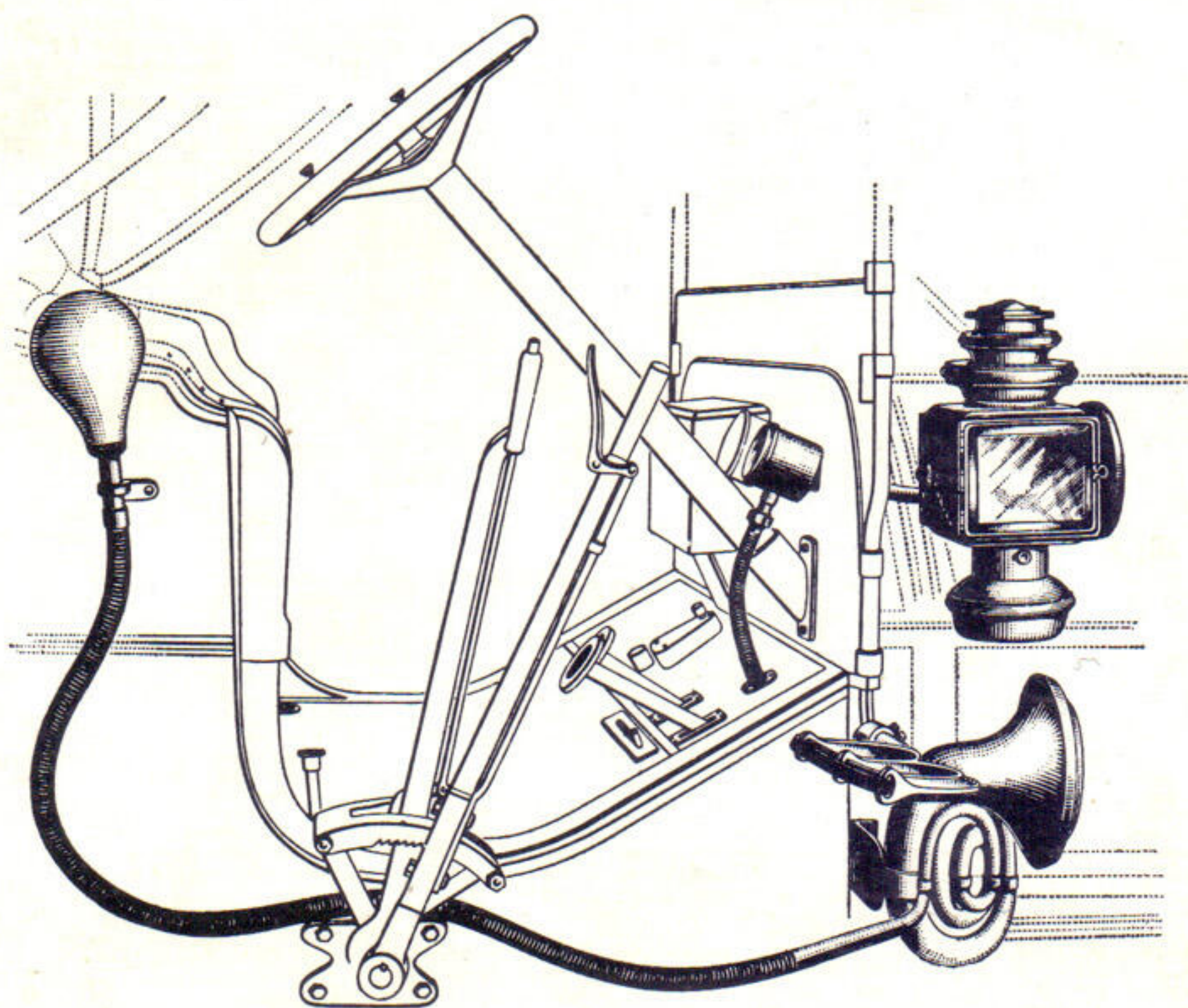


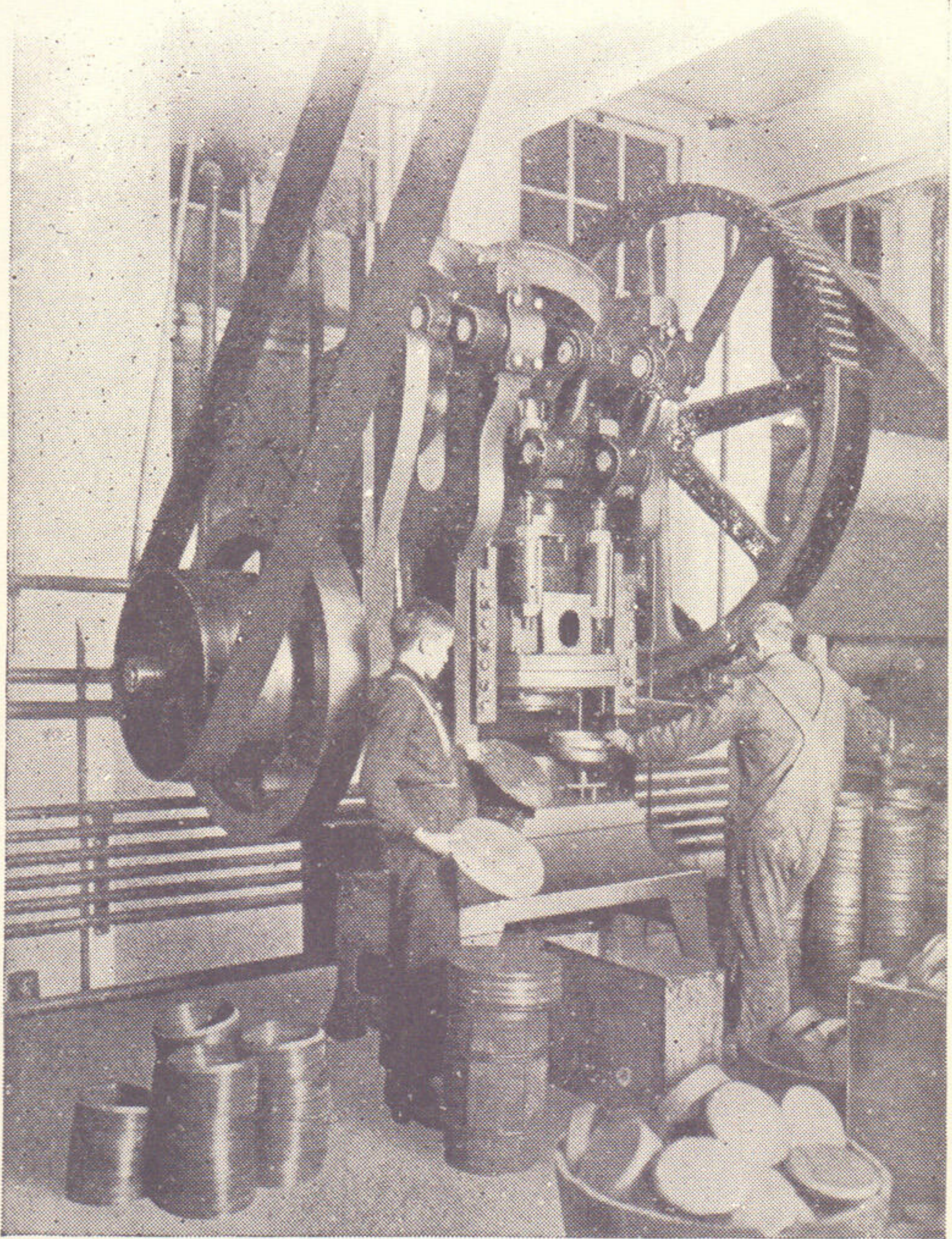
# Antique Auto Body

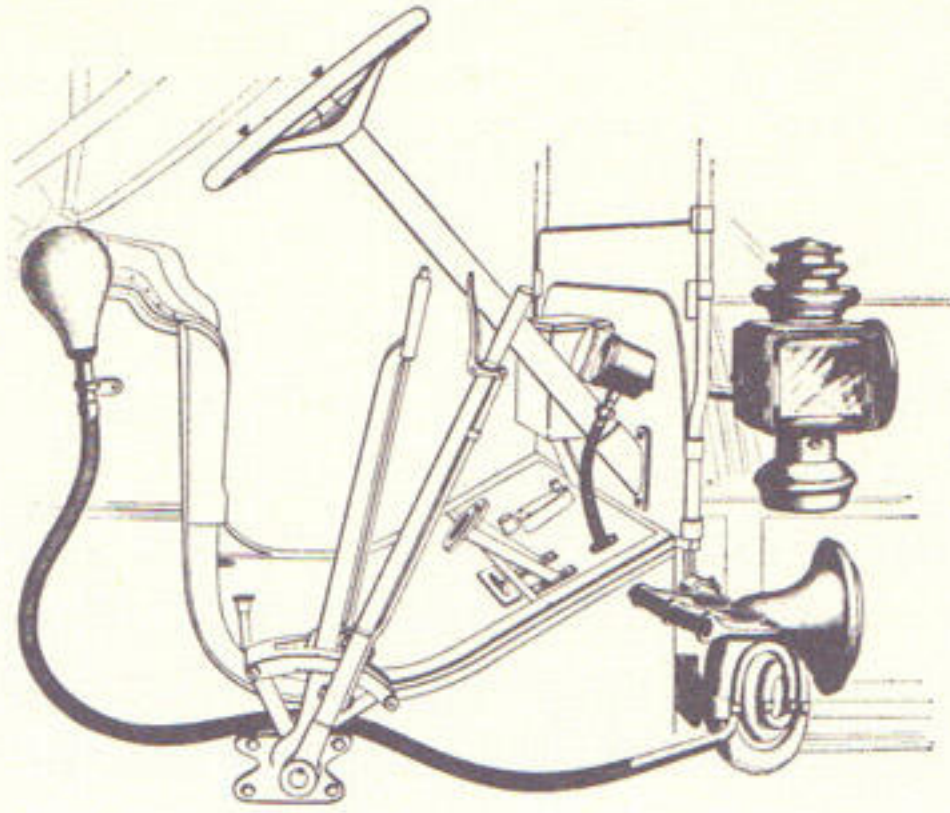
## BRASS WORK



*vintage  
craft  
series*

### for the Restorer





# Antique Auto Body **BRASS WORK** for the Restorer

*compiled principally from the collection of  
ALFRED S. LEWERENZ, Ed. D.*

*with additional matter from  
W. Everett Miller*



**Post Motor Books**  
1970  
Arcadia CA 91006

Scores of accessory catalogs were evaluated from the Dr. Alfred S. Lewerenz Collection to assemble this representative segment of brass wares popular in the automobile's fledgling years. The Rushmore catalog extract and the Dietz catalog generator spread are from the W. E. Miller Library of Vehicles.



Copyright

1970

Dan R. Post

### **The Vintage Craft Series**

Other manuals in the **Vintage Craft Series** provide authentic ground for rediscovery of other early automobile body building trades. Each volume, written and illustrated in graphic detail by recognized contemporary authorities of that golden era before the Wars, revives one of the key motor body hand crafts in three-dimensional clarity.

**VALUABLE REFERENCE FOR EVERY OLD CAR ENTHUSIAST—AND AS HELPFUL AS BLUEPRINTS FOR THE SERIOUS RESTORER!**

## Preface

Use of that classic yellow alloy of copper and zinc was a natural for veteran carriage lamp and band instrument fabricators when they diversified into accessories for the just-arrived automobile. The excellent spinning and drawing properties of soft brass, with ready availability and relative cheapness were points already quite familiar to them. So it was that the gem-like finish of brightly polished brass was to bring warmth and charm to the motor age.

To assist today's enthusiast in identifying, dating and classifying the lamps, horns and other prominent brass fittings that garnished the horseless carriage, this compiled work — through chronological reproduction of display sections from leading accessory catalogs — pictures, describes and prices a hearty selection from the 1906-1912 period.

While milk cost 4¢ a quart and a haircut was a dime, dollars were so far between in early 20th Century America that the average factory worker — after a nine-hour shift unpunctuated by many "breaks" — took home only \$2. Frugality was the temper of the times even among the well-to-do. Preference in motor accessories was often strictly a matter of price. Private-brand promotions, as today, openly shattered firmly-priced *name* brands (pages 16-17).

Sixty years later surviving prime specimens of motor brass often cannot be bought for any cash sum. In barter among antique automobilists, today's watered-down dollar speaks only in a hoarse whisper, while brass work *as a medium of exchange* comes through loud and clear.

Early in 1912 Isabel Crowell, M.D. — the single woman to graduate among 28 from the U.S.C. College of Medicine, Class of 1906 — commemorated the strength of her growing practice by deciding upon one of the last one-cylinder cars to be sold. List price was \$350. By the time Dr. Crowell had added windshield, top, side curtains, and a complement of gas lamps (page 55) her investment in the Liberty model Brush runabout approached \$500.

The good doctor's selection betrayed the fact she had been too engrossed with her patients' welfare to recognize a changing trend in the motor world. The velvet-tongued salesman had not pointed out to her that the "one-lunger" had long been passé, and that acetylene lighting was well into the twilight of its popularity.

Two months later the Brush company went out of business. Bright brass had become as sought-after as a calendar for 1899.<sup>1</sup> But the car ran well and Dr. Crowell was quick to adapt... She simply neglected to polish the fugitive finish of her horn, lamps and windshield frame, intentionally encouraging oxidation. The natural patina that resulted was dull, non-descript and nearly black — just what the doctor "ordered" to remain in style.

1 As carbide flickered out among the motoring elite — in favor of mobile *electric* lighting, the new equipment was painted black, or black with brass trim, or for the more opulent cars, in nickel plate. Shining brass, which originally had characterized and enhanced the motor scene, became *out* socially.

Other motorists also caught with their brass showing were legion in letting it "go." Some even got out the paint pot, for in 1912 black was the extra-cost finish. One catalog house reported ninety per cent of the new car manufacturers furnishing black finish accessories (page 56).

At first brass was simply covered in black enamel to create a maintenance-free finish at a premium price. Then, to effect a substantial production economy, a quiet substitution was concealed behind the black paint: sheet iron was substituted for brass.

The traditionally individual radiator style, sculptured with subtle curves and angular details in soft brass, long had contributed trademark identity to cars of character. As builders expanded the use of cost-saving, *but less toolable*, black iron to other parts the radiator became an early victim. Steel outer shells, with all but uniform dimensions, were adopted by practically all makers.<sup>2</sup>

From the dark and formless design days when black iron was first embraced as the new commercial darling, till the time when the restorer knew what he wanted, lamps and horns that had once been sparkling jewels of the shadowy, adventurous gaslight age were as obsolete as the blunderbuss, derelict objects of derision, and valueless — except for metal salvage.

It took only a driving downward thrust with the bootheel for a hobo to render any brass lamp handier to sack away. The junkie paid a nickel a pound. In the decades between 1910 and 1940 five cents would buy a good cigar. Premium brass, from the commanding Rushmore to the Dainty Dietz, was continuously sacrificed for little more than a smoke. What tramps failed to unearth school-boys scavenged for the price of a Saturday movie ticket. During these faceless years the scrap toll of motor brass was massive.

Individuals with vision eventually moved independently to preserve what motor brass objects remained — at least the best of them. "Most of us passed by opportunities at first to add single or damaged lamps to our collections," recalls veteran antique car authority Dick Teague. "In those days we saved only perfectly matched pairs."

Latter day brass collectors are less selective. Severely metal-fatigued lamps are restored. Casualties and incomplete lamps are preserved. Sometimes a phoenix arises from the bench still strewn with disassembled remnants from several like pieces. Unmatched stray lamps in substantial quantity repose today in the strongholds of collectors ever-hopeful of eventual pairing.

Among the vanguard to recognize the horseless carriage in the Thirties was the late Arthur E. Twohy, who probably originated the brass matching party with an invitational gathering at his home a generation ago. In the course of that afternoon, several phantom singles found mates. The first *brass only* swap meet was a success!

As the supply of matched original lamps dwindles, even among those far-sighted collectors who laid them away long ago, the reappearance of this sort of brass forum, as a social medium among motor buffs, could well implement the pairing off of many other odd lamps in the days to come.

2 The Packard motor car's notable carryover of its distinguishing ox-yoke radiator treatment into the black age proved a thoughtful and wise exception to the new rule.

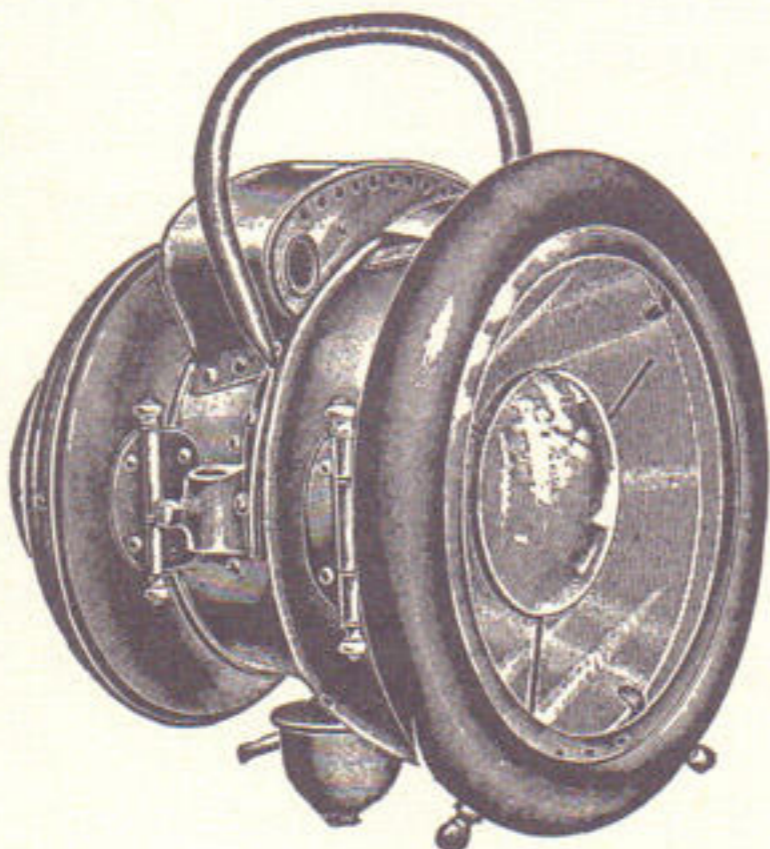
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1906  
ACETYLENE GAS LAMPS

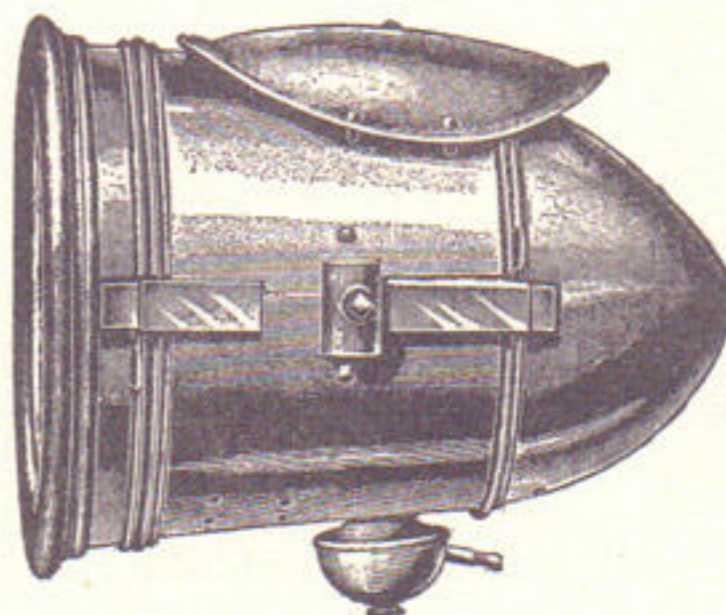
Our line of "Crescent" Lamps is manufactured especially for us and under our own supervision. They are all fitted with genuine Bausch & Lomb lenses and are guaranteed to give satisfaction.

ALPHA STYLE SEARCHLIGHTS.



Alpha and Bullet styles come in all brass but can be furnished with copper front and back if desired.

BULLET STYLE.



|        | Front.      | Depth.     | Height. | Price each. |
|--------|-------------|------------|---------|-------------|
| No. 51 | 10 1/4 inch | 9 1/2 inch | 14 inch | \$24.00     |
| No. 52 | 9 1/4 inch  | 9 inch     | 13 inch | 22.00       |

|        | Front.     | Depth.      | Height.    | Price each. |
|--------|------------|-------------|------------|-------------|
| No. 53 | 8 3/4 inch | 11 1/4 inch | 10 inch    | \$22.00     |
| No. 54 | 8 inch     | 10 1/4 inch | 9 1/4 inch | 20.00       |

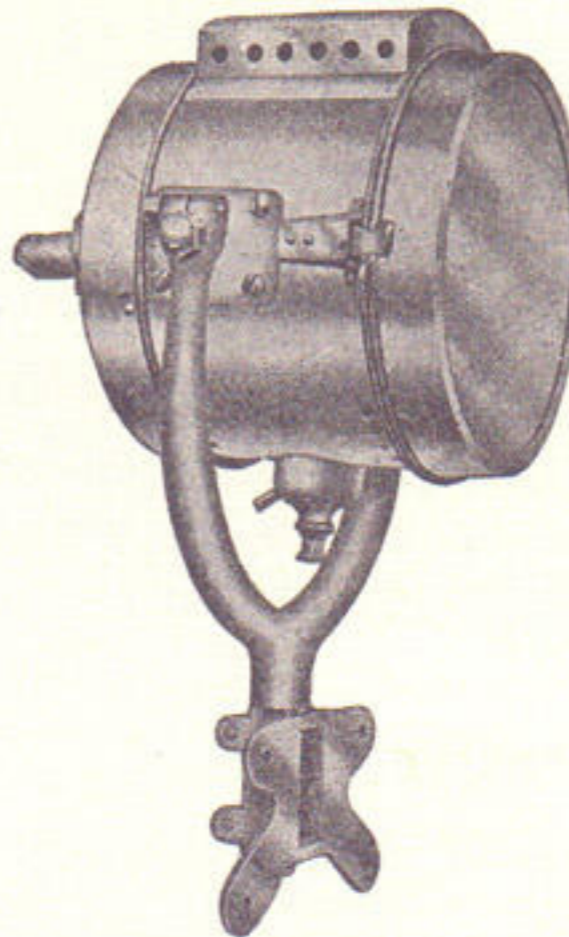
BARREL SEARCHLIGHTS.



Barrel and Swivel Bracket Searchlights come with copper front and back, but can be furnished in all brass if desired.

SEARCHLIGHT.

With Swinging Swivel Bracket.



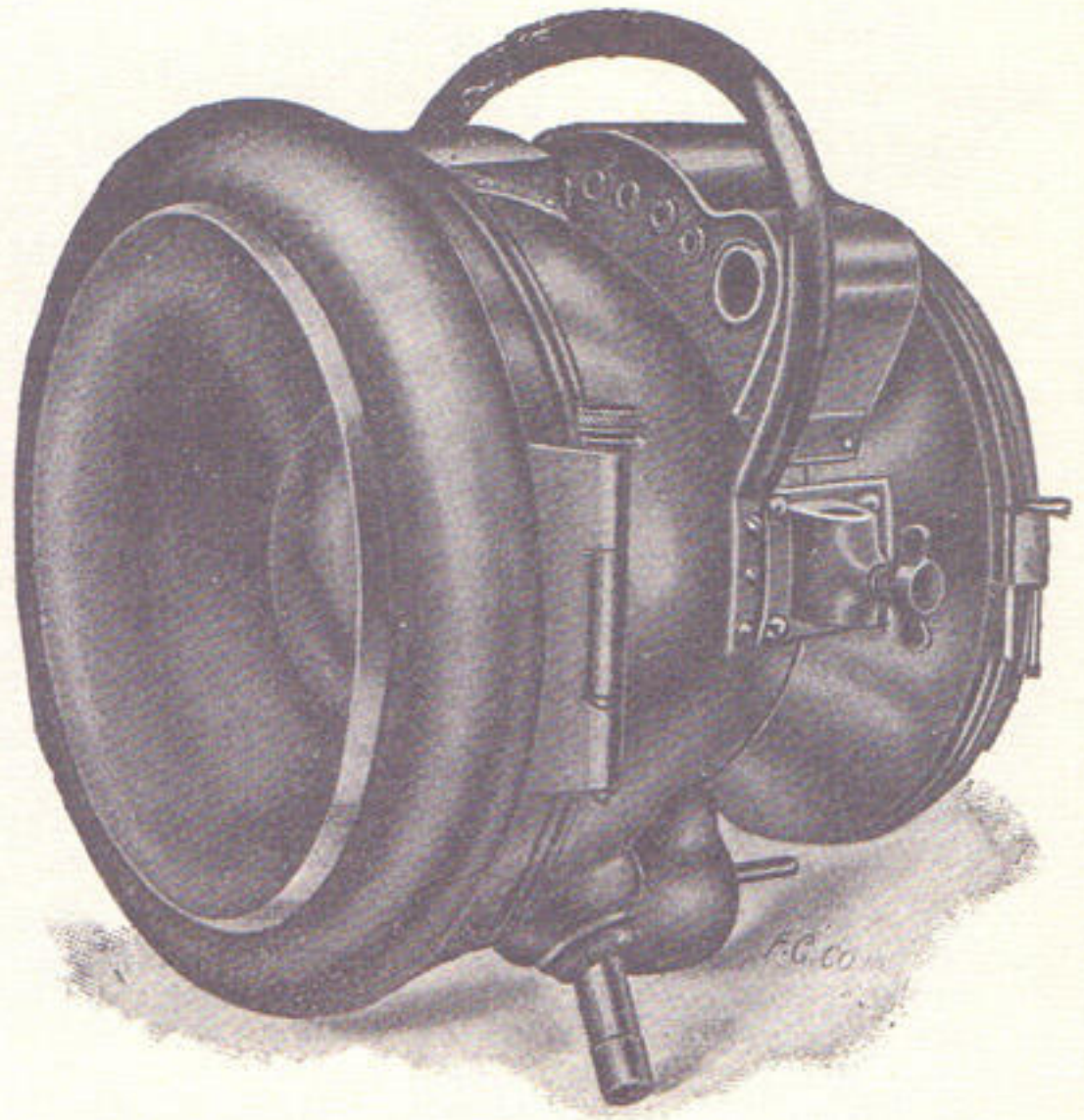
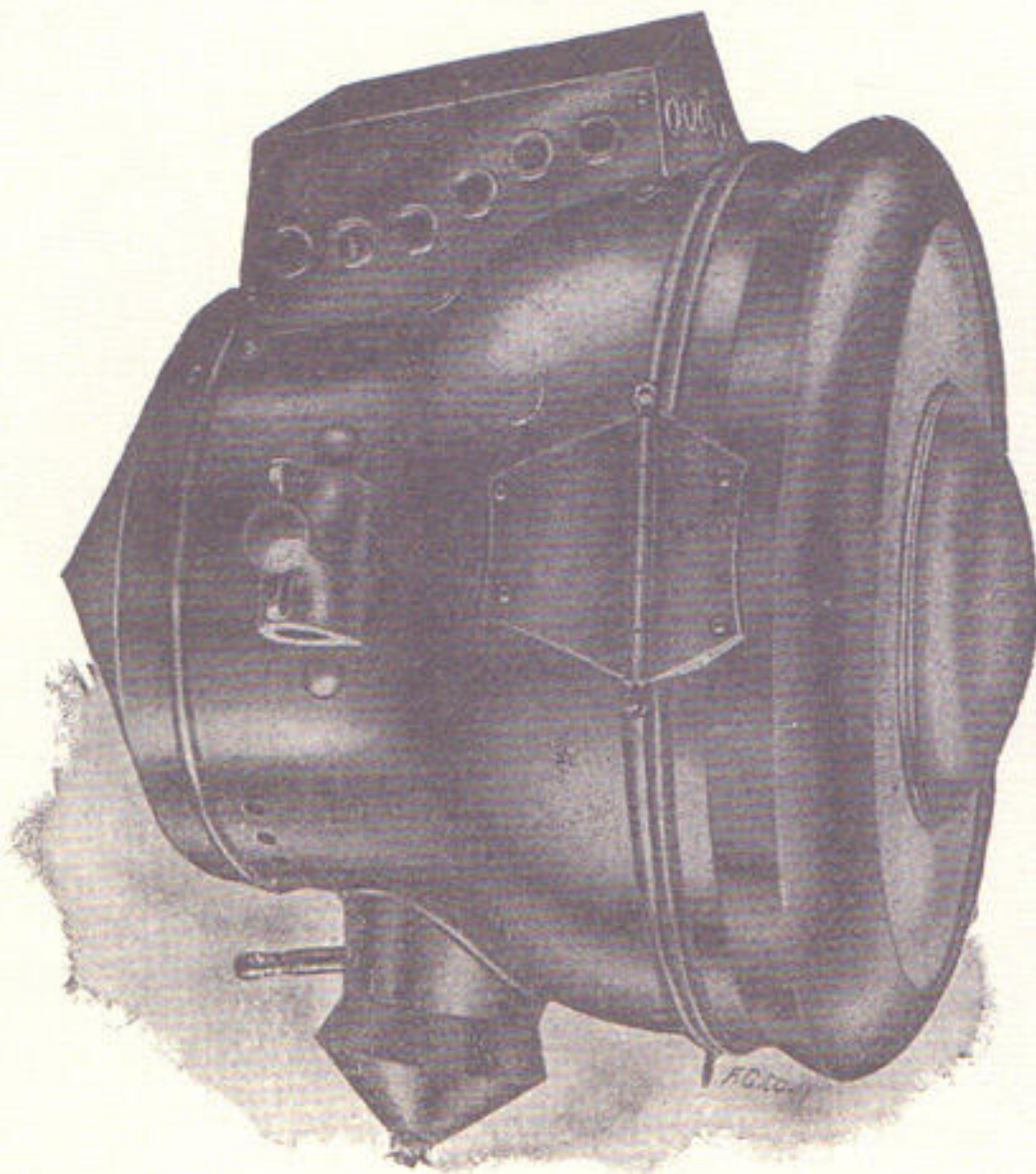
|        | Front. | Depth.     | Height.     | Price each. |
|--------|--------|------------|-------------|-------------|
| No. 55 | 6 inch | 7 1/4 inch | 9 1/2 inch  | \$16.00     |
| No. 56 | 7 inch | 7 1/2 inch | 10 1/2 inch | 19.00       |
| No. 57 | 8 inch | 8 3/4 inch | 11 1/2 inch | 24.00       |
| No. 58 | 9 inch | 9 1/2 inch | 12 1/2 inch | 30.00       |

|        | Front. | Depth.     | Height.     | Price.  |
|--------|--------|------------|-------------|---------|
| No. 61 | 6 inch | 7 1/2 inch | 14 1/2 inch | \$24.00 |
| No. 62 | 7 inch | 7 1/2 inch | 15 inch     | 27.00   |
| No. 63 | 8 inch | 8 3/4 inch | 18 1/2 inch | 33.00   |
| No. 64 | 9 inch | 9 1/2 inch | 19 inch     | 39.00   |



**"JAP" LAMP** 1906

**"FARO"**



An entirely new design. Latest Parisian creation, with French optical front lens.

|         | Front. | Height. | Depth. | Price each. |
|---------|--------|---------|--------|-------------|
| No. 71. | 8      | 10      | 8      | \$24.00     |

The most perfected "Alpha" type lamp; genuine imported optical lens, throwing light over a radius of half a mile. Beveled convexed front glass. Superior to any other lamp.

|         | Front. | Height. | Depth. | Price each. |
|---------|--------|---------|--------|-------------|
| No. 72. | 9½     | 11½     | 9      | \$30.00     |

**MARINE SEARCHLIGHT**

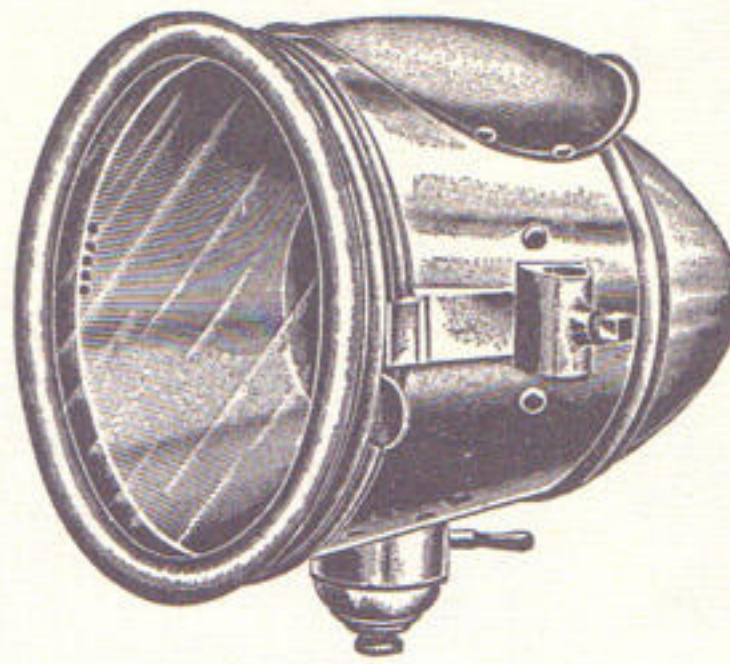
The Marine Searchlight is fitted with the genuine Bausch-Lomb Mangan Mirror Reflector. The deck attachment is of the simplest design, allowing the light to remain stationary, or with one lever the light can be turned in any direction, the lamp being controlled from inside or outside of the cabin or pilot house. Handsomely finished in highly polished brass and copper. The lens is 8 inches in diameter and throws a bright and strong ray of light which searches out objects at a great distance. Complete with Combination Swinging Automatic Swivel Deck Bracket, launches.



Specially designed for use on motor boats and naphtha launches.

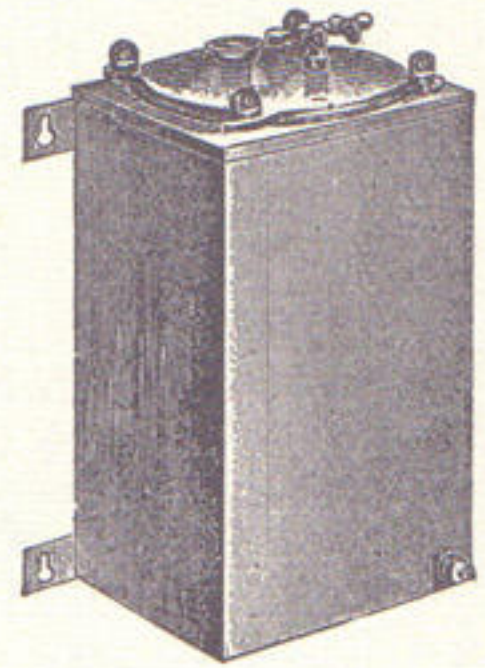
Complete with Combination Swinging Automatic Swivel Deck Bracket, launches.

**NO. 75 BULLET.**



| Front.                  | Height. | Depth. |
|-------------------------|---------|--------|
| 7½                      | 8½      | 9      |
| Price, each .....\$9.00 |         |        |

**NO. 1 GENERATOR.**

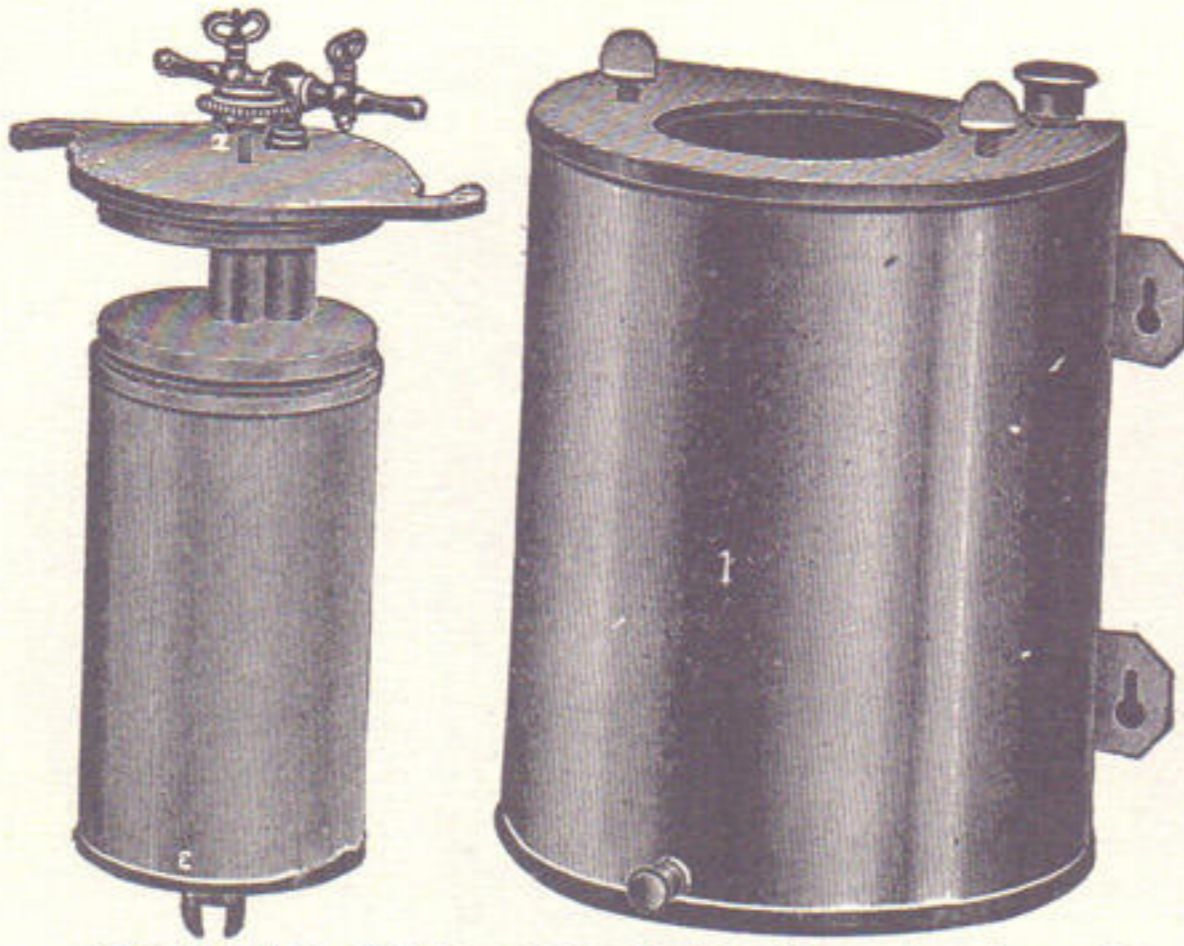


| Height.            | Depth. | Width. |
|--------------------|--------|--------|
| 9                  | 4½     | 4½     |
| Price .....\$12.00 |        |        |

The No. 75 Bullet is a handsome looking lamp, copper front and back, metal reflector, a pair of them in combination with the No. 1 Generator makes an ideal outfit for a light car. Price complete for two lamps and generator.....\$28.00

1906

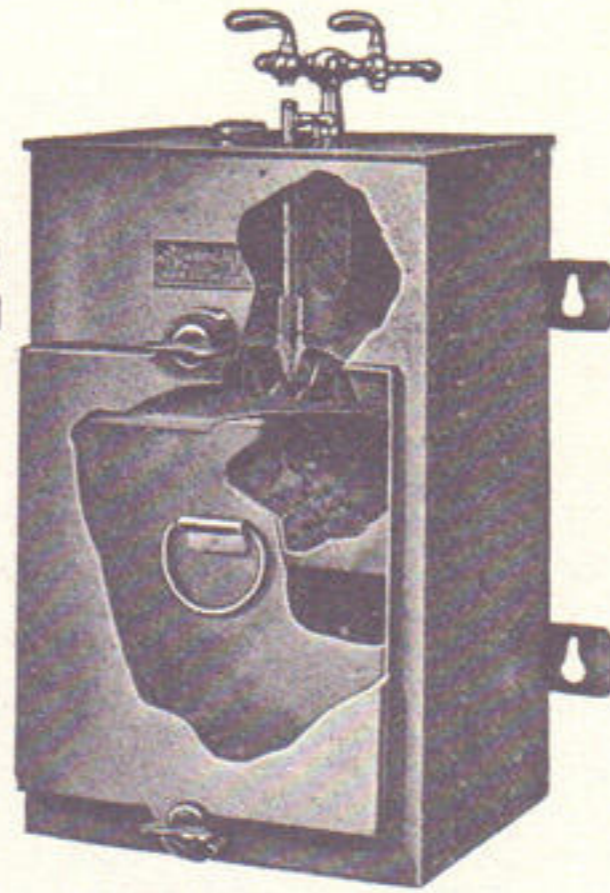
THE HALF ROUND GENERATOR.



By turning off the screw on top the water drops in the carbide chamber and gas is generated instantly; by turning on the screw no more water drops in and no carbide is generated, hence the carbide remains dry and ready for use the next time.

|                           | Height. | Width. | Depth. | Price.  |
|---------------------------|---------|--------|--------|---------|
| No. 2, half round, each.. | 9       | 7      | 5      | \$13.50 |

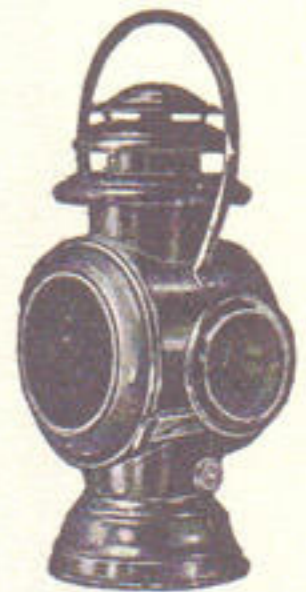
THE ATWOOD.



Simple construction, easily cleaned and operated, perfect cooling system. Anybody can operate it.

|             | Hgt.  | Wdth. | Dpth. | Price   |
|-------------|-------|-------|-------|---------|
| No. 40...10 | 6 1/4 | 5 1/8 |       | \$19.50 |
| No. 41...12 | 7 1/4 | 6     |       | 22.50   |

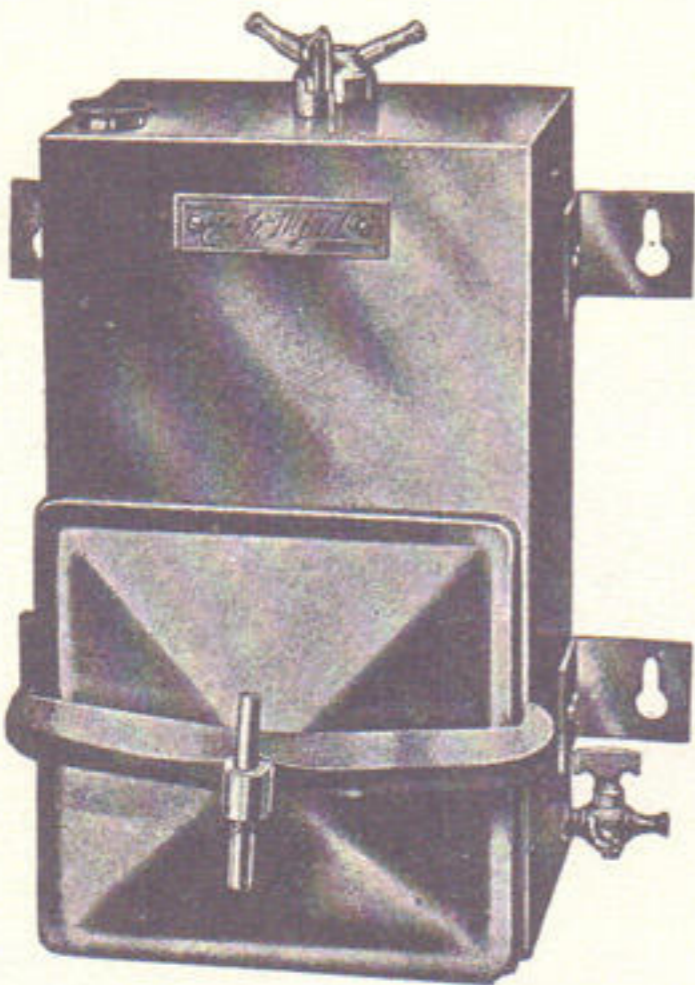
THE ATWOOD BALL TAIL LAMP.



A neat little lamp for small cars and runabouts.

Price, ea..\$5.25

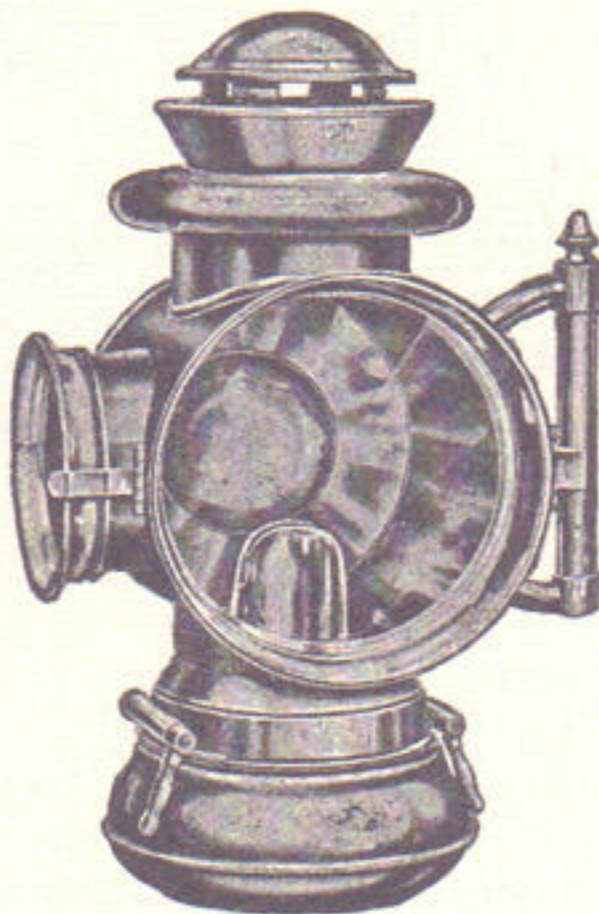
THE E. & J. GENERATOR.



The latest novelty in generators; handsome and practical.

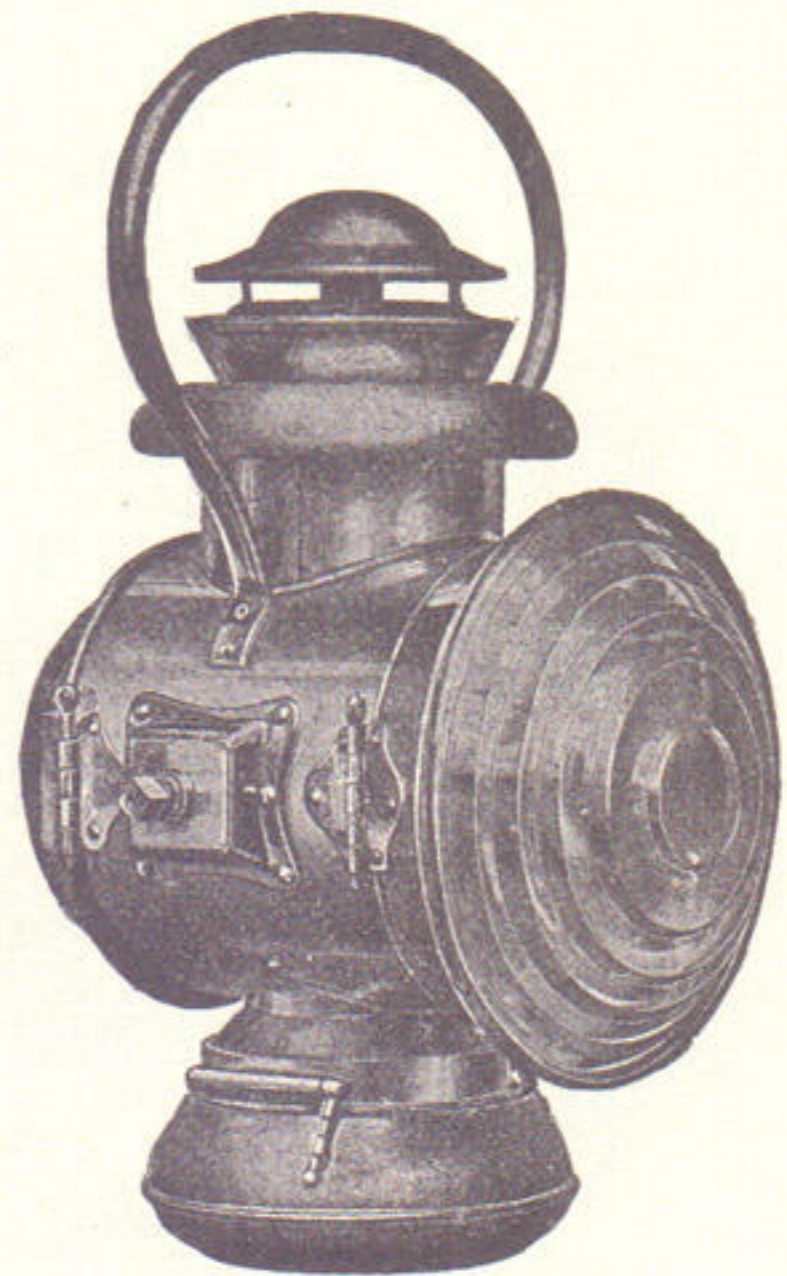
|              | Height. | Width. | Depth. | Price.  |
|--------------|---------|--------|--------|---------|
| No. 76....11 | 6       | 6 1/2  |        | \$18.00 |
| No. 77....11 | 6       | 9      |        | 22.50   |

HAM'S AUTO TAIL LAMPS.



Will stay lit.

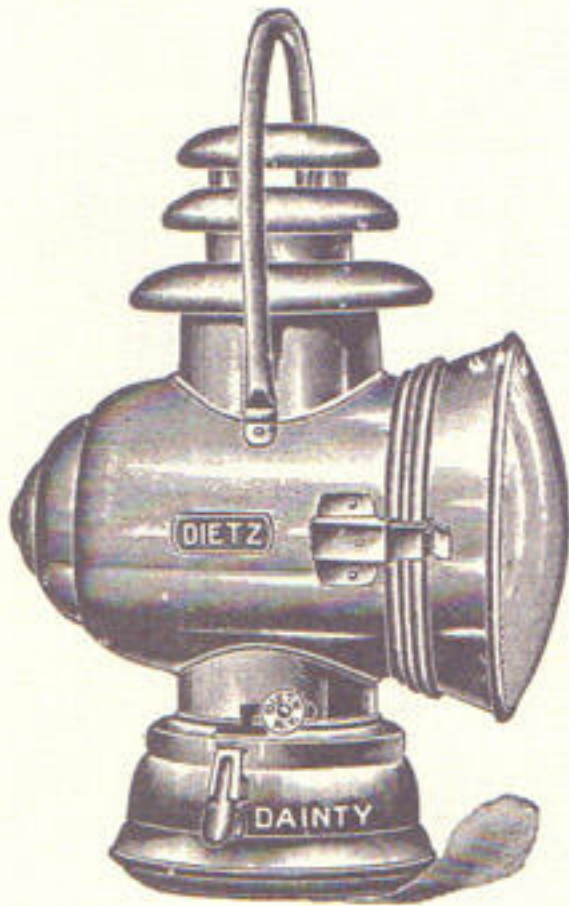
Price, each .....\$10.00



Polished brass, with copper trimmings and silvered reflector.

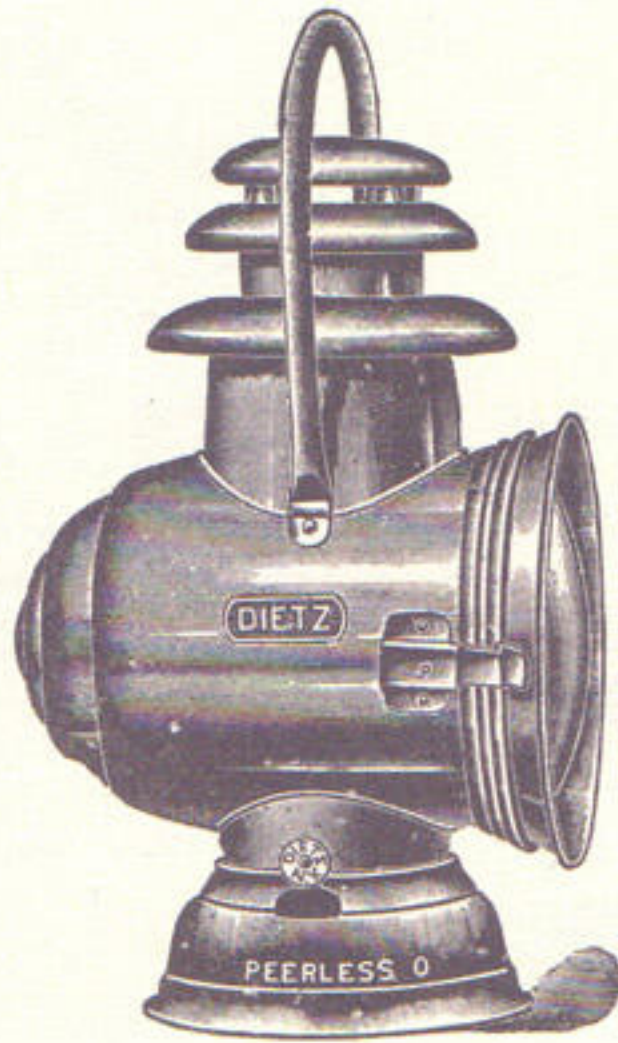
Price, each .....\$10.80

1906  
DIETZ OIL LAMPS



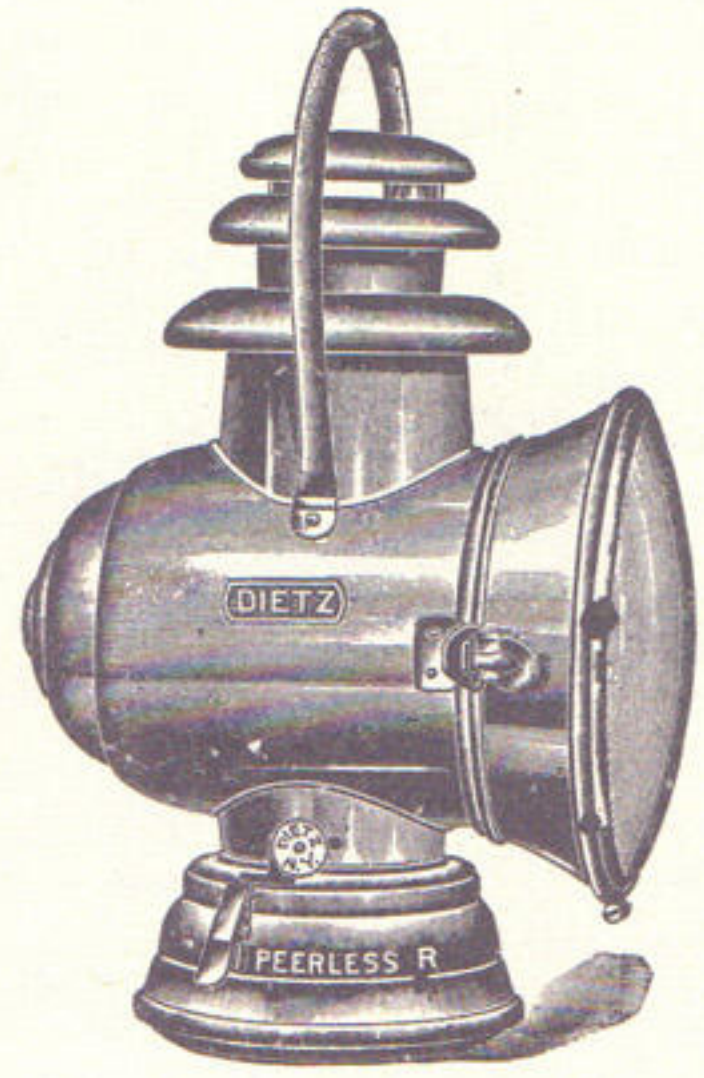
DAINTY SIDE.

12 inches high, 5½ inches across face, weight 3 pounds.  
Price, each .....\$6.00



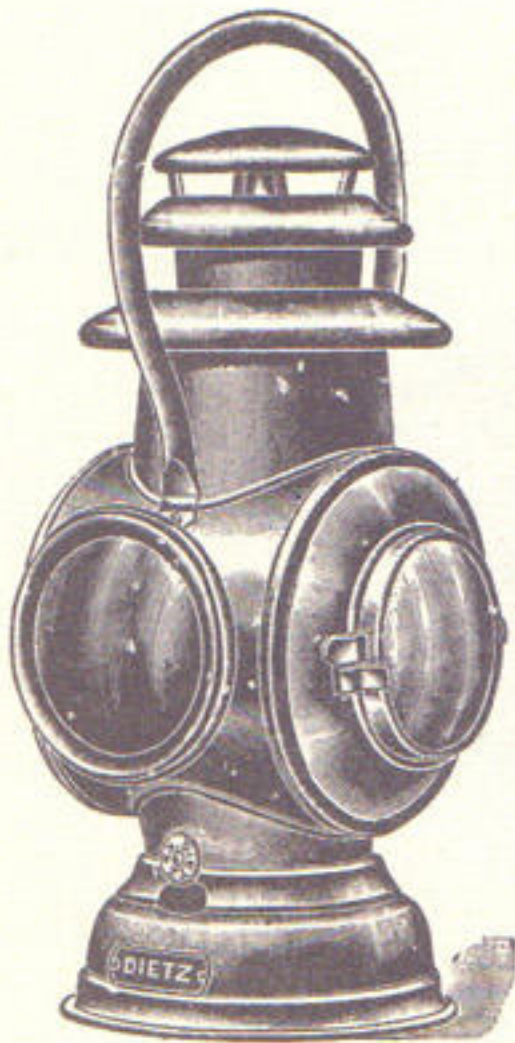
PEERLESS O.

13 inches high, 6 inches across face, weight 3¼ pounds.  
Price, each .....\$6.00



PEERLESS R.

13½ inches high, 7 inches across front, weight 4 pounds.  
Price, each .....\$8.00  
Peerless R with Plano convex lens. Price, each.....\$10.00

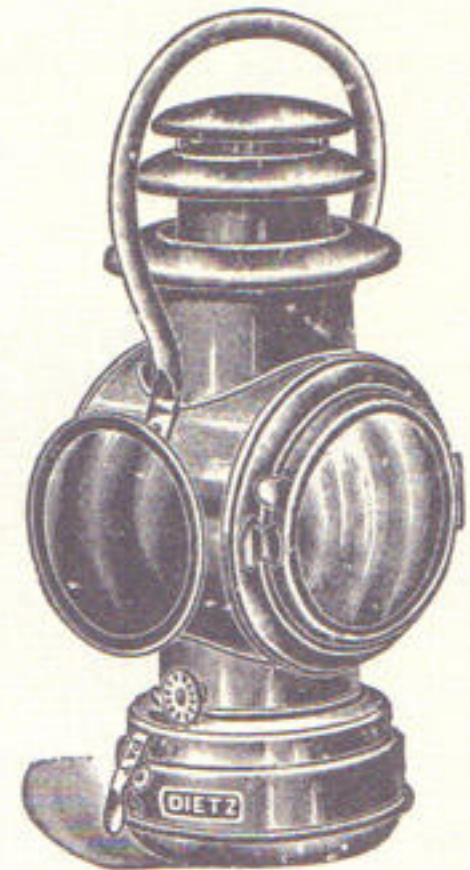


NO. 2 TAIL LAMP.

13 in. high, 6 in. across face, weight 3 pounds.  
Price, each .....\$8.00

PRICE LIST OF PARTS.

|                                  | Each.  |
|----------------------------------|--------|
| Burners .....                    | \$0.40 |
| Oil pot, Peerless O.....         | .80    |
| Oil pot, all other styles.....   | 2.00   |
| Lens for Peerless O.....         | .80    |
| Lens for Peerless R.....         | 1.50   |
| Lens for Dainty Side.....        | .80    |
| Lens for Tail Lamps, white.....  | .25    |
| Lens for Tail Lamps, red.....    | .50    |
| Door, complete, Peerless O.....  | 1.30   |
| Door, complete, Peerless R.....  | 3.00   |
| Door, complete, Dainty Side..... | 2.00   |
| Door, complete, Dainty Tail..... | 1.00   |
| Door, complete, No. 2 Tail.....  | 1.00   |

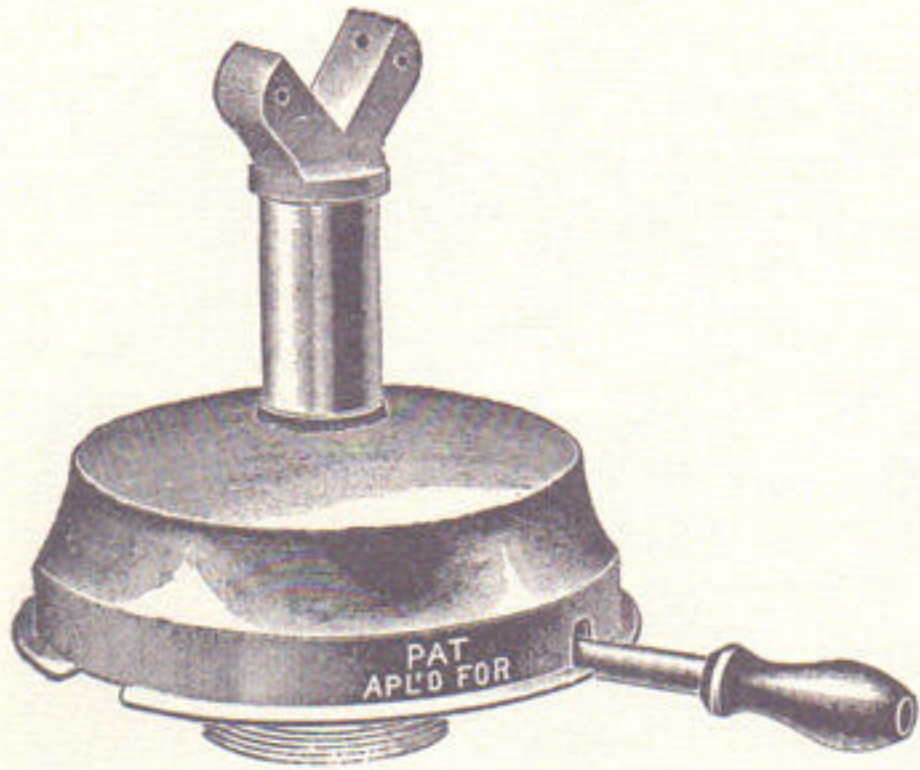


DAINTY TAIL.

11½ in. high, 4½ in. across front, weight 2½ pounds.  
Price, each ....\$7.00

1906

ACETYLENE GAS BURNER FOR DIETZ OIL LAMPS.



Remove the kerosene burner, put this in its place and you have a gas lamp.  
Price, each .....\$2.00

VAN SCHWARZ' BURNERS.



Perfection.



No. 96042.

Price, Perfection, 1/2, 3/4 or 1 foot.....each, 65c  
Price, No. 96042.....each, 65c

LUTA ACETYLENE BURNERS.



1/4, 1/2, 3/4 foot, each..60c

BURNER CLEANERS.



Price, each .....20c

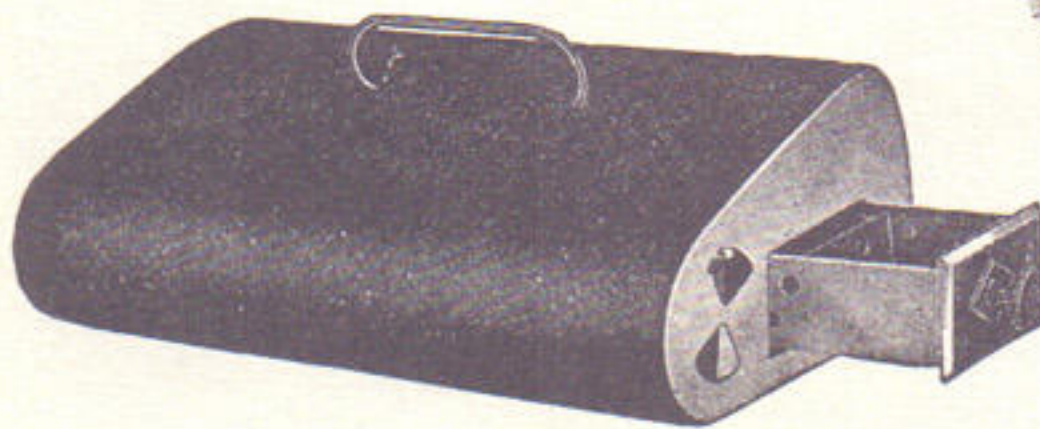
GAS BAGS FOR ACETYLENE LAMPS.



Price, each .....50c

LEHMAN HEATERS.

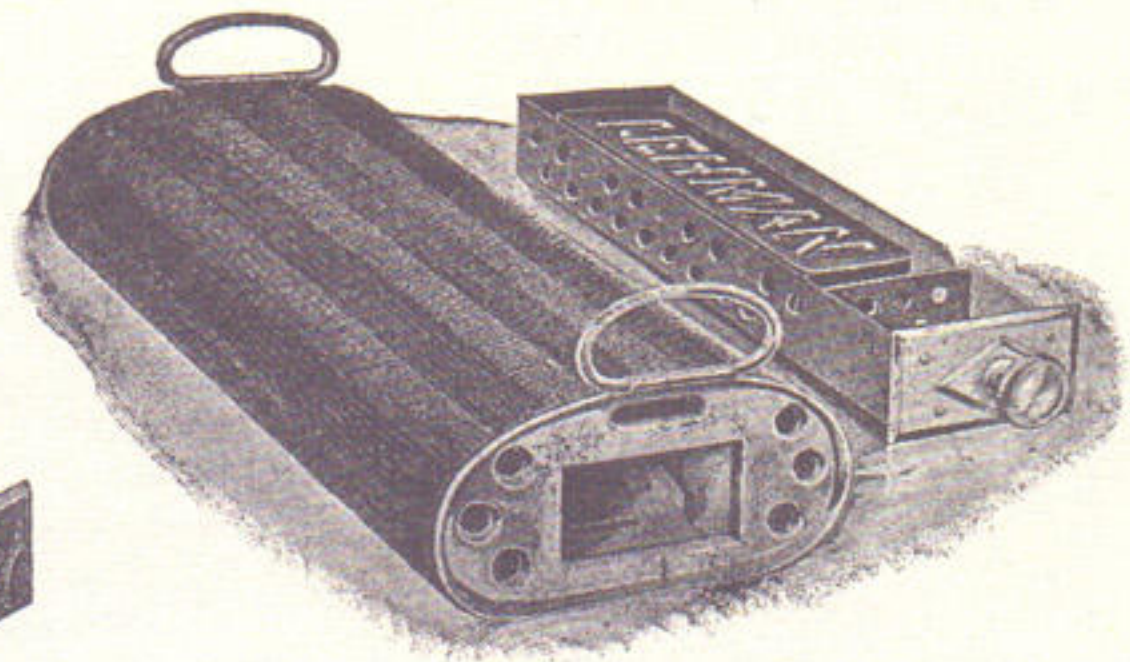
LEHMAN HEATERS.



"The Queen."  
14 inches long.

Each.

Queen, No. 1C, white metal ends, green plush..\$3.00  
Queen, No. 2C, polished brass ends, green plush. 3.25



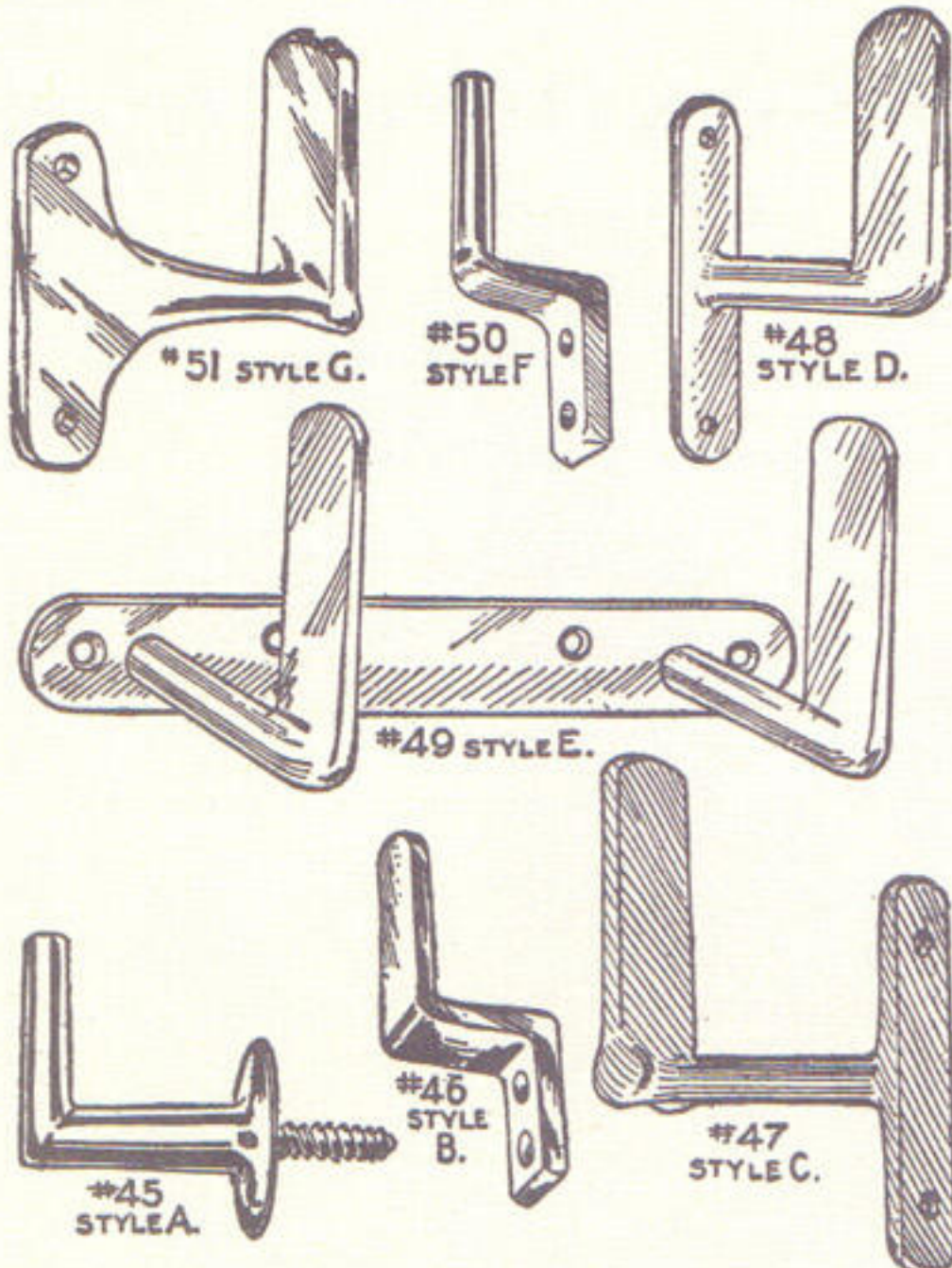
(With Drawer Removed and Coal in Place.)

No. 8C, 14 in. polished brass ends, covered with velvet carriage carpet.....\$3.75  
No. 7C, 20 in. polished brass ends, covered with velvet carriage carpet..... 5.00

Lehman's coal, per dozen bricks.....\$1.00

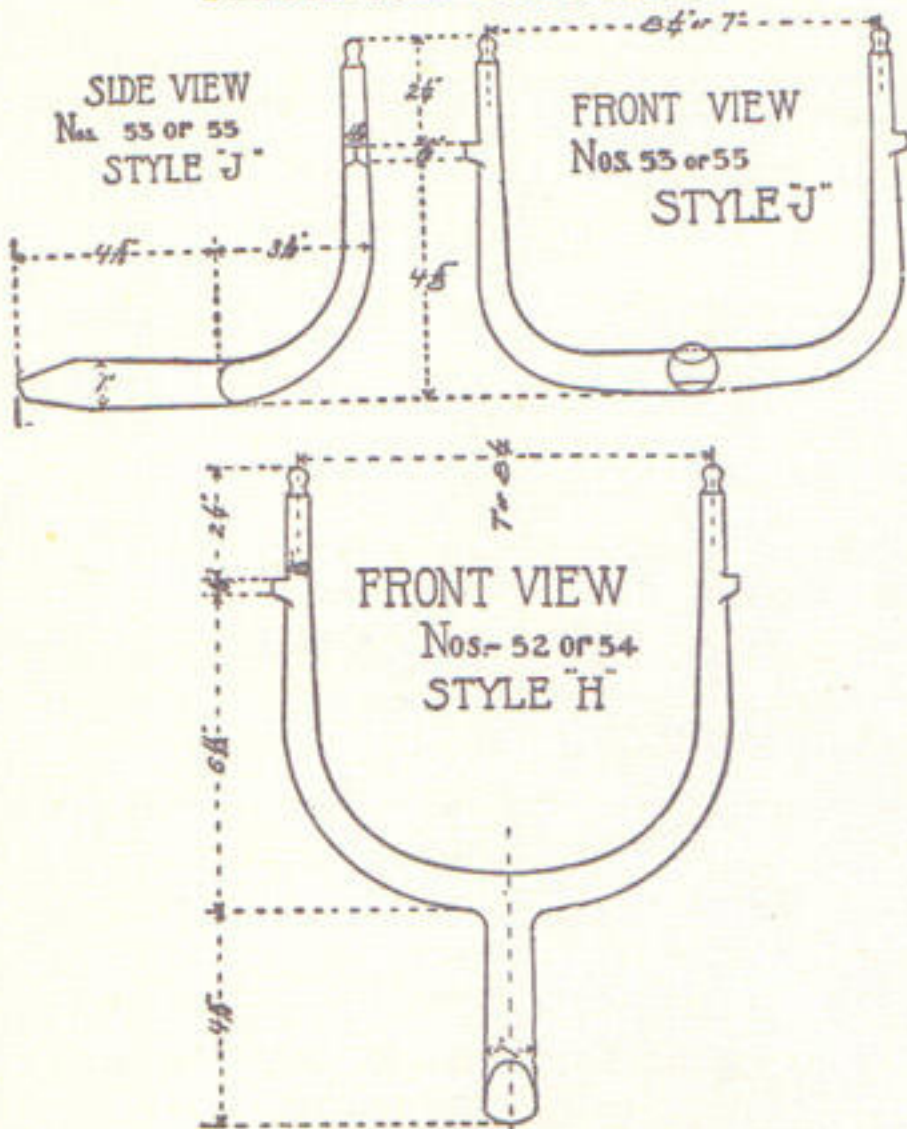
1906  
LAMP BRACKETS

FOR BOATS, LAUNCHES AND AUTOMOBILES.



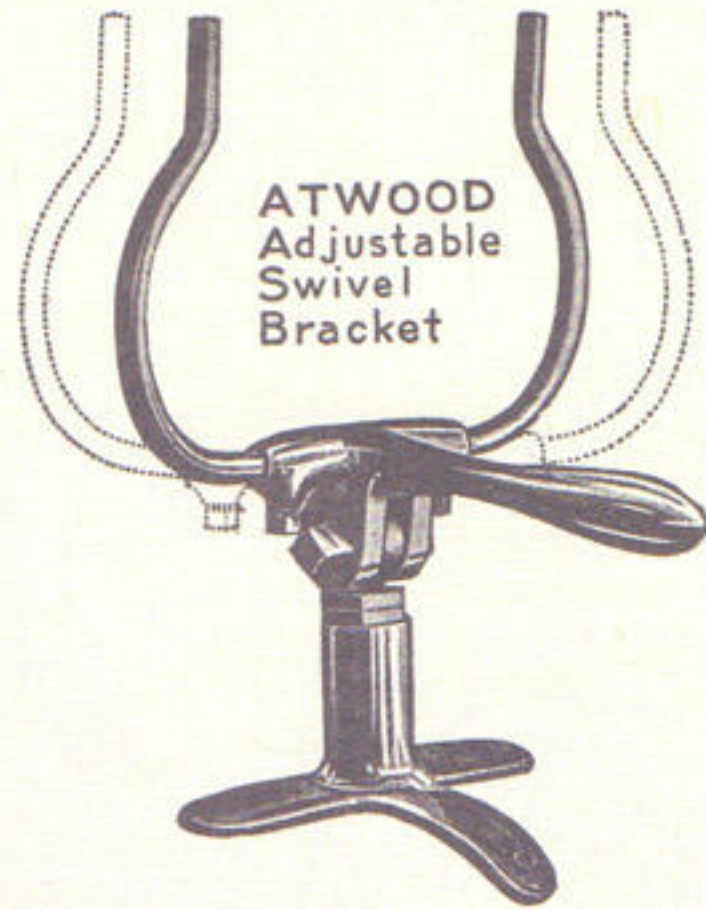
|              |        |              |        |
|--------------|--------|--------------|--------|
| A. Each..... | \$0 75 | D. Each..... | \$0 75 |
| B. ".....    | 75     | E. ".....    | 2 50   |
| C. ".....    | 75     | F. pair..... | 75     |
| G. Each..... | \$0 75 |              |        |

PITCHFORK BRACKETS.



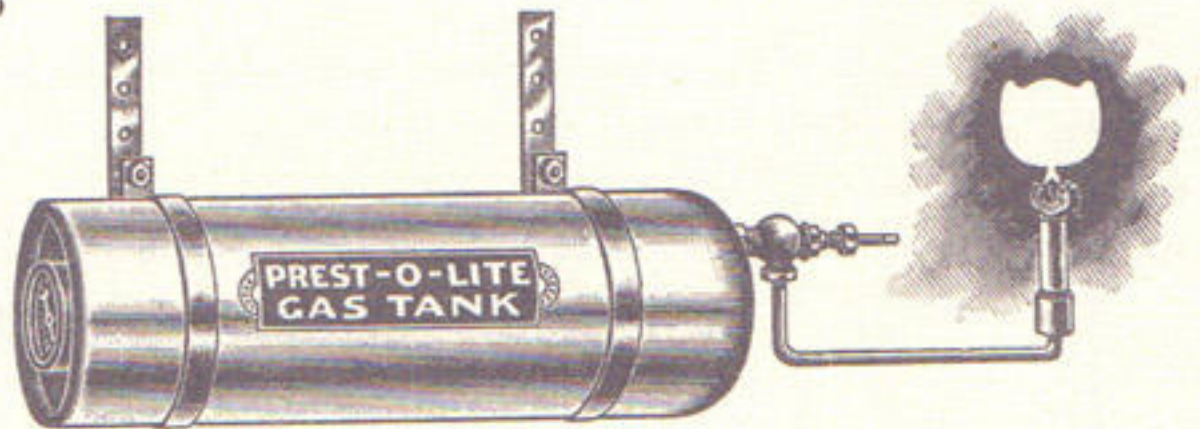
Price, either style.....\$1.00 each.

These pitchfork brackets for Phare special head-light and generator lamps are the very best grade of forgings and are made with a long enough stub of liberal stock, to be forged in shape to fit to car as desired or welded to other attachments.



Full brass polished.  
Adjustable.—Will fit any lamp.  
Very convenient.  
By its use Lamp will swing or tip in any direction.  
Price .....\$10.00 each.

"PREST-O-LITE" GAS TANKS FOR AUTOMOBILES.



Contains 50 feet of Acetylene Gas.

No Cleaning of Generators.  
No Carbide Supply to Carry.  
No Water Needed.  
No Waste.  
No Odor.  
No Attention.  
Tips Never Clog.  
Nothing to Freeze.  
Light at Any Time, Instantaneous.  
Never Wears Out.  
SAFE; No Leaking Gas.  
More Hours' Capacity.  
Economical.  
Better and More Satisfactory Light.  
Size and Appearance.  
Burn as Many Lights as May be Desired from One Tank.

When You Want Gas, Turn It On, When You Don't, Turn It Off.

18 good reasons and points of superiority over the old style Carbide Generator.

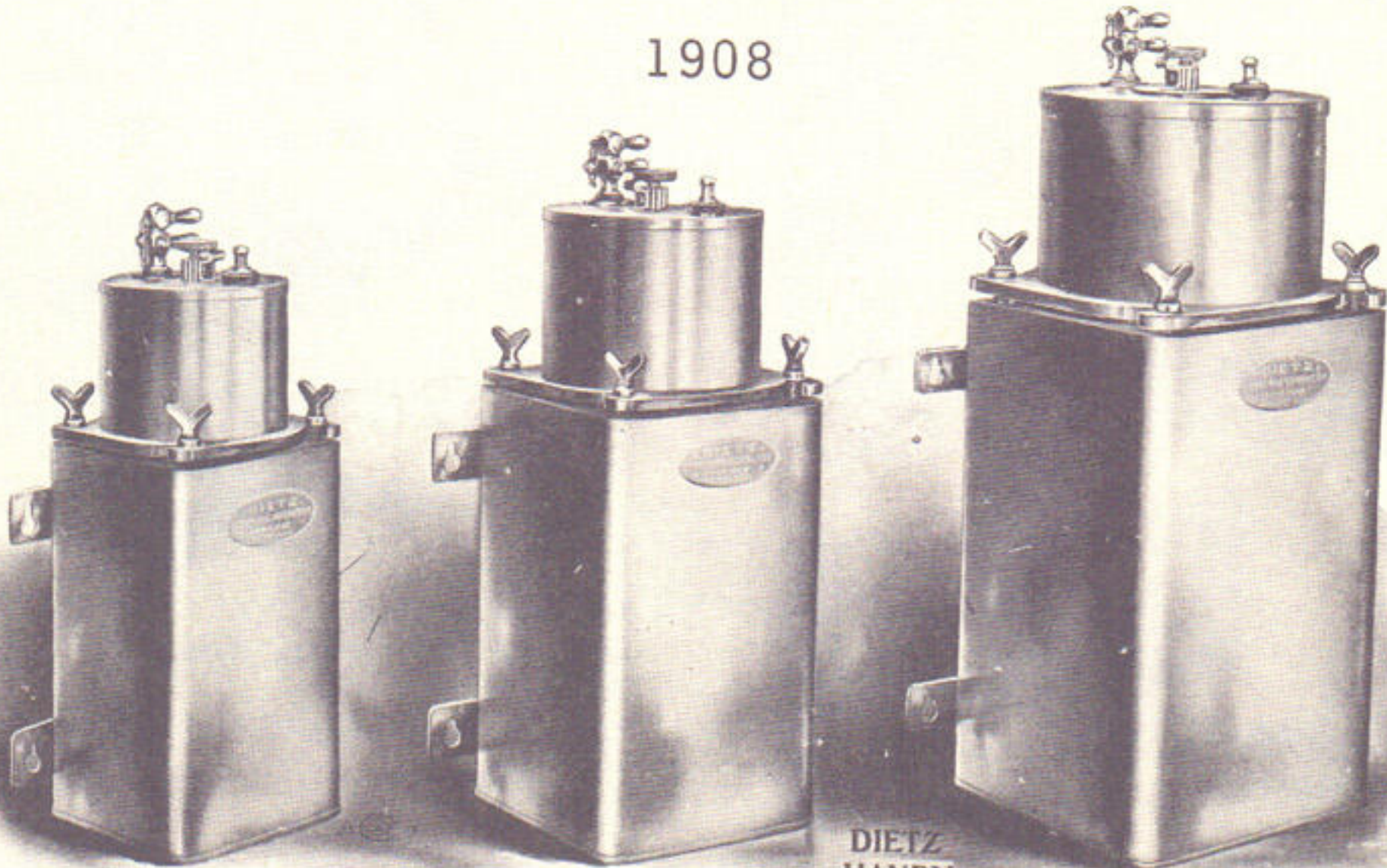
Price, each .....\$35.00  
For recharging ..... 2.75

R. E. DIETZ COMPANY, NEW YORK, U. S. A.

## DIETZ "HANDY" GENERATORS

(3 SIZES)

1908



DIETZ  
HANDY  
GENERATORS

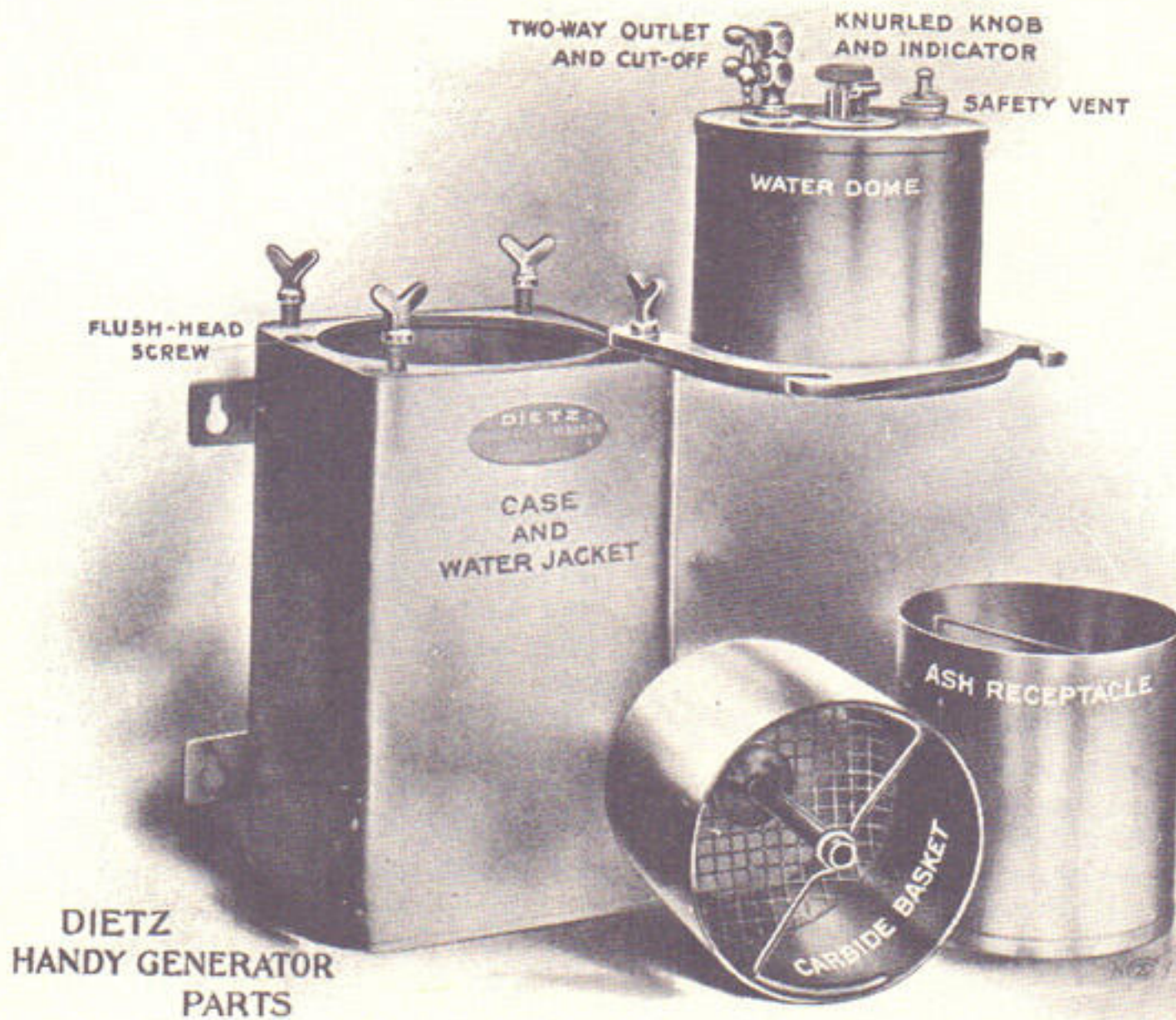
No. 5, 2 Pounds Carbide

No. 6, 3½ Pounds Carbide

No. 7, 5 Pounds Carbide

## DIETZ "HANDY" GENERATOR

OPENED TO SHOW THE FOUR PRINCIPAL PARTS



"SIMPLE AND EFFECTIVE"

R. E. DIETZ COMPANY, NEW YORK, U. S. A.

**DIETZ "HANDY" GENERATORS**  
**FOR GENERATING ACETYLENE GAS**  
 (3 SIZES)

| "Handy" Generators                                    | No. 5<br>"Handy" | No. 6<br>"Handy" | No. 7<br>"Handy" |
|---|------------------|------------------|------------------|
| Code Word   | Vixal            | Voroz            | Vodox            |
| Extreme Height (over all) <i>inches</i>               | 13 $\frac{3}{4}$ | 16 $\frac{1}{2}$ | 18               |
| Extreme Width, <i>inches</i>                          | 5                | 6                | 7                |
| Extreme Depth, <i>inches</i>                          | 5                | 6                | 7                |
| Size Carbide Employed, <i>inches</i>                  | $\frac{1}{2}$    | $\frac{1}{2}$    | $\frac{1}{2}$    |
| Carbide Capacity, <i>pounds</i>                       | 2                | 3 $\frac{1}{2}$  | 5                |
| Maximum Generation Gas per Hour,<br><i>cubic feet</i> | 2                | 4                | 5                |
| Polished Brass, <i>each</i>                           | \$9.50           | \$12.50          | \$16.00          |
| Add for Gun Metal finish, <i>each</i>                 | 2.25             | 2.25             | 2.25             |
| Add for Nickel-plating, <i>each</i>                   | 1.75             | 1.75             | 1.75             |

**Instructions for Operating the DIETZ "HANDY" Generators**

DIETZ "HANDY" Generators consist of four principal parts:

- Water Tank or Dome.
- Double Case, forming Water Jacket.
- Carbide Basket (removable).
- Ash Receptacle (removable).

**Charging**—First, fill Water Jacket (once a season) through hole covered by flush-headed screw in top of case as shown in illustration. Second, place Ash Receiver in bottom of case and follow with the Carbide Basket *filled with half-inch carbide*. Finally, fill the Water Tank or Dome, seat securely in place and fasten with the four thumb screws. Generator is now ready to produce gas.

**Operating**—The Water Drip is controlled by a Knurled Knob and Indicator on top of the Water Tank or Dome. To start the generation of gas, *turn the Indicator from No. 0 to No. 5 on the scale found on the top of the Dome* or till the lamps in use burn brightly. A safety vent is provided against undue pressure.

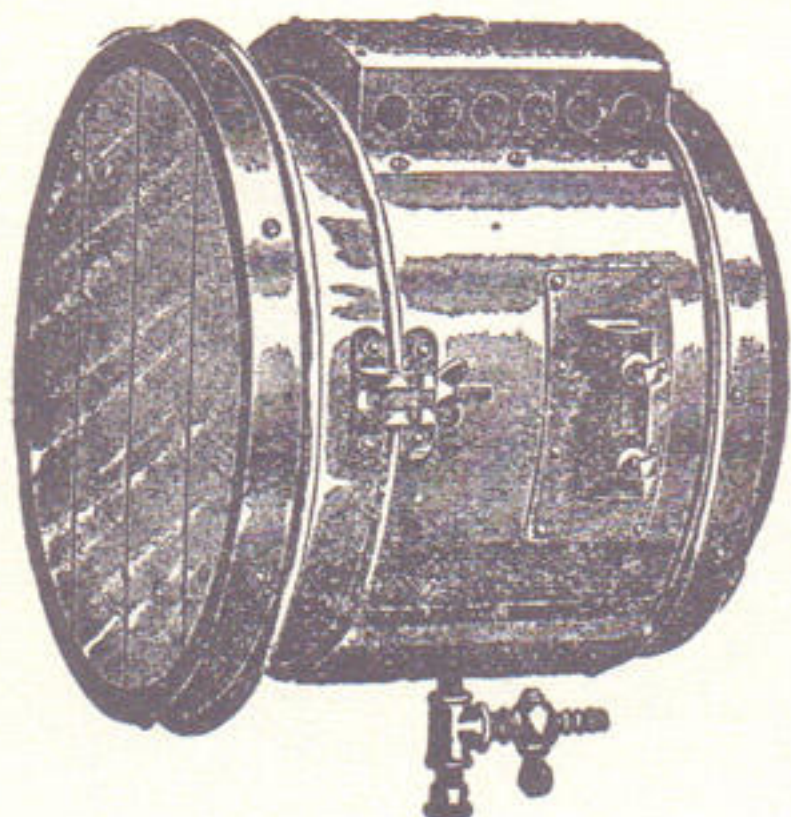
**To Economize**—By turning off water drip a few moments before arriving at destination, the carbide will be conserved.

*Every DIETZ Motor Car Lamp bears the name plainly "DIETZ"*

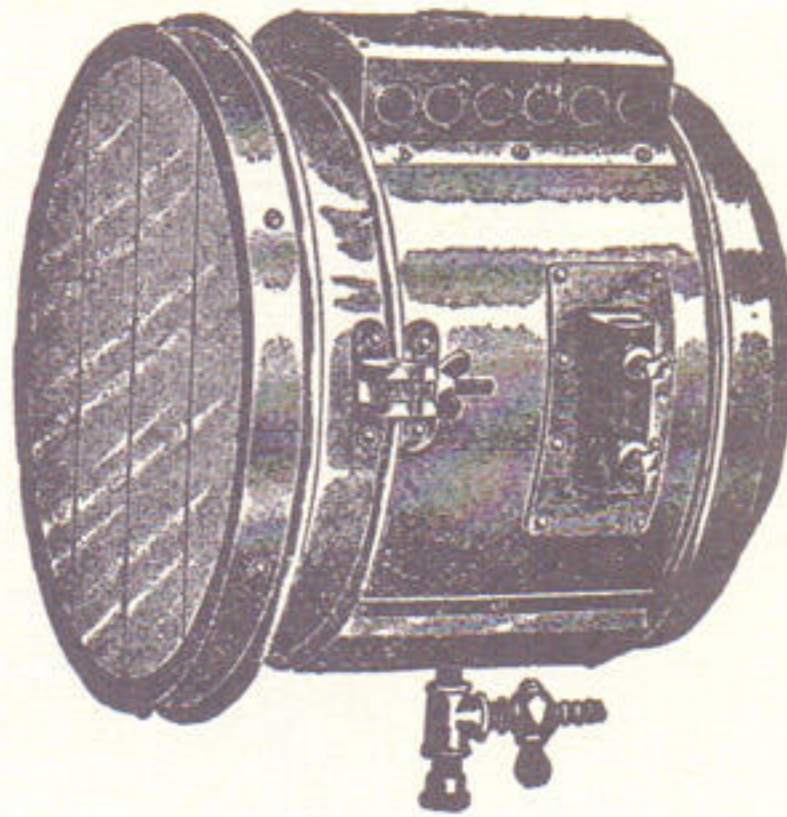
"YOUR MONEY'S WORTH OR YOUR MONEY BACK"

1908

## RUSHMORE AND RELIANCE Flare Front Searchlights



RUSHMORE, Nos. 110-114



RELIANCE, Nos. 115-119

WHILE the Rushmore and Reliance Navy Standard type lens mirror searchlights is preferred by the majority of manufacturers of high grade cars and by engineers and owners of mechanical tastes, as representing the maximum of illuminating power with the minimum size and weight, there is a considerable demand for lights of a more purely ornamental design and to present an appearance of greater size. To meet this demand we have brought out the new flare front searchlight, which is exactly the same as the standard searchlight, but having a larger flaring front, as shown in the cut above.

The wide front permits more of the light directly from the flame to strike the road directly in front of the car. This is desired by many drivers who do not care to make speed after dark. The lights have the same short focus lenses as the standard searchlights and give the same long range beam.

The Rushmore and Reliance Lamps illustrated and described above are practically exactly alike in every detail. The reason the prices below are lower on the Reliance is because the manufacturers of these lamps are not spending as much money in advertising, and are also satisfied with smaller profits. We absolutely guarantee that the Reliance Searchlights are all fitted with genuine Mangin Mirror Lens Reflectors.

| RUSHMORE |  | RELIANCE |  |
|----------|--|----------|--|
| No. 110. | Diam. Front Door, 7½ in.<br>Lens Mirror, 6 in.<br>Price, \$17.50; <b>our price</b> .....   | No. 115. | Diam. Front Door, 7½ in.<br>Lens Mirror, 6 in.<br>Price, \$17.50; <b>our price</b> .....   |
|          | <b>\$14.25</b>   |          | <b>\$10.00</b>   |
| No. 111. | Diam. Front Door, 9¼ in.<br>Lens Mirror, 7 in.<br>Price, \$20.00; <b>our price</b> .....   | No. 116. | Diam. Front Door, 9¼ in.<br>Lens Mirror, 7 in.<br>Price, \$20.00; <b>our price</b> .....   |
|          | <b>16.00</b>   |          | <b>12.50</b>   |
| No. 112. | Diam. Front Door, 10 in.<br>Lens Mirror, 8 in.<br>Price, \$24.00; <b>our price</b> .....   | No. 117. | Diam. Front Door, 10 in.<br>Lens Mirror, 6 in.<br>Price, \$24.00; <b>our price</b> .....   |
|          | <b>19.20</b>   |          | <b>15.00</b>   |
| No. 113. | Diam. Front Door, 11⅜ in.<br>Lens Mirror, 9 in.<br>Price, \$33.00; <b>our price</b> .....  | No. 118. | Diam. Front Door, 11⅜ in.<br>Lens Mirror, 9 in.<br>Price, \$3.300; <b>our price</b> .....  |
|          | <b>26.40</b>   |          | <b>17.50</b>   |
| No. 114. | Diam. Front Door, 12¼ in.<br>Lens Mirror, 10 in.<br>Price, \$45.00; <b>our price</b> ..... | No. 119. | Diam. Front Door, 12¼ in.<br>Lens Mirror, 10 in.<br>Price, \$45.00; <b>our price</b> ..... |
|          | <b>36.00</b>   |          | <b>21.50</b>   |

35 PER CENT AUTOMOBILE SUPPLY CO. A. B. NORWALK, PRES.



"YOUR MONEY'S WORTH OR YOUR MONEY BACK"

**'SOLAR' AND 'RELIANCE'**

**PARABOLENS PROJECTORS**

**SOLAR No. 783-784-785**

**RELIANCE No. 135-136-137**

1908



The Solar and Reliance Parabolens Projectors have a principle of light projection and reflection adopted by most European makers, and a style of design approved by the most exclusive motorists. Were first introduced in the U. S. in 1905, and as we predicted, have proven so popular that numbers of crude imitations are now being offered by others, constructed without scientific regard for focus of lens and reflectors and the combined correct location of all three. Are a combination of an accurately ground and polished plano convex lens in front of short focus, surrounded by a German silver reflector, which is a section of a parabola and a spherical rear silver reflector, (neither are silver plated copper reflectors) all in correct relation to each other. Produce a steady light which combines a long finding ray with a wide immediate front field. The use of the front condensor avoids the magnified flame flicker of lens mirror reflectors and their blinding rays when approached.

The Solar and Reliance lamps illustrated and described above are practically exactly alike in every detail. The reason the prices are lower on the Reliance is because the manufacturers of these lamps are not spending as much money in advertising, and are also satisfied with smaller profits.

We also furnish these lamps without condensers but with Mangin Mirror Reflector in the back. Same sizes and prices as below.

**SOLAR**

**RELIANCE**

783 11 inches high, 8½ inches front glass.  
For 7 inch brackets. Price \$17.50

Our price **14.00**

784 12½ inches high, 10 inches front glass.  
For 7 inch brackets. Price \$20.00

Our price **16.00**

785 14 inches high, 11½ inches front glass.  
For 8½ inch brackets. Price \$32.50

Our price **26.00**

135 11 inches high, 8½ inches front glass.  
For 7 inch brackets. Price \$17.50

Our price **10.50**

136 12½ inches high, 10 inches front glass.  
For 7 inch brackets. Price \$20.00

Our price **12.50**

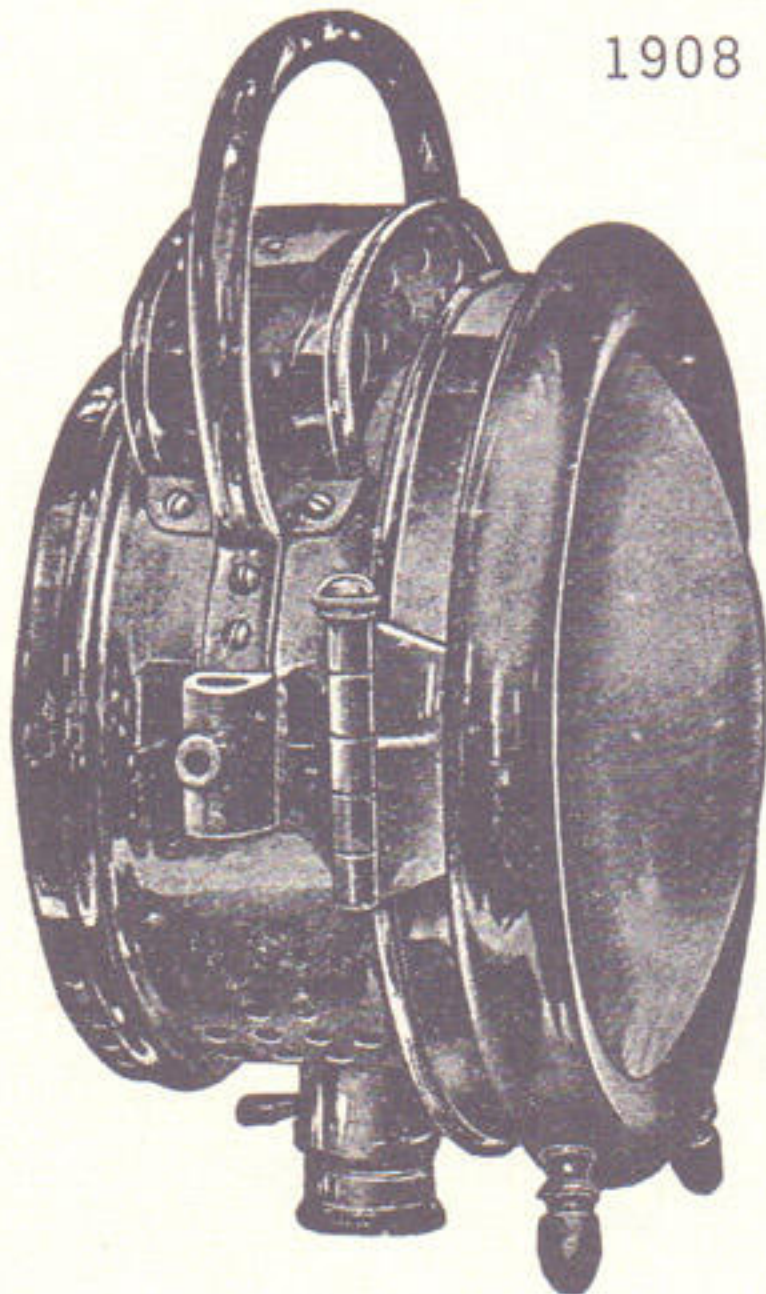
137 14 inches high, 11½ inches front glass.  
For 8½ inch brackets. Price \$32.50

Our price **15.00**

**35 PER CENT AUTOMOBILE SUPPLY CO. A. B. NORWALK, PRES.**

"YOUR MONEY'S WORTH OR YOUR MONEY BACK"

## THE NEWEST, LATEST AND BEST



1908

**No. 100**—This Lamp popularly known as the "Light Intensifier" has met with instant success at the last Auto shows, as its light giving qualities have never been equalled by any other lamps on the market.

It is compactly built of the heaviest gauge brass, doors and props being made of brass castings.

Furnished with highest grade reflector in back and in front a *powerful optically ground 9-inch condensing lens*, which not only magnifies the intensity of light, but also propels the long distance rays.

The general design of this—the handsomest lamp made—appeals to the eye and its simple, strong construction guarantees its durability.

Truly a **WONDERFUL LAMP** giving a wonderful light

Diameter front. .... 10½ in.  
Brackets, center to center.... 8½ in.  
Height.... 13½ Depth..... 7 in.

**No. 100**—Price, each.....\$25 00 Our Price, each.....\$17 50

## THE FAMOUS T. F. P. LAMPS

There are lots of good lamps, but the T. F. P. LAMPS are in a class by themselves. Beware of imitations which our competitors call "Just as good." Insist upon the genuine article with the "T. F. P." trade mark.

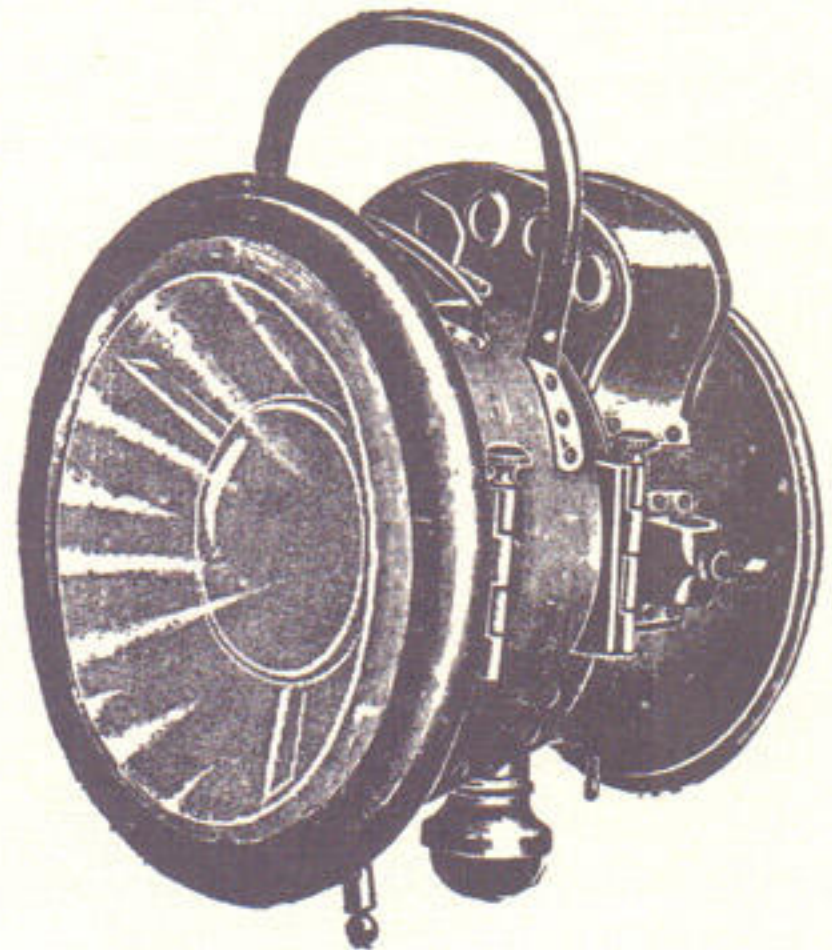
The "T. F. P." is handsome in design and well made. It is used on such cars as the Mercedes, Rochet Schneider, F. I. A. T. and several of the other high-grade foreign cars.

### IMITATION IS THE SINCEREST FLATTERY

No lamp has been more widely imitated both here and abroad than the T. F. P. Lamps. The workmanship of these lamps have never been equalled. Light giving power surpasses any other lamp on the market. Used by all who appreciate and want the best.

**No. 163**—3500 Candle Power.

Price, each.....\$25 00 Our Price, each.....\$15 00

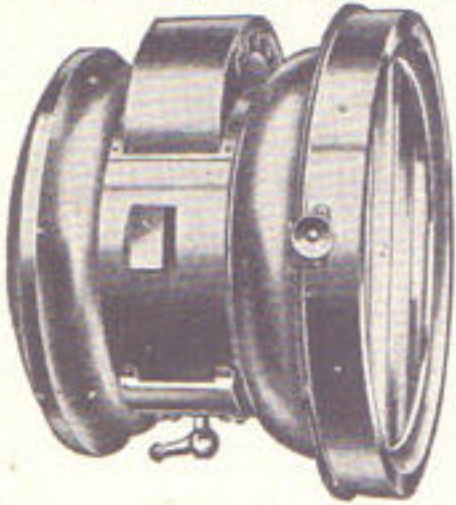


35 PER CENT AUTOMOBILE SUPPLY CO. A. B. NORWALK, PRES.

## Gray & Davis Headlights

Gray & Davis Lamps represent the highest quality in lamp manufacture. We are their exclusive New York representatives and carry a complete line

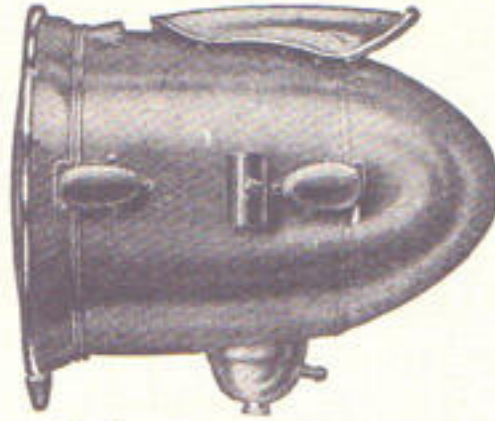
### SQUARE OR STRAIGHT LINE LENS MIRROR SEARCHLIGHTS



Designed especially to be used with the square oil side lamps, adding harmony to beautiful style embodied in these lamps. Fitted with short focus Bausch & Lomb Lens Mirror Reflectors and split front glass.

- Each.  
 No. 96. Diam. of front, 9 $\frac{5}{8}$  in. \$17.50  
 No. 97. Diam. of front, 10 $\frac{3}{4}$  in. 20.00  
 No. 98. Diam. of front, 11 $\frac{7}{8}$  in. 25.00  
**Large Front Searchlights**

### BULLET LAMPS



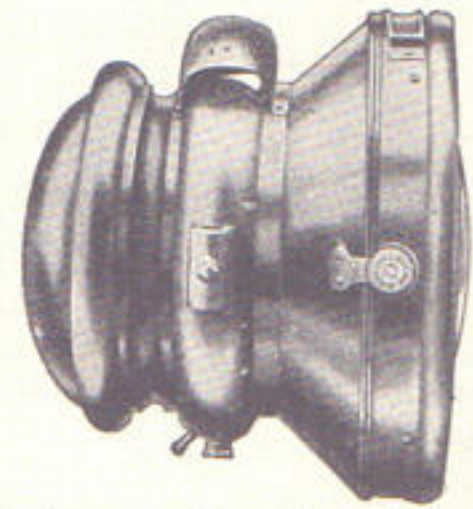
The Bullet Lamp is the style that made the G. & D. line famous. They are fitted with the double reflector system, that is, lens mirror in the back and silver reflector in front.

Style 42 is made in pairs and has single flat bracket for side of large cars or front of small cars. Has metal reflector without lens mirror.

- Each.  
 No. 40. Diam. of front, 8 in. \$15.00  
 No. 45. Diam. of front, 8 $\frac{3}{4}$  in. 20.00  
 No. 42. Diam. of front, 6 $\frac{3}{8}$  in. 7.50

### G. & D. ALPHA TYPE HEADLIGHT

1908



This is a most popular design lamp and corresponds with the Alpha type Has B. & L. lens mirror reflectors and gives that long penetrating ray so effective in touring. Used by many of the leading car manufacturers as their regular equipment.

- Each.  
 No. 61. Diam. of front, 9 $\frac{1}{4}$  in. \$15.00  
 No. 65. Diam. of front, 10 $\frac{3}{8}$  in. 17.50  
 No. 66. Diam. of front, 11 $\frac{1}{2}$  in. 20.00

## Gray & Davis Square Lamps

### SQUARE SIDE OIL LAMPS WITH OVAL GLASS



Particularly striking and attractive; suitable for touring cars and limousine. The latest pattern square oil lamp, with oval glass. Nothing finer made than these lamps, as they embody all the latest designs and are made in a most efficient manner.

- Each.  
 No. 835. Body 5 $\frac{1}{4}$ x5 $\frac{1}{4}$  in. .... \$10.50  
 No. 833. Body 4 $\frac{1}{4}$ x4 $\frac{3}{4}$  in. .... 8.50

### SQUARE SIDE OIL LAMPS



These lamps are very similar to 38 except that the glass is beveled, not bent. They are attractive lamps for touring cars and runabouts, giving light to side for reading sign boards, etc. A most satisfactory lamp at a low price.

- Each.  
 No. 36. Body 5 $\frac{1}{4}$ x5 $\frac{1}{4}$  in. .... \$8.50  
 No. 834. Body 4 $\frac{1}{4}$ x4 $\frac{1}{4}$  in. .... 6.50

### SQUARE SIDE OIL LAMPS



Square oil side lamps of large, massive appearance suitable for touring cars or limousines. The glass in these lamps is beveled and bent and presents a very fine appearance. These lamps are practically the same as the 835, except that they have full square glasses giving the greatest possible amount of light.

- Each.  
 No. 38. Body 5 $\frac{1}{4}$ x5 $\frac{1}{4}$  in. .... \$10.50  
 No. 839. Body 4 $\frac{3}{4}$ x4 $\frac{3}{4}$  in. .... 8.50

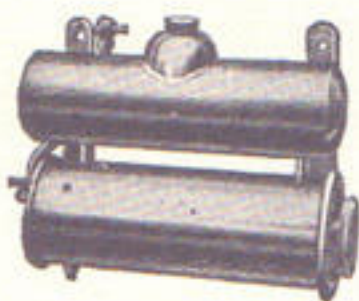
### SQUARE TAIL OIL LAMP



The square tail lamp can be used in connection with any of the square side lamps. It bears a resemblance to all and is in quality in keeping with the best. Has ruby rear light and white side light. Has large oil pot and will stay lit under the most trying conditions.

- No. 837. Square Tail Lamp. .... \$7.00

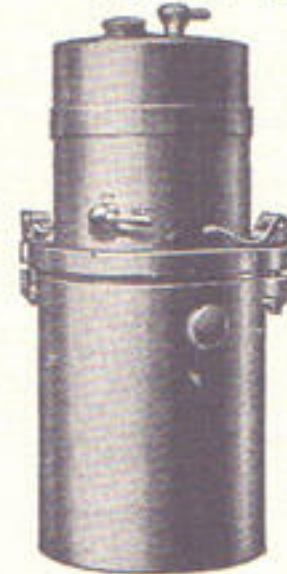
### TYPE "F" GENERATOR



recommended for simplicity and ease of cleaning.

- No. F. Generator ..... Each, \$15.00

### TYPE "G" GENERATOR



Type "G" Generator constructed on the drip principle and requires one valve only. Turning on the gas turns on the water. Shutting off gas shuts off water. Simplicity and efficiency combined in the best generator made.

- No. G. Generator, each, \$15.00

Correspond With Us for Any Article Not Listed in This Catalogue

## Dietz Lamps

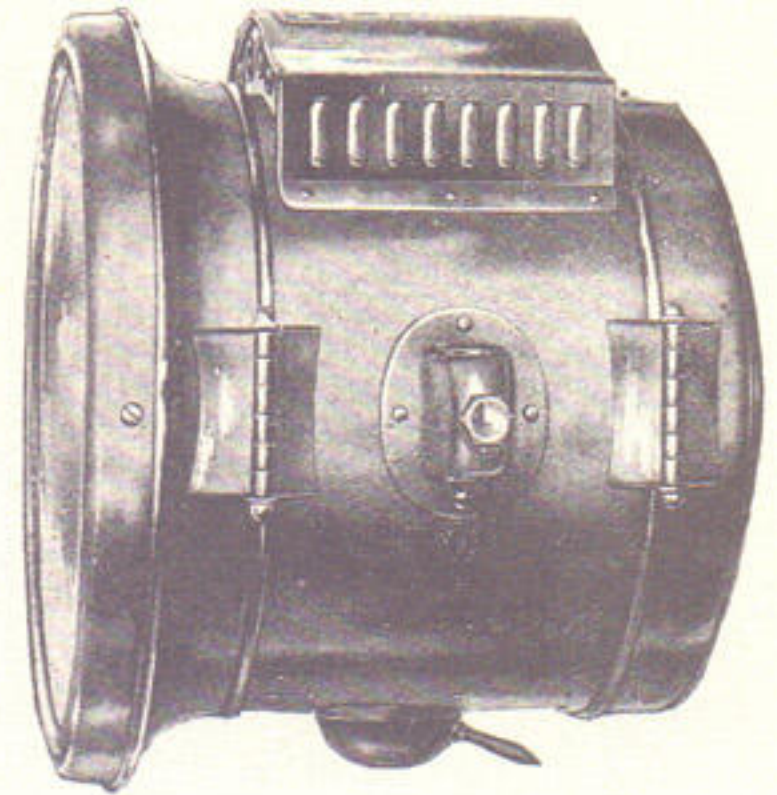
### DIETZ "FLARE" MIRROR LENS HEADLIGHT

Fitted with Bausch & Lomb Mirror Lens

This popular style of Headlight is superior to most so-called "Flare Front" lights on the market, being hinged front and back, giving accessibility to all parts for cleaning.

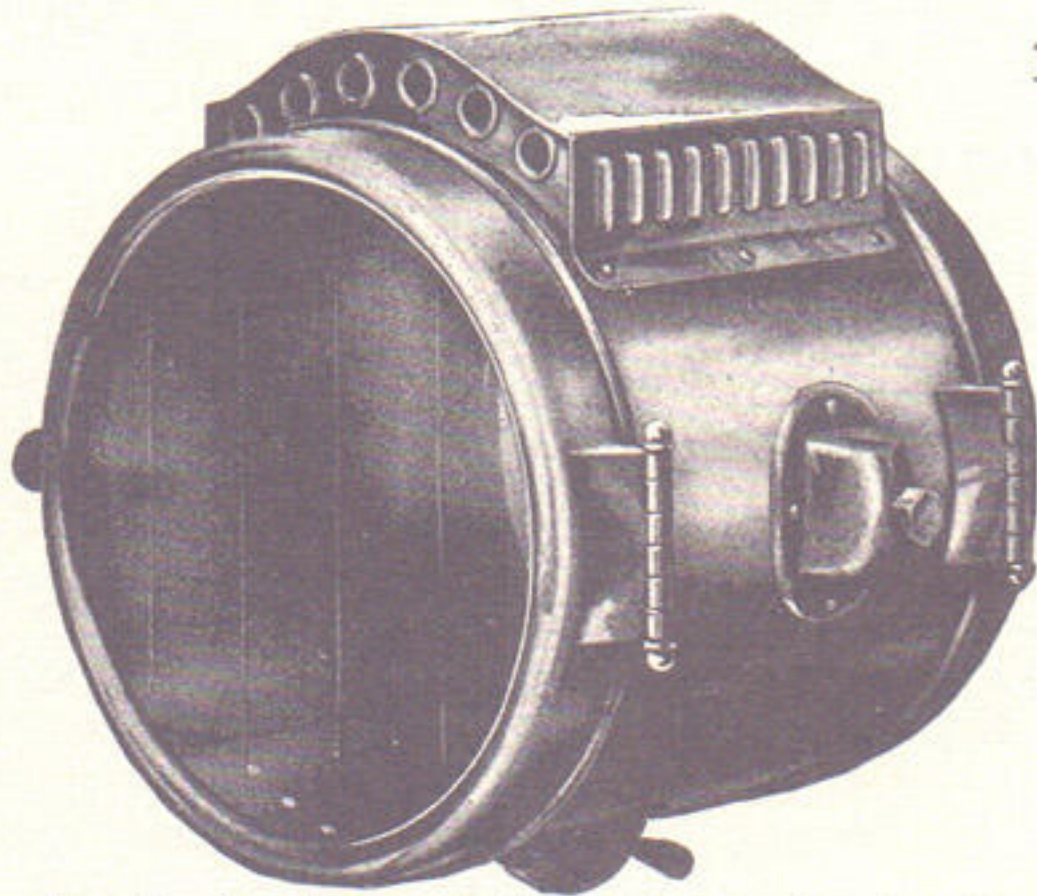
The Dietz "Flare Front" Headlights give a maximum candle power of illumination with a minimum consumption of gas. They have standard sockets, conforming to the standard brackets on all motor cars.

| "Flare" Headlights,             | 6 inches.<br>Lamp. | 7 inches<br>Lamp. | 8 inches.<br>Lamp. | 10 inches<br>Lamp. |
|---------------------------------|--------------------|-------------------|--------------------|--------------------|
| Extreme Height .....            | 8¼ in.             | 9¼ in.            | 10¼ in.            | 13 in.             |
| Extreme Depth .....             | 7½ in.             | 8 in.             | 9 in.              | 10½ in.            |
| Width of Barrel.....            | 6¼ in.             | 7½ in.            | 8½ in.             | 10¼ in.            |
| Diameter Front Glass.....       | 7¾ in.             | 8½ in.            | 9½ in.             | 12 in.             |
| Diameter Mirror Lens.....       | 5 in.              | 6 in.             | 7 in.              | 9 in.              |
| Distance between Sockets.....   | 6¾ in.             | 8½ in.            | 9½ in.             | 11 in.             |
| Burner regularly furnished..... | ¾ ft.              | ½ ft.             | ¾ ft.              | 1 ft.              |
| Candle Power .....              | 400                | 535               | 950                | 1160               |
| Price, each.....                | \$9.00             | \$11.00           | \$15.00            | \$25.00            |

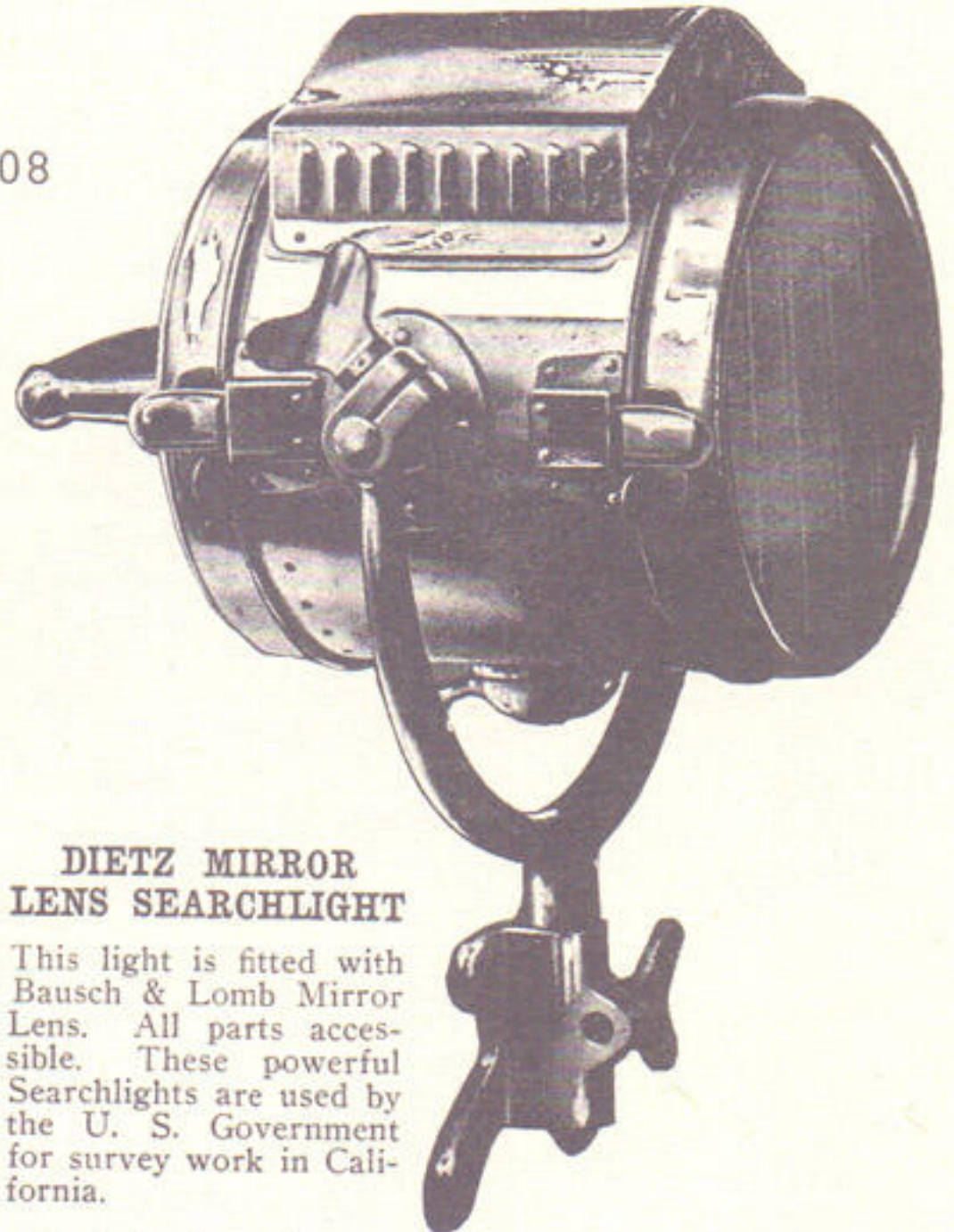


### DIETZ MIRROR LENS HEADLIGHT

Fitted with Bausch & Lomb Mirror Lens. All parts Accessible. Bracket and Stub Extra.



1908



### DIETZ MIRROR LENS SEARCHLIGHT

This light is fitted with Bausch & Lomb Mirror Lens. All parts accessible. These powerful Searchlights are used by the U. S. Government for survey work in California.

| Mirror Lens Headlights     | 6-in.<br>Lamp. | 7-in.<br>Lamp. | 8-in.<br>Lamp. | 10-in.<br>Lamp. |
|----------------------------|----------------|----------------|----------------|-----------------|
| Extreme Height .....       | 8 in.          | 9¼ in.         | 10½ in.        | 12¼ in.         |
| Extreme Depth .....        | 7½ in.         | 7¾ in.         | 8½ in.         | 10¼ in.         |
| Width of Barrel.....       | 6¼ in.         | 7½ in.         | 8½ in.         | 10¼ in.         |
| Diameter Front Glass....   | 5½ in.         | 6½ in.         | 7½ in.         | 9¾ in.          |
| Diameter Mirror Lens....   | 5 in.          | 6 in.          | 7 in.          | 9 in.           |
| Distance between Sockets.  | 6¾ in.         | 8½ in.         | 9½ in.         | 11 in.          |
| Burner regularly furnished | ¾ ft.          | ½ ft.          | ¾ ft.          | 1 ft.           |
| Candle Power .....         | 400            | 535            | 950            | 1160            |
| Price each .....           | \$9.00         | \$11.00        | \$14.00        | \$25.00         |

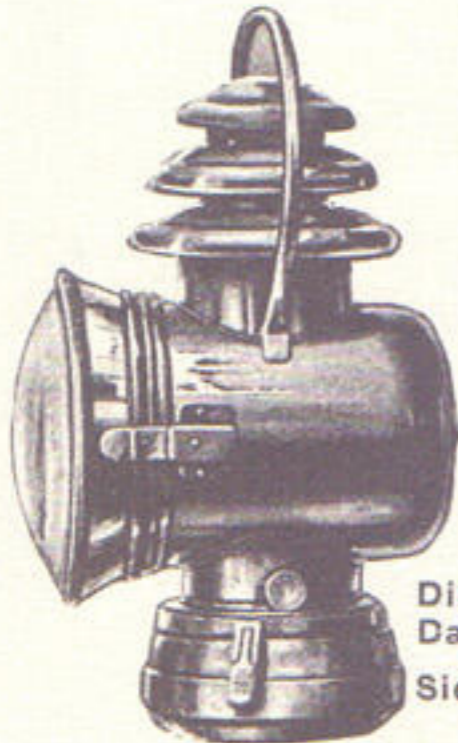
Made in four sizes, 6, 7, 8 and 10 inches.

| 6-in.  | 7-in.   | 8-in.   | 10-in.  |
|--|---------|---------|---------|
| \$9.00   | \$11.00 | \$14.00 | \$25.00 |
| Solid bronze brackets with swivel studs are included in the price. |         |         |         |
| 6-in.  | 7-in.   | 8-in.   | 10-in.  |
| \$15.00  | \$18.00 | \$21.00 | \$23.00 |

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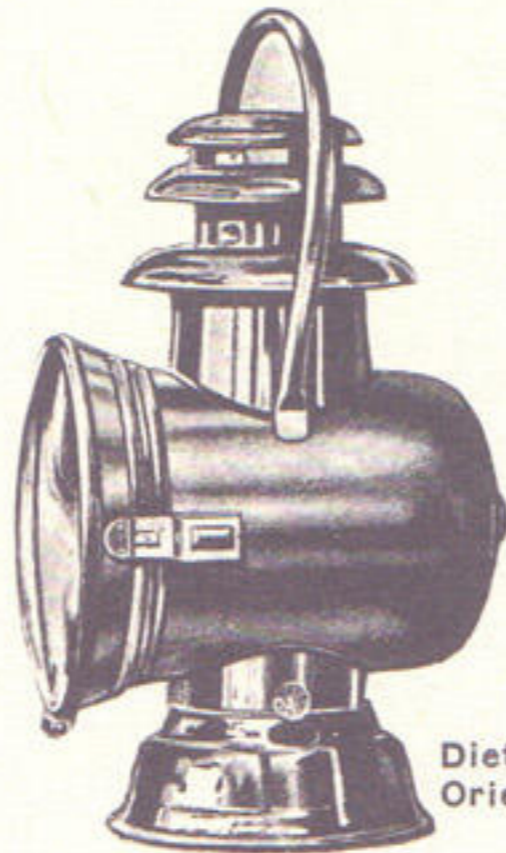
1908

# Dietz Lamps



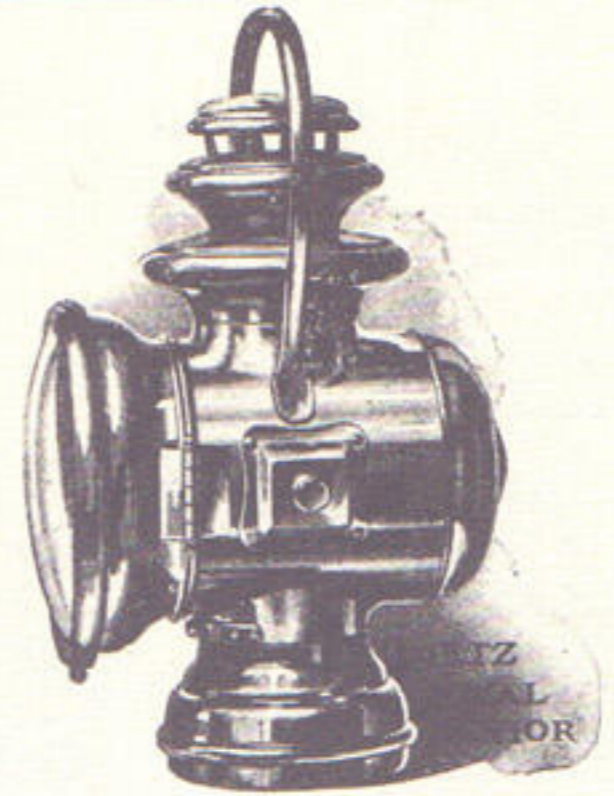
**Dietz Dainty Side**

For use on small cars. Thirteen candle-power.  
Height, 11 $\frac{3}{4}$  in. Depth, 7 $\frac{1}{4}$  in.  
Diam. of lens, 5 $\frac{1}{4}$  in.  
Price, each.....\$3.75

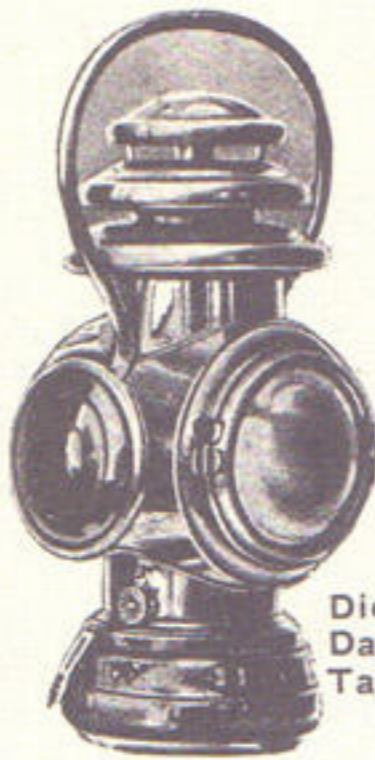


**Dietz Orient**

For runabouts and touring runabouts.  
Height, 12 $\frac{3}{4}$  in. Depth, 7 $\frac{3}{4}$  in.  
Diam. of lens, 5 $\frac{3}{4}$  in.  
Price, each.....\$4.00



For large touring cars. Forty candle-power.  
Height, 13 $\frac{3}{4}$  in. Depth, 8 $\frac{1}{4}$  in.  
Diam. of lens, 6 $\frac{1}{4}$  in.  
Price, each.....\$7.00



**Dietz Dainty Tail**

Suitable for all style cars. Ten candle-power.  
Height, 11 $\frac{1}{2}$  in. Width, 4 $\frac{1}{4}$  in.  
Diam. of lens, 3 in.  
Price, each.....\$4.00



**DIETZ SENTINED TAIL**

A compact tail lamp. Furnished either in electric or acetylene styles.  
Price, Acetylene.....\$3.25  
Price, Electric.....3.75



**DIETZ STERLING JUNIOR**

Medium size square lamp. Twenty candle-power.  
Price, each.....\$9.00

### DIETZ ORIENT TAIL LAMP

Same construction as the Dainty Tail Lamp, but larger. Twelve candle-power.  
Height, 13 $\frac{1}{4}$  in. Width, 4 $\frac{7}{8}$  in.  
Diam. of lens, 3 in.  
Price, each.....\$4.50



**Dietz Presto Acetylene Burner**

Burner for use with acetylene gas in any Dietz Lamp. Fitted with  $\frac{1}{2}$ -foot tip.  
Price, each.....\$1.25



**Dietz Electric Bulb Attachment**

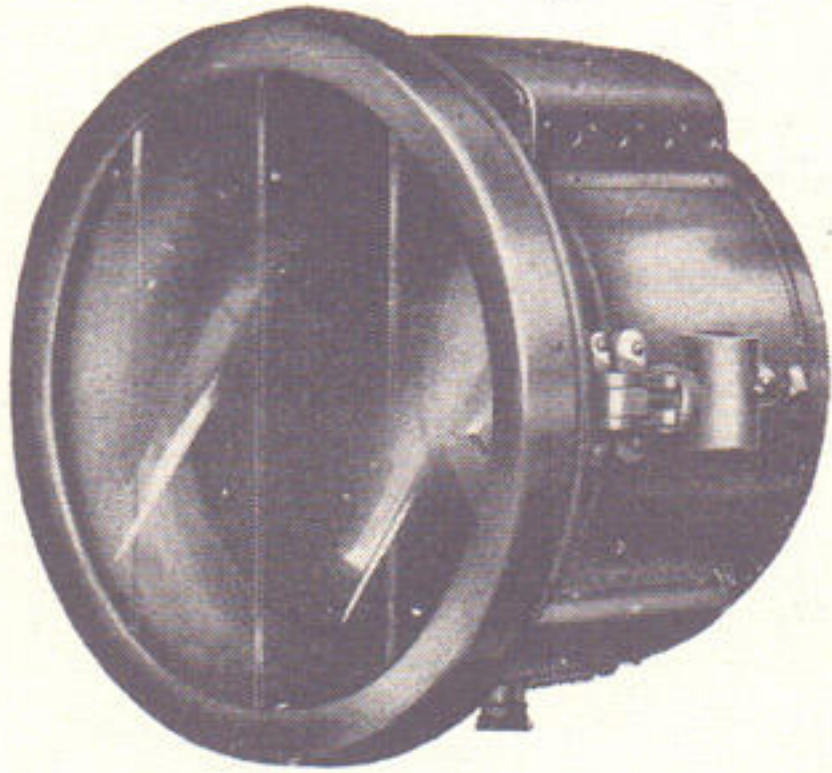
Burner for use with electricity. Can be substituted for oil burner and connected to battery.  
Price, each.....\$1.60

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**SOLAR LAMPS.**

Solar Lamps and Generators are the result of years of experience in the making of acetylene gas lamps and generators. All details of construction and operation have been carefully tested before being adopted. The best of material and most skilled workmen are employed in the manufacture of Solar Lamps and Generators in the best equipped lamp factory in the world.

**Mirror Searchlight.**



1908

PRICES.

**Mirror Searchlights.**

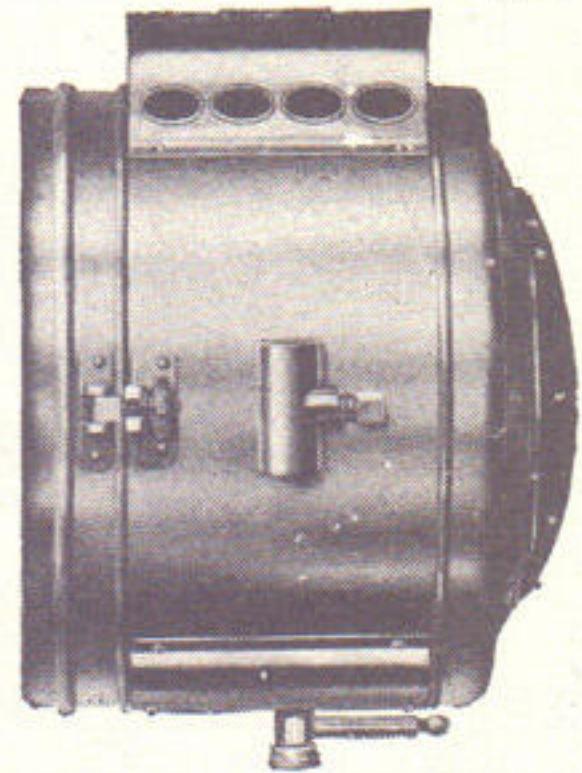
|                 |         |
|-----------------|---------|
| Model 856A..... | \$11.00 |
| Model 857A..... | 15.00   |
| Model 858A..... | 20.00   |
| Model 859A..... | 30.00   |

PRICES.

**Lens Mirror Searchlight.**

|                |         |
|----------------|---------|
| Model 856..... | \$10.00 |
| Model 857..... | 14.00   |
| Model 858..... | 19.00   |
| Model 859..... | 28.50   |

**Lens Mirror Searchlight.**



**Solar Motor Searchlight.**



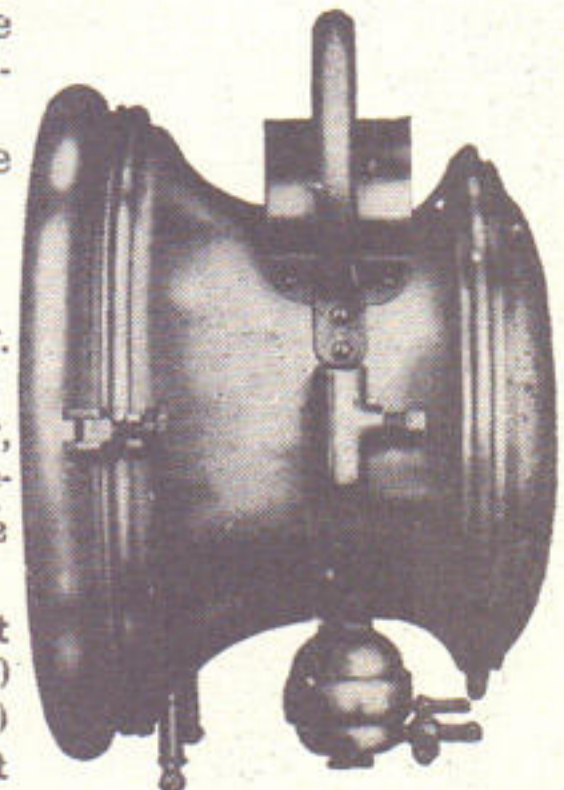
A gas generator headlight of attractive design and popular price, combining the long finding ray of the mangin mirror reflector in the back with the wide light from the removable aluminum front reflector. For 7 or 8 1/4 in. fork racket and are suitable for most Style Cars.

Model 898.—8-inch Lens Mirror, wide light front reflector, 8 1/4 in. between prop centers, 14 in. high, 9 1/2 inches long. Price, \$30.00.

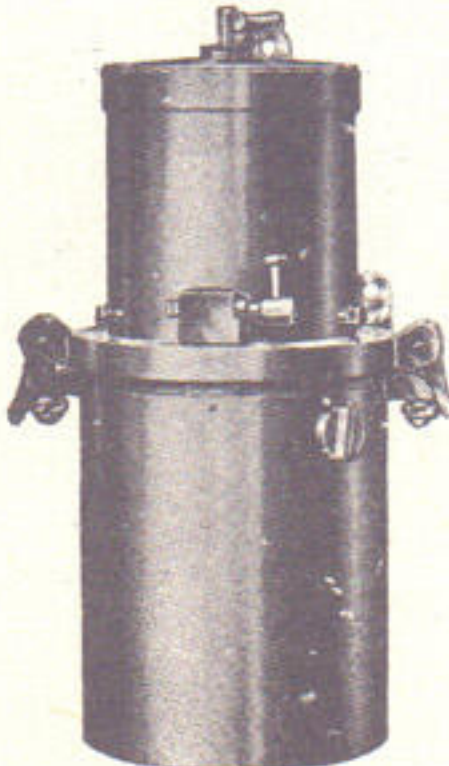
Model 887—7-inch Lens Mirror, wide light, front reflector, 7-inch between prop. centers, 12 in. high, 8 1/2 in. long. Price, \$20.00.

|   |         |
|---|---------|
| 767 Lens Mirror, 7 in., with dash bracket without generator .....     | \$25.00 |
| With 711 generator .....  | 35.00   |
| 768 Lens Mirror, 8-in., with dash bracket without generator .....     | \$30.00 |
| with 711 generator .....  | 40.     |
| 769 Lens Mirror, 9 1/2 in., with dash bracket without generator ..... | \$40.00 |
| with 712 generator .....  | 55.00   |

**Lens Mirror Projector.**



**Model 898.**



**SOLAR GAS GENERATORS.**

No. 711 is 12 inches high, 5 1/2 in. wide, with lower bracket holes 4 5/8 inches, centers and upper with adjustment from 2 to 4 inches from lower.

Has a carbide capacity of 1 3/4 lbs. and will supply 3/4 foot of gas per hour. Suitable for a single large or two small headlights.

|                              |         |
|------------------------------|---------|
| No. 711 Single, Brass..each, | \$10.00 |
| No. 712 Double, Brass..each, | 15.00   |

No. 712 is 15 inches high and 8 inches wide, with lower bracket holes 5 1/8 inches, centers and upper with adjustment from 2 1/2 to 5 inches from lower.

Has carbide capacity of 3 1/2 lbs. and will supply 1 1/2 feet of gas per hour. Suitable for any two headlights.

|                     |             |
|---------------------|-------------|
| No. 713 Brass ..... | each, 22.50 |
| Each with Gas Bags. |             |

GRAY AND DAVIS LAMPS.



NO. 834.

No. 834.—Corresponds with No. 36, being smaller in size.

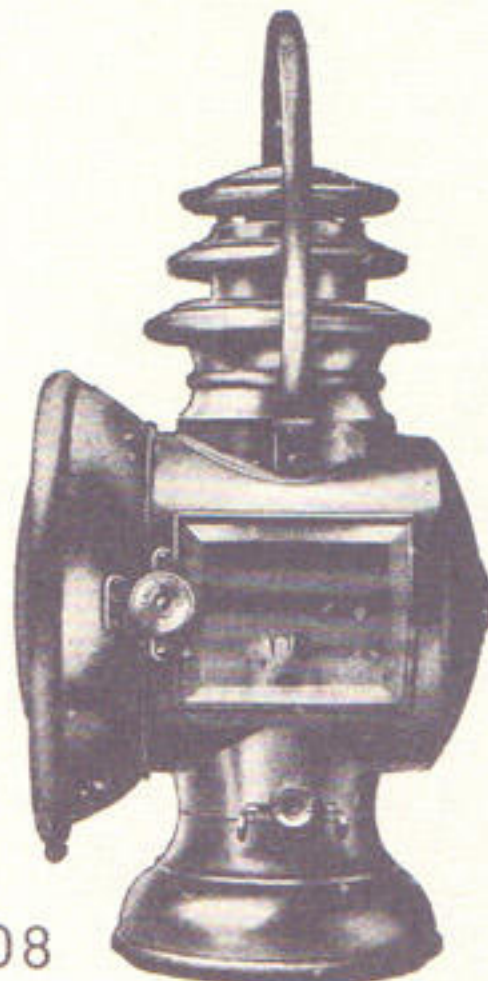
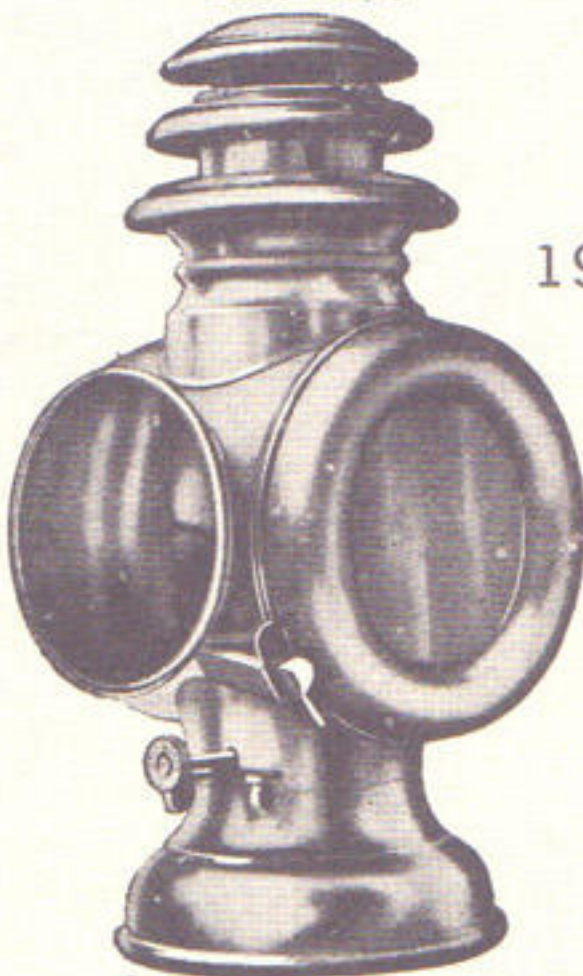
Style 834.  
Price, each . . . \$6.50  
Size body, 4 3/4 x 4 3/4 ins.  
Extreme height, 13 ins.

TAIL LAMP.

NO. 817.

No. 817—Tubular oil tail lamp, a very popular design, suitable for use on large touring cars.

Style 817  
Price, each . . . \$6.00  
Diam flange, 5 in.  
Extreme length, 5 1/2 in.  
Extreme height, 11 1/4 in.



NO. 819.

No. 819.—A cylindrical lamp, similar in general lines to the No. 29 but of smaller size and suitable for medium size touring cars.

Style 819.  
Price, each . . . \$6.50  
Diam. flange 6 5/8 ins.  
Extreme length, 6 3/4 ins.  
Extreme height, 13 3/4 ins.

GENERATOR.

Type "G."—Constructed on the drip principle and requires one valve only. Turning on the gas turns on the water. Shutting off gas shuts off water.

Price, each . . . \$15.00



RUSHMORE SEARCHLIGHTS AND GENERATOR.

Rushmore Generator.

Round type, single valve . . . . . \$15.00  
Round type, double valve . . . . . 15.50  
Square type, No. 1, double valve 19.50  
Square type, No. 2, double valve. 25.00

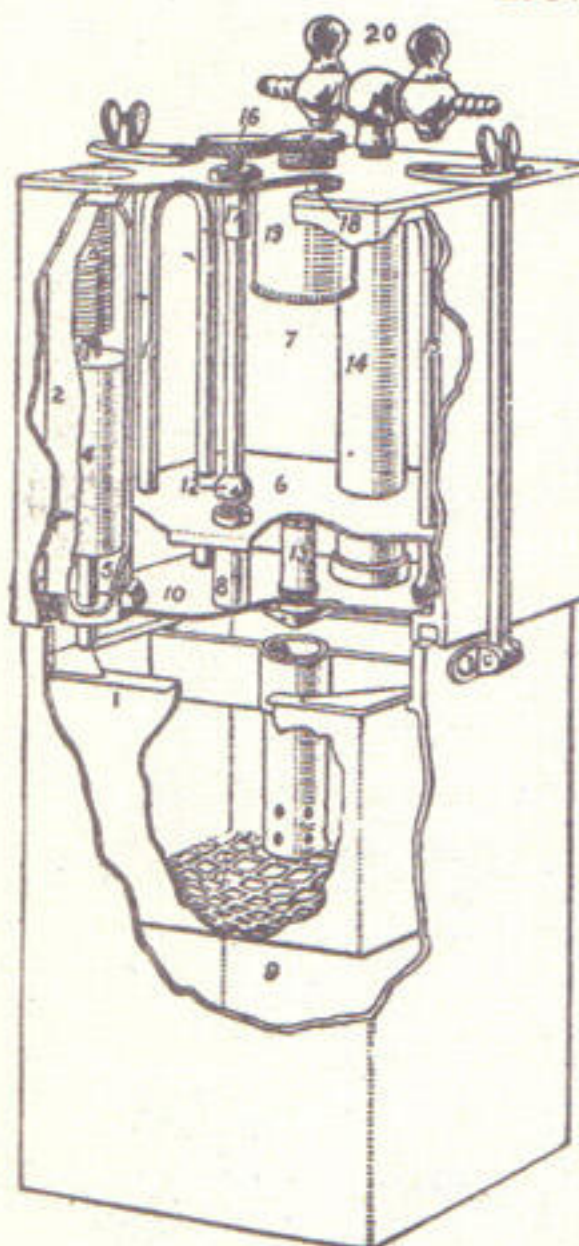
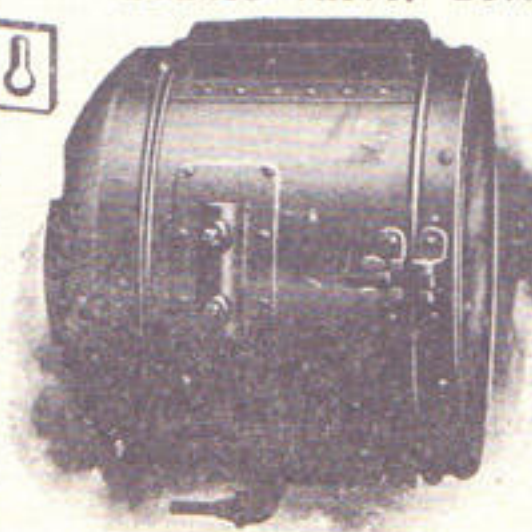


Fig. 1

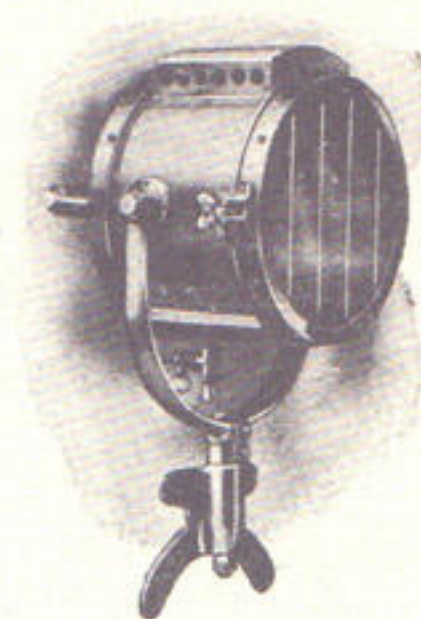
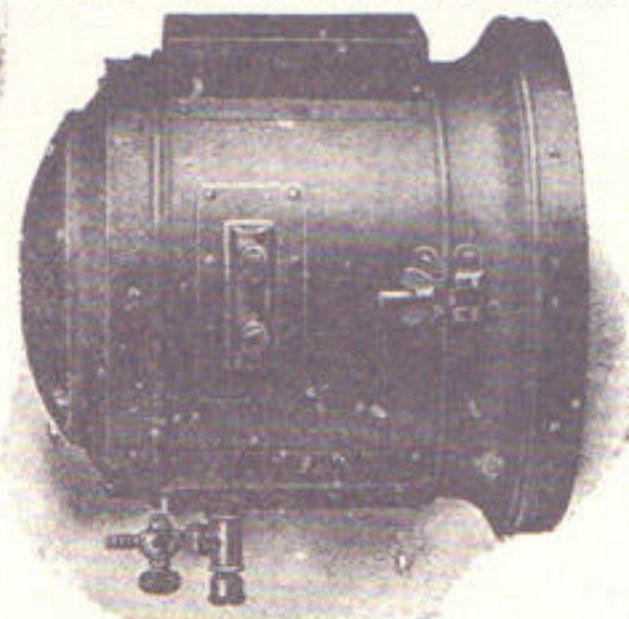
Flare Front Searchlights, Rigid.

Size A . . . . . \$17.50  
Size B . . . . . 20.00  
Size C . . . . . 24.00  
Size D . . . . . 33.00  
Size E . . . . . 45.00



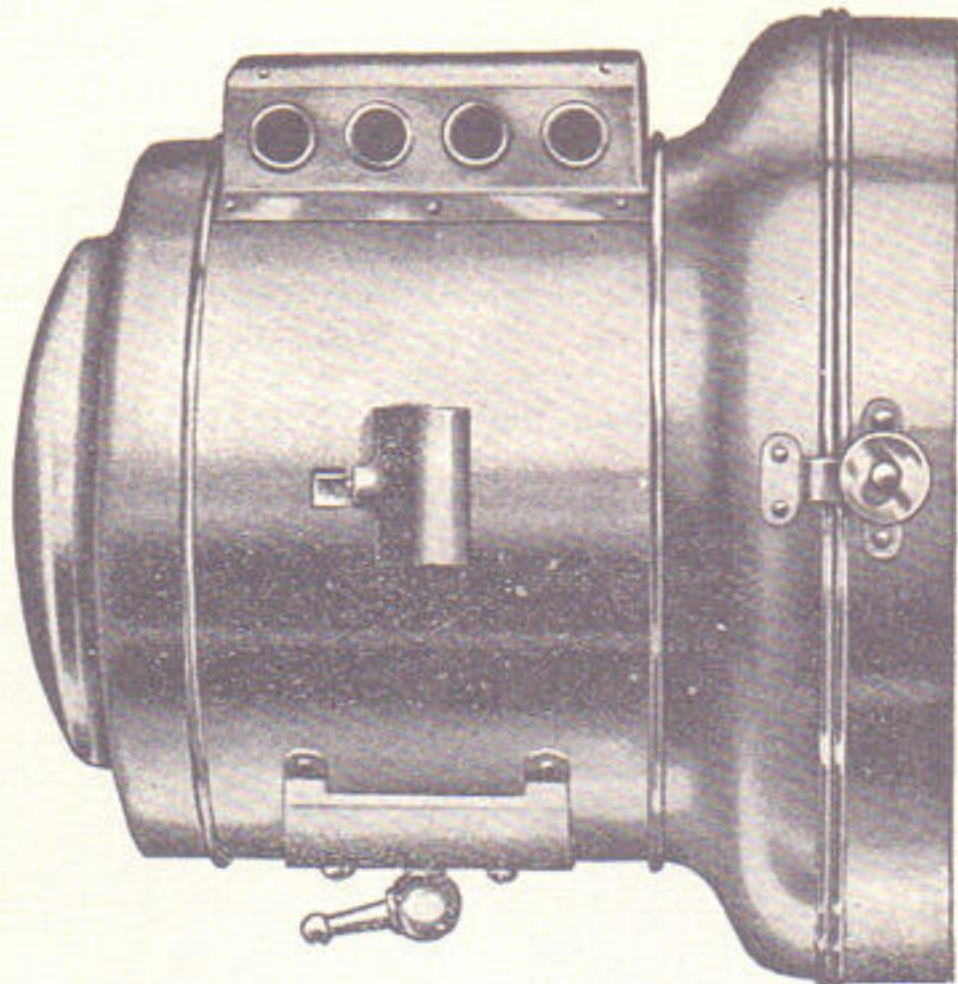
Plain Door—Rigid.

6 inch . . . . . \$15.50  
7 inch . . . . . 17.50  
8 inch . . . . . 21.50  
9 inch . . . . . 30.00  
10 inch . . . . . 39.50



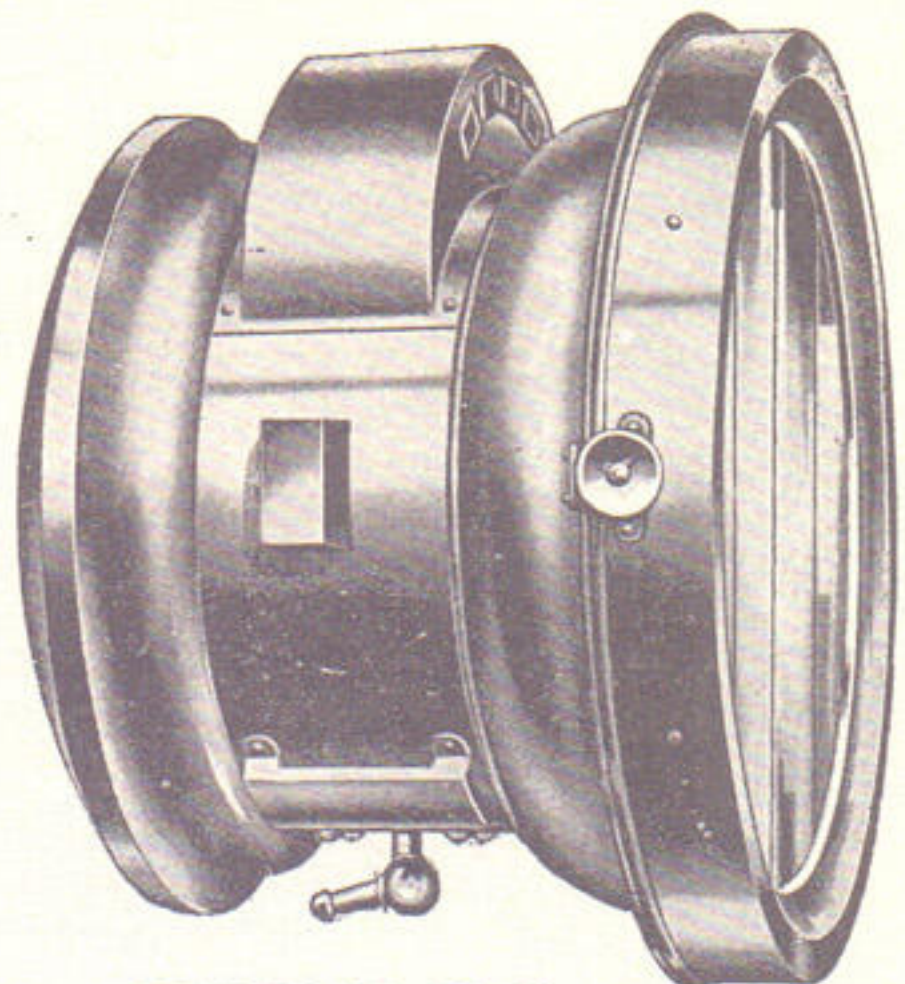
Swing Bracket, Search. with Handle.

6 in . . . \$20.00  
7 in . . . 23.00  
8 in . . . 27.50  
9 in . . . 36.50  
10 in . . . 46.50



**Gray  
and  
Davis  
Lamps**

1908



STYLES No. 867, 869, 871.

STYLES 96, 97, 98.

All the cuts shown are direct from photograph, giving a good idea of every detail of the design.

Nos. 867, 869, 871, are all of the same style, different only in size. All are equipped with the lens mirror, 6 in. No. 867, 7 in. No. 869, 8 in. No. 871.

|                      | Style 867                          | Style 869                          | Style 871                           |
|----------------------|------------------------------------|------------------------------------|-------------------------------------|
| Price, each          | \$15.00                            | \$17.50                            | \$20.00                             |
| Diam. Flange         | 9 ins.                             | 9 <sup>7</sup> / <sub>8</sub> ins. | 10 <sup>3</sup> / <sub>4</sub> ins. |
| Extreme Length       | 8 ins.                             | 9 ins.                             | 10 <sup>1</sup> / <sub>4</sub> ins. |
| Extreme Height       | 9 ins.                             | 9 <sup>7</sup> / <sub>8</sub> ins. | 10 <sup>3</sup> / <sub>4</sub> ins. |
| Distance bet. Props. | 7 <sup>1</sup> / <sub>2</sub> ins. | 8 <sup>3</sup> / <sub>8</sub> ins. | 9 <sup>1</sup> / <sub>8</sub> ins.  |

Nos. 96, 97, 98. Square or Straight Line Lens Mirror Searchlight. Designed especially to be used with the square oil side lamps. Particular attention is called to the square corners made up from straight lines, square ventilating holes and square socket. Used with our square side oil lamps your equipment will be in perfect harmony. No. 96 for small size cars. No. 97 for medium size cars. No. 98 for large size cars.

|                      | Style 96                           | Style 97                            | Style 98                            |
|----------------------|------------------------------------|-------------------------------------|-------------------------------------|
| Price, each          | \$17.50                            | \$20.00                             | \$25.00                             |
| Diam. Flange         | 9 <sup>5</sup> / <sub>8</sub> ins. | 10 <sup>3</sup> / <sub>4</sub> ins. | 11 <sup>7</sup> / <sub>8</sub> ins. |
| Extreme Length       | 8 <sup>1</sup> / <sub>2</sub> ins. | 9 <sup>1</sup> / <sub>4</sub> ins.  | 10 <sup>1</sup> / <sub>4</sub> ins. |
| Extreme Height       | 9 <sup>5</sup> / <sub>8</sub> ins. | 10 <sup>3</sup> / <sub>4</sub> ins. | 11 <sup>7</sup> / <sub>8</sub> ins. |
| Distance bet. Props. | 7 <sup>1</sup> / <sub>2</sub> ins. | 8 <sup>3</sup> / <sub>8</sub> ins.  | 9 <sup>1</sup> / <sub>8</sub> ins.  |



No. 38.

No. 38. Square oil lamp of large massive appearance, suitable for touring cars or limousines. The glass in this lamp is beveled and bent and has a very pleasing effect.

|             | Style 38  |
|-------------|---|
| Price, each | \$10.50   |
| Size Body   | 5 <sup>1</sup> / <sub>4</sub> x5 <sup>1</sup> / <sub>4</sub> in. Extreme Height, 14 <sup>1</sup> / <sub>4</sub> in. |

No. 29. A large massive cylindrical body lamp for use on large type touring cars. It has a glass on the side and is of very stylish and striking appearance.

|   | Style 29                                   |
|---|--|
| Price, each                                     | \$9.00                                     |
| Diam. Flange, 7 <sup>3</sup> / <sub>8</sub> in. | Length, 8 <sup>3</sup> / <sub>8</sub> in.  |
|   | Height, 15 <sup>3</sup> / <sub>8</sub> in. |

No. 839 corresponds with No. 38, being smaller in size.

|  | Style 839      |
|--|----------------|
| Price, each  | \$8.50         |
| Size body, 4 <sup>3</sup> / <sub>4</sub> x 4 <sup>3</sup> / <sub>4</sub> in. | Height, 13 in. |

No. 835. Latest pattern square oil lamp, with oval glass, similar to our No. 38 and No. 36 so popular last year. Particularly striking and attractive; suitable for touring cars or limousines

|   | Style 835. |
|---|------------|
| Price, each   | \$10.50    |
| Size body 5 <sup>1</sup> / <sub>4</sub> x5 <sup>1</sup> / <sub>4</sub> in. Extreme Height, 14 <sup>1</sup> / <sub>4</sub> in. |            |



No. 36.

No. 36. Is the same style and size as the No. 38 and differs only in the glass, which is beveled, not bent.

|  | Style 36. |
|--|-----------|
| Price, each  | \$8.50    |
| Size body, 5 <sup>1</sup> / <sub>4</sub> x5 <sup>1</sup> / <sub>4</sub> in. Extreme height, 14 <sup>1</sup> / <sub>4</sub> in. |           |



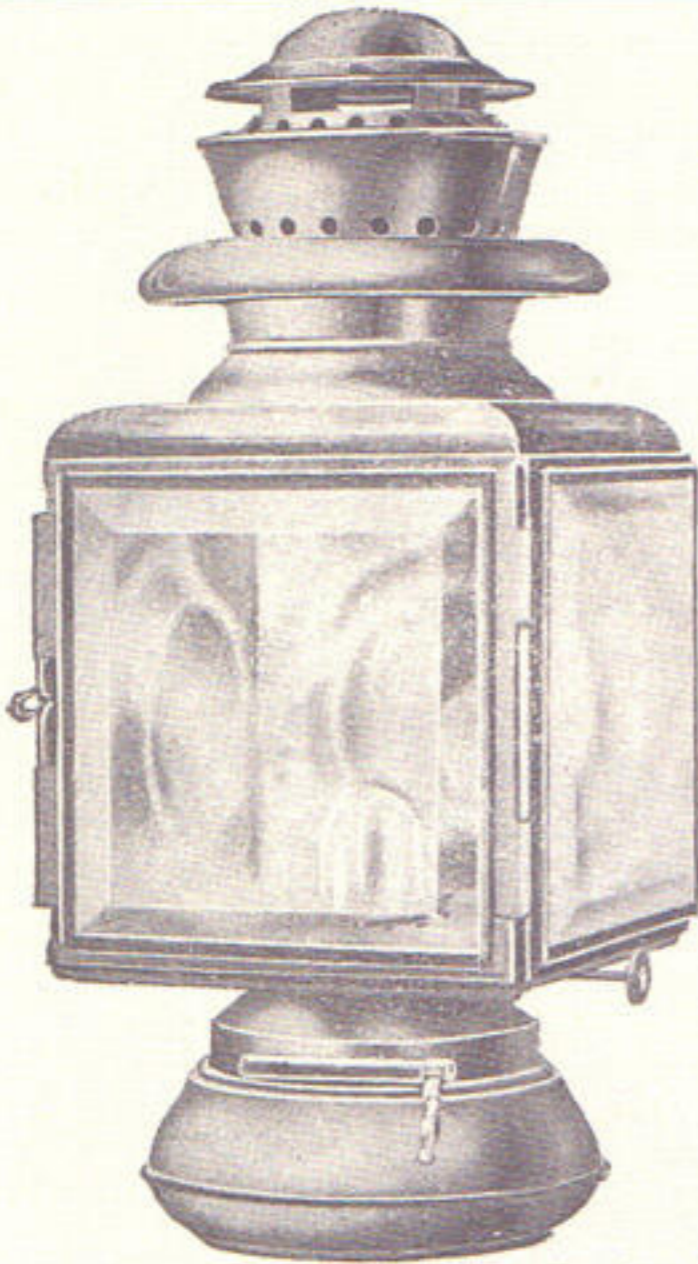
## Ham Cold Blast

Oil Side Lights and Rear Lamps.

1908

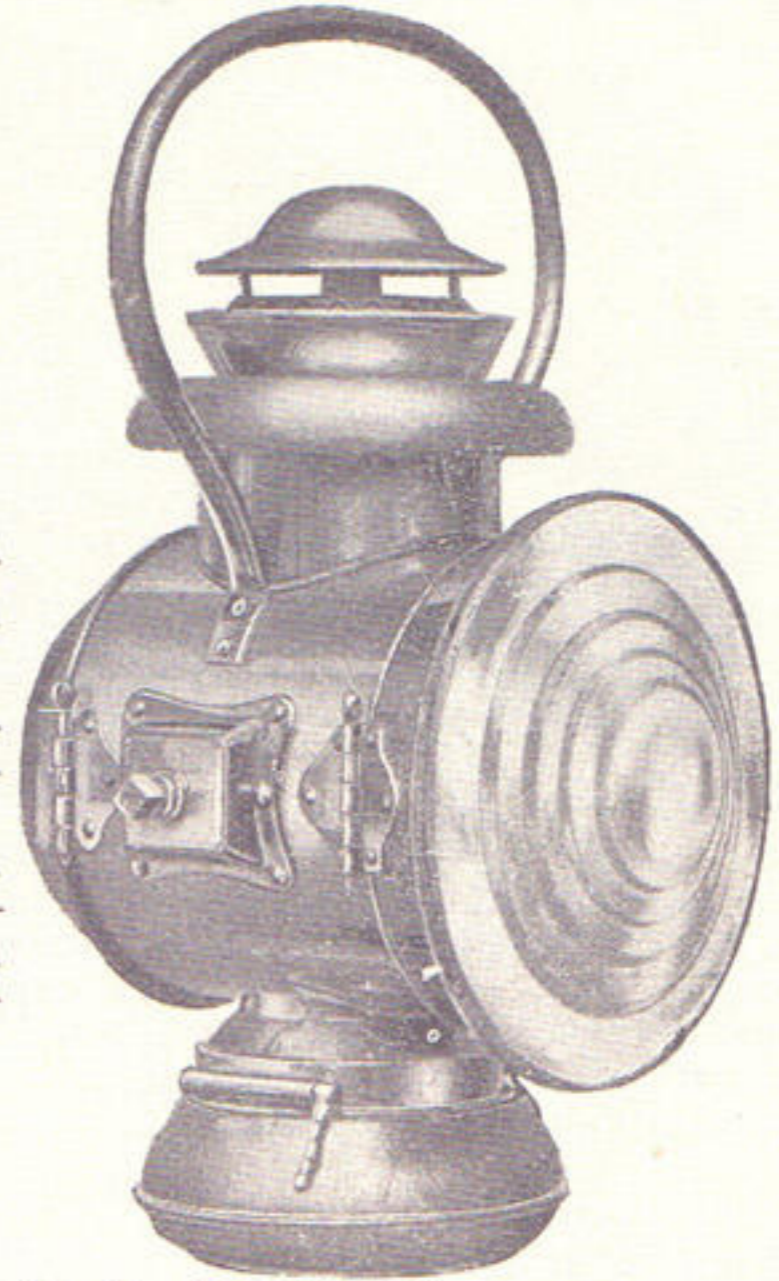
A clear, steady, large flame, and a clean, bright interior is a trade mark of the Ham Cold Blast Principle.

Ham lamps are constructed with handsome appearance and elegant finish. They have combined strength and sturdiness of construction to withstand the hard usage an auto lamp is necessarily subjected to.



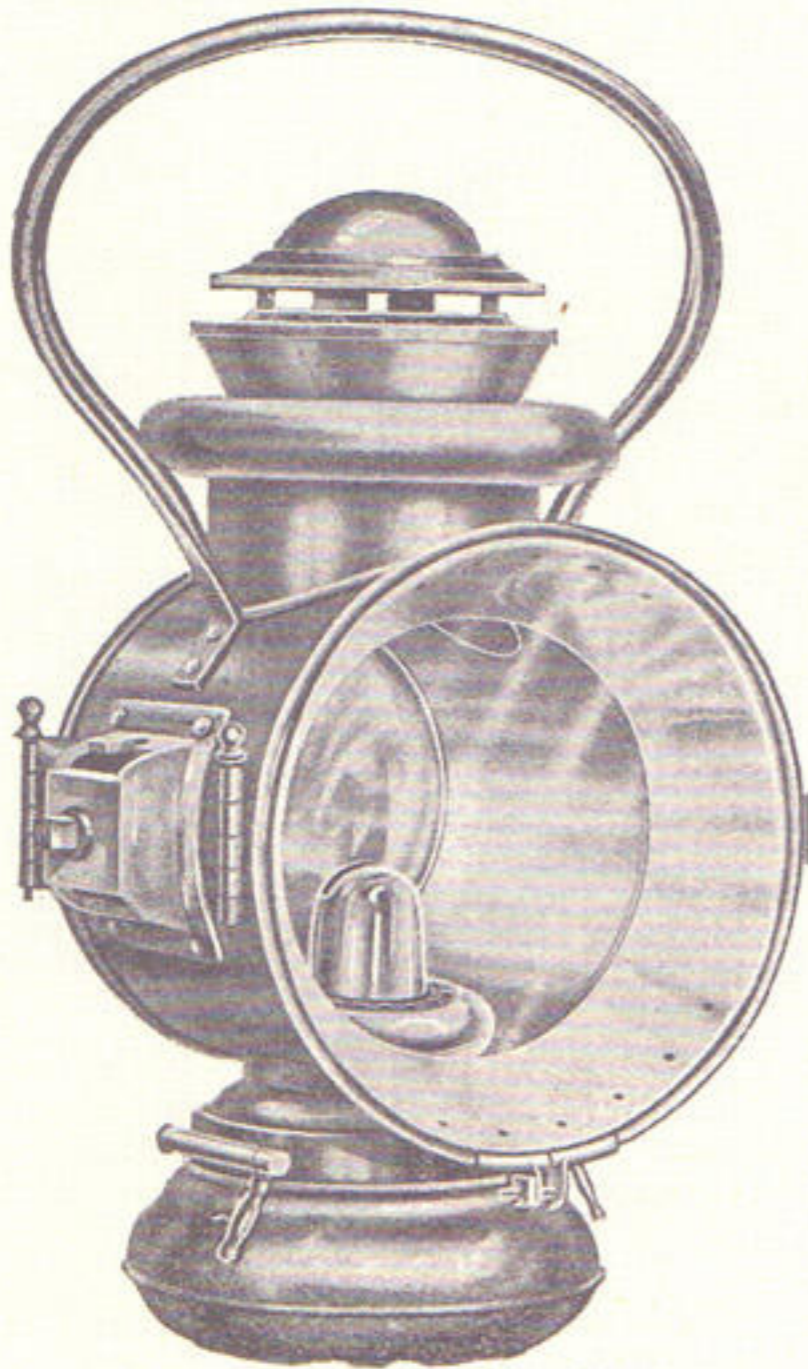
No. 1. The Rochester.

Height, 14 inches. Net weight, 10½ lbs.  
Width, 6 inches.  
Fount holds sufficient oil to burn 27 hours.  
Polished brass, each, \$15.00.



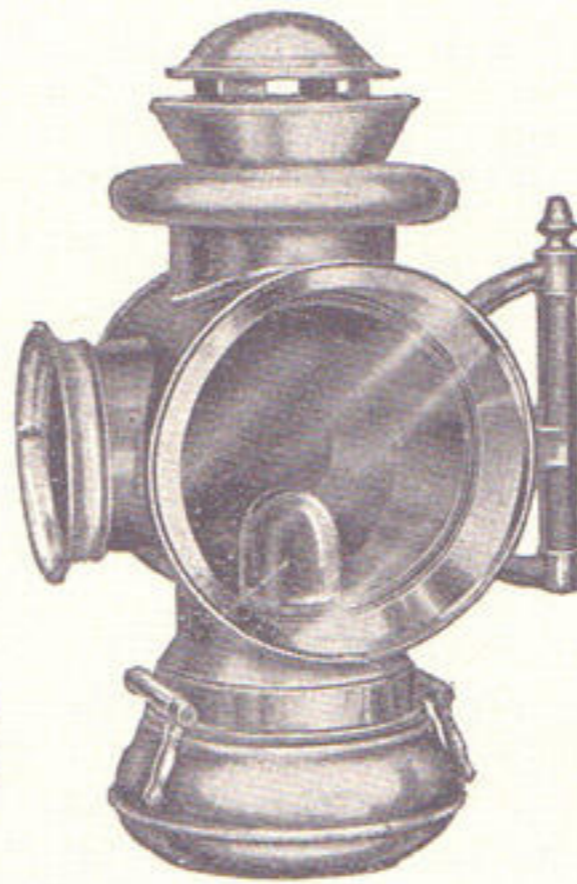
No. 2. The Tourist.

Height, 14 inches. Net weight, 10¾ lbs.  
Width, 7 inches  
Fount holds sufficient oil to burn 27 hours.  
Polished brass, each, \$10.00.



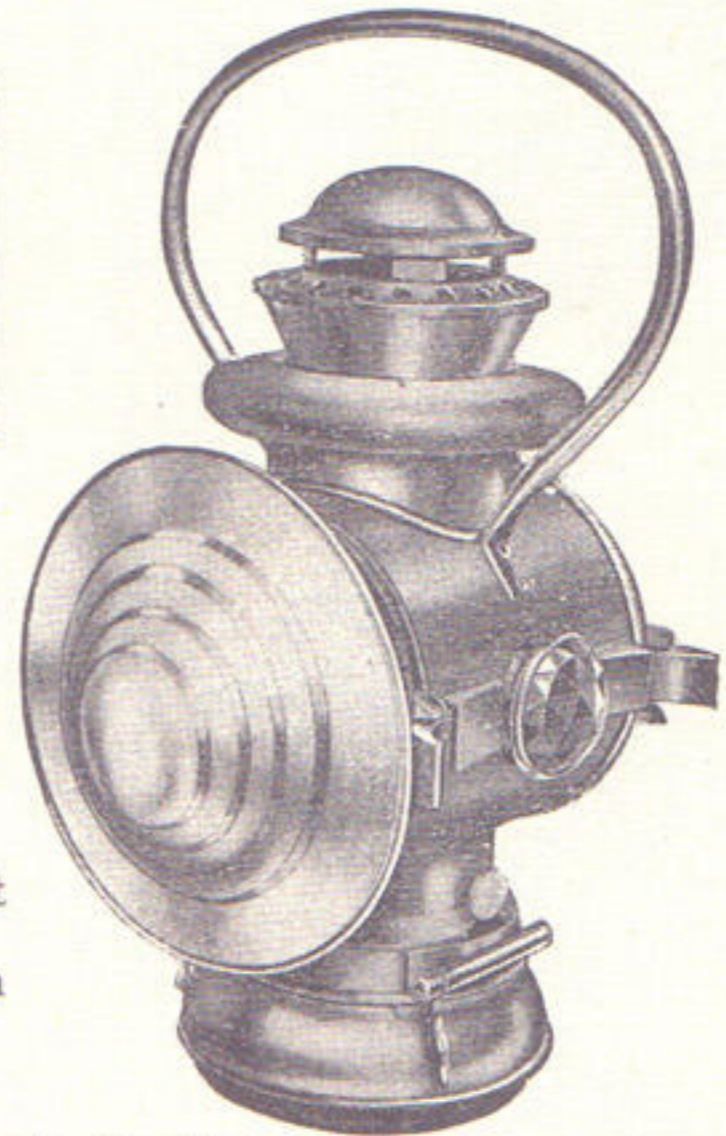
No. 5. The Aurora.

Height 14 inches. Net weight, 8¼ lbs.  
Width, 7 inches.  
Fount holds sufficient oil to burn 27 hours.  
Polished brass, each, \$8.00.



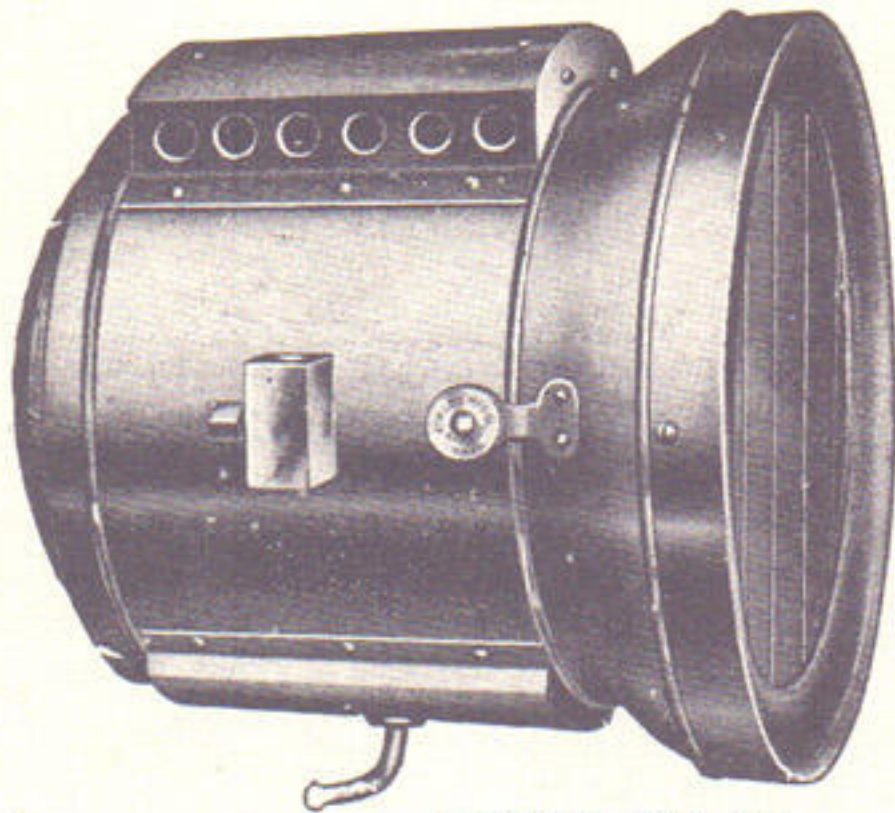
No. 9. The Vigilant.

Height, 10 inches. Net weight, 7¼ lbs.  
Polished brass. Will burn 29 hours. Each, 7.00.



No. 6. The Apex.

Height, 12 inches. Net weight, 5½ lbs.  
Width, 6 inches.  
Fount holds sufficient oil to burn 29 hours.  
Polished brass, each, \$8.00.



STYLE NO. 78.

A very beautiful lamp, one of the latest designs. Suitable for the highest grade of large Touring Car. Full brass. Best quality of Mangin Lens Mirrors. Guaranteed to give a large and powerful light.

Nothing better made at price.

Made in two sizes.

|                                     | Style 78<br>8 inch | Style 78<br>9 inch |
|-------------------------------------|--------------------|--------------------|
| Price, each                         | \$18.00            | \$22.00            |
| Diam of Flange                      | 10½ ins.           | 11½ ins.           |
| Extreme Length                      | 10¼ ins.           | 11½ ins.           |
| Extreme Height                      | 11 ins.            | 12½ ins.           |
| Dist. from center to center of Lugs | 9½ ins.            | 9¾ ins.            |

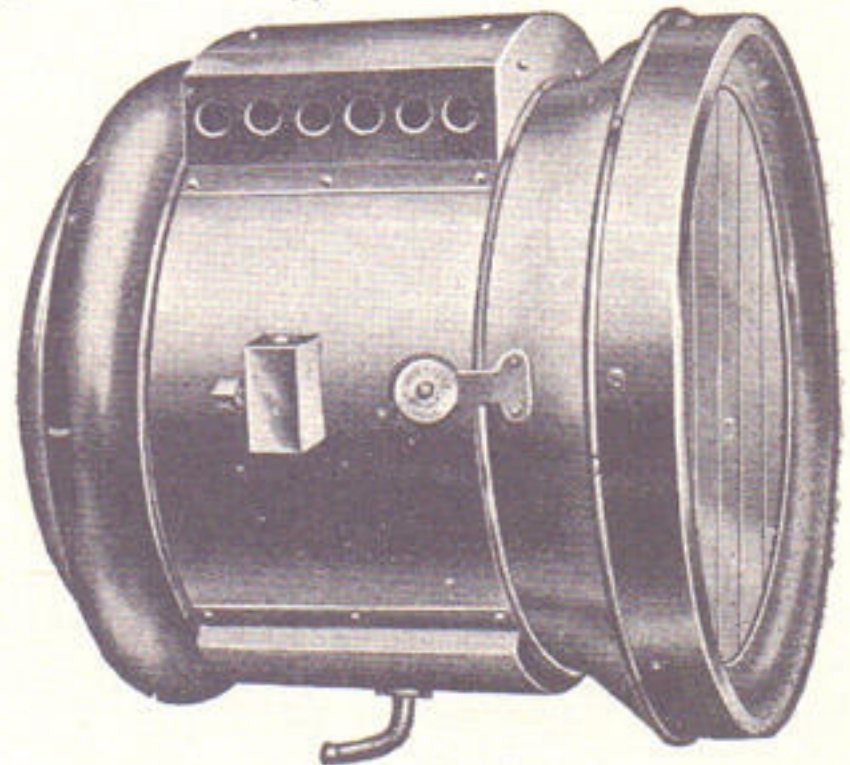
**ATWOOD GAS SEARCH LIGHTS.**

STYLE NO 67.

Full brass, highly polished, supplied with best quality Mangin Lense Mirrors, short focused and warranted to project the most powerful light of any lamp made. Made of heavy brass, extra strong in construction. Very fine in finish.

| Made in three sizes                    | Style 67<br>6 ins. | Style 67<br>7 ins. | Style 67<br>8 ins. |
|--|--------------------|--------------------|--------------------|
| Price, each                            | \$13.50            | \$15.00            | \$17.00            |
| Diam of Flange                         | 7¾ ins.            | 9¼ ins.            | 10¼ ins.           |
| Extreme Length                         | 8 ins.             | 9½ ins.            | 10½ ins.           |
| Extreme Height                         | 8⅞ ins.            | 9¾ ins.            | 10¾ ins.           |
| Distance from center to center of Lugs | 7⅛ ins.            | 8¼ ins.            | 9⅛ ins.            |

1908

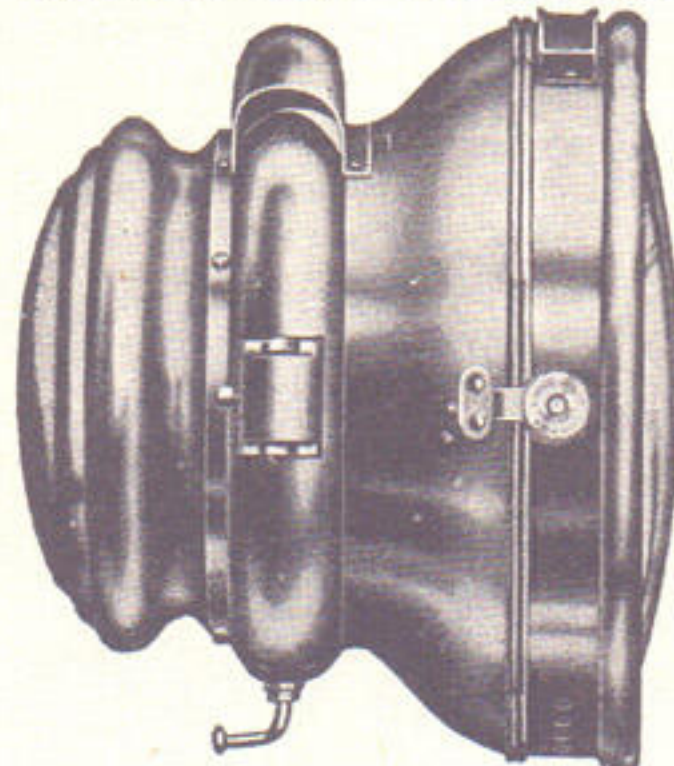


STYLES NO. 70, NO. 71 AND NO. 72.

Full brass, highly finished. Every lamp supplied with the best quality Mangin Lense Mirrors, warranted to project a powerful light a long ways ahead, and at the same time to light the roadway immediately in front of the car. Extra strong in construction. The whole body of the lamp made in one piece. Nothing to come apart.

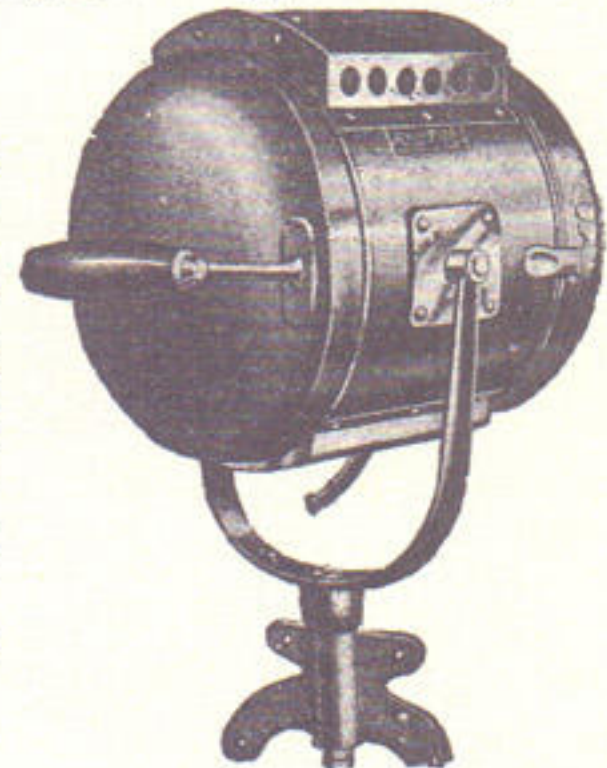
Made in three sizes.

|                                     | Style 70 | Style 71 | Style 72 |
|-------------------------------------|----------|----------|----------|
| Price, each                         | \$14.00  | \$16.00  | \$18.00  |
| Diam. of Flange                     | 9¼ ins.  | 10¼ ins. | 11½ ins. |
| Extreme Length                      | 8¾ ins.  | 8¾ ins.  | 10¾ ins. |
| Extreme Height                      | 9⅞ ins.  | 10½ ins. | 10¾ ins. |
| Dist. from center to center of Lugs | 8¾ ins.  | 9⅛ ins.  | 9⅛ ins.  |



Search Lights with Swivel Brackets.

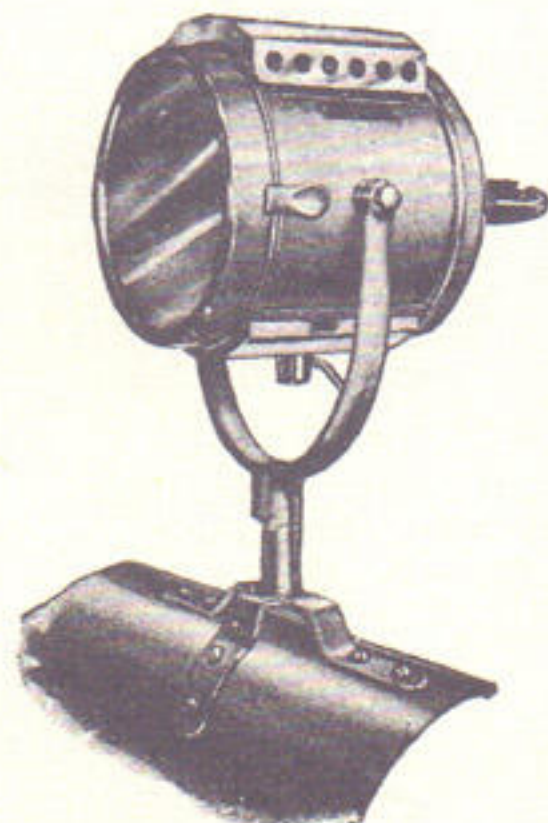
Style No. 21



Style No. 65.

Made with the best quality Lens Mirrors. Sizes same as No. 67 Gas Head Lights. These are the very highest grade and most powerful light projectors known. Made of heavy gauge brass, strictly high grade, will project a powerful light in any direction. Nothing better made at any price. Made Flare front same as No. 67 Gas Lamp.

Style No. 65 has bracket designed to fit curved dash.

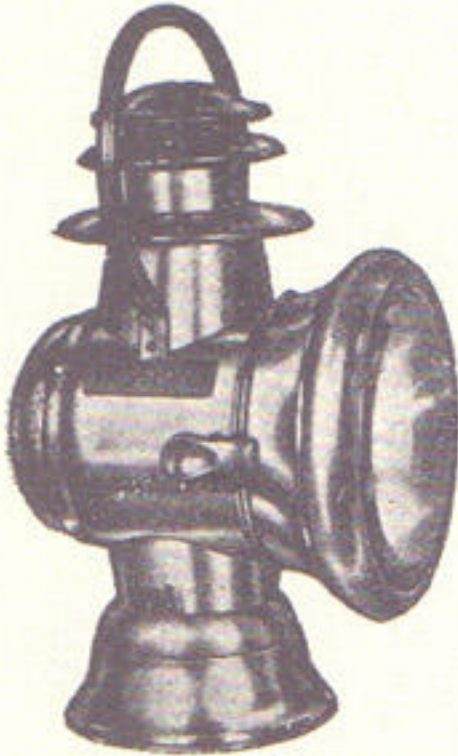


|                              | Style No. 21. | Style No. 65 |
|------------------------------|---------------|--------------|
| Price complete               |               |              |
| Including Brackets, 6 inches | \$21.00 each  | \$22.50 each |
| Including Brackets, 7 inches | 22.50 each    | 24.00 each   |
| Including Brackets, 8 inches | 25.00 each    | 26.00 each   |

## Atwood Side Oil Lamps

Atwood lamps are a high grade line, of heavy brass. Workmanship of the best hands that can be had.

Atwood lamps are strictly high grade and fully guaranteed, and the styles are the best and after the finest of imported lamps.



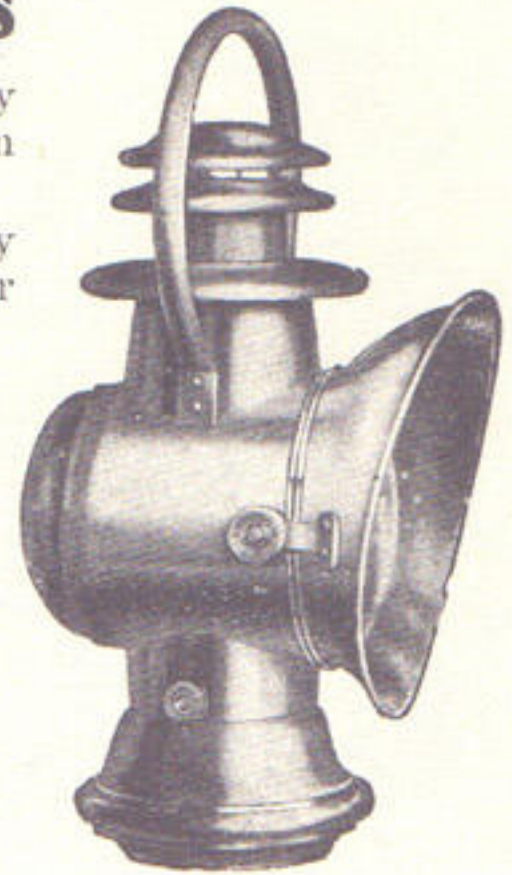
No. 53.

### No. 53.

Extreme height, exclusive of bail, 12 in.  
Length of body, 5 1/8 in.  
Diameter of glass, 7 1/2 in.  
Polished brass, per pair.....\$10.80.

### Style No. 76.

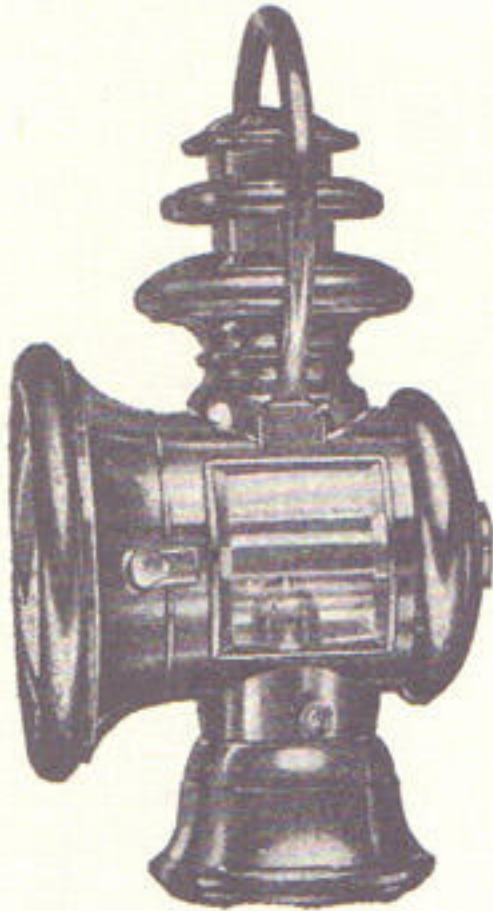
Diameter of flange, 6 7/8 in.  
Extreme length, 6 3/4 in.  
Extreme height (without handle, 12 in.  
Price, per pair.....\$10.50



Style No. 76.

### Style No. 56.

A high grade lamp suitable for the largest touring cars. In presenting this lamp we invite comparison with all other makes of similar design. We claim that it is the richest and finest lamp of the kind ever produced by any manufacturer. Full brass, highly burnished, silver lined. Made on the tubular or cold blast principle. Gives fine light, and stays lighted.



Style No. 56.

Price, per pair.....\$16.00  
Extreme height .....14 inches  
Length of body ..... 8 inches  
Diameter of glass..... 6 inches

1908

Square Oil Side Lamp, full brass full silver lined. We make the above lamp with green and red enamel border, 5/8-inch wide, just inside the bevel on glass, extending all around the front of glass, frequently seen on high grade French Lamps. Very pretty and attractive. Red border on one, and green border on the other, which does not detract from the light. Very nice lamp for high grade cars. When ordering these, specify No. 73 Special or No. 74 Special, according to size of lamp wanted.

MADE IN TWO SIZES.

### Style 73.

Price, per pair.....\$15.00  
Size of body, 4 3/4 x 4 3/4 in. Extreme height, 13 in.

### Style 74.

Price, per pair.....\$18.00  
Size of body, 5 1/4 x 5 1/4 in. Extreme height, 14 1/4 in.

### Style 73 Special.

Price, per pair.....\$17.50

### Style 74 Special

Price, per pair.....\$20.00



Style No. 73 and 74.

SOLAR OIL LAMPS.

1908



MOD. 832.

Model 832.

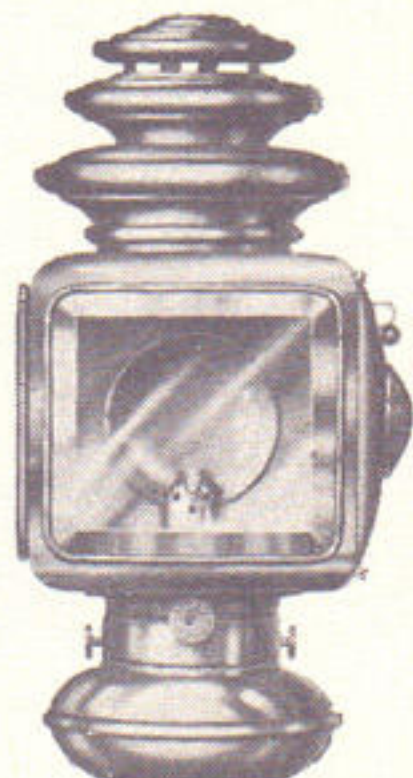
Prop for round or flat iron. Height 12 in. Side glass  $4 \frac{5}{16} \times 5$  in. Front glass  $4 \frac{1}{4}$  in. sq.; rear  $1 \frac{1}{2}$ -in. ruby. Burnished silver linings.

Pair .....\$16.00

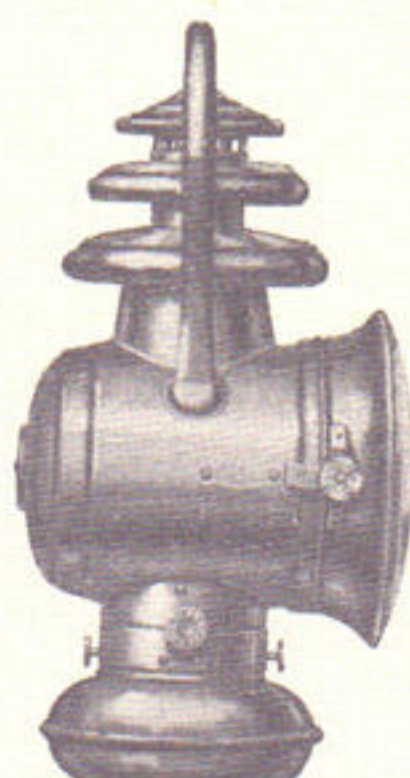
Mod. 834.

Prop. for round or flat iron. Height 13 in. Side glass  $4 \frac{1}{2} \times 5$  in. Front glass  $4 \frac{1}{2}$  in. sq. Rear 2 in. ruby. Burnished silver linings.

Pair .....\$22.00



MOD. 834.



MOD. 824.

Mod. 824.

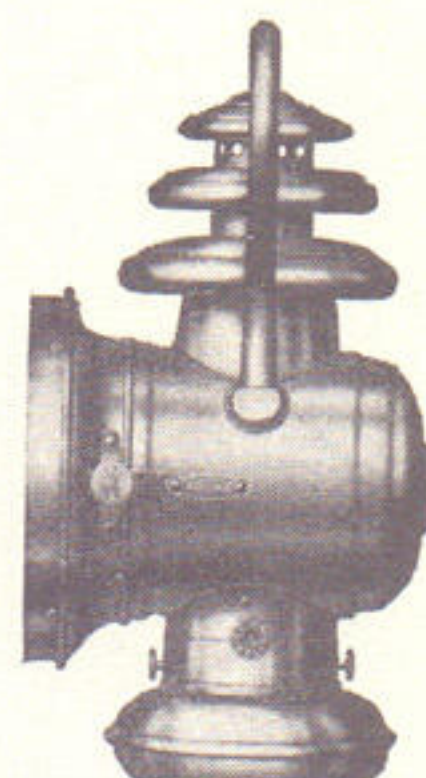
Props for round or flat iron. Height 14 in. Length  $7 \frac{1}{4}$  in. Front glass  $6 \frac{1}{8}$  in.; rear  $1 \frac{1}{2}$  in. ruby. Aluminum reflector.

Pair .....\$11.00

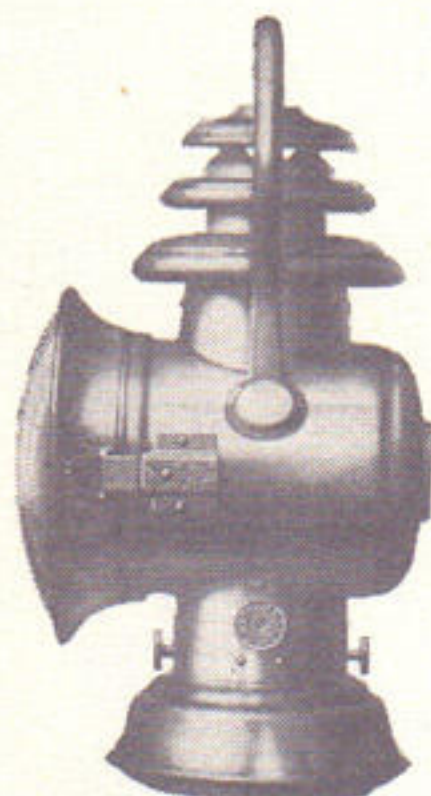
Mod. 824A.

Same as Mod. 824, except front glass  $6 \frac{7}{16}$  in. and has aluminum door lining.

Price, pair .....\$12.00



MOD. 824A.



MOD. 820.

Mod. 820.

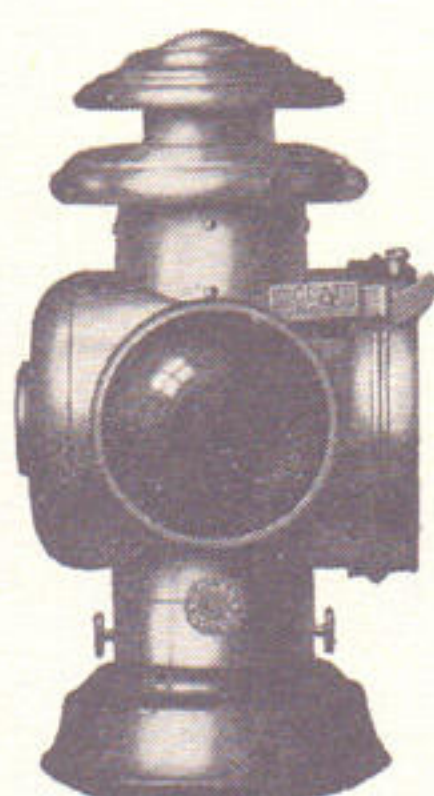
Props for round or flat iron. Height  $11 \frac{1}{2}$  in. Length 6 in. Front glass 5 in. Rear  $1 \frac{1}{2}$  in. ruby. Aluminum reflector.

Pair .....\$9.00

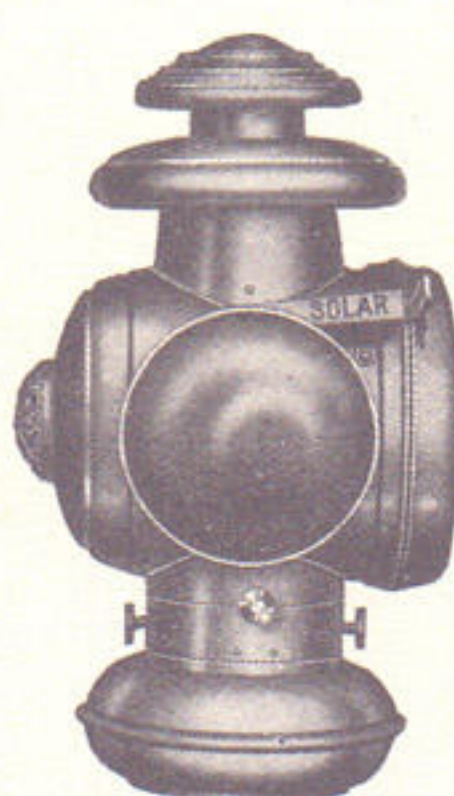
Mod. 805.

Prop for round iron only. Height 9 in. Rear glass 3 in. ruby. White side 3 in. Green side  $1 \frac{1}{2}$  in. Aluminum reflector.

Price .....\$4.00



MOD. 805.



MOD. 806.

Mod. 806.

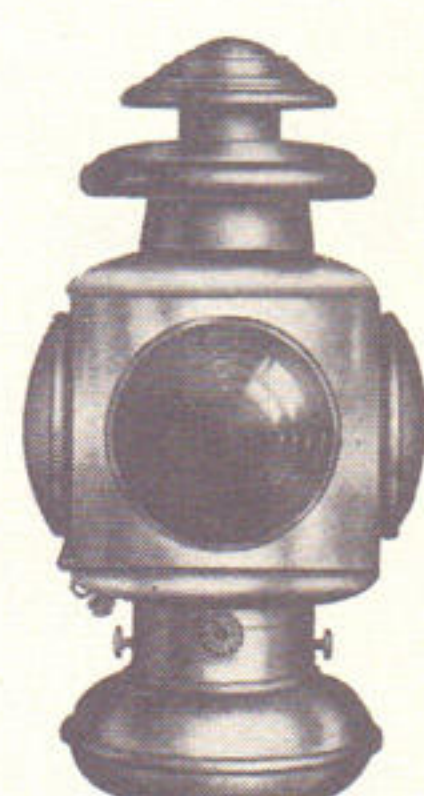
Prop. for round or flat iron. Height 13 in. Aluminum reflector. Ruby rear semaphore,  $3 \frac{1}{2}$  in. White side  $3 \frac{1}{2}$  in.; green 2 in.

Price .....\$6.00

Mod. 730.

Prop for round or flat iron. Height 12 in. Rear glass  $3 \frac{1}{2}$  in. ruby. White side  $3 \frac{1}{2}$  in. Green side 2 in. Other dimensions same as No. 832.

Price .....\$8.00



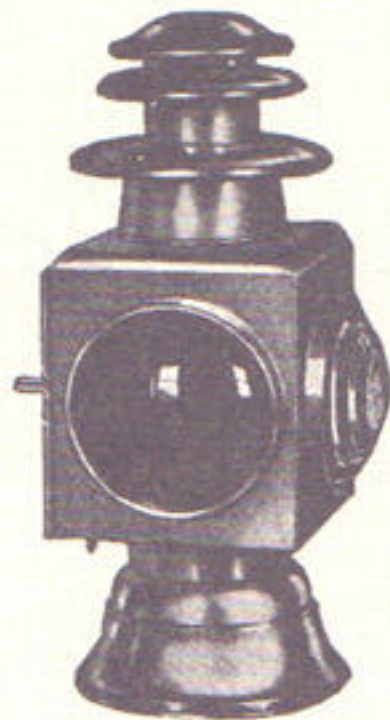
MOD. 730.

## Atwood Lamps and Brackets



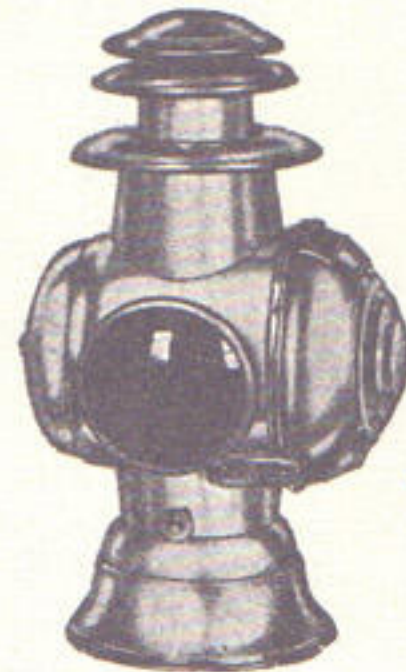
**Ball Tail.**

Height exclusive of bail, 10 in.  
 Diameter of red glass, 3 1/8 in.  
 Diameter of green glass, 3 1/8 in.  
 Diameter of white glass, 2 5/8 in.  
 Polished brass, each, \$3.50.



**No. 57.**

Extreme height, 12 in.  
 Size of body, 4 1/2 x 4 1/8 in.  
 Full brass, silver lined.  
 Price, each, \$8.00.



**Style 81.**

Extreme height, 11 in.  
 Price, each, \$5.70.

1908



**Style Nos. 95, 96.**

MADE IN TWO SIZES.

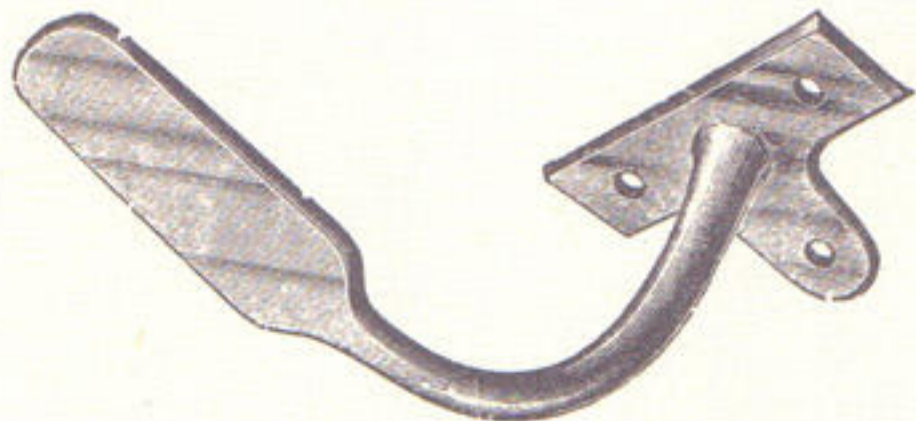
**Style 95.**

Price, per pair.....\$17.00  
 Size of body, 4 3/4 x 4 3/4 in.  
 Extreme height, 13 in.

**Style 96.**

Price, per pair.....\$20.00  
 Size of body, 5 1/4 x 5 1/4 in.  
 Extreme height, 14 1/4 in.

### Oil Lamp Brackets.



**No. 25.**

Fits any of our oil side lamps.  
 Price, per pair.....\$1.60



**No. 23.**

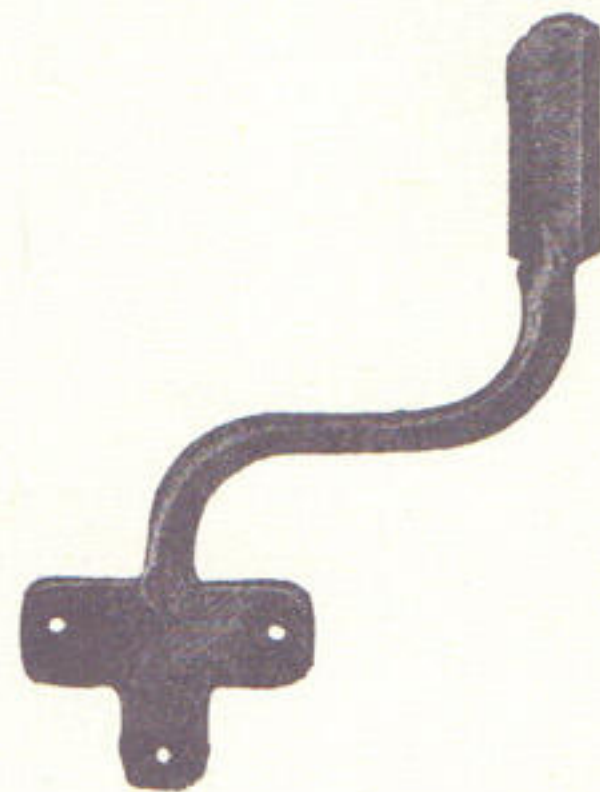
Fits Ball Tail Lamp.  
 Price, each.....64c



**No. 26.**

Fits any of our oil side lamps.  
 Designed to be used on curved dashers.

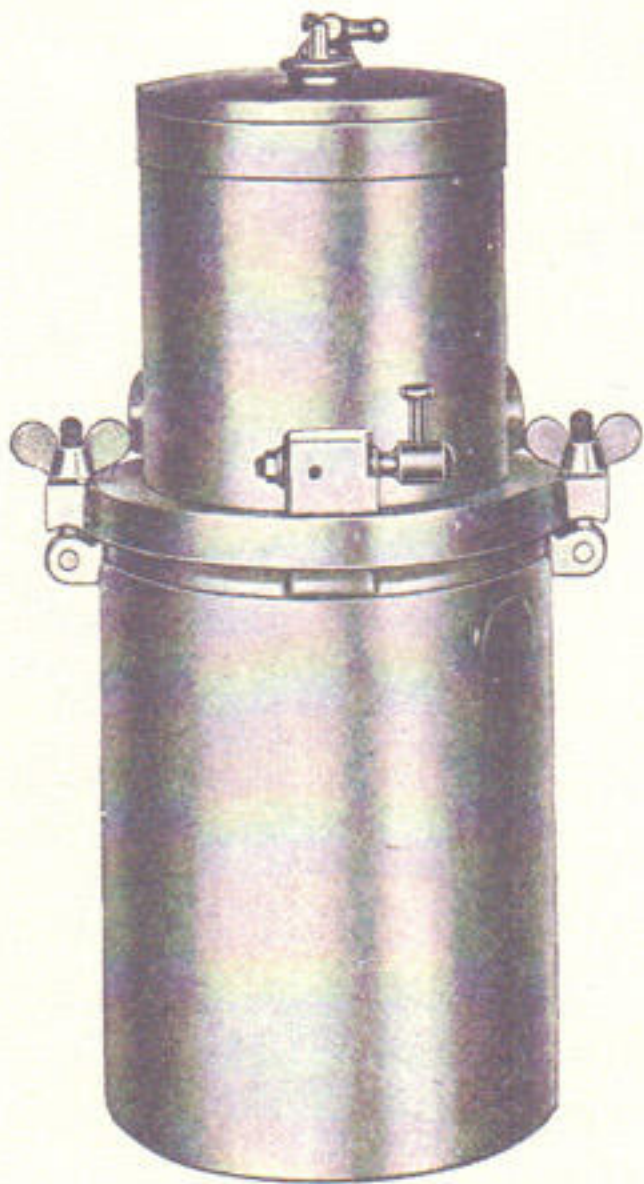
Price, per pair.....\$1.60



**No. 21.**

Fits any of our oil side lamps...  
 Price, per pair.....\$1.60

**1908 ROYAL GENERATORS.**  
**No. F2 Royal Round Generator.**



No. F2.

Made of heavy seamless drawn brass. Simple in construction and operation. Gas is generated by turning water valve at front of generator, so water will drip on carbide in basket at the center of generator.

Top of generator containing water is permanently fastened to car by bolts. Bottom of generator may be quickly detached for cleaning and refilling. Suitable for running three large lamps.

Size, 15 inches high over all.  
 Bottom, 8 inches high, 6 $\frac{1}{4}$  inches diameter.  
 Top, 6 inches high, 5 inches diameter.  
 Carbide capacity, 3 lbs.

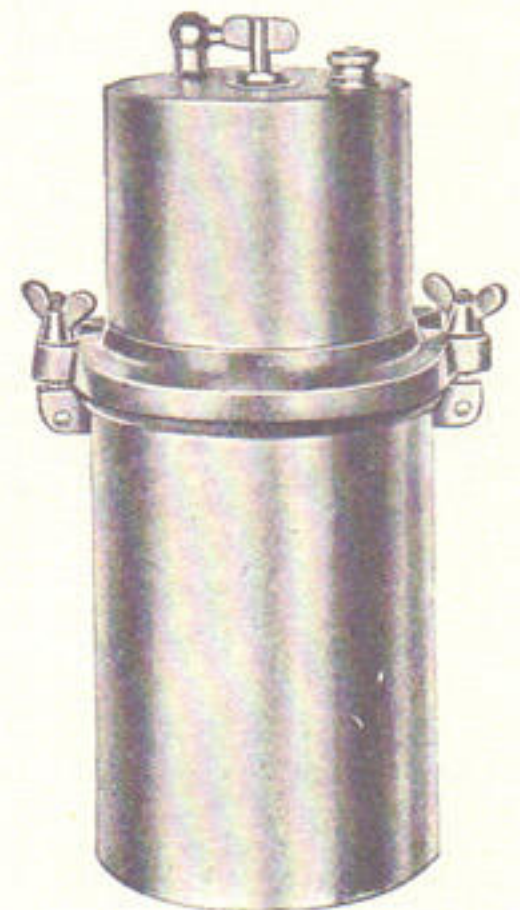
No. F2, Each, \$12.00.

**No. G2 Royal Round Generator.**

Similar in design to our F2 generator but smaller in size. Is operated by the drip system. Suitable for one pair of six or seven inch lamps, or one large swivel searchlight.

Carbide capacity, 2 lbs.

No. G2, Each, \$8.00.  
 Made with Water Jacket.  
 No. G2, W. J. Each \$10.00



No. G2.

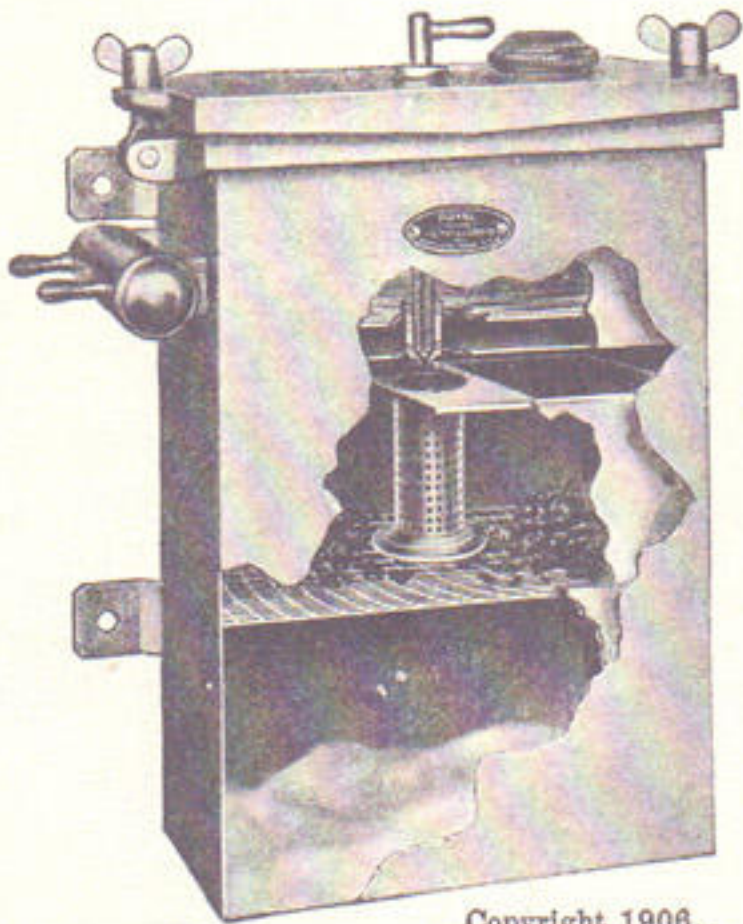
**Royal Square Grate Generator.**

The square brass outside case is permanently attached to the car. Water is contained in a separate tank in the upper part of the generator. Operated by the drip system. Gas is only generated when water valve is open. Water may be easily turned on or off. This type of generator has proved to be one of the most satisfactory yet devised.

To clean, it is only necessary to lift out the water tank, and then the carbide cage, when the pan at the bottom which catches the carbide dust, may be taken right out and emptied.

Holds 2 $\frac{1}{2}$  lbs. of carbide. May be used for one headlight or pair side lamps. The generator is 10 $\frac{1}{2}$ " high, 6 $\frac{3}{4}$ " wide, 3 $\frac{3}{4}$ " deep.

No. D2, Each, \$9.00.



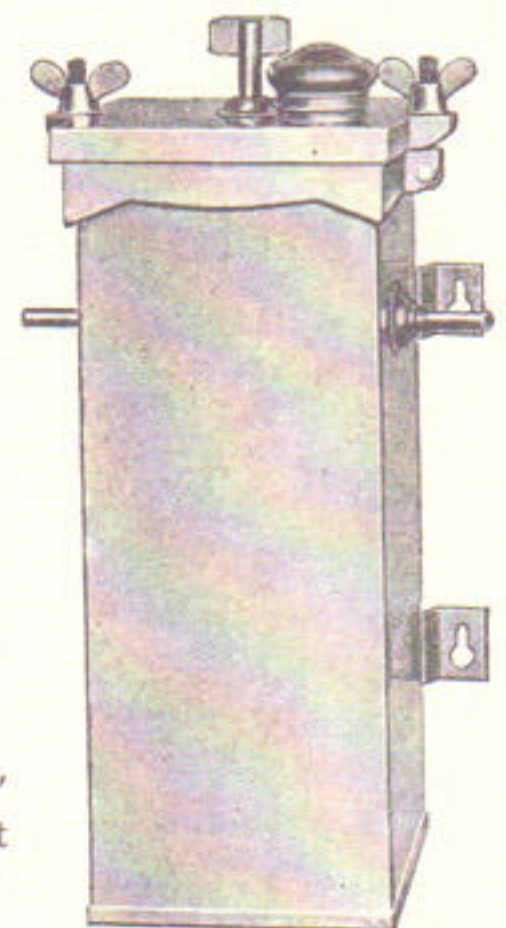
Copyright 1906,  
 The Post & Lester Co.

D2 Royal Generator.

**No. E2 Royal Grate Generator.**

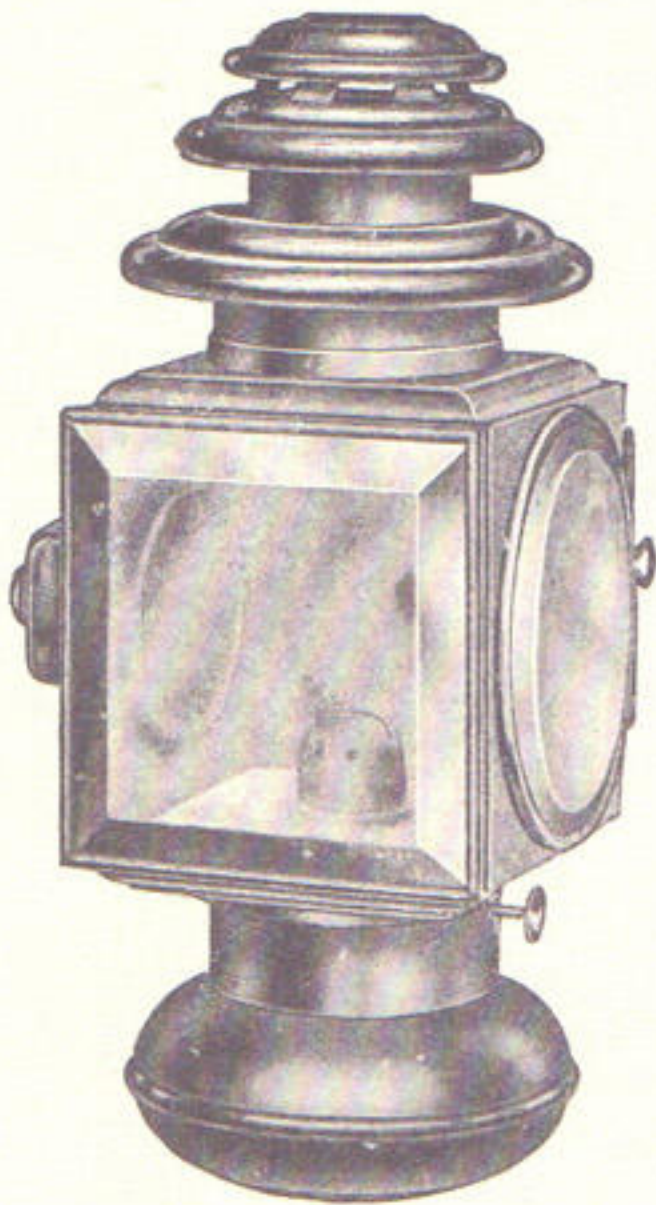
Similar in style and design to our D2 generator, but smaller in size, 10" high, 4 $\frac{1}{4}$ " wide, 4 $\frac{1}{4}$ " deep. Holds 1 $\frac{3}{4}$  lbs. carbide. Suitable for one headlight or two small side lamps.

No. E2, Each, \$8.00.



E2 Royal Generator.

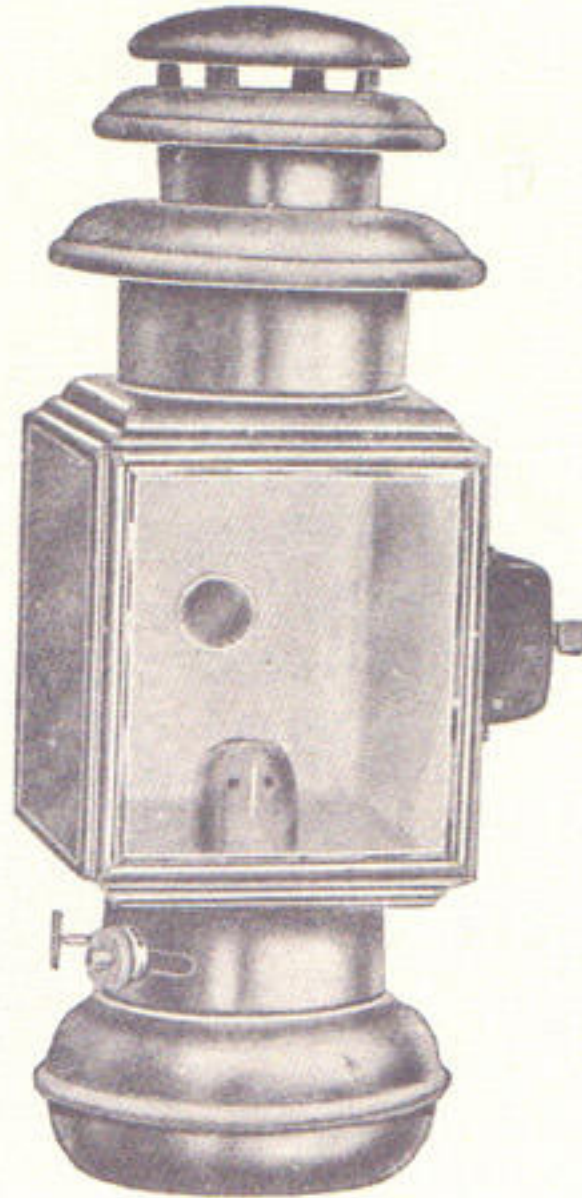
1908 ROYAL SIDE OIL LAMPS, TAIL LAMPS.



No. 30 Royal French Style Square Oil Side Lamps.

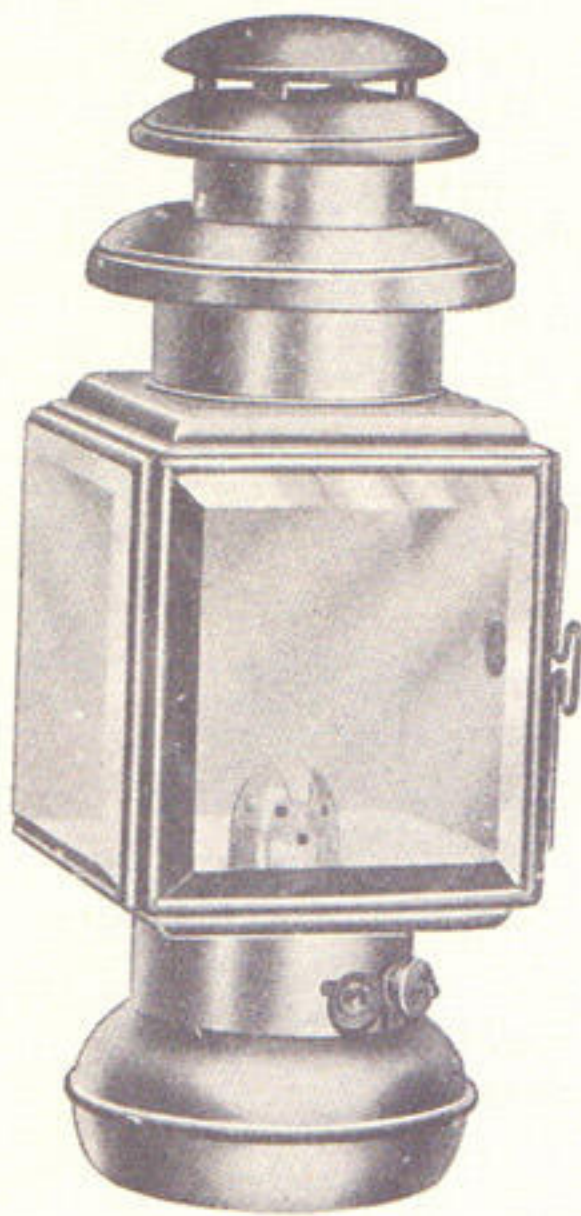
Made of heavy gauge brass throughout, has heavy square beveled glass on side and oval glass in front; red light in back. Mirrors are heavily silvered. Patent oil fount cannot jar loose. Takes flat bracket or finger iron bracket. A very stylish lamp.

|           |              |
|-----------|--------------|
|           | Per          |
| No. Glass | Height Pair  |
| 30 4½x4¾" | 12½" \$10.00 |



No. 14 Royal Square Oil Tail Lamp.

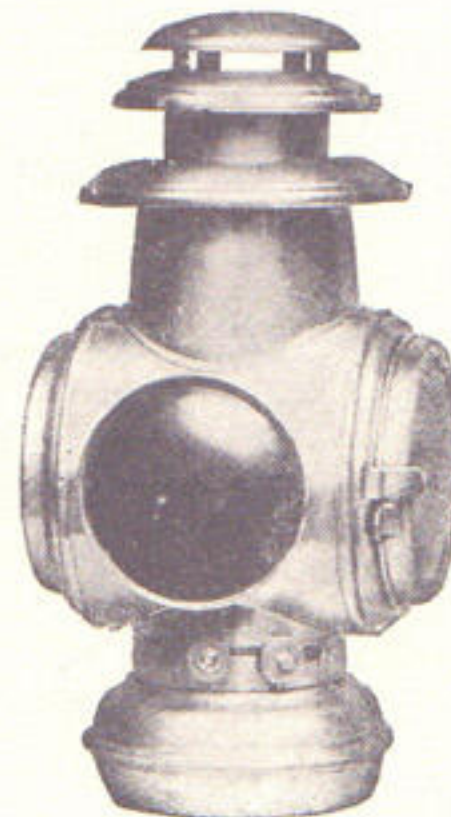
Similar in size to No. 30, but has one large red glass. No. 14. Each, \$5.00.



No. 10 Royal French Style Square Oil Side Lamps.

Made of heavy gauge brass throughout, heavy beveled glass on two sides, red light in back, silvered mirrors. Has patent oil fount which cannot be detached except by turning thumb nut.

|                   |             |
|-------------------|-------------|
|                   | Per         |
| Size of No. Glass | Height Pair |
| 10 4¾x4¾"         | 12½" \$9.00 |



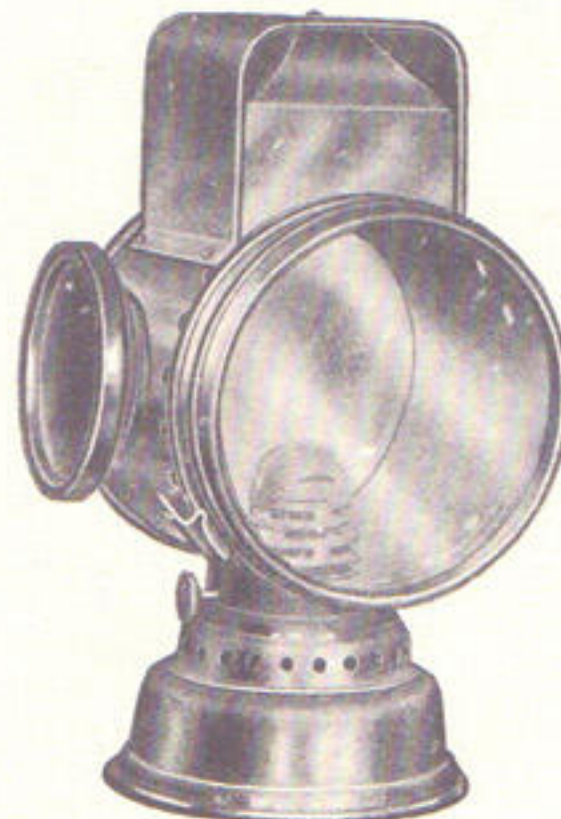
No. 18 Round Royal Tail Lamp.

A strong, well made tail lamp. Will stay lighted. Shows large red light in rear. 11½ in. high.

Each, \$5.00.

No. 20 Royal Bullet Tail Lamp.

Height, 11". Each \$3.50.



No. 21 Royal Tail Lamp.

A strong compact lamp guaranteed to stay lighted. Takes round finger iron bracket. Height, 8¼ inches, diameter of flange 4 inches.

Each, \$3.50.

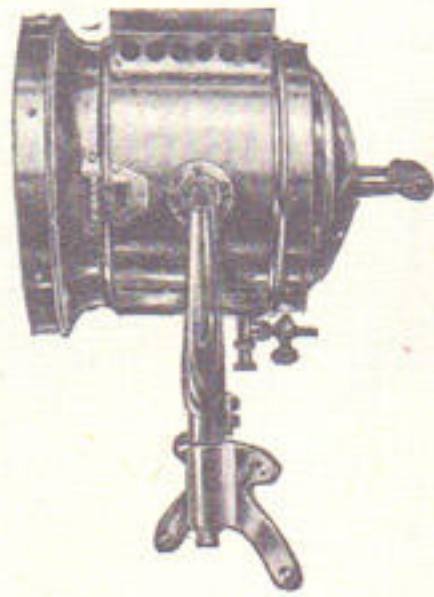
**RUSHMORE LENS MIRROR SEARCHLIGHTS.**

For safety in night driving the powerful, long range beam provided by these Searchlights is a prime necessity. They are both life and car insurance. Rushmore Searchlights are the highest development of optical laws and mechanical construction applicable to automobile lighting. Every part of a Rushmore lamp is specially designed to add strength and vitality. All parts are assembled with solid rivets, screws and bolts, not one solder joint in any lamp. Beauty of finish and artistic design are given careful consideration and no pains or expense spared to produce the best possible results for car owners and drivers.

**Swing Bracket Searchlights.**

Enable you to explore the road and locate curves, turns, ditches, cattle, excavations, obstructions, approaching or going teams or people, crossings, grades, hills and objects off the road, as house numbers, locations, curb stones, etc.

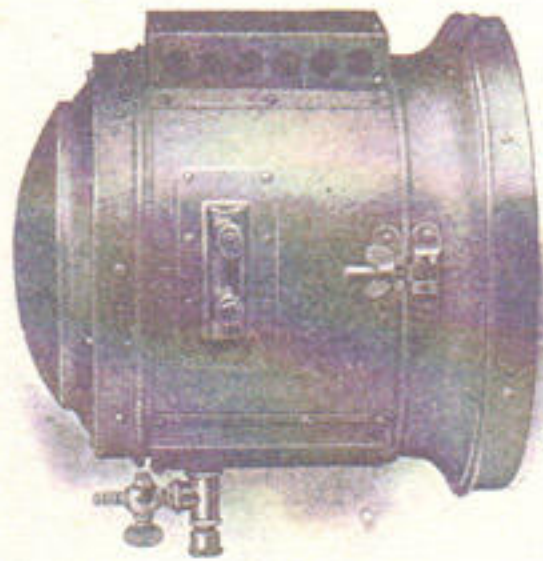
The well-known powerful searchlights that are famous for their light-giving qualities.



**Flare Front Swivel Lamp.**

With bracket at attach to vertical dash.

| Size front door | Each    |
|-----------------|---------|
| A— 7¾-inch      | \$22.00 |
| B— 9¼-inch      | 25.50   |
| C—10 -inch      | 30.00   |
| D—11⅜-inch      | 39.50   |
| E—12¼-inch      | 52.00   |

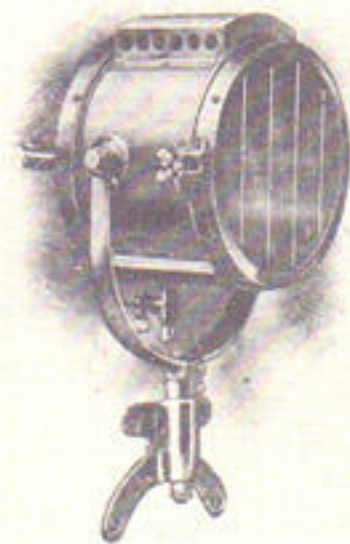


**Flare Front Fork Style.**

Flare front rigid bracket searchlights to attach to fork brackets.

| Size front door | Each    |
|-----------------|---------|
| A— 7¾-inch      | \$17.50 |
| B— 9¼-inch      | 20.00   |
| C—10 -inch      | 24.00   |
| D—11⅜-inch      | 33.00   |
| E—12¼-inch      | 45.00   |

Constructed on the navy principle with scientifically ground deep bowl-shaped lenses, giving powerful light.



**Plain Front Swivel Style.**

To attach to vertical dash. Special bracket can be supplied for slanting or curved dashboards.

| Size    | Each    |
|---------|---------|
| 6-inch  | \$20.00 |
| 7-inch  | 23.00   |
| 8-inch  | 27.50   |
| 9-inch  | 36.50   |
| 10-inch | 46.50   |

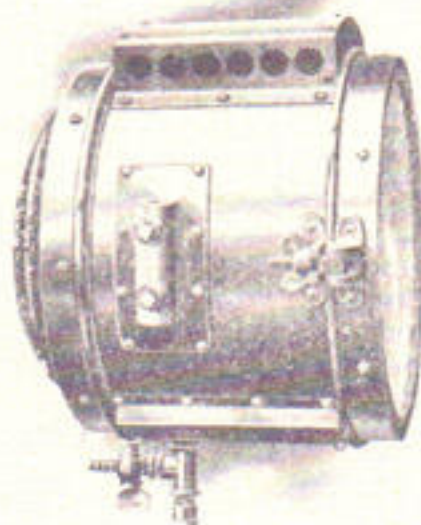
1908



**Deck Searchlight.**

Deck light. Used on motor boats or sailing vessels. Can be secured to deck permanently or fastened with clamp screws for removal in daytime.

| Size           | Each    |
|----------------|---------|
| 6-inch         | \$20.00 |
| 7-inch         | 23.00   |
| 8-inch         | 27.50   |
| 9-inch         | 36.50   |
| 10-inch        | 46.50   |
| 14-inch, brass | 113.50  |
| 14-inch, iron  | 88.50   |



**Plain Front Fork Style.**

Rigid searchlight to be used on fork brackets.

| Size    | Each    |
|---------|---------|
| 6-inch  | \$15.50 |
| 7-inch  | 17.50   |
| 8-inch  | 21.50   |
| 9-inch  | 30.00   |
| 10-inch | 39.50   |



**Pilot House.**

**Pilot House Searchlight.**

Has connections so as to allow it to be used from inside of pilot house.

| Size    | Each    |
|---------|---------|
| 6-inch  | \$26.00 |
| 7-inch  | 29.50   |
| 8-inch  | 34.50   |
| 9-inch  | 44.00   |
| 10-inch | 54.50   |



# DEALER'S SPECIAL BARGAIN

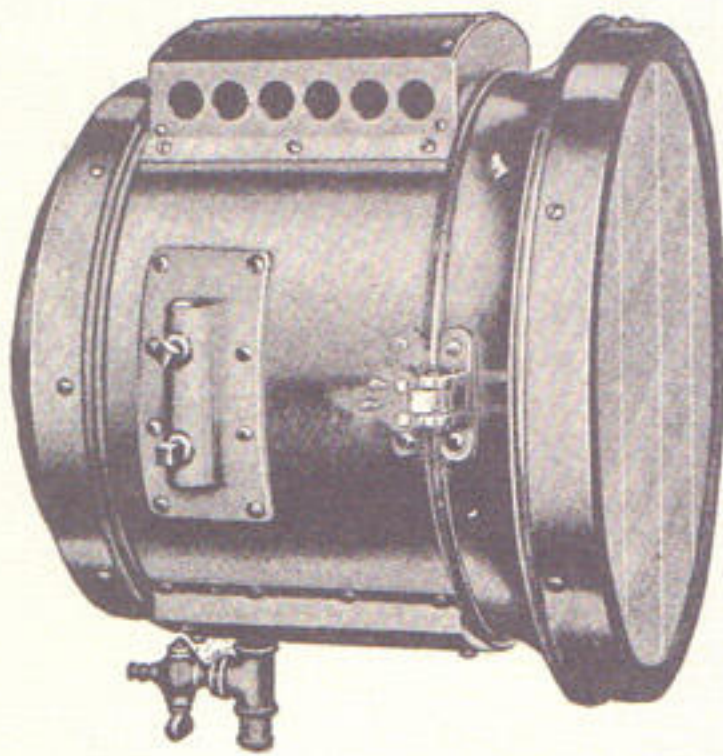
Here is a line of lamps we are closing out at a sacrifice.

The manufacturers of the Rushmore lamp have secured injunctions against most makers of lamps of this design.

We have arranged with them to dispose of these lamps and discontinue their sale, and have their permission to sell them. When they are gone we shall make up no more of this design lamp.

They must be sold at once, however, and we put prices on them to move them. If you need any lamps and know lamp values you will buy all these you can even if you don't need them just now. Our loss is your gain.

## Royal Fork Flaredfront Searchlights.



Nos. 6F, 7F, 8F Fork Searchlights.

These lamps are made of extra heavy gauge brass, highly burnished.

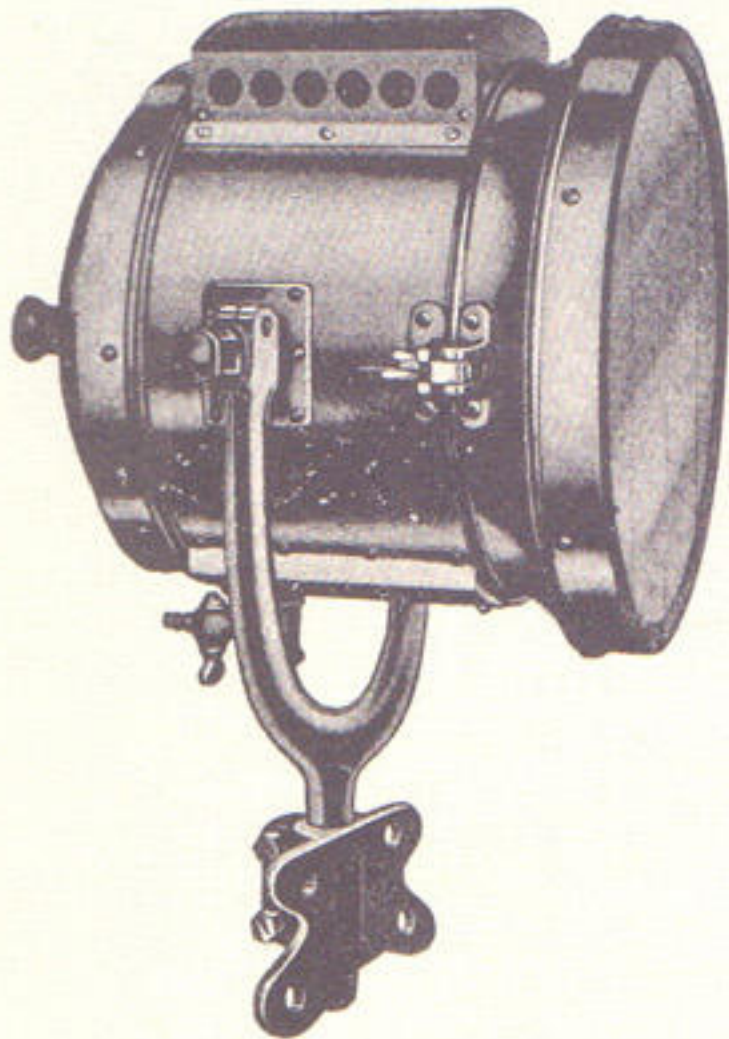
All parts are riveted or screwed together. Hinges and brackets are made of the best grade bronze castings.

Lamps are all equipped with the genuine Bausch & Lomb mirrors, which are acknowledged to be the best in the market; they produce the most powerful and penetrating light. Fronts of lamps are flared so that more light is shed directly in front of car. Finish all brass, throughout. Fork searchlights are furnished in pairs to go in front of car. Fitted with adjustable focusing burners.

| No. | Style | Size of barrel  | Dia. of front     | Size of lens mirror | Distance between prop. centers | Former Price Each | Price Now Each |
|-----|-------|-----------------|-------------------|---------------------|--------------------------------|-------------------|----------------|
| 6F  | Fork  | 6 "             | 7 $\frac{3}{4}$ " | 5"                  | 7 "                            | \$12.25           | \$7.75         |
| 7F  | Fork  | 7 $\frac{1}{4}$ | 9 $\frac{1}{4}$   | 6                   | 8 $\frac{1}{4}$                | 14.00             | 9.00           |
| 8F  | Fork  | 8               | 10                | 7                   | 8 $\frac{3}{4}$                | 16.00             | 10.00          |

1908

## Royal Swivel Flaredfront Searchlights.



No. 88F Swivel Searchlight.

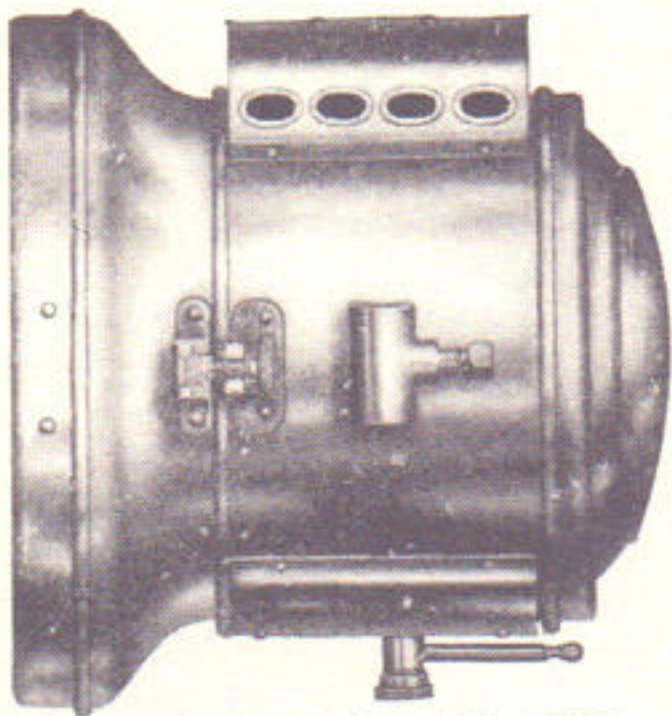
The swivel searchlight is made similar to the fork style, except that it has attached a swivel bracket and a handle which is placed at the back of the lamp.

With this bracket the light may be thrown at any angle, in any direction, by turning the handle.

Fitted with adjustable focusing burners, wind shields, Bausch & Lomb lens mirrors. Brass finish throughout. Furnished singly to be used as a searchlight attaching to dash. Fitted with adjustable focusing burners.

| No. | Style  | Size of barrel | Dia. of front | Size lens mirror | Former Price Each | Price Now Each |
|-----|--------|----------------|---------------|------------------|-------------------|----------------|
| 88F | Swivel | 8"             | 10"           | 7"               | \$22.00           | \$13.50        |

THE POST & LESTER CO., Hartford, Conn.



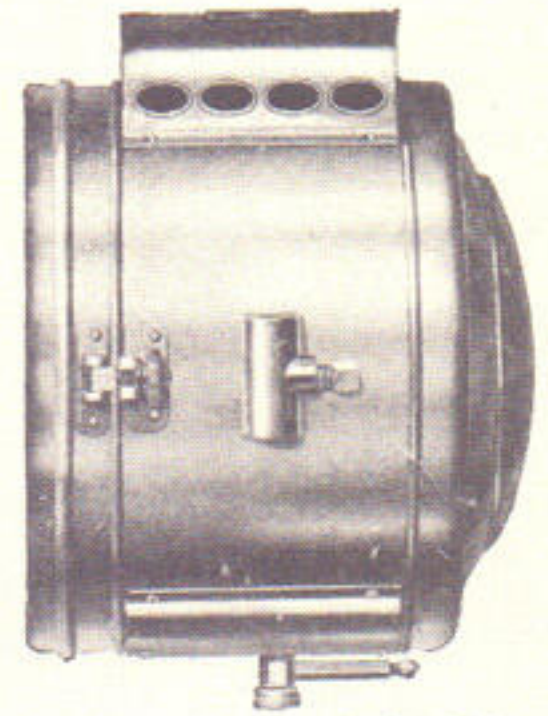
Nos. 856A, 857A, 858A, 859A.

**SOLAR GAS LAMPS, GENERATORS.**  
Flared Searchlights.

| Model | Dia. barrel       | Dia. door | Prop. centers    | Dia. lens | burner           | Each    |
|-------|-------------------|-----------|------------------|-----------|------------------|---------|
| 856A  | 6 $\frac{7}{8}$ " | 9"        | 7 "              | 6"        | $\frac{1}{2}$ ft | \$11.00 |
| 857A  | 8 1-16            | 10        | 8 $\frac{1}{4}$  | 7         | $\frac{5}{8}$ "  | 15.00   |
| 858A  | 9 $\frac{1}{4}$   | 11        | 9 $\frac{1}{4}$  | 8         | $\frac{3}{4}$ "  | 20.00   |
| 859A  | 10 $\frac{1}{8}$  | 12        | 10 $\frac{1}{4}$ | 9         | $\frac{3}{4}$ "  | 30.00   |

**Lens Mirror Searchlights.**

|     |                   |                  |    |                   |         |
|-----|-------------------|------------------|----|-------------------|---------|
| 856 | 6 $\frac{7}{8}$ " | 7 "              | 6" | $\frac{1}{2}$ ft. | \$10.00 |
| 857 | 8 1-16            | 8 $\frac{1}{4}$  | 7  | $\frac{5}{8}$ "   | 14.00   |
| 858 | 9                 | 9 $\frac{1}{4}$  | 8  | $\frac{3}{4}$ "   | 19.00   |
| 859 | 10 $\frac{1}{8}$  | 10 $\frac{1}{4}$ | 9  | $\frac{3}{4}$ "   | 28.50   |



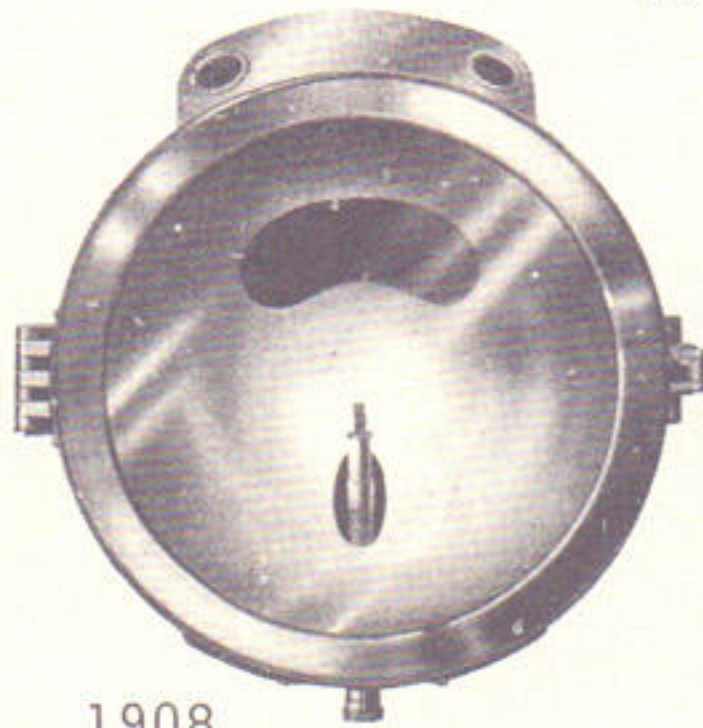
Nos. 856, 857, 858, 859.



**Swivel Searchlights.**

| Model     | Each    |
|-----------|---------|
| Model 767 | \$25.00 |
| Model 768 | 30.00   |
| Model 769 | 40.00   |

Specifications same as 857-8-9.



**Generator Headlight.**

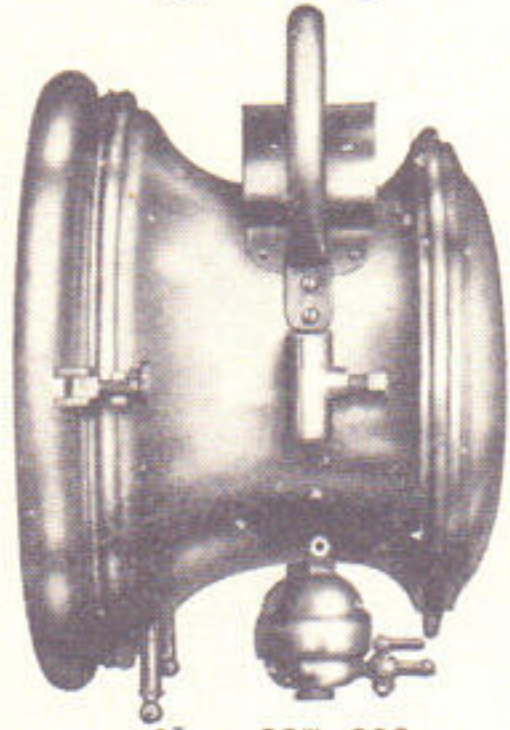
Parabolic Aluminum Reflector

7 in. between prop centers

All other dimensions and specifications same as 856

Model 851 each \$7.50

1908

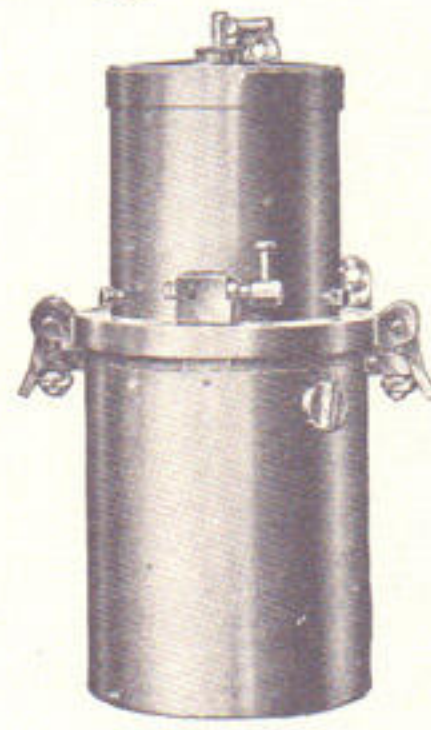


**Lens Mirror Projector.**

7-inch B. & L. Lens Mirror  
Wide light front reflector  
7 in. between prop centers  
12 in. high, 8 $\frac{1}{2}$  in. long  
Model 887 each \$20.00

8-inch B. & L. Mirror  
Wide light front reflector  
8 $\frac{1}{4}$  in. between prop centers  
14 in. high, 9 $\frac{1}{2}$  in. long  
Model 898 each \$30.00

Nos. 887, 898.



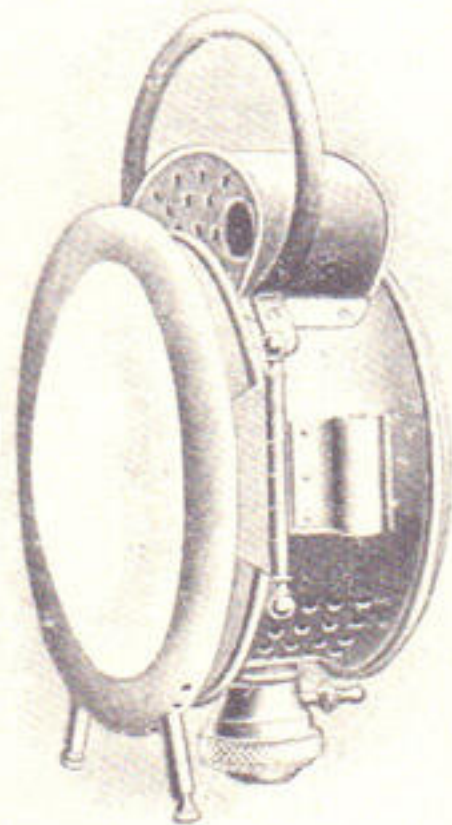
**Solar Gas Generators.**

**Water Jacketed**

Model 711, height 12", diameter 5 $\frac{1}{2}$ ", capacity 1 $\frac{1}{2}$  lbs., each \$10.00.

Model 712, height 15", diameter 8", capacity 3 lbs., each \$15.00.

Model 713, height 17 $\frac{1}{2}$ ", diameter 8 $\frac{1}{2}$ ", capacity 5 lbs., each \$22.00.



**Autoclipse and Solarclipse Headlights.**

**System Besnard.**

| Model |              | Lens                  |                 | Each    |
|-------|--------------|-----------------------|-----------------|---------|
| 850A  | Autoclipse,  | 10 $\frac{1}{2}$ -in. | with shutter    | \$65.00 |
| 850   | Autoclipse,  | 10 $\frac{1}{2}$ -in. | without shutter | 60.00   |
| 849A  | Autoclipse,  | 9                     | with shutter    | 50.00   |
| 849   | Autoclipse,  | 9                     | without shutter | 45.00   |
| 850S  | Solarclipse, | 10 $\frac{1}{2}$ -in. | with shutter    | 70.00   |
| 850M  | Solarclipse, | 10 $\frac{1}{2}$ -in. | without shutter | 65.00   |
| 849S  | Solarclipse, | 9                     | with shutter    | 55.00   |
| 849M  | Solarclipse, | 9                     | without shutter | 50.00   |

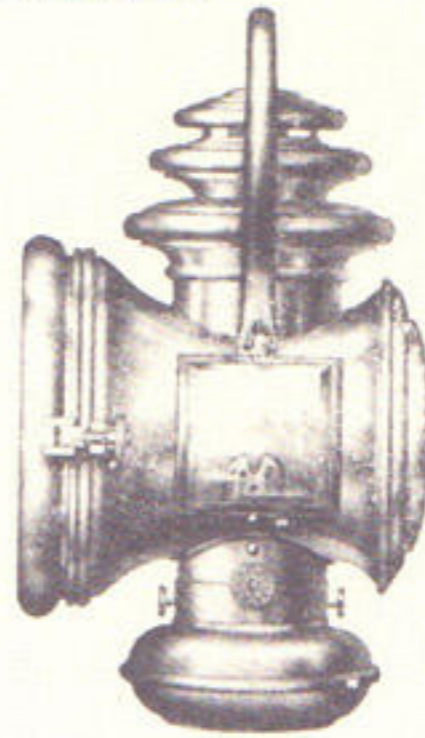
Bowden Control for operating Eclipse, with connector for 2 lamps, \$10.00.

SOLAR OIL LAMPS.



**Senior Square Side Lamp.**

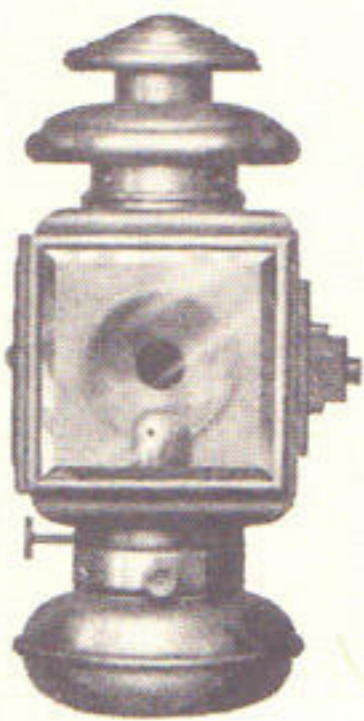
Prop for round or flat iron  
 Height 13 in. side glass  $4\frac{1}{2} \times 5$  in.  
 Front glass  $4\frac{1}{2}$  in. sq. rear 2-in. ruby  
 Burnished silver linings  
 Model 834 per pair \$22.00



**DeLuxe Oil Side Lamp.**

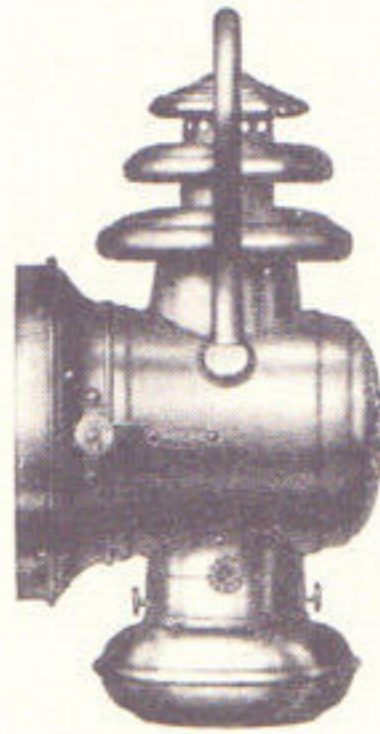
Prop for round or flat iron  
 Height  $14\frac{1}{2}$  in. length 8 in.  
 Front glass  $6\frac{7}{8}$  in. side  $3 \times 3\frac{1}{2}$  in.  
 Burnished silver linings  
 Model 828 per pair \$28.00

1908



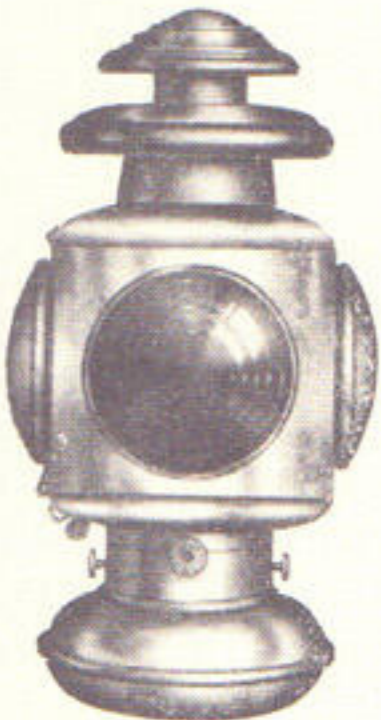
**Junior Square Side Lamp.**

Prop for round or flat iron  
 Height 12 in. side glass  $4\frac{5}{16} \times 5$  in.  
 Front glass  $4\frac{1}{4}$  in. sq. rear  $1\frac{1}{2}$ -in. ruby  
 Burnished silver linings  
 Model 832 per pair \$16.00



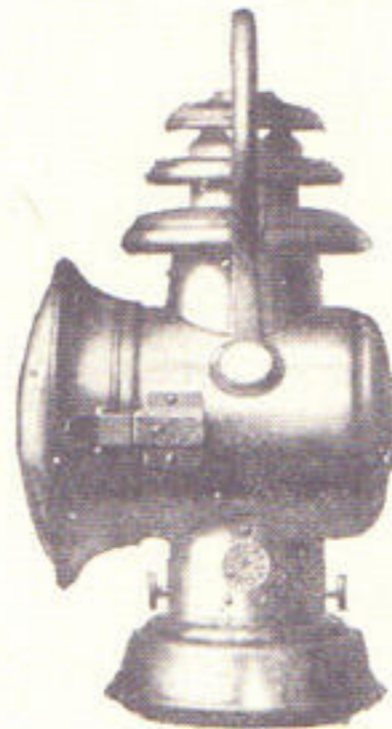
**Searchlight Side Lamp.**

Prop for round or flat iron  
 Height 14 in. length  $7\frac{1}{4}$  in.  
 Front glass  $6\frac{7}{16}$  in. rear  $1\frac{1}{2}$ -in. ruby  
 Aluminum reflector and door lining  
 Model 824A per pair \$12.00



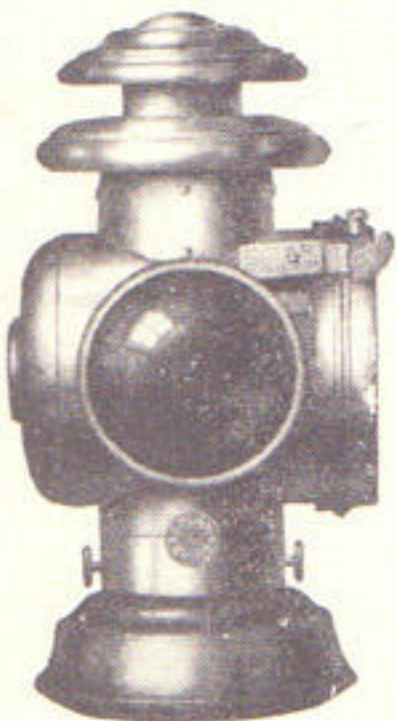
**Square Oil Tail Lamp.**

Prop for round or flat iron  
 Height 12 in. rear glass  $3\frac{1}{2}$ -in. ruby  
 White side  $3\frac{1}{2}$  in. green side 2 in.  
 Other dimensions same as No. 832  
 Model 730 each \$8.00



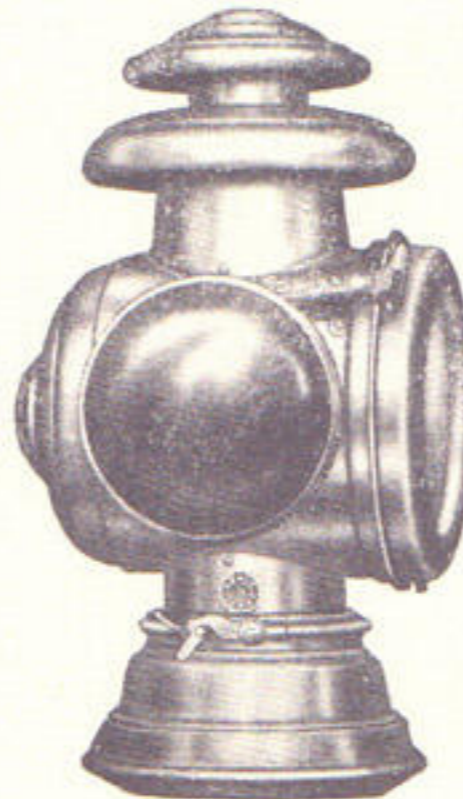
**Junior Side Lamp.**

Prop for round or flat iron  
 Height  $11\frac{1}{2}$  in. length 6 in.  
 Front glass 5 in. rear  $1\frac{1}{2}$ -in. ruby  
 Aluminum reflector  
 Model 820 per pair \$9.00



**Junior Oil Tail Lamp.**

Prop for round iron only  
 Height 9 in. rear glass 3-in. ruby  
 White side 3 in. green side  $1\frac{1}{2}$  in.  
 Aluminum reflector  
 Model 805 each \$4.00



**Senior Oil Tail Lamp.**

Prop for round or flat iron  
 Height 13 in. Aluminum reflector  
 Ruby rear semaphore  $3\frac{1}{2}$  in.  
 White side  $3\frac{1}{2}$  in. green 2 in.  
 Model 806 each \$6.00

# Rushmore Automobile Searchlights



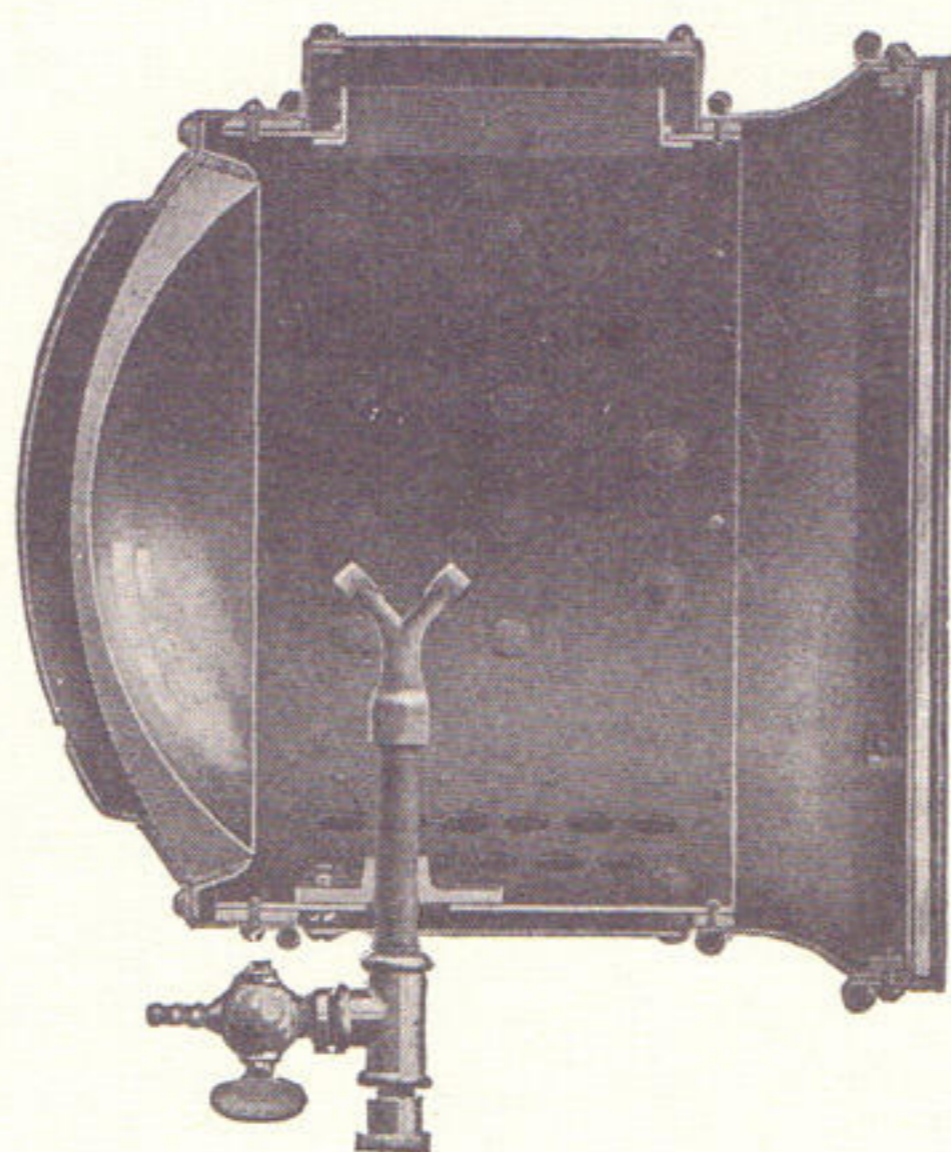
January, 1909

Rushmore Dynamo Works  
Plainfield, N. J.

London, 49 Rupert St., Shaftesbury Ave., W.  
Paris . . . . . 116 Boulevard Pe'reire  
Chicago . . . . . 1330 Michigan Ave.

# Modern Night Touring

The condition of safe and enjoyable motoring at night is that one shall be able to see the road clearly far enough to give ample stopping distance at ordinary road speeds. To fulfill this condition the bulk of the light from the lamps must fall on the road between 5 and 50 to 100 yards from the car. If the lamps throw most of their light on the road close to the car, leaving only a slender distance ray, they defeat their own



object, since the driver's eyes are partially dazzled by the strong nearby illumination, and he cannot see past it to the fainter light beyond. When a dashboard searchlight is used (as it always should be) it can be set to supplement the further reaches of the headlight beams, thereby greatly extending the visible range and producing an evenly balanced illumination, by which, while no portion of the field is of glaring brilliancy, it is possible to see a long distance.

## Optical Principles of the Lens Mirror

To project a powerful beam of long range from an acetylene flame, four things are necessary:

First—The reflector (or equivalent optical device for projecting the rays) must receive the largest possible fraction of the total light from the flame.

Second—The light so received must be *projected*, not absorbed by the surface of the reflector.

Third—The beam must be as nearly parallel as possible, since the more rapidly it spreads the sooner it is lost.

Fourth—The projected beam must be non-scattering; that is, when thrown upon a blank wall its outline must be sharply defined. If the outline is indefinite it indicates that some of the rays leave the main beam at an angle. Such scattering rays are quickly lost.

A parabolic silver-plated reflector intercepts a great number of rays from a flame at its focus, but it tarnishes so badly that it absorbs nearly all the light. A bull's-eye lens and its modification, the corrugated or Fresnel lens, absorb much of the light, and, as commercially manufactured, they scatter the light around their edges, and therefore project beams of short range. As such lenses cannot be made of short focus, they are inefficient at best.

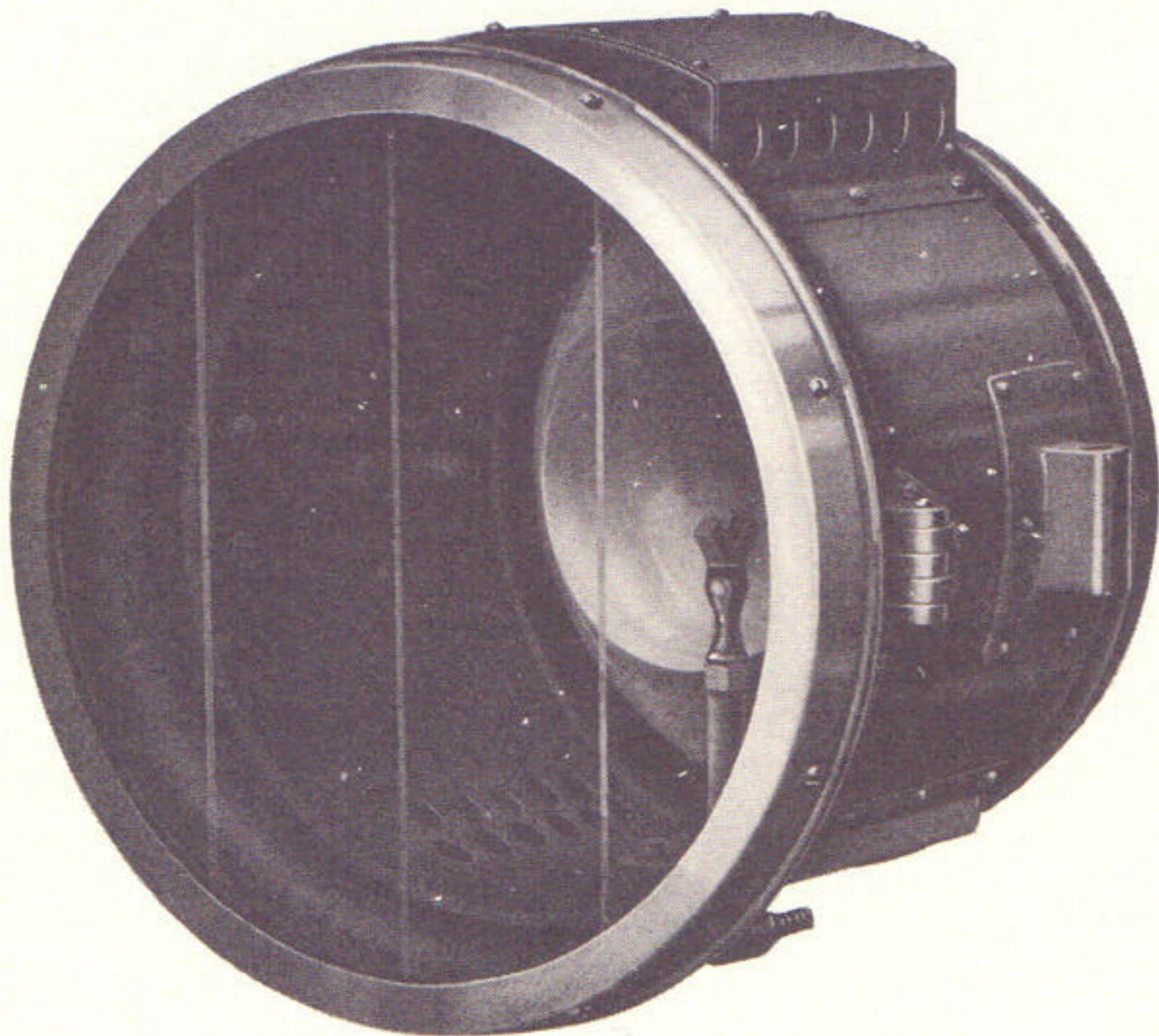
The foregoing objections are overcome in the Lens Mirror. This, as the name implies, is a bowl-shaped lens, silvered on the back, and formed of curves so proportioned as to compensate perfectly for the scattering effect of the plain spherical mirror. If the source of light were a geometrical point, the beam from a lens mirror would be perfectly parallel: a mile distant it would be little larger than the lens, and it would lose intensity only by atmospheric absorption and dispersion. The spreading of the actual beam is due to the fact that the flame has a considerable area, so that only a single point of it can be in the geometrical focus. A beam from a correctly ground lens mirror gives, in fact, an inverted image of the flame itself, as may easily be seen by directing it upon a blank wall, and it is therefore broadest where it strikes the road.

It is obvious that for equal diameters the lens closest to the flame will intercept the largest amount of light. The value of a short focal length, as it is called, is also apparent from the familiar law that "the intensity of the light is inversely as the square of the distance." That is, the closer the flame to the surface of the lens mirror, the greater will be the brilliancy of each individual projected ray. It follows that enlarging the flame does not increase the intensity of the beam, but only its breadth or spread. The mere employment of a large flame with a lens mirror of long focus does not produce a beam of the same intensity as is given by a shorter focal length and a small flame. The beam from the mirror of the shortest focal length will be the brightest under all conditions. For maximum range the lens mirror must be of large diameter also, since this gives a broad beam with little spread.

# The Rushmore Lens Mirror

We were the first to adopt the lens mirror in marine electric searchlights in this country. Their introduction in 1892 was speedily followed by the total disappearance of the parabolic reflector searchlights previously used at sea.

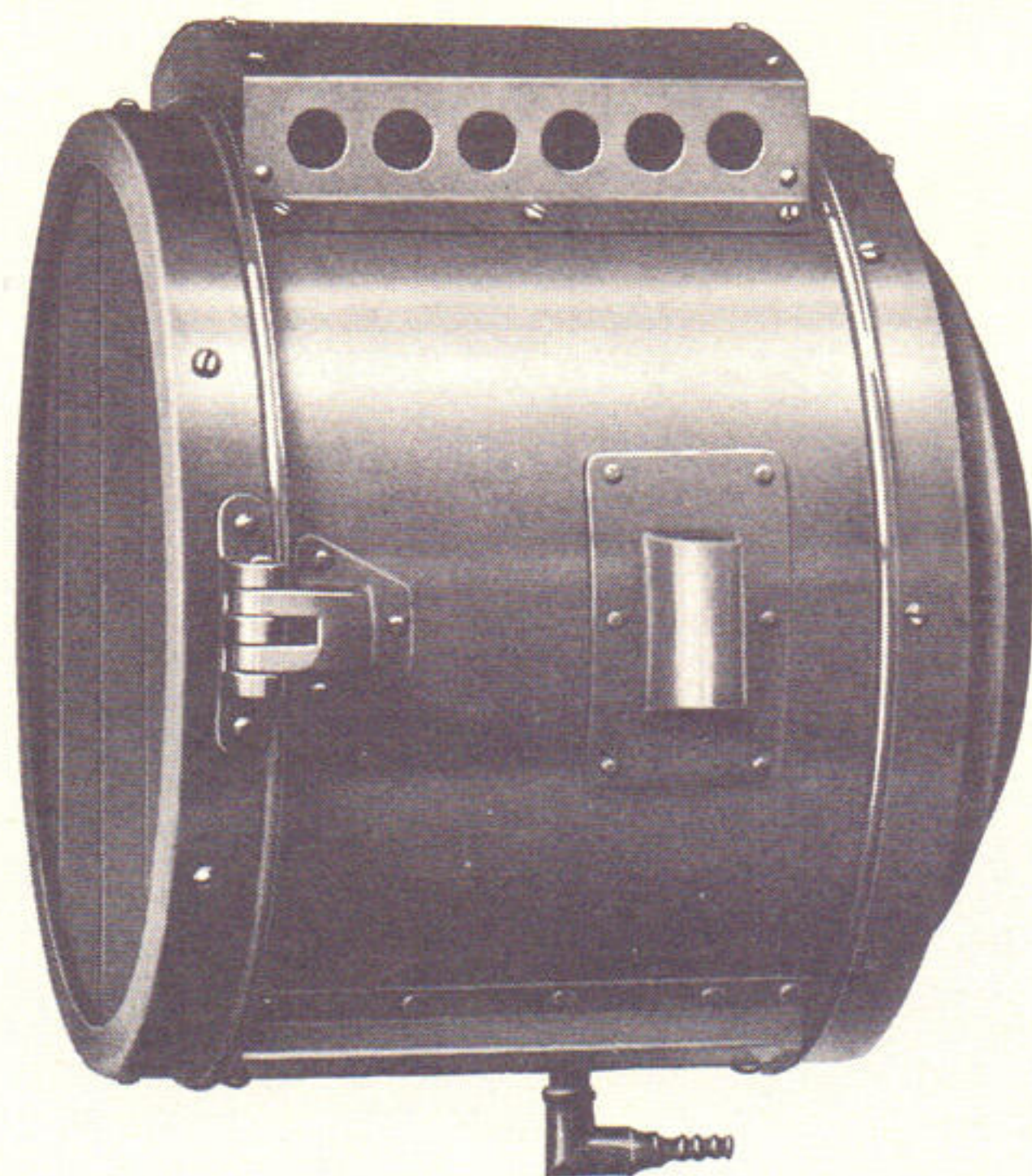
In 1900 we brought out the first automobile searchlights containing lens mirrors. Today the lens mirror is used in automobile lamps to the practical exclusion of all other optical devices.



It has from the first been our policy to manufacture our lamps, *including lenses*, complete on our own premises, and this fact has given us a unique position. While every other lamp manufacturer has had to purchase what the market afforded, we have developed our own special lens-grinding machinery, and have produced lenses to our own special designs, which in all automobile sizes have focal distances much shorter than any obtained elsewhere. This is the reason for the extraordinary power and range of the RUSHMORE automobile lights, which has led them, in spite of numerous imitations, to be universally admitted to be the leaders in their field.

A short focal distance requires the lens to be of very tough glass to withstand the heat. Our lenses are made of lead glass specially mixed to our own formula, and carefully annealed. Both they and their silver backing will resist any heat short of a flame playing directly on the glass.

## Plain Front Searchlights



In view of the large number of lamps which superficially resemble the Rushmore, we desire to call attention to the solidity and workmanlike character of the construction we use, which it is impossible to imitate in a cheaply built lamp:

First—The extremely short focal distance of the Rushmore lens mirror is shown by the location of the burner, which is back of the center of the lamp and close to the front edge of the lens mirror. The position of the burner is adjustable, and every Rushmore light is exactly focused before it leaves the factory.

Second—Every Rushmore lens mirror is of the largest diameter the lamp body will contain, whereas most others are from one-half inch to one inch smaller.

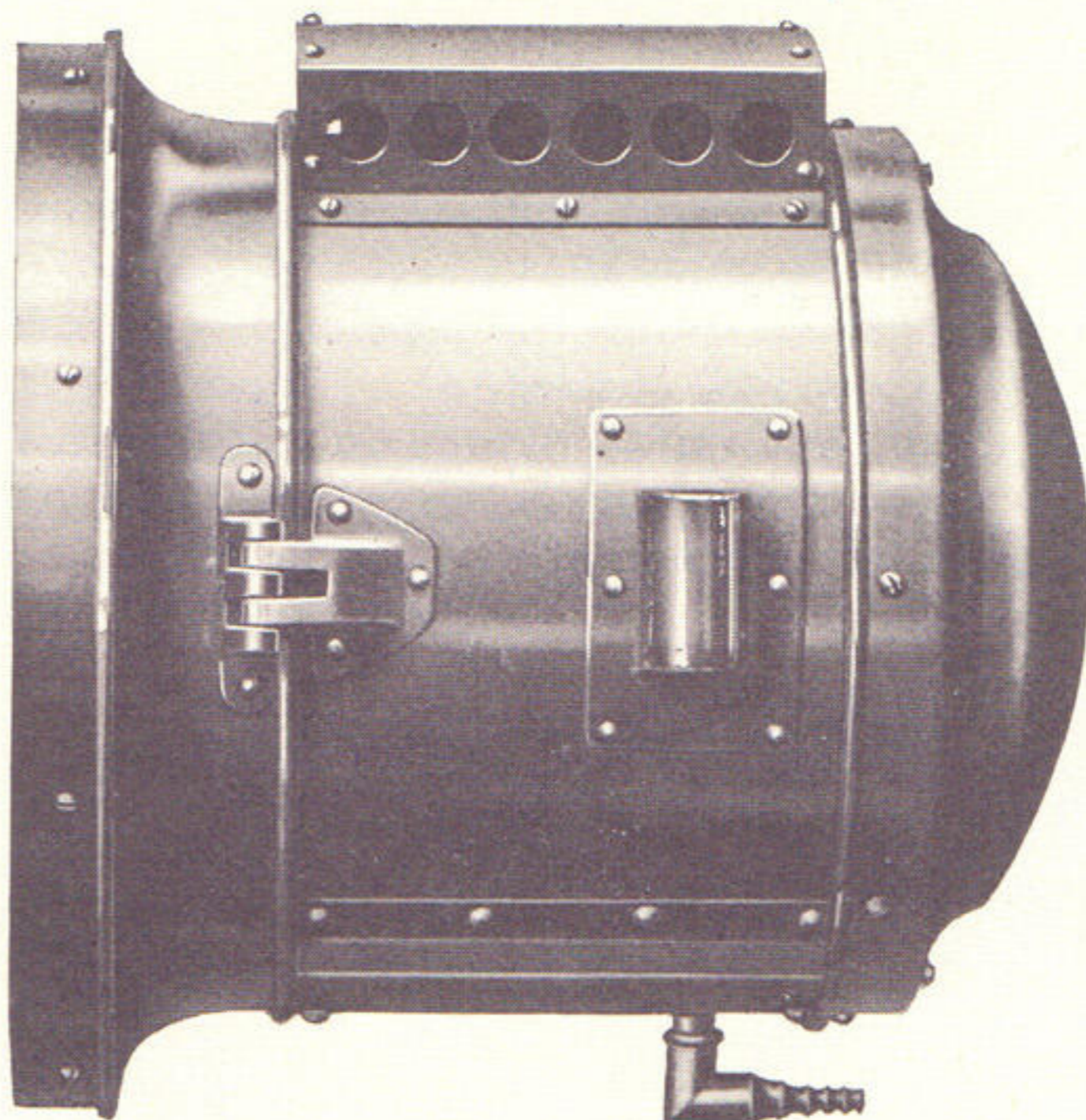
Third—The sheet brass of which the body of the lamp is formed is twice as heavy as that usually found in other lamps.

Fourth—Because heavy gauge brass is used, the various parts of the lamp can be assembled by means of screws and rivets instead of solder. This makes it possible to replace any part in a few minutes should the lamps become damaged. A lamp made of thin brass, on the contrary, must be put together with solder, and requires an expert to repair it, if it can be repaired at all. Should the lens or front glass of a Rushmore light be broken in collision, either may be removed with a screw-driver in a few moments.

Fifth—The mechanical details generally are in keeping with the solidity of material used. The front and back of the lamp are stiffened with heavy endless rings. The side sockets and the hinges are brass castings, machine finished and riveted in place. In all these respects the 1909 Rushmore Headlights and Searchlights are identically the same as those of last year.



# Flare Front Searchlights



Rushmore Headlights and Searchlights are made in both plain and flare front designs, we having been the first to introduce the Rushmore flare front design now everywhere familiar. There is no difference in the lighting powers of the two styles, but frequently owners prefer the flare front for appearance in the headlights, and the plain front in the dashboard searchlight.

The dimensions of the plain front lamps are given in the table on page 9. The dimensions of the flare front lights are the same except dimension D, which is given below.

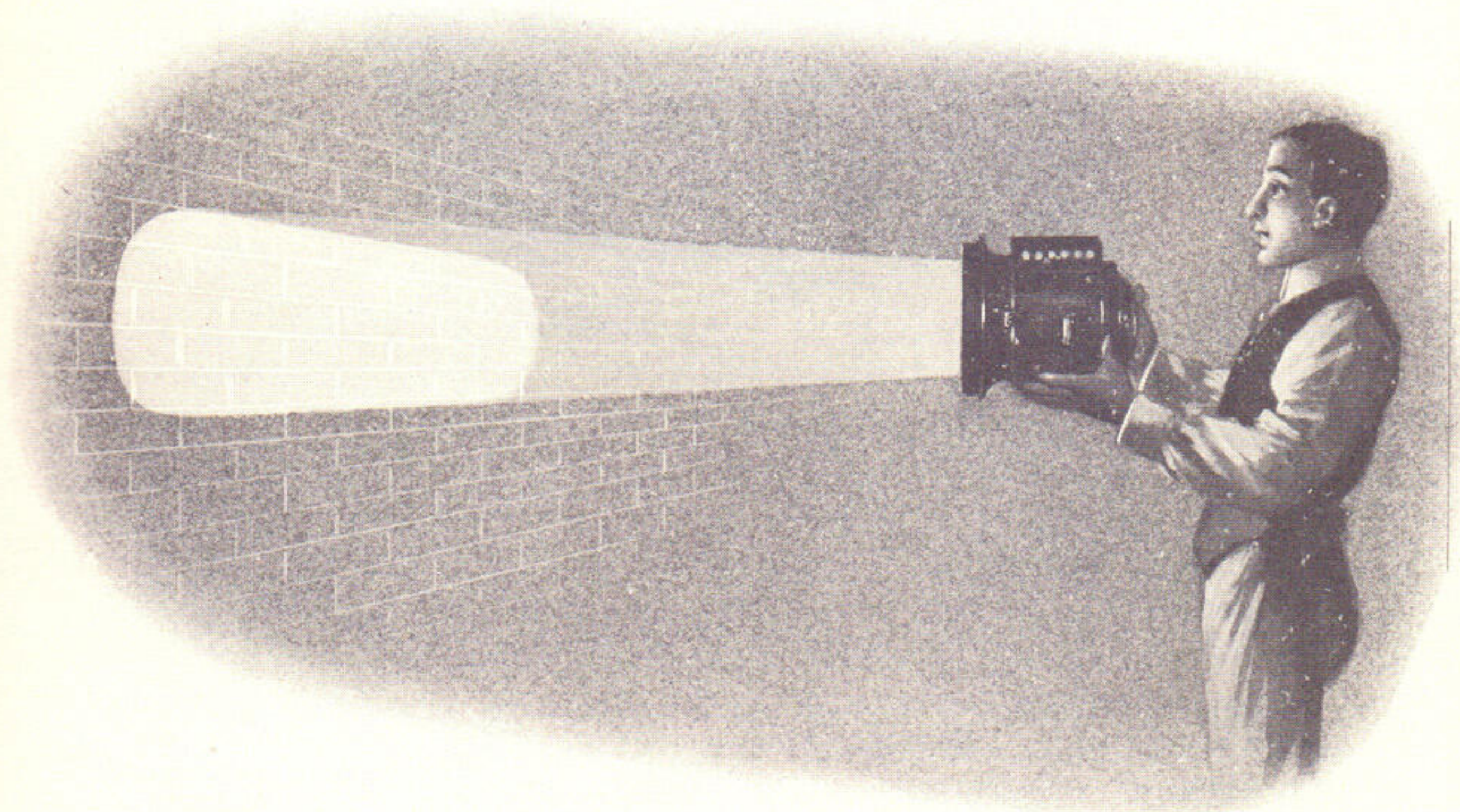
- Size A—Diam. front door,  $7\frac{3}{4}$  inches,  
same lens mirror as in 6-inch standard searchlight.  
Dimension F,  $3\frac{3}{4}$  inches.
- Size B—Diam. front door,  $9\frac{1}{4}$  inches,  
same lens mirror as in 7-inch standard searchlight.  
Dimension F, 5 inches.
- Size C—Diam. front door, 10 inches,  
same lens mirror as in 8-inch standard searchlight.  
Dimension F, 6 inches.
- Size D—Diam. front door,  $11\frac{3}{8}$  inches,  
same lens mirror as in 9-inch standard searchlight.  
Dimension F, 7 inches.
- Size E—Diam. front door,  $12\frac{1}{4}$  inches,  
same lens mirror as in 10-inch standard searchlight.  
Dimension F,  $6\frac{3}{4}$  inches.

# The Multiplex Searchlight

## Non-Flickering

### What It Is

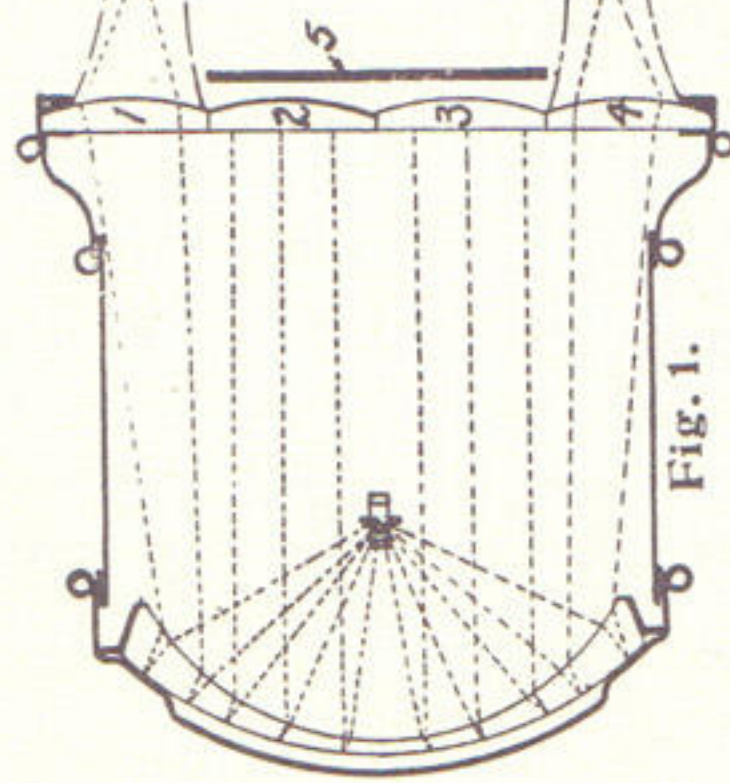
In the non-flickering searchlights, the plane glass strips in the front door are replaced with heavier strips 2 inches wide which are flat on the rear side, while the front side is accurately ground and polished to a convex curvature. These lens strips spread the light out in a horizontal plane only as shown in Fig. 1, the non-flickering beam giving a wide field and perfectly even illumination without any spreading up or down.



Tests on a car driven 60 miles an hour in a strong wind have shown that the flickering is completely eliminated, and the driver can always depend upon perfectly even illumination, although, when the car is standing still, with the diverging doors open, the range is somewhat greater than with the beams spread out, still the complete absence of the annoying flickering and dancing of the beams has the effect that one may actually see farther down the road at high speeds than with the plain door light.

The diverging lenses are ground and polished by elaborate special machinery which we have been developing for several years. We are now prepared to supply them for all sizes of our searchlights. Aside from the great advantage of the wide spreading, non-flickering beam at night, the diverging lens front gives the lamps a singularly rich and attractive appearance in the daytime, and greatly improves the appearance of the car to which they are attached. Prices will be found on page 27.

The remarkable non-flickering effect is explained in Fig. 1, in which 1, 2, 3 and 4 are diverging lens strips shown in section. Suppose a shield, or board 5, be placed temporarily in front of the two centre lens strips 2 and 3, so that the light from the lens mirror can escape only through strips 1 and 4. It will be seen that the light from strip 1 spreads out and covers the space between 6 and 7, while the light from strip 4 is likewise spread out over the same.

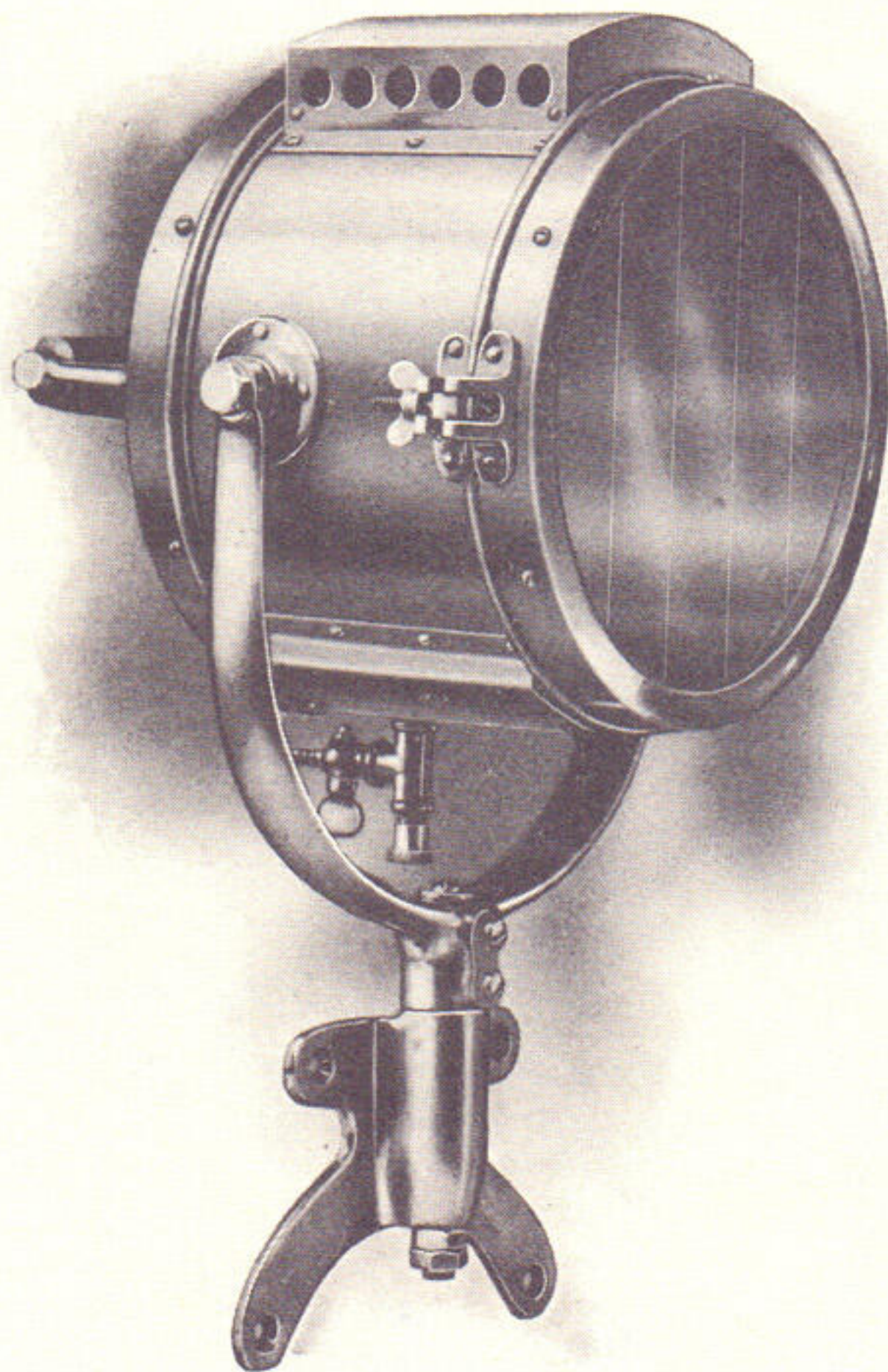


space; thus, no matter though one or several of the diverging strips may be covered up, the rectangular spreading beam remains in exactly the same position—covering more of the lens strips simply increasing the intensity of the illumination. It will thus be seen that no matter how badly the flame may flicker, the light projected by the lens mirror passing through the diverging strips will be distributed evenly over the full width of the space 6 and 7.

Diagram showing the Principle of the Multiplex Diverging Lens.

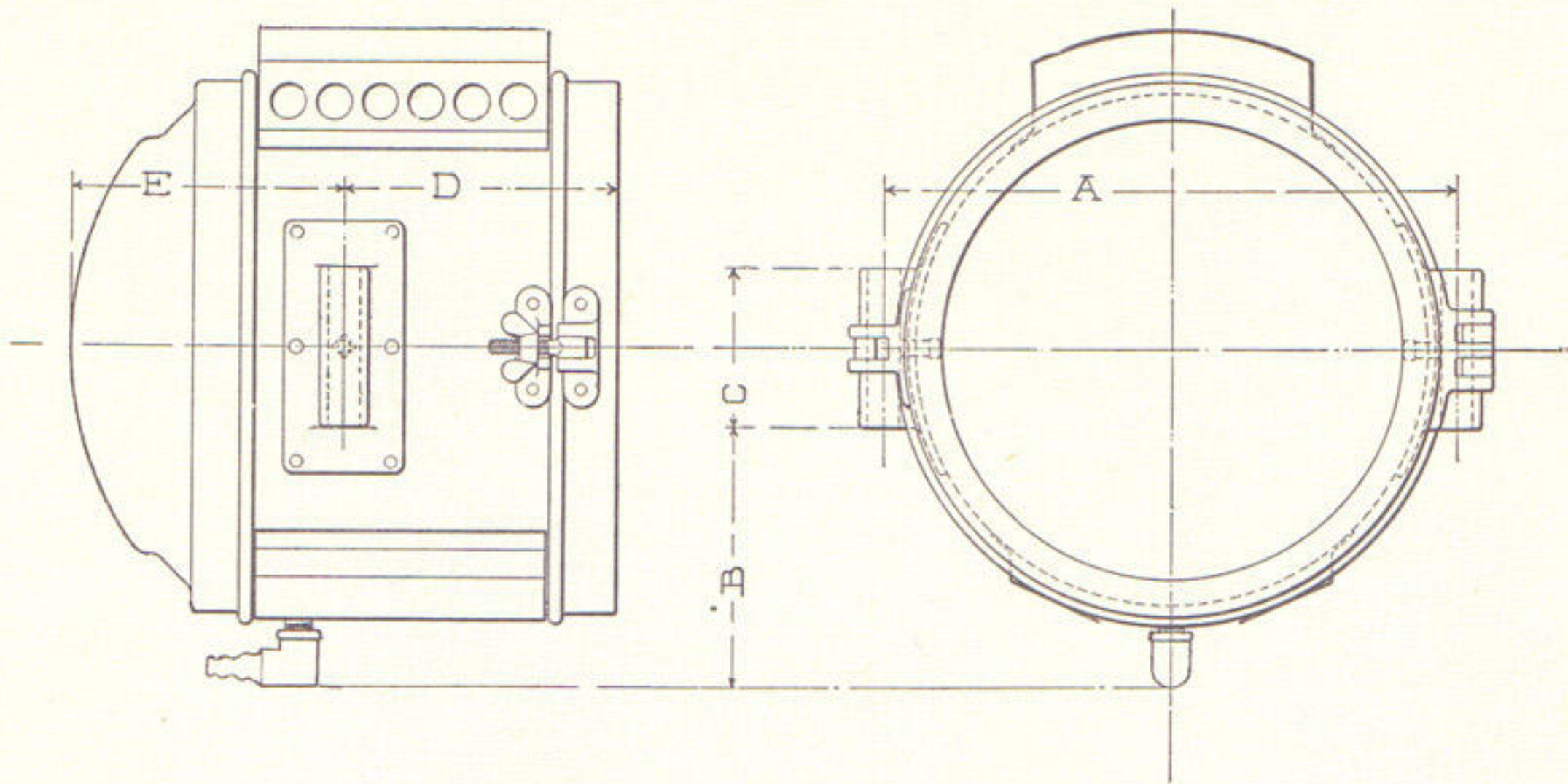
# The Rushmore Swivel Searchlight

It was remarked in a previous paragraph that on a straight road the searchlight should be set to throw its beam on the road just beyond the headlight beams, thereby greatly extending the visible field. It is highly desirable to have the searchlight one or two sizes larger than the headlights, since its efficiency on a straight road is thereby increased. On a winding road the



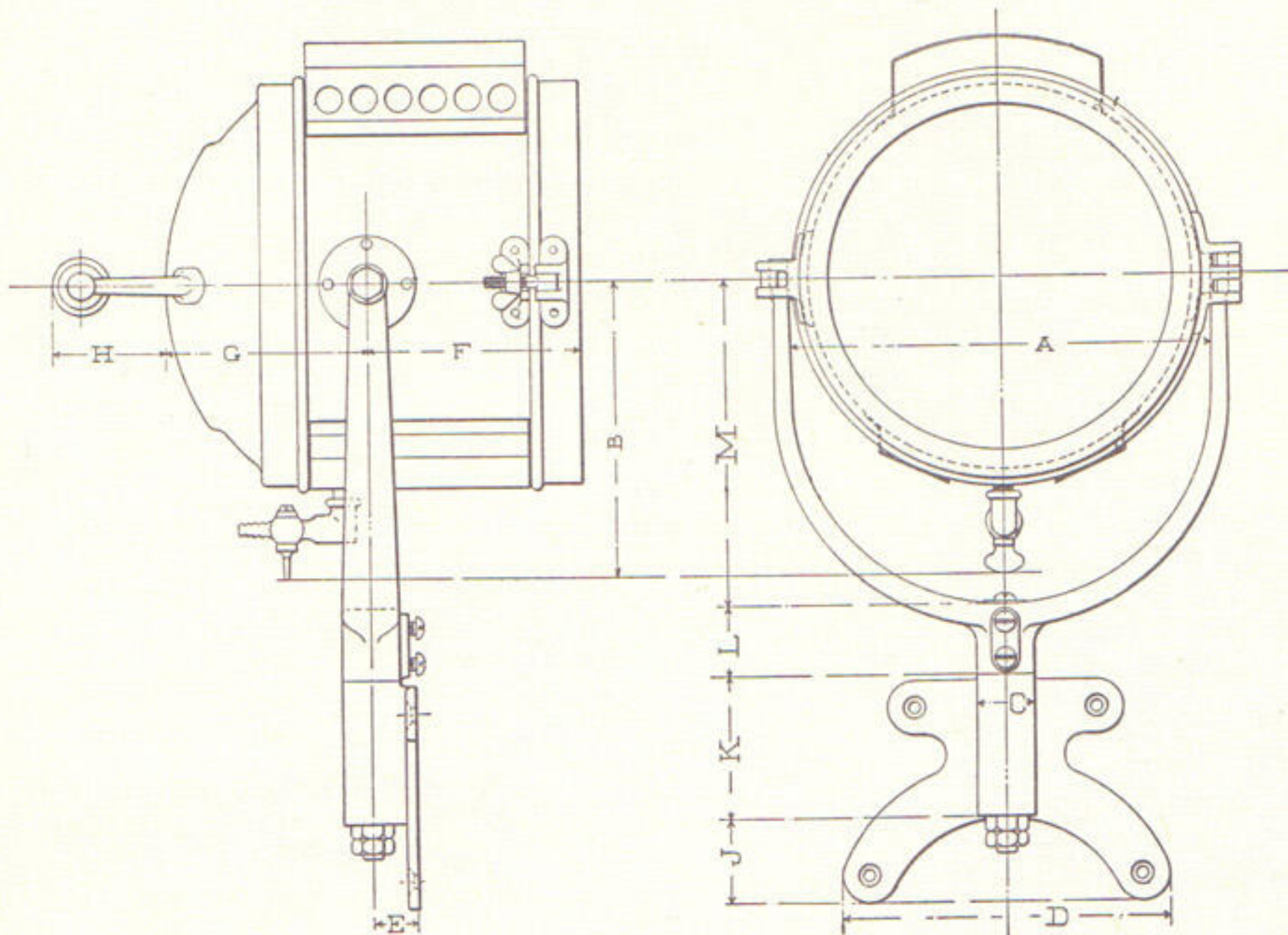
user of a searchlight is able to explore the road past turns before reaching them, and therefore can take them at speed, whereas if headlights alone were used it would be necessary to slow down considerably at each turn, since the headlight beams are then far off the road.

The above illustration shows a swivel searchlight in the standard bracket for a flat vertical dash. Other styles of brackets are shown on page 10. By means of these brackets the searchlight may be attached to almost any style of dashboard. See price list for prices of these special brackets.



**Dimensions of Rigid Lights**

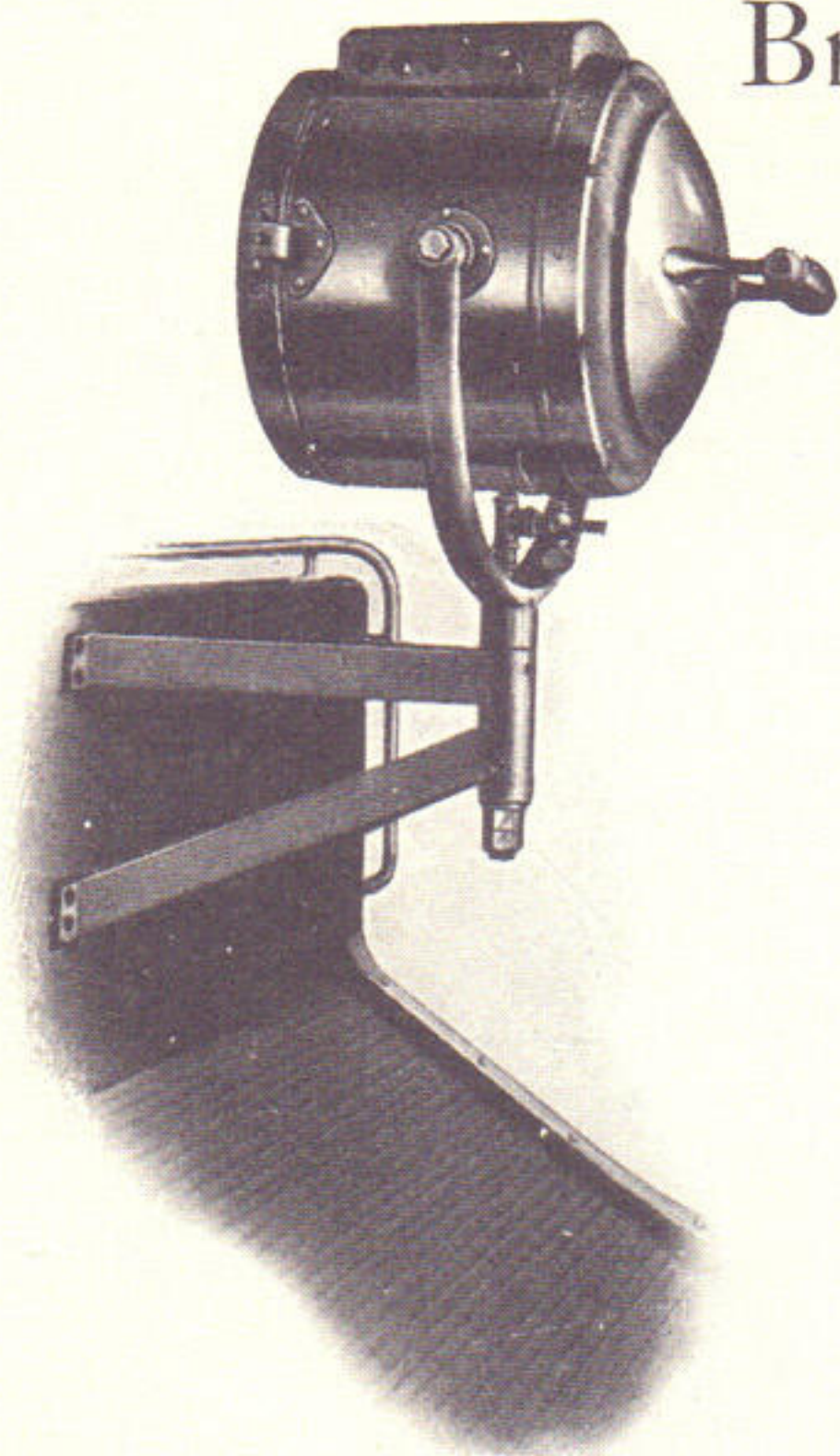
| Diam. | A               | B              | C              | D              | E              |
|-------|-----------------|----------------|----------------|----------------|----------------|
| 6"    | $7\frac{1}{4}$  | $4\frac{1}{4}$ | $\frac{3}{4}$  | $3\frac{1}{8}$ | $2\frac{3}{4}$ |
| 7"    | $8\frac{1}{2}$  | $4\frac{3}{4}$ | $1\frac{1}{8}$ | $3\frac{3}{8}$ | $3\frac{3}{4}$ |
| 8"    | 9               | $4\frac{3}{4}$ | $1\frac{1}{2}$ | $4\frac{3}{8}$ | 4              |
| 9"    | $10\frac{1}{4}$ | $5\frac{3}{8}$ | $1\frac{1}{2}$ | $4\frac{7}{8}$ | $4\frac{3}{4}$ |
| 10"   | $11\frac{1}{8}$ | $5\frac{7}{8}$ | $1\frac{1}{2}$ | $5\frac{1}{4}$ | $5\frac{1}{8}$ |



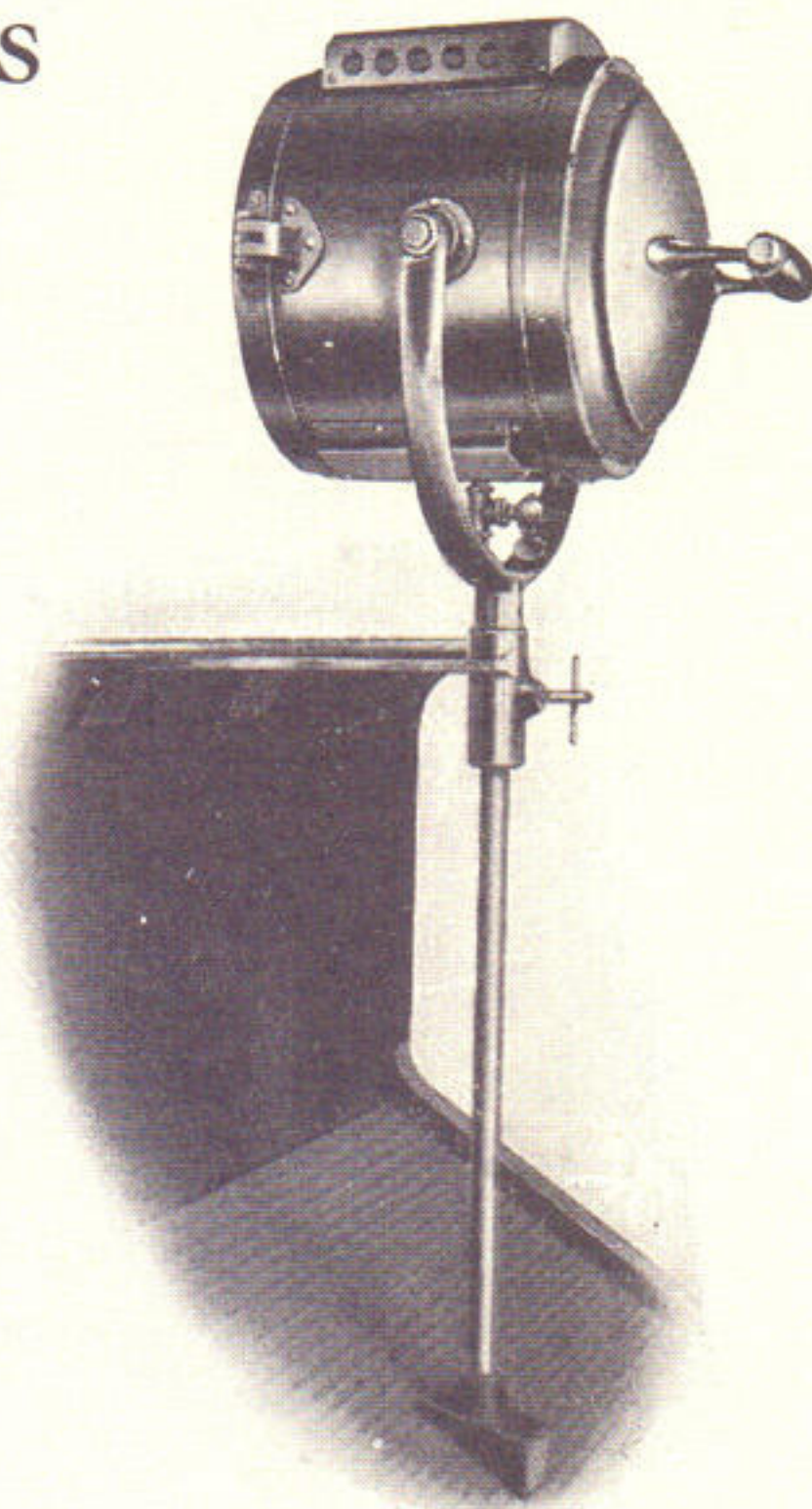
**Dimensions of Swing Lights**

| Diam. | A               | B              | C              | D              | E              | F              | G              | H              | J              | K              | L              | M              |
|-------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 6"    | $7\frac{1}{4}$  | $5\frac{3}{8}$ | $1\frac{1}{8}$ | $5\frac{3}{4}$ | $\frac{9}{16}$ | $3\frac{1}{8}$ | $2\frac{3}{4}$ | $2\frac{1}{4}$ | $1\frac{1}{8}$ | $3\frac{1}{4}$ | $1\frac{3}{8}$ | $5\frac{3}{4}$ |
| 7"    | $8\frac{1}{4}$  | 6              | $1\frac{1}{8}$ | $6\frac{3}{4}$ | $\frac{7}{8}$  | $3\frac{3}{8}$ | $3\frac{3}{4}$ | $2\frac{1}{4}$ | $1\frac{5}{8}$ | 3              | $1\frac{1}{2}$ | $6\frac{1}{2}$ |
| 8"    | $8\frac{3}{4}$  | $6\frac{1}{4}$ | $1\frac{1}{8}$ | $6\frac{3}{4}$ | $\frac{7}{8}$  | $4\frac{3}{8}$ | 4              | $2\frac{1}{4}$ | $1\frac{5}{8}$ | 3              | $1\frac{1}{2}$ | $6\frac{3}{4}$ |
| 9"    | 10              | $6\frac{7}{8}$ | $1\frac{1}{8}$ | $6\frac{3}{4}$ | $\frac{7}{8}$  | $4\frac{7}{8}$ | $4\frac{3}{4}$ | $2\frac{1}{4}$ | $1\frac{5}{8}$ | 3              | $1\frac{1}{2}$ | $7\frac{1}{4}$ |
| 10"   | $10\frac{7}{8}$ | $7\frac{3}{8}$ | $1\frac{1}{8}$ | $6\frac{3}{4}$ | $\frac{7}{8}$  | $5\frac{1}{4}$ | $5\frac{1}{8}$ | $2\frac{1}{4}$ | $1\frac{5}{8}$ | 3              | $1\frac{1}{2}$ | $7\frac{1}{2}$ |

# Showing Lights Mounted on Special Brackets



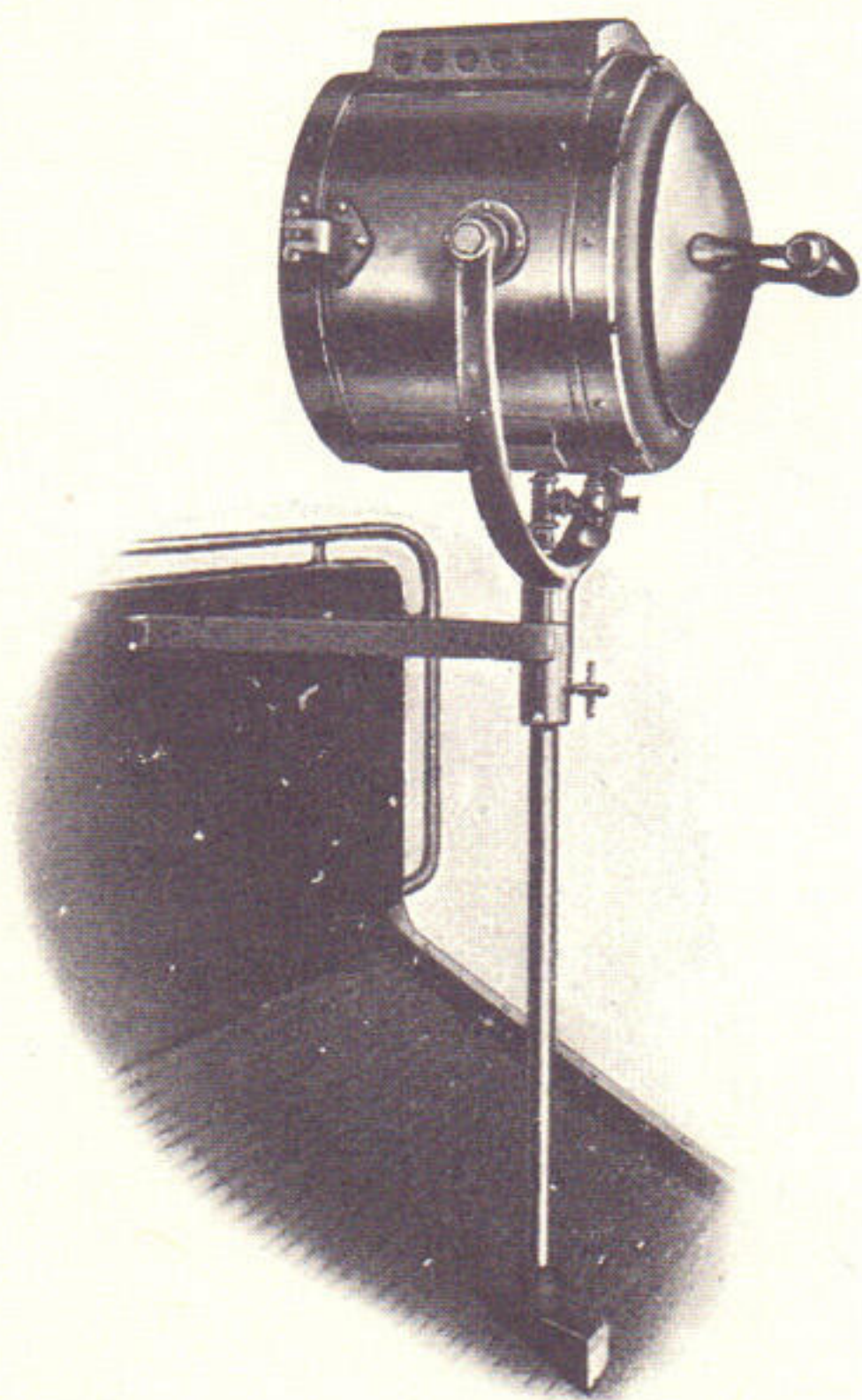
Searchlight mounted on Quad bracket. Complete as above.



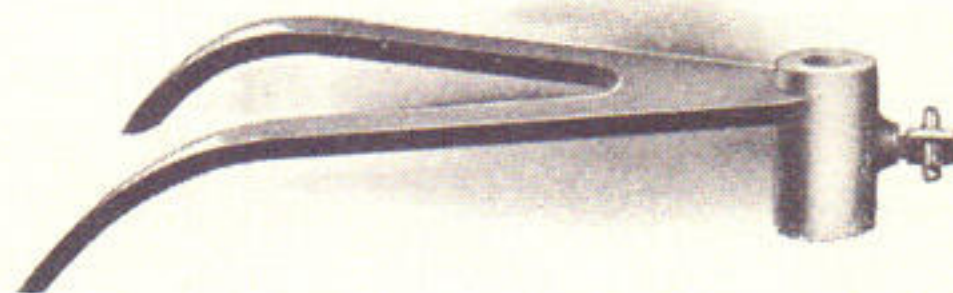
Searchlight mounted on K Winton swing bracket. Light may be instantly lifted out of socket to get at parts under floor.

Price includes complete outfit as above.

Where the floor bearing is used the dashboard is relieved of practically all strain and need not be re-inforced.



Searchlight mounted on Stevens swing bracket. Light may be instantly lifted out of socket to get at parts under floor. Price includes complete outfit as above.



Curved end bracket for overhand dashboards. The brass casting may be bent to fit any dash.

# The Rushmore Shaking Grate Generator

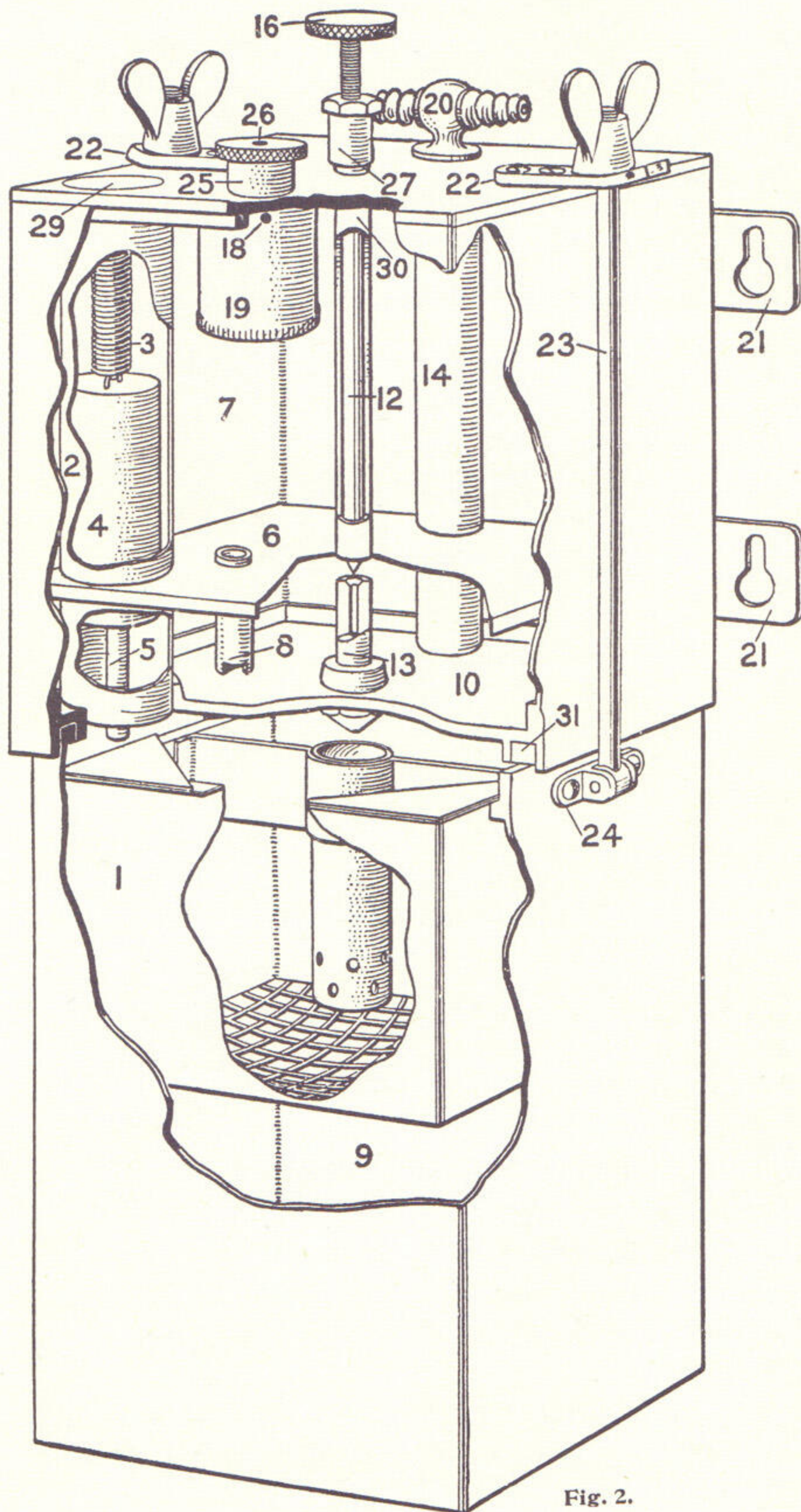


Fig. 2.

# The Rushmore Shaking Grate Generator

The Rushmore Shaking Grate Generator has been recognized for the past three years as being the only gas generator for automobile use constructed on scientific principles. In its present form it has been considerably simplified, but without change in its two important features, namely, the Automatic Regulating Chamber and the Shaking Carbide Basket, to which its well-known steadiness and perfect operation are due.

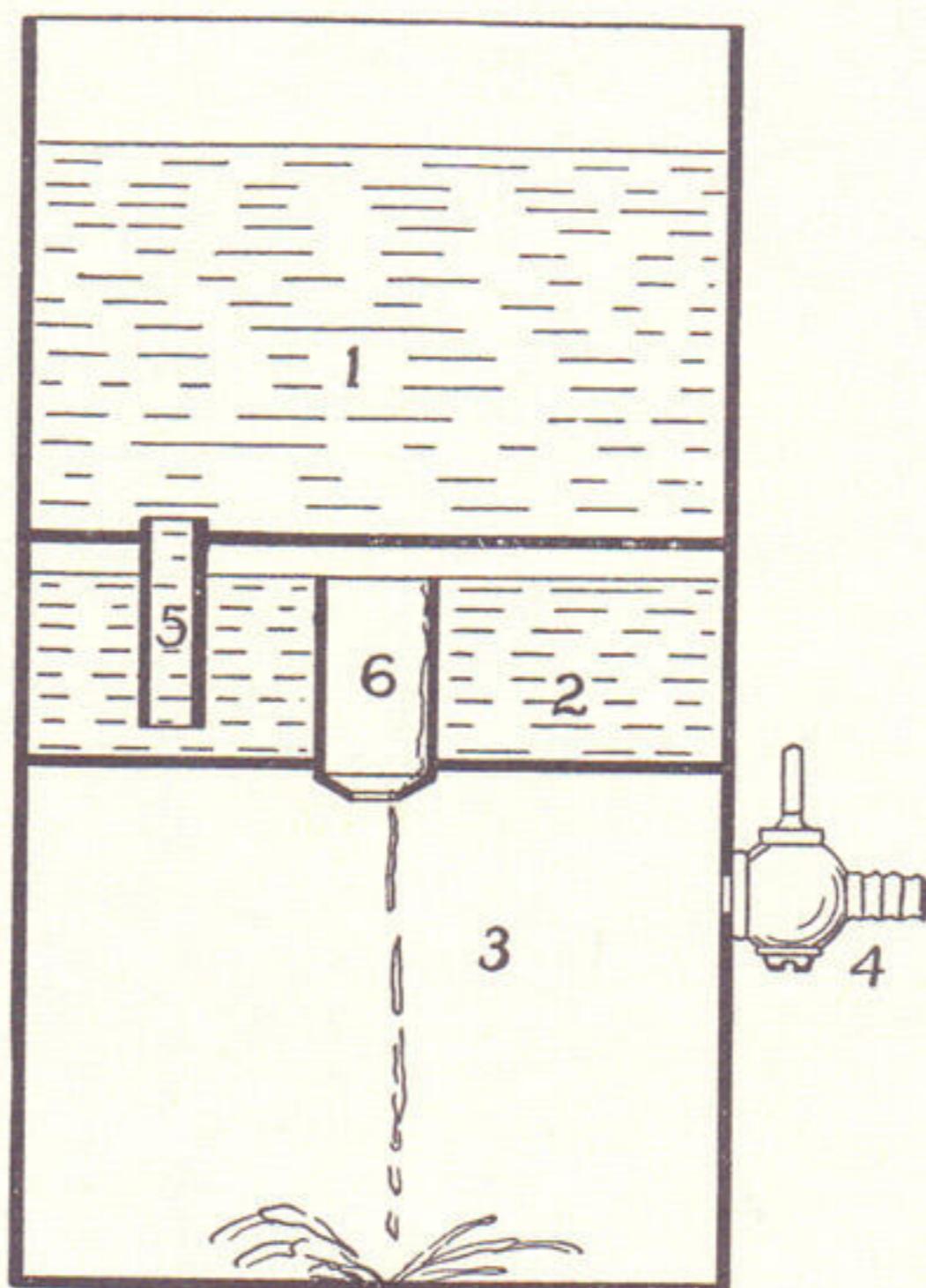


Fig. 3.

When properly handled this generator will give the following results:

1. It will separate from 85 to 95 per cent. of the lime from the carbide.
2. It will regulate the water feed automatically according to the gas pressure, regardless of the number of burners lighted.
3. It will not wet the lime.
4. It will not overheat.
5. It will supply gas faster without injury than any other generator made.
6. It will not waste carbide when the gas is shut off.
7. It will not develop excessive pressure, whether it is working or not.



An automobile generator of the ordinary type operates by holding the carbide in a comparatively solid mass and feeding water to it, the rate of the feed being determined either by some wick stuffed into a small tube or by careful adjustment of an easily choked needle valve. In neither case is the feed controlled by the amount of gas generated. The carbide is usually held in a comparatively solid mass. The lime formed by the reaction with the water swells to a larger volume than the carbide upon which it forms an envelope retaining the heat, so that the acetylene is decomposed into tar vapors, which cause the sickly reddish light so often noticed and choke up the burners with tar. As there are no means of ridding the carbide from the lime, there is formed in the center a small puddle when the car is standing or running over smooth roads. When the engine

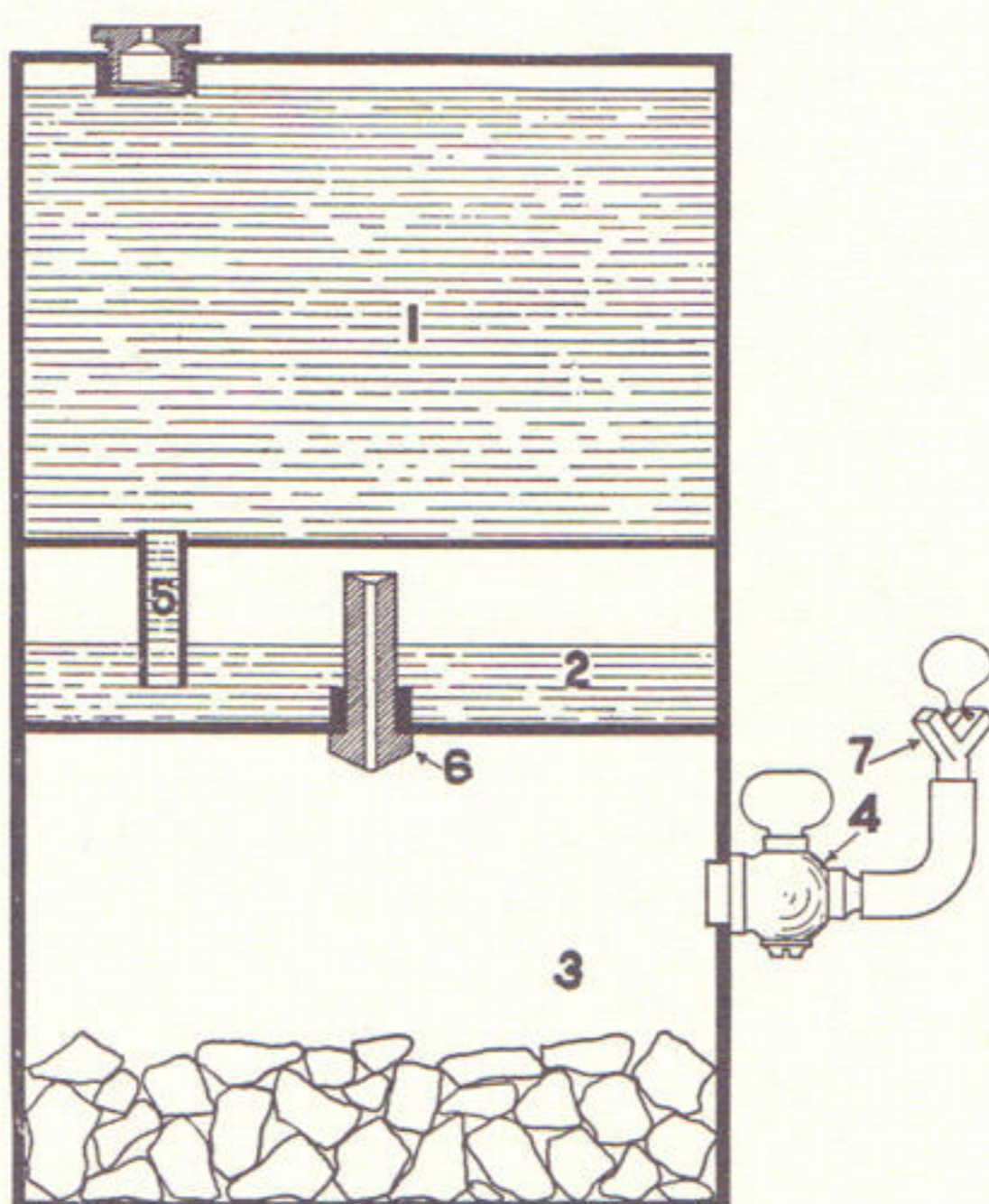


Fig. 4.

is started or a rough piece of road is encountered, this puddle of water is scattered through the unconsumed carbide. The result is a terrific rise in pressure which can be relieved only through the burners, and besides the loss of carbide there is danger of breaking the lens mirrors. Such generators give only a dim sickly light on smooth roads when the driver wants to run at high speed, but on a bumpy section where he must run slowly and needs little light, his lamps flare up magnificently.

To produce a constant flow of gas without waste of carbide two principal things are needed: The supply of water to the carbide must be governed automatically by the gas pressure; and to accomplish this the carbide itself must be instantly freed from the lime dust formed upon it. These two objects are attained in the Rushmore Generator by means of the patented Automatic Regulating Chamber and the Shaking Grate or Carbide Basket.

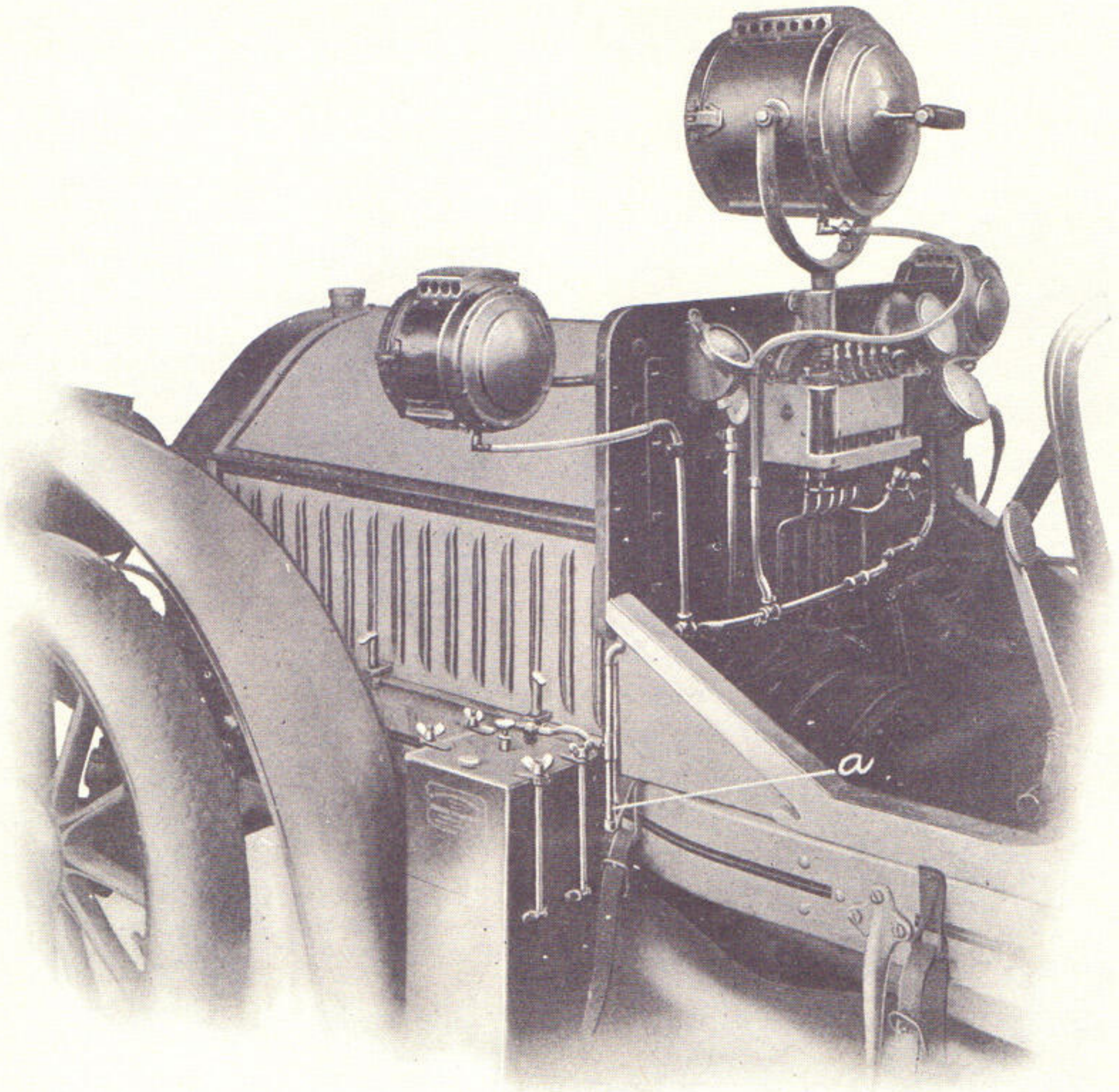
The Automatic Regulating Chamber operates on the principle illustrated in Figs. 3 and 4. These show a vessel with a water tank 1, an intermediate chamber 2, and a bottom chamber 3, with an outlet 4. Water poured into 1 will run down through the tube 5 and overflow the standpipe 6. If there is only atmospheric pressure in 3, the water will run down freely, as there is nothing to hold it back. If, however, 3 contains calcium carbide, the first few drops of water reaching the carbide will generate gas, whose pressure, communicated to the chamber 2, will force a portion of the water back to the tank, so that the water levels in 1 and 2 will take about the positions shown. The "head" of the water is then exactly equal to the gas pressure in 2 and 3. If a gas burner 7 be connected to 4, the pressure in 3 will gradually diminish till the water again overflows 6, and the process is repeated. This chamber 2 is the Automatic Regulating Chamber of the Rushmore generator, and so long as carbide remains it performs its functions in the manner indicated, permitting no water to fall upon the carbide till the gas pressure has dropped below the normal "head" of about four inches of water, which is the proper working pressure for the burners.

The shaking carbide basket is simply a square or round basket, suspended by its upper edge at two opposite points, and jarred constantly by a lead weight suspended from a spring. This weight (not shown in the illustrations) is kept in motion by the slight vertical movement of the car when running, and by striking the carbide basket it gives the whole mass of carbide a sharp shock and the wire grate forming the bottom of the latter a slight horizontal motion, resembling that of a common ash sifter, which is found to be a complete preventive of the caking and clogging of the carbide experienced with other forms of generator. Cheap commercial lump carbide is used, giving the largest yield of gas per pound.

In Fig. 2 is shown the manner in which the principle of the Automatic Regulating Chamber is applied in the actual generator. The carbide is contained in a swinging basket 1, through the bottom of which the lime dust sifts out when the basket is shaken. To give access to the carbide basket the generator is made in two parts, which are connected by a joint made gas-tight by a rubber gasket 31. The water valve 16 is provided to shut off the flow of water to the generating chamber when the bottom half is detached for recharging.

Instead of taking the gas out from the side of the generator, it is carried up through pipe 14, which passes with gas-tight connections through the regulating chamber and tank, and is filled with curled hair, which acts as a filter to prevent lime dust from being carried into the gas pipe. As this large tube is surrounded by water, the gas is effectually cooled.

# How to Pipe a Car



## Importance of Proper Piping

Probably ninety per cent. of the trouble experienced with gas lamps is due to use of small metal tubing and lack of provision for drainage.

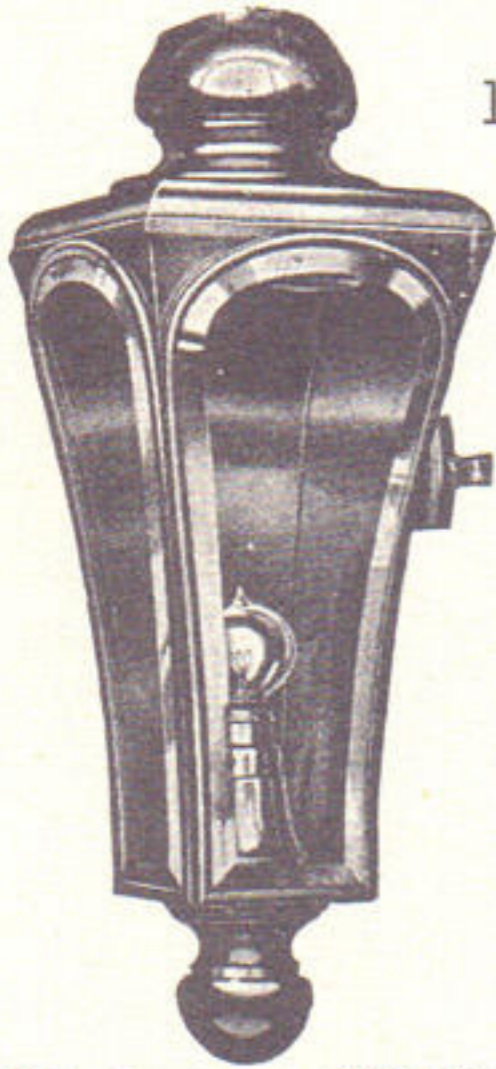
Small brass or copper tubes must never be used, but only standard gas pipe, known as  $\frac{1}{8}$ -inch, but which measures  $\frac{1}{4}$ -inch inside.

It is very important that the gas from the generator be first led downward to a trap where any moisture may collect, and then upward to the lamps.

The above illustration shows the proper method of piping from generator to three lamps. Large pipe and standard gas fittings are used throughout. The main feed pipe slopes downward to the generator and is extended to a dead end marked *A*, while the large rubber tube from generator leads downward to connect with the pipe line. With this arrangement the small amount of condensation will collect in the dead end *A* and the lights will never flicker.

# Oil Side and Rear Lamps

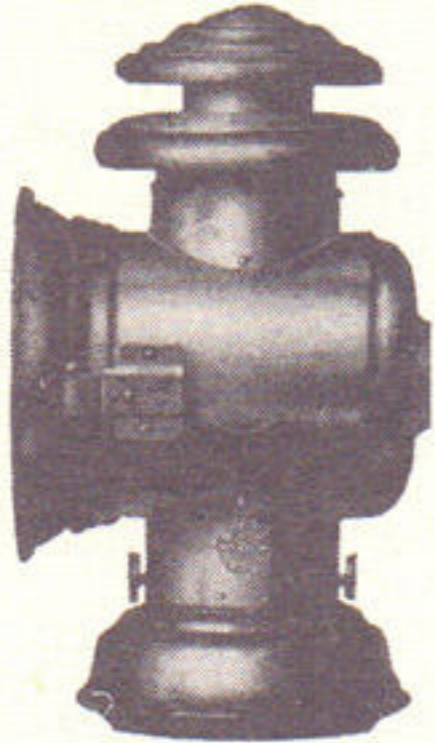
**Pillar  
Limousine Lamp**



1911

Per pr. . . . . \$25.00

**Commercial**



**No. 1023**

Height, 12 inches; 5½-inch front glass, 1½-inch ruby rear, aluminum reflector.

Model 1023. Price, per pair. . . . . \$9.50

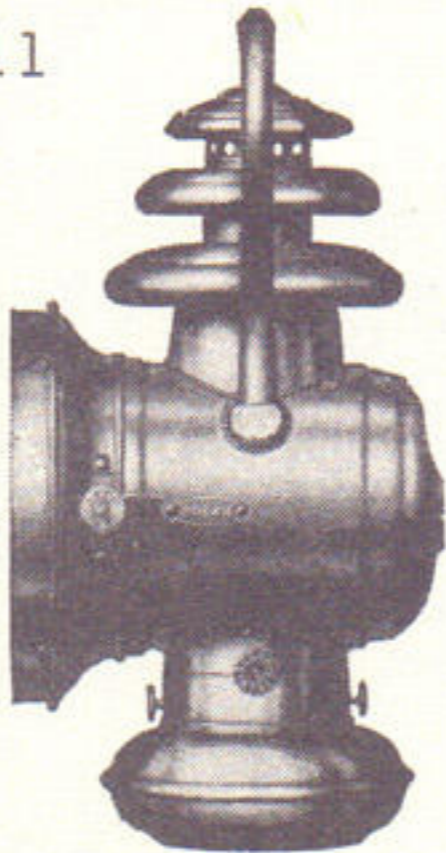
**Standard Square  
Side Lights**

Height, 12½ inches with 4¼-inch square front and 4¼x5-inch side, beveled glass; 1½-inch ruby rear signal and burnished silver lining.

Model 933. Price, per pair. . . . . \$11.00

Model 1033C. Combination oil or electric, per pair. . \$14.50

**Searchlight  
Side Lamp**

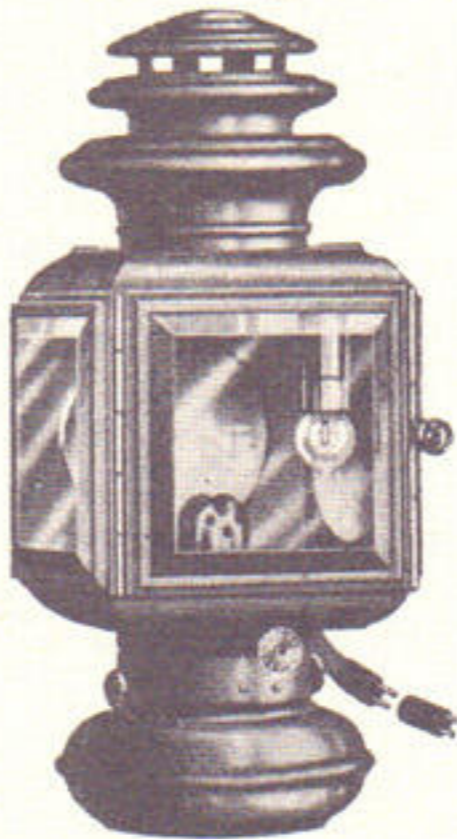


**No. 1024A**

Prop for round or flat iron. Height, 14 in., 6½-in. front glass, 1½-inch rear jewel, aluminum reflector.

Model 1024A. Price, per pair. . . . . \$10.00

**Senior Square  
Side Lights**



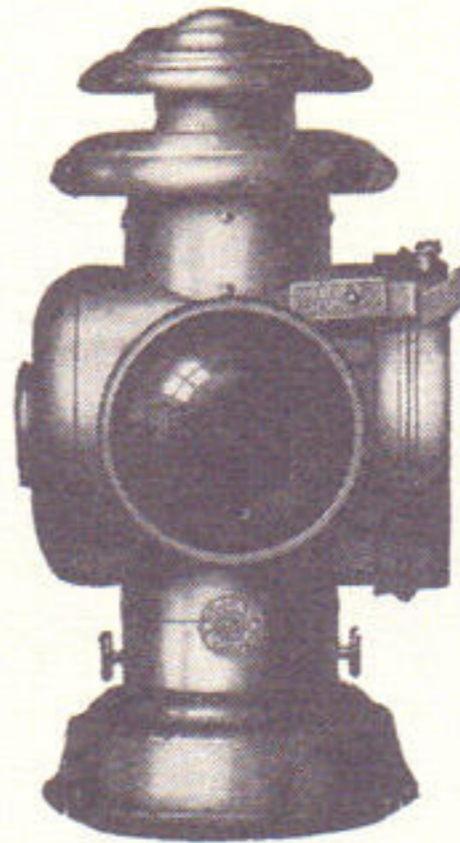
**No. 1134**

Prop for round or flat iron. Height, 13½ inches with 4½-inch square front, 4½x5½ side, beveled glass; 2-inch ruby rear signal and burnished silver lining.

Model 1134. Price, per pair. . . . . \$16.50

Model 1134C. Combination oil or electric, per pair. . \$20.00

**Security Tail**



**No. 1105**

Prop for round or flat iron. Height, 9 inches. Rear glass, 3 inch ruby. White side, 3-inch. Green side, 1½-inch; aluminum reflector.

No. 1005. Price, each. . . . . \$3.25

No. 1105C. Combination oil and electric. Price, ea. \$5.00

**Square Tail**



**No. 1130**

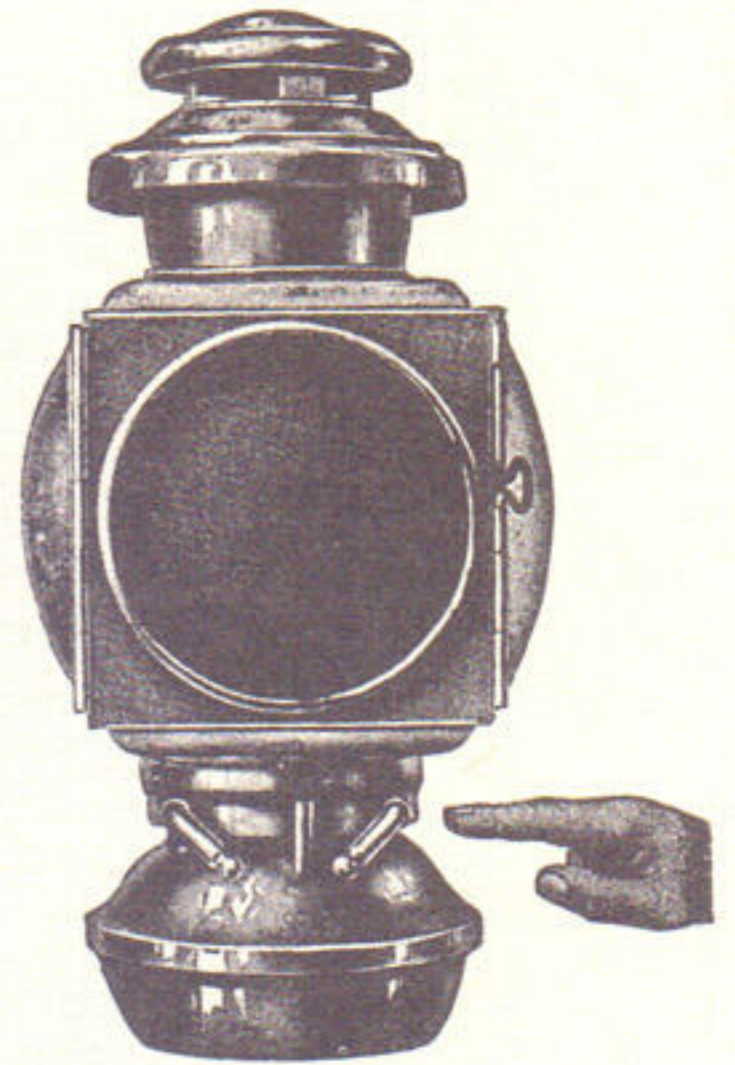
Prop for round or flat iron. Height, 12 in. Rear glass, 3½ in. ruby. White side, 3½ in. Green side, 2-in.

Other dimensions same as No. 1132.

No. 1130. Price, each. . . . . \$4.75

No. 1130C. Combination oil and electric. Price, each. \$6.50

**E. & J. Tail Lamp**



**No. 3A**

Price . . . . . \$3.25

**Taxicab Square  
Side Lights**

Height, 11½ inches, with 3¾-inch square front and side beveled plate glass, 1-inch ruby rear signal and silver lining.

Model 1132. Price, per pair. . . . . \$9.00

Model 1132C. Combination oil and electric, per pair. . \$12.50

**Square Tail**

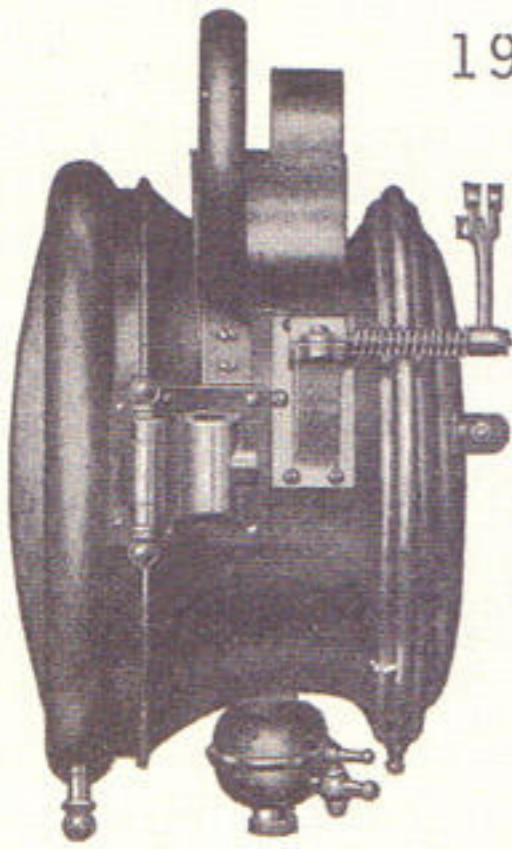


**No. B80**

Price . . . . . \$2.75

James L. Gibney & Bro., Philadelphia, Pa.

# Solar Headlights



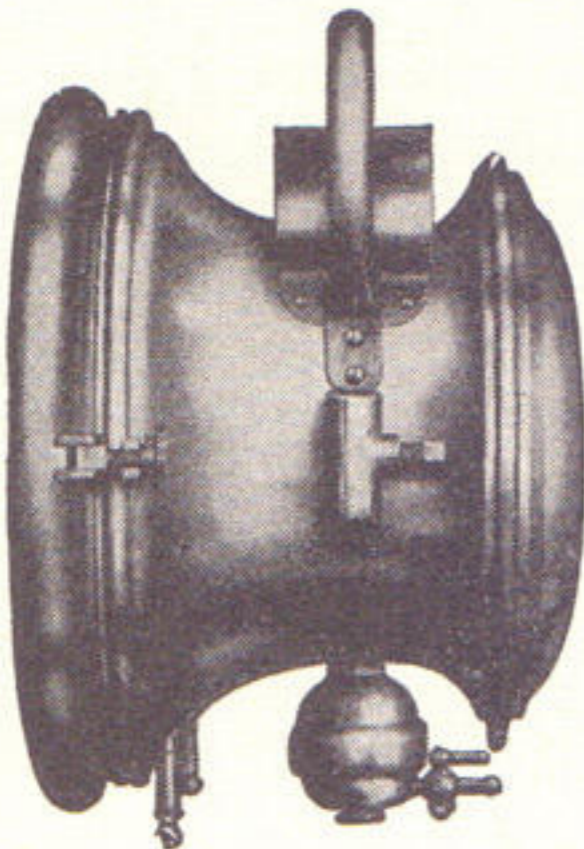
1911

## Solarclipse Motor Car Headlight

Model 950 of this type is the most powerful light produced, designed for use on large touring cars. Model 949 is smaller in size and light power, same design and construction, intended for use on medium-sized cars. Both sizes have ground and polished glass lens reflector and front plano-convex lens and are of highest grade workmanship. A headlight guaranteed without an equal.

|  | Per Pair. |
|--|-----------|
| No. 1150S. Brass, with shutter and control ..... | \$110.00  |
| " 1150. Brass, without shutter and control.....  | 95.00     |
| " 1149S. Brass, with shutter and control .....   | 90.00     |
| " 1149. Brass, without shutter and control.....  | 75.00     |
| " 138. Brass, with shutter and control .....     | 70.00     |
| " 138. Brass, without shutter and control.....   | 55.00     |

## Lens Mirror Projector

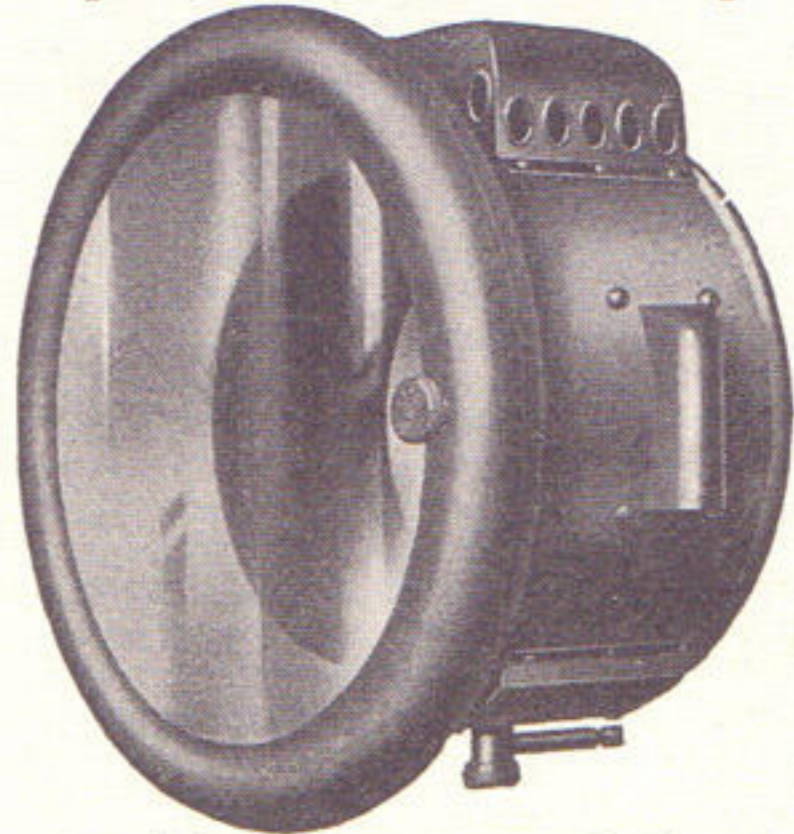


Exclusive design and a departure from the flared front type, with the added advantage of short wide light from front reflector.

### Prices

|                              |            |         |
|------------------------------|------------|---------|
| No. 898. 8-inch lens mirror. | Each ..... | \$20.00 |
| No. 887. 7-inch lens mirror. | Each ..... | 16.25   |

## Torpedo Lens Mirror Headlight

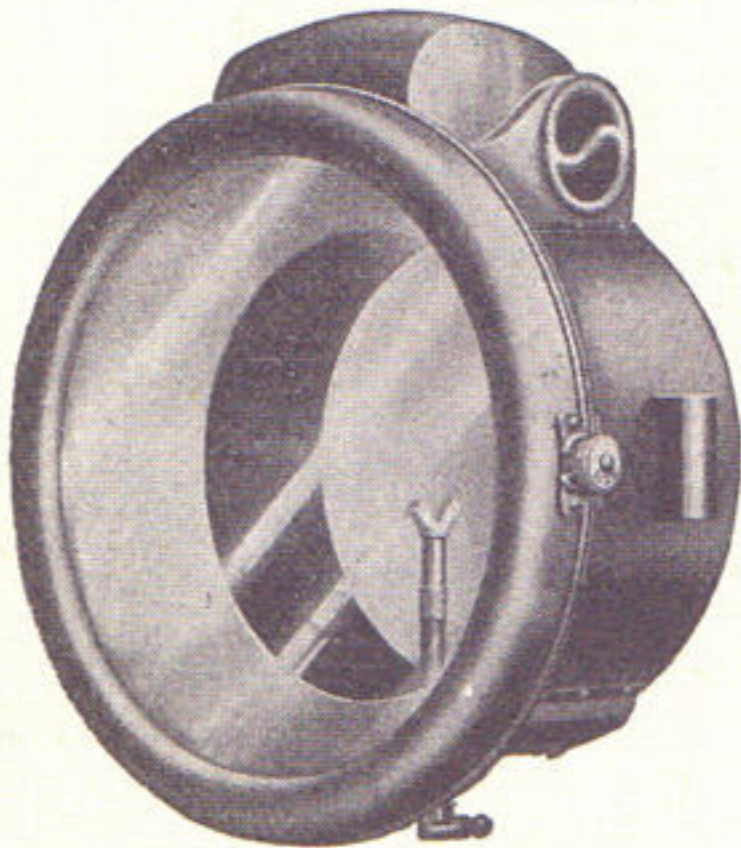


A rational improvement and change from the now common searchlight type and the latest headlight design. Made very plain and very easy to keep clean.

### Prices

|                      |  | Each.  |
|----------------------|--|--------|
| No. 1176. Brass..... |  | \$8.75 |
| " 1177. " .....      |  | 10.00  |
| " 1178. " .....      |  | 13.75  |
| " 1179. " .....      |  | 18.75  |

## Lens Mirror Searchlight



New original patented design flared front searchlight type headlight. Short in length and large in diameter.

### Prices

| No.       | Size                    | Material | Each.  |
|-----------|-------------------------|----------|--------|
| No. 1146. | 6-inch lens mirror..... | Brass    | \$8.00 |
| " 1147.   | 7 " " " .....           | Brass    | 8.75   |
| " 1158.   | 8 " " " .....           | Brass    | 12.50  |
| " 1169.   | 9 " " " .....           | Brass    | 17.50  |

## Motor Car Searchlight



Motor car searchlight is mounted in brass fork bracket which allows combined vertical and lateral movements. Thumb nuts are provided for locking in any position. Has dash bracket.

### Prices

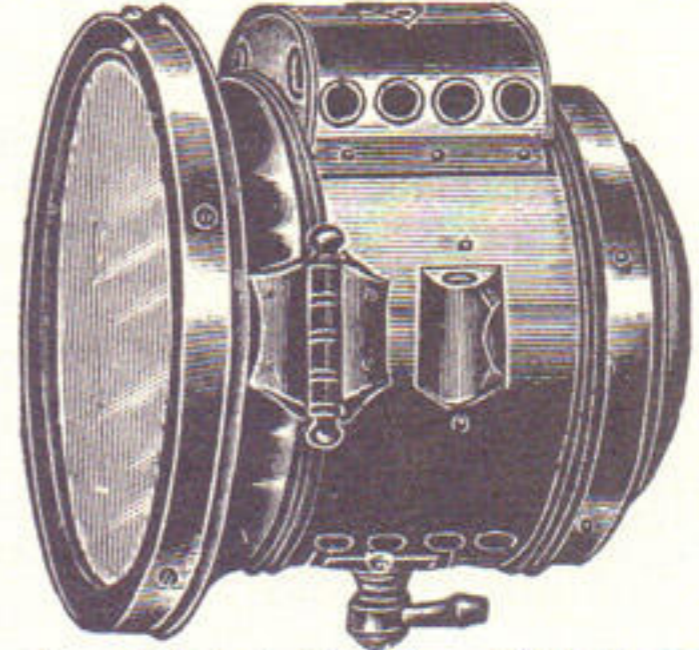
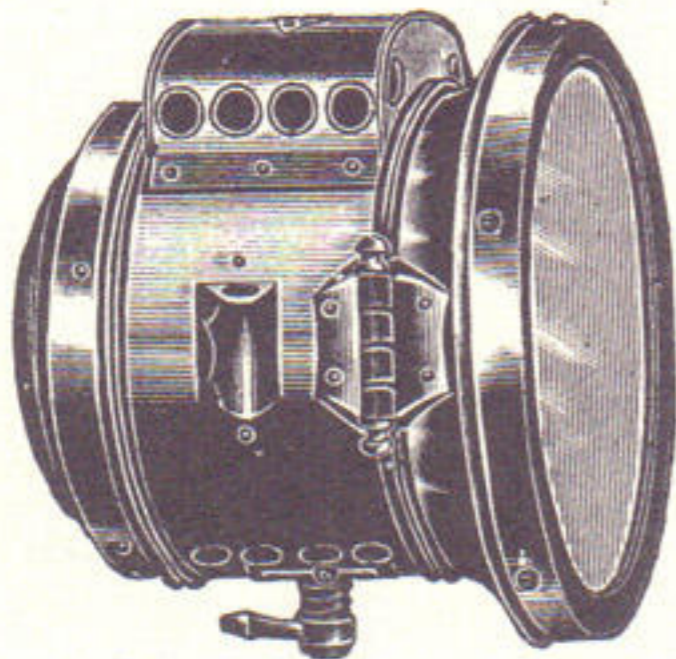
|                           |         |
|---------------------------|---------|
| No. 967. Brass, each..... | \$15.00 |
| No. 968. Brass, each..... | 17.50   |
| No. 869. Brass, each..... | 22.50   |

Manufacturers and Importers

**OUR STANDARD FLARE FRONT SEARCHLIGHT OUTFIT**

**EACH SET CONSISTS OF TWO LAMPS AND GENERATOR**

**WITH 8 FOOT OF RUBBER TUBING READY TO ATTACH**



Original design and construction of the popular Flare Front Searchlight Outfit. Cylinders and fittings are made of heavy 18 gauge brass, highly polished and lacquered, and assembled entirely by interior rivets instead of exterior screws, which produces a practically smooth exterior surface, and simplifies cleaning. Each and every lamp is carefully tested, and accurately focused before it leaves the factory, and if it does not give full power it is rejected by the examiners. When purchasing a set of these lamps, you are assured of getting the best that money can buy, at a price that is within the reach of all.

Powerful Lens Mirror is used, furnishing a wide range of light, with adjustable burners, which enable you to focus the light to any desired point.

Beautiful Design and Finish. In presenting this popular design, you will find the latest developments in the art of lamp making. We recommend these lamps to those who appreciate true value, skilled workmanship, efficiency and durability.

Generator. The size of the generator is 15 inches high and 8 inches wide, and has a capacity of three and one-half pounds of carbide, and will supply gas for two of these lamps from seven to eight hours. We furnish generator with either style bracket, the adjustable side bracket type, as shown on the upper illustration, or the baseboard type bracket, as shown on the lower illustration. We recommend the former for fastening to the side of the frame of the car, and the latter for securing the generator to the running board. We also furnish lamps and generator separately. For Prices, see Pages 17 and 18.

Please Note: The quotations given on these lamps apply only to lamps and generator in solid brass finish. We are prepared to furnish the following finishes at the following extra charge: All black, or black body with brass trimmings, 10% extra; all nickel, or black body with nickel trimmings, 15% extra. When ordering special finishes, do not forget to add the extra cost to your remittance.

**FURNISHED IN TWO SIZE SETS**

**BABY GRAND OUTFIT**—Especially suitable for runabouts, such as Ford, Maxwell, Buick, Brush, Hudson, Reo, Hupmobile, etc., etc.

**DIMENSIONS**—Lamp: Diam. of door, 7 1/2 in.; distance between props, 6 1/2"; length, 7 in.; height, 8 in.; diameter of mirror lens, 5 in.

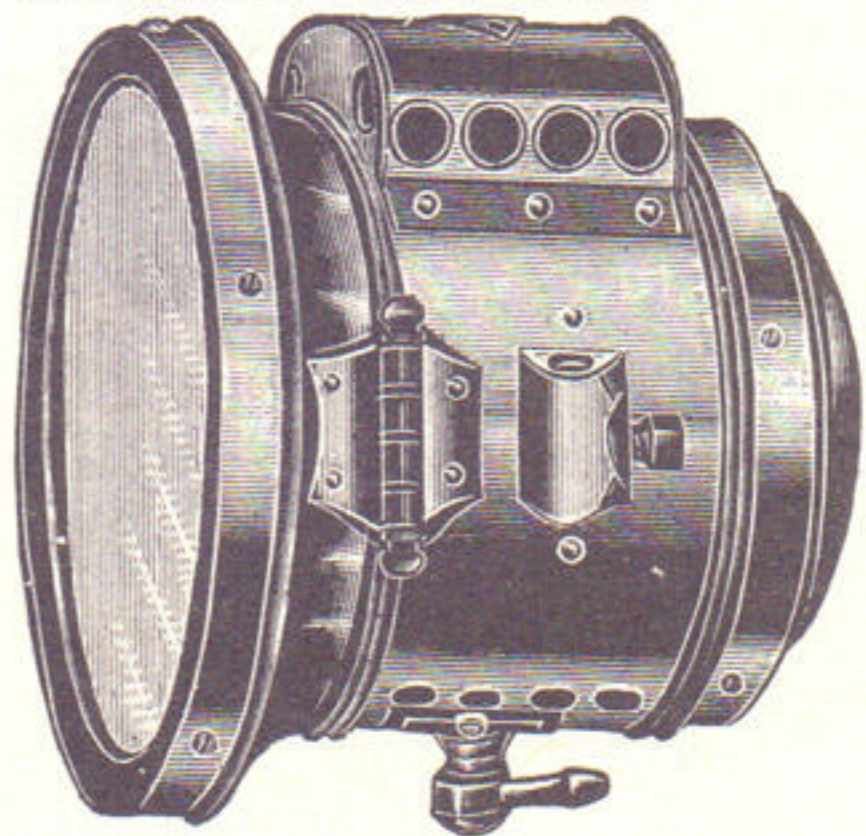
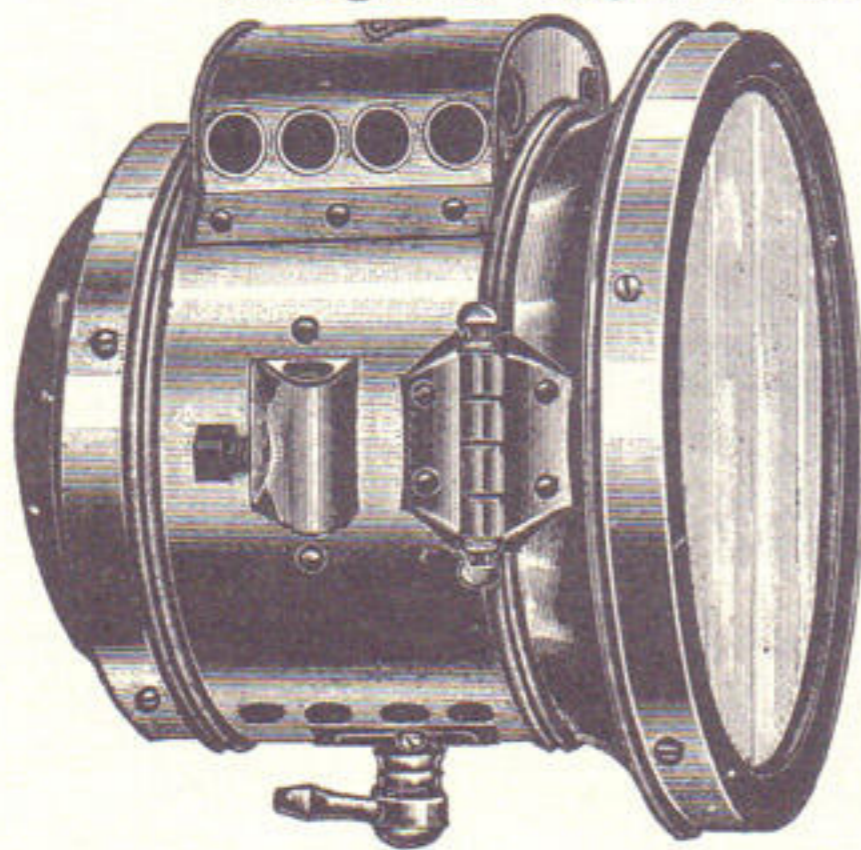
Generator: The same generator is furnished with either set. Set No. 2400. Reg. Pr., \$22.50. Cut Pr., \$8.50. Average Net Weight 13 lbs.

**STANDARD OUTFIT**—Especially suitable for touring cars and roadsters, such as Cadillac, E. M. F., Chalmers, Buick, Reo, White, Overland, Maxwell, Studebaker, etc.

**DIMENSIONS**—Lamp: Diam. of door, 9 1/2 in.; distance between props, 8 in.; length, 9 in.; height, 9 in.; diameter of lens, 7 in.

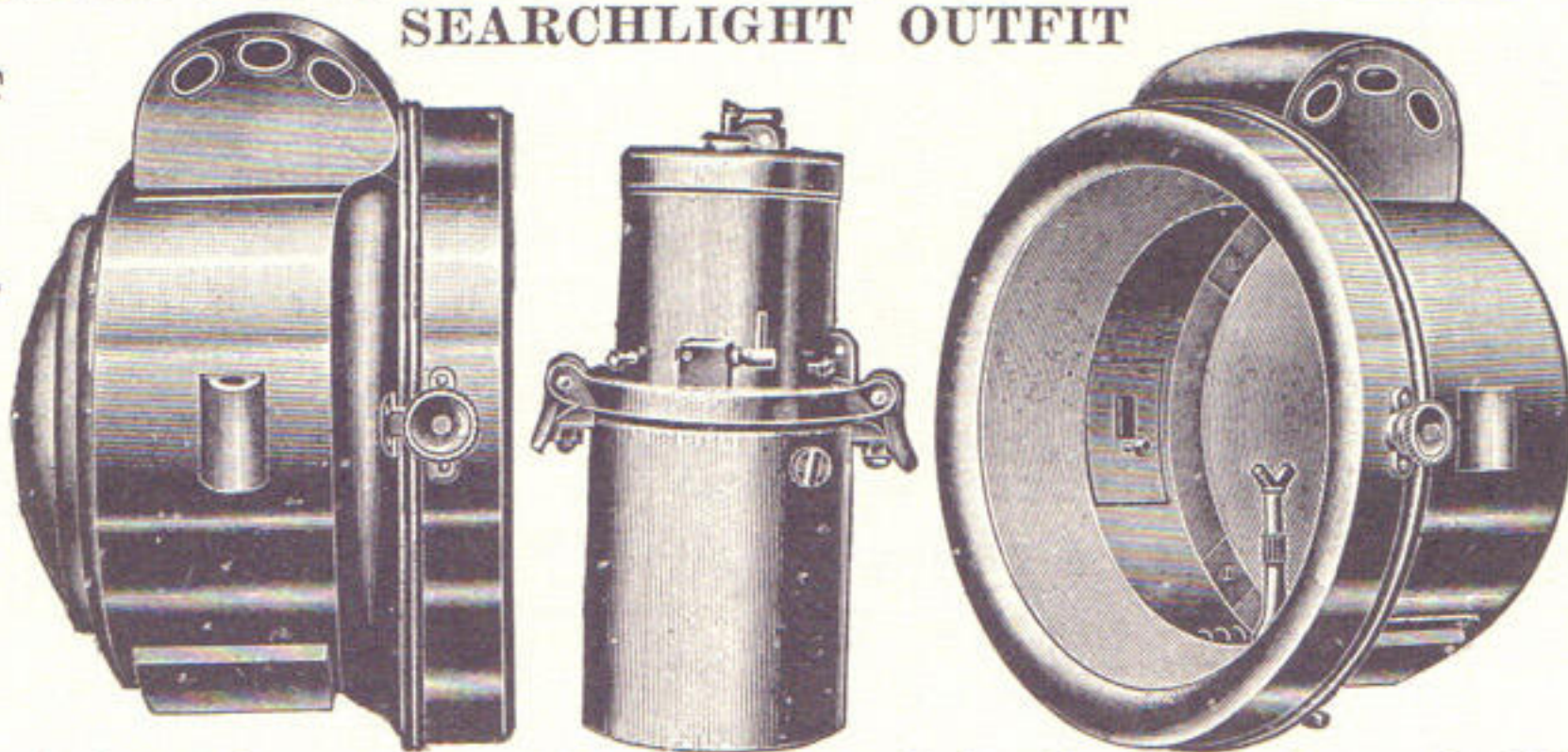
Generator: The same generator is furnished with either set. Set No. 2401. Reg. Pr., \$25.00. Cut Pr., \$10.75. Average Net Weight 16 lbs.

1912



**OUR IMPROVED TYPE 1912 "CLOSE-COUPLED" FLARE FRONT SEARCHLIGHT OUTFIT**

**EACH SET CONSISTS OF TWO LAMPS AND GENERATOR**



**WITH 8 FOOT OF RUBBER TUBING READY TO ATTACH**

The exclusive style on all the high priced cars during the last season, and will be the leading design for 1912. This lamp embodies the very latest idea of the art of lamp making. The body of lamp is drawn from sheet brass and is all one piece up to the door. The head or hood is also drawn and is clinched to the top of the lamp, and secured by screws from the inside. The mirror and front glass are secured by concealed screws, and are readily replaced.

**Powerful Lens Mirror** is used exclusively, furnishing a wide range of light, with adjustable burners, which enable you to focus the light to any desired point.

**A Bold and Rich Looking Lamp.** These lamps have no equal at any price; made up in the finest manner of heavy gauge brass; highly polished and lacquered.

**Generator.** The size of the generator is 15 inches high and 8 inches wide, and has a capacity of three and one-half pounds of carbide, and will supply gas for two of these lamps from seven to eight hours. We furnish generator with either style bracket, the adjustable side-bracket type, as shown on the upper illustration, or the baseboard type bracket, as shown on the lower illustration. We also furnish lamps and generator separately. For Prices see Pages 17 and 18.

**Please Note:** The quotations given on these lamps apply only to lamps and generator in solid brass finish. We are prepared to furnish the following finishes at the following extra charge: All black, or black body with brass trimmings, 10% extra; all nickel, or black body with nickel trimmings, 15% extra. When ordering special finishes, do not forget to add the extra cost to your remittance.

**FURNISHED IN TWO SIZE SETS**

**MEDIUM SIZE OUTFIT**—Especially suitable for runabouts, such as Ford, Maxwell, Buick, Brush, Hudson, Reo, Hupmobile, etc., etc.

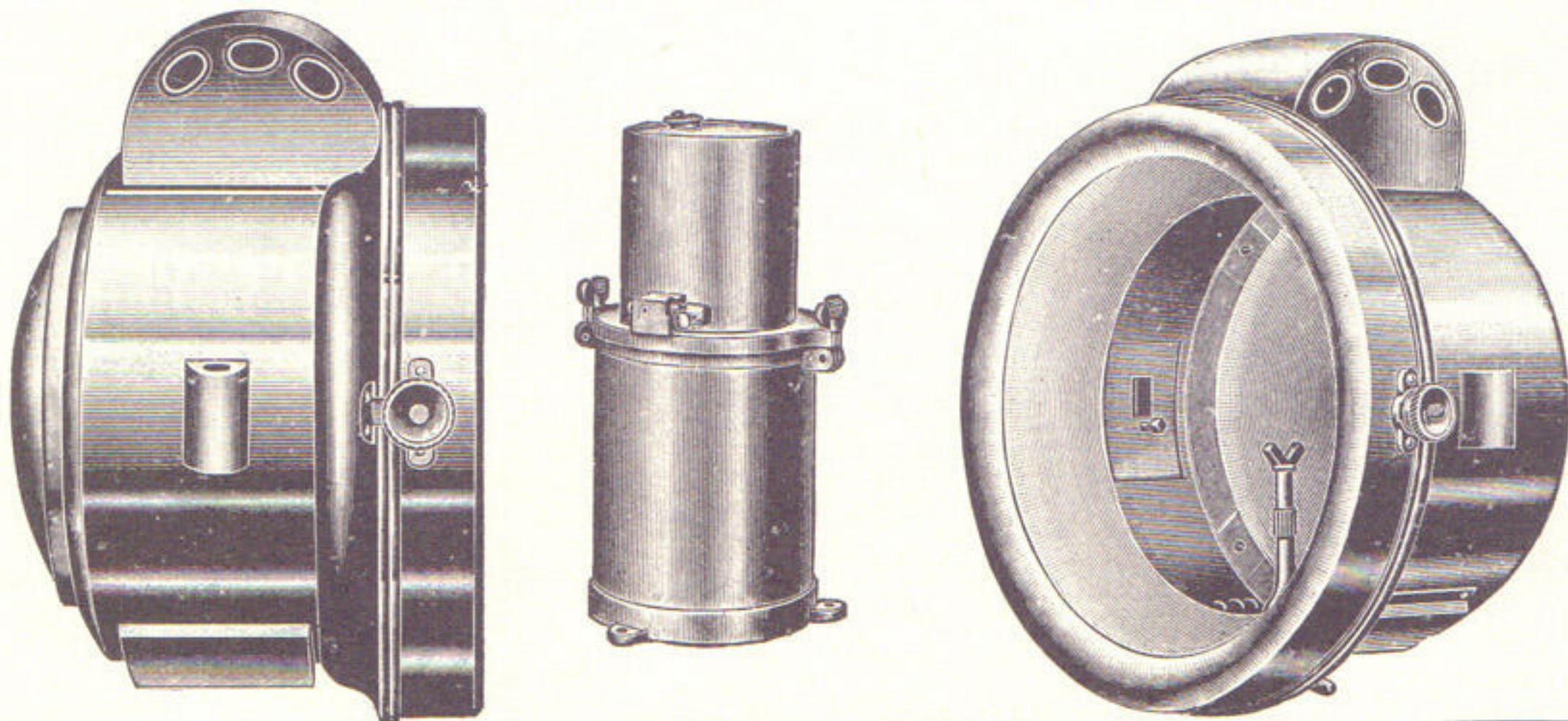
**DIMENSIONS**—Lamp: Diam of door, 9 in.; distance between props, 7 in.; length 6 3/8 in.; height 10 in.; diameter of mirror lens, 6 in.

**Generator:** The same generator is furnished with either set. Set No. 2410. Reg. Pr., \$25.00. Cut Price, \$10.75. Average Net Weight 13 lbs.

**LARGE SIZE OUTFIT**—Especially suitable for touring cars and roadsters, such as Cadillac 30, E. M. F., Chalmers Detroit, Buick, Model "F" White, Overland, Maxwell, Studebaker, etc.

**DIMENSIONS**—Lamp: Diam. of door, 10 in.; distance between props, 8 in.; length, 7 3/8 in.; height, 11 1/4 in.; diameter of lens, 7 in. Generator same as above.

Set No. 2411. Reg. Pr., \$27.50. Cut Price, \$11.50. Average Net Weight 18 lbs.



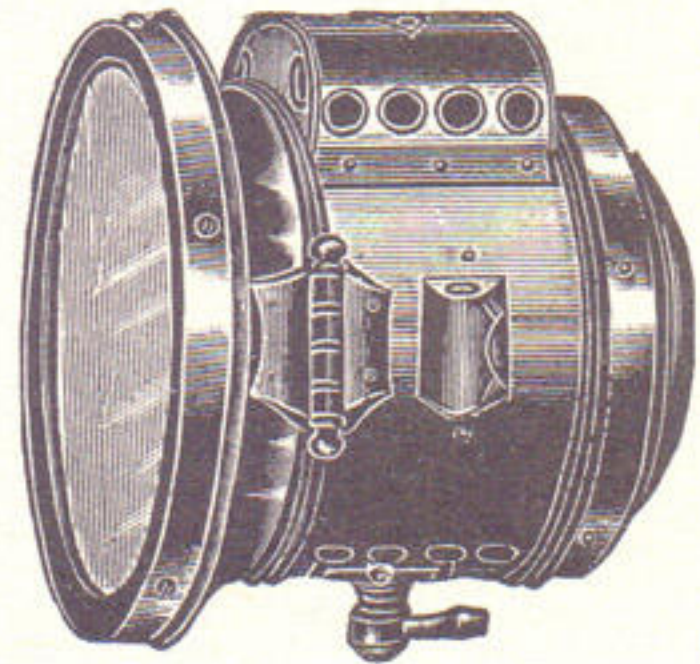
Highest Quality, Low Price, Prompt Shipments When You Buy From Us

**SPECIAL NOTICE REGARDING FINISHES OF LAMPS**

Practically all Lamps, Horns, Foot Rails, and every other part of an automobile that was finished almost exclusively in Brass during all the time since automobiles were placed on the market, will shortly be finished in exclusive Black with Brass or Nickel Trimmings. Therefore, we will only carry in stock Black Lamps, Horns, etc., with Brass or Nickel Trimmings, thus entirely discouraging Brass finished goods. All Lamps, Horns, etc., that we furnish are of a metallic, lacquer-like finish, impervious to heat and moisture, require no care in washing to prevent scratching and eliminates the care of keeping the Brass bright. We take this step in furnishing Lamps, Horns, and other Brass goods in Black finish, way ahead of our competitors, and call your particular attention to the fact that during 1912 over 90 per cent. of manufacturers are equipping their cars with Black-finished accessories, and after this year we hardly think that manufacturers will equip their cars in any other way. However, we will furnish Bright Brass goods to all of our customers who prefer to have them.

**"B. & L." FLARE FRONT SEARCHLIGHT**  
(1912 Model)

The cylinders and fittings of these searchlights are made of heavy brass, firmly finished and polished. The construction throughout is the same as in the large Navy searchlights. Cylinder end rings are heavy and endless, and all parts put together with screws and heavy rivets. Powerful lens mirrors are used. With the medium size searchlight—the 7-inch size fitted with a ¾-ft. burner—an experienced driver can make out a team or notice a bend in the road at from 1,000 to 1,500 feet with favorable weather conditions, and on a dry "white" stone road. The polished back of the carriage or the reflection from horses' or cats' eyes may often be seen over 2,000 feet. The spreading of the beam is about the same in both of the lights, the range and power of the light increasing with the size of the flame employed.

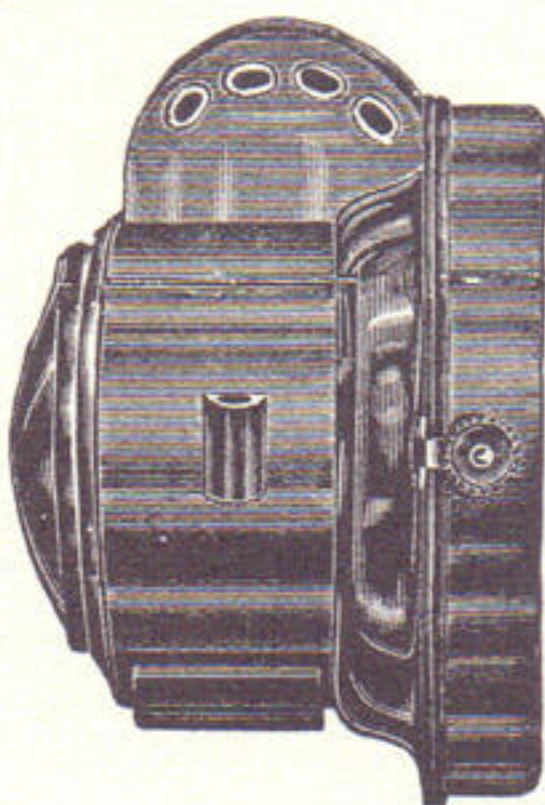


| No.  | Finish                       | Lens Mirror | Diameter Of Door | Prop Centers | Reg. Price | Cut Price Each |
|------|------------------------------|-------------|------------------|--------------|------------|----------------|
| 2428 | All Brass                    | 6 in.       | 8 ¾ in.          | 6 ¾ in.      | \$7.50     | 3.35           |
| 2429 | Body Black, Brass Trimmings  | 6 in.       | 8 ¾ in.          | 6 ¾ in.      | 8.25       | 3.70           |
| 2430 | All Nickel                   | 6 in.       | 8 ¾ in.          | 6 ¾ in.      | 8.25       | 3.70           |
| 2431 | Body Black, Nickel Trimmings | 6 in.       | 8 ¾ in.          | 6 ¾ in.      | 8.25       | 3.70           |
| 2432 | All Brass                    | 7 in.       | 9 ¾ in.          | 7 ¾ in.      | 8.50       | 4.00           |
| 2433 | Body Black, Brass Trimmings  | 7 in.       | 9 ¾ in.          | 7 ¾ in.      | 9.25       | 4.40           |
| 2434 | All Nickel                   | 7 in.       | 9 ¾ in.          | 7 ¾ in.      | 9.25       | 4.40           |
| 2435 | Body Black, Nickel Trimmings | 7 in.       | 9 ¾ in.          | 7 ¾ in.      | 9.25       | 4.40           |
| 2436 | All Brass                    | 8 in.       | 10 ¾ in.         | 8 ¾ in.      | 10.50      | 4.65           |
| 2437 | Body Black, Brass Trimmings  | 8 in.       | 10 ¾ in.         | 8 ¾ in.      | 10.50      | 5.10           |
| 2438 | All Nickel                   | 8 in.       | 10 ¾ in.         | 8 ¾ in.      | 10.50      | 5.10           |
| 2439 | Body Black, Nickel Trimmings | 8 in.       | 10 ¾ in.         | 8 ¾ in.      | 10.50      | 5.10           |

Average Net Weight 4 ½ lbs.

**"VICTOR" CLOSE-COUPLED HEADLIGHT**  
(1912 Model)

This lamp embodies the very latest ideas of the art of lamp making. The body of lamp is drawn from sheet brass, and is all one piece up to the door. The brass is carefully selected and annealed. The head, or hood, is also drawn, and is clinched to body of lamp and secured by screws from the inside. The mirror and front glass are secured by concealed screws and are readily replaced. Powerful lens mirrors are used.



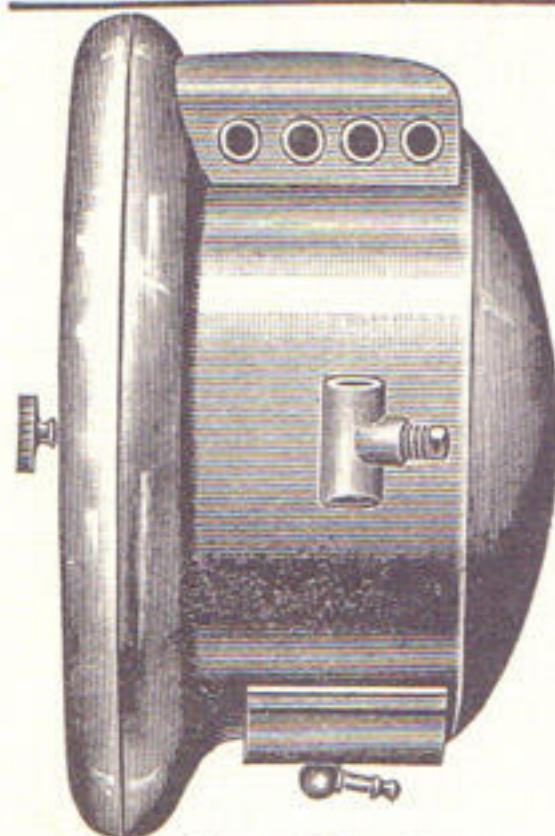
Each and every one of our gas lamps is carefully tested and accurately focused before it leaves the factory, and if a mirror does not give its full power it is rejected by examiners.

| No.  | Finish                   | Lens Mirror | Diam. Door | Prop Centers | Reg. Price | Cut Price Each |
|------|--------------------------|-------------|------------|--------------|------------|----------------|
| 2440 | All Brass                | 6"          | 8 ¾"       | 6 ¾"         | \$8.50     | \$3.75         |
| 2441 | Body Blk., Brass Trmgs.  | 6"          | 8 ¾"       | 6 ¾"         | 9.25       | 4.12           |
| 2442 | All Nickel               | 6"          | 8 ¾"       | 6 ¾"         | 9.25       | 4.12           |
| 2443 | Body Blk., Nickel Trmgs. | 6"          | 8 ¾"       | 6 ¾"         | 9.25       | 4.12           |
| 2444 | All Brass                | 7"          | 9 ¾"       | 7 ¾"         | 9.50       | 4.25           |
| 2445 | Body Blk., Brass Trmgs.  | 7"          | 9 ¾"       | 7 ¾"         | 10.50      | 4.67           |
| 2446 | All Nickel               | 7"          | 9 ¾"       | 7 ¾"         | 10.50      | 4.67           |
| 2447 | Body Blk., Nickel Trmgs. | 7"          | 9 ¾"       | 7 ¾"         | 10.50      | 4.67           |
| 2448 | All Brass                | 8"          | 10 ¾"      | 8 ¾"         | 11.50      | 5.25           |
| 2449 | Body Blk., Brass Trmgs.  | 8"          | 10 ¾"      | 8 ¾"         | 12.50      | 5.77           |
| 2450 | All Nickel               | 8"          | 10 ¾"      | 8 ¾"         | 12.50      | 5.77           |
| 2451 | Body Blk., Nickel Trmgs. | 8"          | 10 ¾"      | 8 ¾"         | 12.50      | 5.77           |

Average Net Weight 5 lbs.

Write For Any Article You Do Not See In This Catalogue, We Can Save You Money

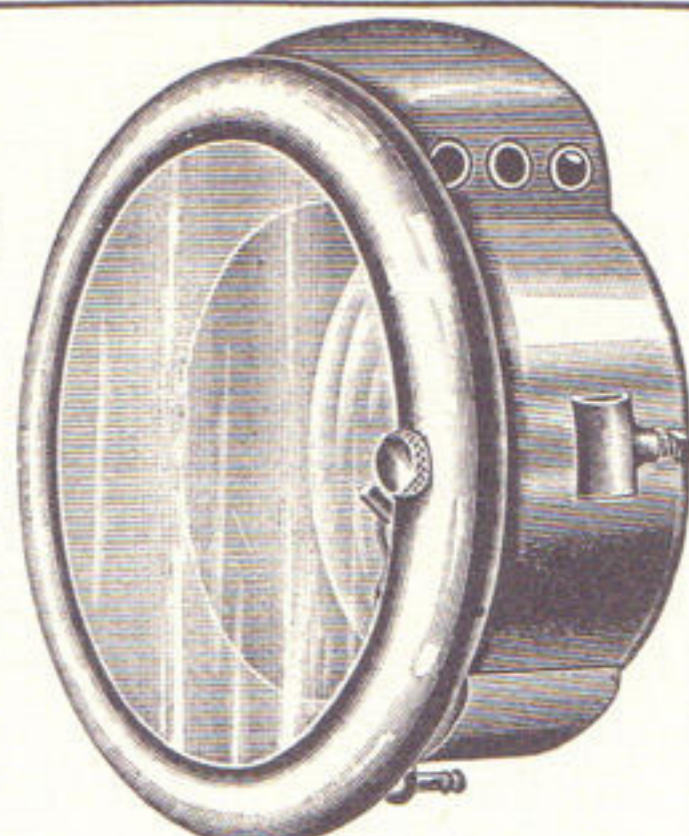




Low Hood

**"SOLAR" TORPEDO TYPE GAS HEADLIGHT**

A rational improvement in headlight design, symmetrical and compact yet extreme in its simplicity. The body and flare are of a single piece of extra heavy brass with front aluminum reflector, fastened to door, giving two fields of light. Made in two sizes, low hood type, with exclusive Solar lead glass lens mirror reflector which is of shorter focus and more efficient than any other mirror. Add H to following model numbers if high hood is desired. Prices of either are alike.



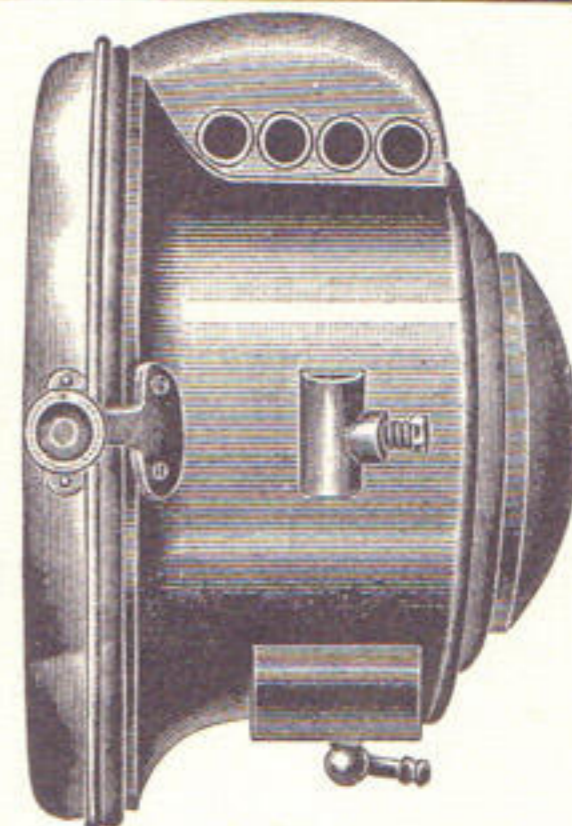
High Hood

| No.  | Model | Finish                       | 1912 | Lens Mirror | Diameter Of Door | Prop Centers | Reg. Price | Cut Price Each |
|------|-------|------------------------------|------|-------------|------------------|--------------|------------|----------------|
| 2484 | 1287  | All Brass                    |      | 7"          | 11 11/16"        | 9 1/4"       | \$8.75     | \$6.56         |
| 2485 | 1287  | Body Black, Brass Trimmings  |      | 7"          | 11 11/16"        | 9 1/4"       | 9.63       | 7.42           |
| 2486 | 1287  | All Nickel                   |      | 7"          | 11 11/16"        | 9 1/4"       | 10.07      | 7.55           |
| 2487 | 1287  | Body Black, Nickel Trimmings |      | 7"          | 11 11/16"        | 9 1/4"       | 9.85       | 7.39           |
| 2488 | 1298  | All Brass                    |      | 8"          | 12 3/4"          | 10 1/4"      | 11.25      | 8.44           |
| 2489 | 1298  | Body Black, Brass Trimmings  |      | 8"          | 12 3/4"          | 10 1/4"      | 12.38      | 9.29           |
| 2490 | 1298  | All Nickel                   |      | 8"          | 12 3/4"          | 10 1/4"      | 12.94      | 9.70           |
| 2491 | 1298  | Body Black, Nickel Trimmings |      | 8"          | 12 3/4"          | 10 1/4"      | 12.66      | 9.49           |

Average Net Weight 5 lbs.

**"SOLAR" MODEL "12" HEADLIGHT**

The latest popular priced Solar headlight. Made in two sizes, is larger in front diameter than comparative sizes of other makes. The body and flare are drawn from one piece of heavy gauge brass. The exclusive Solar lens mirror is of shorter focus and more efficient than any other, which, with the front aluminum reflector, produces the two necessary fields of light. Easily cleaned. Has adjustable tip, removable glass, lens mirror and front reflector.



| No.  | Model | Finish                   | Lens Mirror | Diam. Door | Prop Center | Reg. Price | Cut Price Each |
|------|-------|--------------------------|-------------|------------|-------------|------------|----------------|
| 2500 | 1236  | All Brass                | 6"          | 9 1/2"     | 7"          | \$6.25     | \$4.69         |
| 2501 | 1236  | Body Blk., Brass Trmgs.  | 6"          | 9 1/2"     | 7"          | 6.88       | 5.16           |
| 2502 | 1236  | All Nickel               | 6"          | 9 1/2"     | 7"          | 7.19       | 5.40           |
| 2503 | 1236  | Body Blk., Nickel Trmgs. | 6"          | 9 1/2"     | 7"          | 7.04       | 5.28           |
| 2504 | 1247  | All Brass                | 7"          | 11 1/2"    | 8 1/4"      | 7.50       | 5.63           |
| 2505 | 1247  | Body Blk., Brass Trmgs.  | 7"          | 11 1/2"    | 8 1/4"      | 8.25       | 6.19           |
| 2506 | 1247  | All Nickel               | 7"          | 11 1/2"    | 8 1/4"      | 8.63       | 6.47           |
| 2507 | 1247  | Body Blk., Nickel Trmgs. | 7"          | 11 1/2"    | 8 1/4"      | 8.44       | 6.33           |

Average Net Weight 5 lbs.

**"VICTOR" GENERATOR**



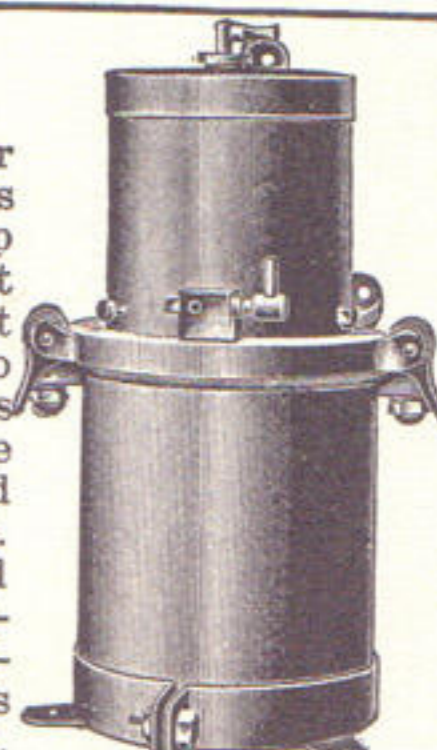
This generator is of the best possible construction, both as to material and workmanship, and is handsomely finished. It is 15" high, 8" wide, has a carbide capacity of 3 1/2 lbs., and will supply two ordinary headlights from 8 to 10 hours. Furnished in two styles, with baseboard bracket, as shown in cut, or with side bracket attachment, fastened to the upper part of lower tank.

| No.  | Finish           | Reg. Price | Cut Price |
|------|------------------|------------|-----------|
| 2512 | All Brass        | \$5.00     | \$3.50    |
| 2513 | Black and Brass  | 5.50       | 3.75      |
| 2514 | Black and Nickel | 6.00       | 3.75      |

Average Net Weight 5 1/4 lbs.

**"SOLAR" GENERATOR**

This is the famous Solar generator, which contains the original principle of drip system, and was the first generator of this type put on the market. Made in two styles, with base bracket as shown in cut, or side bracket attachment fastened to bottom of lower tank. Furnished in the standard size, 15" high, 8" wide, carbide capacity 3 1/2 lbs.; suitable for any two headlights having up to 3/4 ft burners.

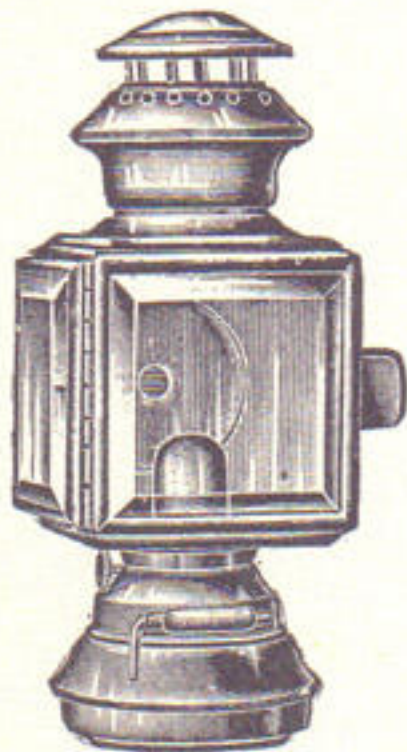


| No.  | Finish           | Reg. Price | Cut Price |
|------|------------------|------------|-----------|
| 2516 | All Brass        | \$9.00     | \$6.75    |
| 2517 | Black and Brass  | 9.90       | 7.42      |
| 2518 | Black and Nickel | 10.13      | 7.60      |

Average Net Weight 5 1/4 lbs.

A Quick Way of Ordering Means a Quick Way of Getting. Order Today

**"INDIANA" OIL SIDE AND TAIL LAMPS**



An absolutely dependable line of Oil Lamps suitable for small or large cars. Made of extra heavy gauge brass, in the most attractive style and substantial manner. Only 10 rivets are used in the entire construction of the lamp, which makes it as thoroughly rattle-proof as it is possible to make lamps. Both Side and Tail lamps are one size, viz., 11½" high, size of body 4¼x4¼". The Tail Lamp is fitted with red, green and white glass. The Side Lamp is fitted with beveled French plate glasses, with ruby light in the rear. Both lamps are furnished in All Brass, Black Body with Brass Trimmings, All Nickel, and Black Body with Nickel Trimmings, at the following prices.



**"INDIANA" SIDE LAMPS**

1912

**"INDIANA" TAIL LAMP**

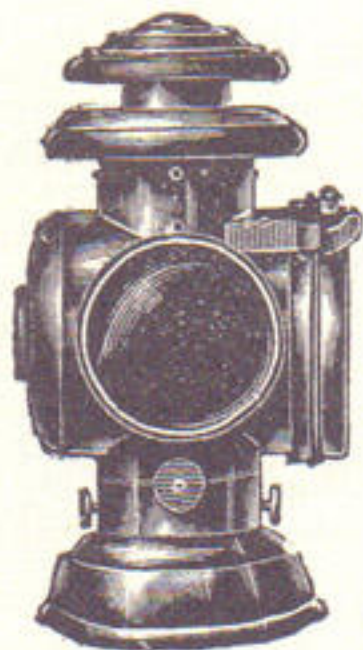
| No.  |                          | Reg. Price | Cut Price |
|------|--------------------------|------------|-----------|
|      |                          | Per Pair   |           |
| 2654 | All Brass                | \$8.00     | \$4.00    |
| 2655 | Black with Brass Trmgs.  | 8.50       | 4.25      |
| 2656 | All Nickel               | 9.00       | 4.50      |
| 2657 | Black with Nickel Trmgs. | 9.00       | 4.50      |

| No.  |                          | Reg. Price | Cut Price |
|------|--------------------------|------------|-----------|
|      |                          | Each       |           |
| 2658 | All Brass                | \$4.00     | \$2.00    |
| 2659 | Black with Brass Trmgs.  | 4.50       | 2.25      |
| 2660 | All Nickel               | 5.00       | 2.50      |
| 2661 | Black with Nickel Trmgs. | 5.00       | 2.50      |

Net Weight 3 lbs.

Net Weight 3 lbs.

We also furnish the same lamps as above with Combination Electric Fixtures. Please refer to page 11.



**"SOLAR" TAIL LAMP**

A high class tail light to meet the requirements of those wanting the best. Cannot and will not jar out under any road conditions, and fully guaranteed by the manufacturers. The standard popular size tail lamp, suitable for all makes of cars. 9½" high, 3⅜" white glass on the right, 3" rear ruby, 1½" green jewel on left.

**MODEL 905—With Kerosene Burner**

| No.  |                          | Reg. Price | Cut Price |
|------|--------------------------|------------|-----------|
|      |                          | Each       |           |
| 2564 | All Brass                | \$3.25     | \$2.60    |
| 2565 | Black with Brass Trmgs.  | 3.57       | 2.85      |
| 2566 | All Nickel               | 4.89       | 3.10      |
| 2567 | Black with Nickel Trmgs. | 4.89       | 3.10      |

**MODEL 905C—With Electric Attachment**

Same as above, except fitted with electric attachment which enables you to use the lamp with kerosene oil, or electricity, at will, without removing any attachment. Furnished with 4 c.p. Mazda Tungsten bulb, fitted into Ediswan bayonet socket.

| No.  |                          | Reg. Price | Cut Price |
|------|--------------------------|------------|-----------|
|      |                          | Each       |           |
| 2572 | All Brass                | \$4.75     | \$3.80    |
| 2573 | Black with Brass Trmgs.  | 5.25       | 4.20      |
| 2574 | All Nickel               | 5.75       | 4.60      |
| 2575 | Black with Nickel Trmgs. | 5.75       | 4.60      |

Average Net Weight 2½ lbs.

**"SOLAR" SQUARE TAIL LAMP**

This tail lamp is especially made to match side lamps, models 1232 and 933. 12 in. high, has 3⅞" white lens on right, 3½" rear ruby semaphore, and 1½" jewel on left. Equipped with combination prop for round or flat brackets. Especially suitable for use on limousines, landaulets or town cars.

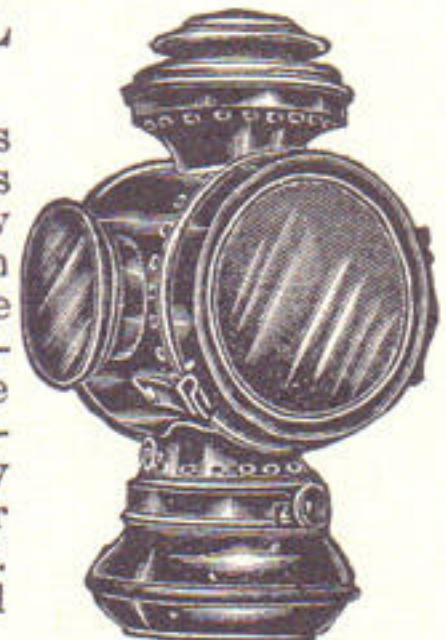


**MODEL 1130—With Kerosene Burner**

| No.  |                          | Reg. Price | Cut Price |
|------|--------------------------|------------|-----------|
|      |                          | Each       |           |
| 2568 | All Brass                | \$4.50     | \$3.60    |
| 2569 | Black with Brass Trmgs.  | 4.95       | 4.20      |
| 2570 | All Nickel               | 5.40       | 4.35      |
| 2571 | Black with Nickel Trmgs. | 5.40       | 4.35      |

**"STERLING" TAIL LAMP**

A lamp you can always depend on. It always gives light and cannot jar or blow out, no matter how much vibration, how rough the roads are. Durably constructed of solid heavy gauge brass, highly polished, silver-lined, fitted with ruby glass on side, white for showing license number. Height 10 in. Diam. of red glass, 3 in.



**With Kerosene Burner Only**

| No.  |                    | Reg. Price | Cut Price  |
|------|--------------------|------------|------------|
| 2662 | All Brass          | \$2.00     | \$1.15 ea. |
| 2663 | Blk., Brass Trmgs. | 2.50       | 1.25 ea.   |

Average Net Weight 3 lbs.

The Genuine Article At One-Third To One-Half Less Than Others Charge

**ELECTRIC LAMPS & LIGHTING**

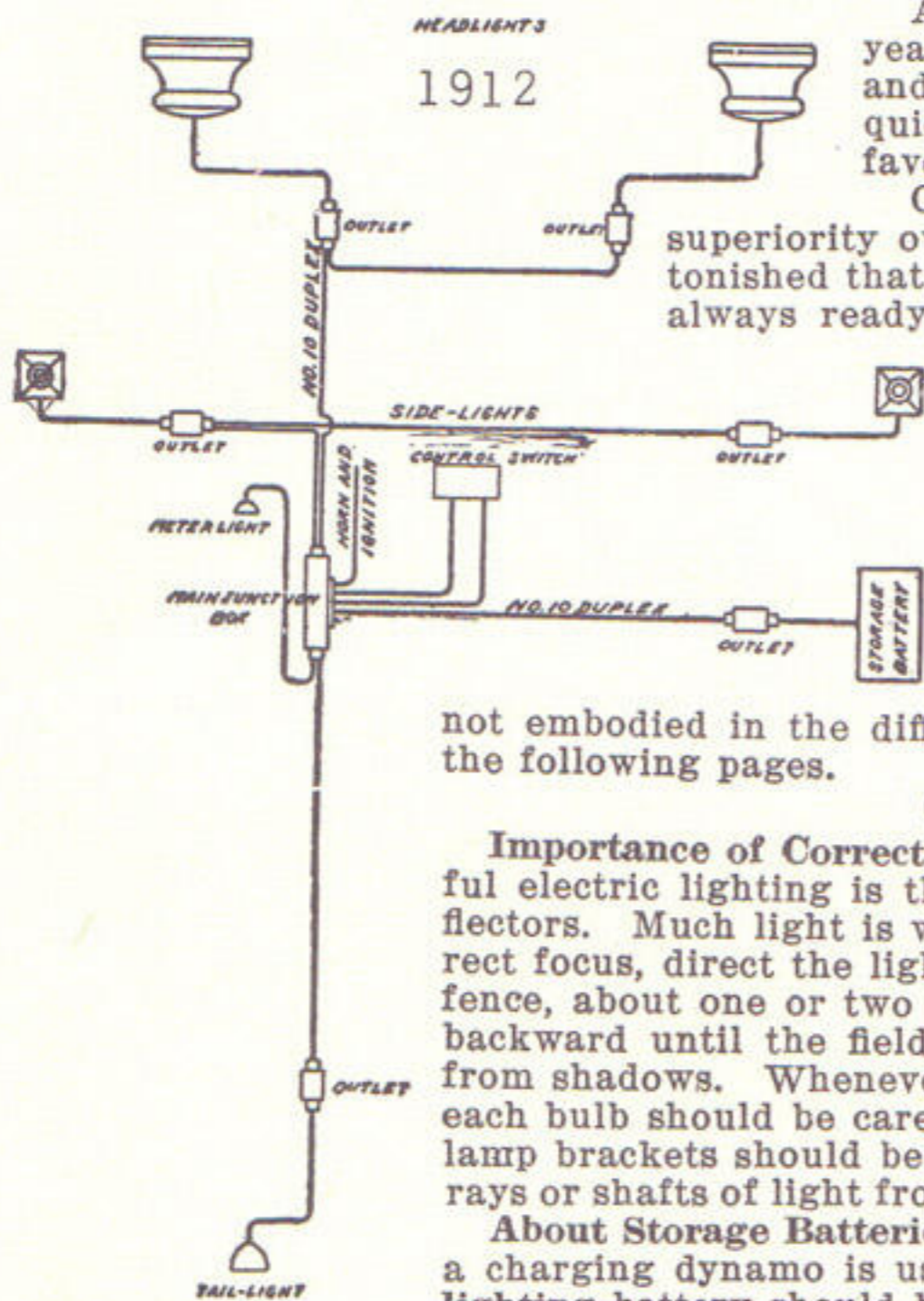


Diagram showing electric wiring with storage battery system

Automobiles were first lighted by electricity four years ago. The perfection of Mazda (Tungsten) lamps and suitable special lighting batteries to operate them, quickly helped electric lighting to win its way into the favor of the motoring public.

Considering the advantages of electric lighting, its superiority over other systems is so marked that one can be astonished that it remained so long in the background. It is clean, always ready, requires no attention, needs no adjustment, and can be turned on or off in an instant, without the driver leaving his seat. It furnishes much more and brighter illumination than the old-fashioned generator, gas tank, or ill-smelling oil lamps.

Electric lighting to-day is past the experimental stage. Manufacturers of every accessory pertaining to electric lighting, such as batteries, lamps, reflectors, bulbs, even the wiring and switches, have perfected their construction to such an extent that there is hardly any improvement to be had that is

not embodied in the different electric lighting accessories that we offer on the following pages.

**GENERAL INFORMATION**

**Importance of Correct Focus Adjustment.** A most vital factor in successful electric lighting is the correct position of the Mazda lamps in their reflectors. Much light is wasted when lamps are not in focus. To obtain correct focus, direct the light on some upright surface, such as a wall or board fence, about one or two car lengths away. Then move the bulb forward or backward until the field of light is at its maximum brilliancy and is free from shadows. Whenever new bulbs are placed in reflectors, the position of each bulb should be carefully adjusted. After correct focus is obtained, the lamp brackets should be bent forward and toward each other until the main rays or shafts of light from both headlights 'strike' the road at the same point.

**About Storage Batteries.** Where straight storage battery lighting without a charging dynamo is used, nothing smaller than a standard 80 amp. hour lighting battery should be used, and for use with 5 or more lights on a car, 100 or 120 amp. hour capacity is recommended; therefore persons not familiar with storage battery lighting, should, under no circumstances, try to use an ignition battery for lighting, as satisfactory results cannot be obtained.

The sparking battery is built for special service on engine ignition and for that reason has a very low discharge rate, which makes it unsuited and unsatisfactory for discharging at the high rate required for lighting. We must admit that the dynamo or generator system is superior to straight storage battery lighting, but we cannot positively state that there are more than one or two entirely satisfactory systems now on the market, and these far too expensive to install, and they cannot usually be satisfactorily installed in cars not having special provision to receive such apparatus. Special lighting storage batteries therefore will give very satisfactory service, provided they are large enough, and are handled properly. Where a great deal of night driving is done, and constant uninterrupted service is required, two lighting batteries on your car will give better service than dynamo system at considerably less cost, inasmuch as every dynamo system requires one storage battery for auxiliary service.

**Care of Storage Batteries.** Always be sure that electrolyte covers the plates. Regular operation of the battery evaporates the water in the electrolyte. This loss should be replenished by adding rain water or distilled water, (not acid), whenever plates are not entirely covered. This instruction should be particularly noted by the owner whose car has a lighting dynamo for charging the battery. Should the battery become fully discharged (5.4 volts across terminals)—get it "on charge" at once. Keep top of battery clean and dry. Have battery box wood lined or blocked so that battery cannot shake about.

**Regarding Tungsten Bulbs.** To avoid the great confusion created by buying the wrong lamps and thereby not getting satisfactory service from your electric equipment, we herewith give you a scale of standard equipment, operated from any good storage battery, of a six-volt 100 amp. hour capacity on one charge, as follows:

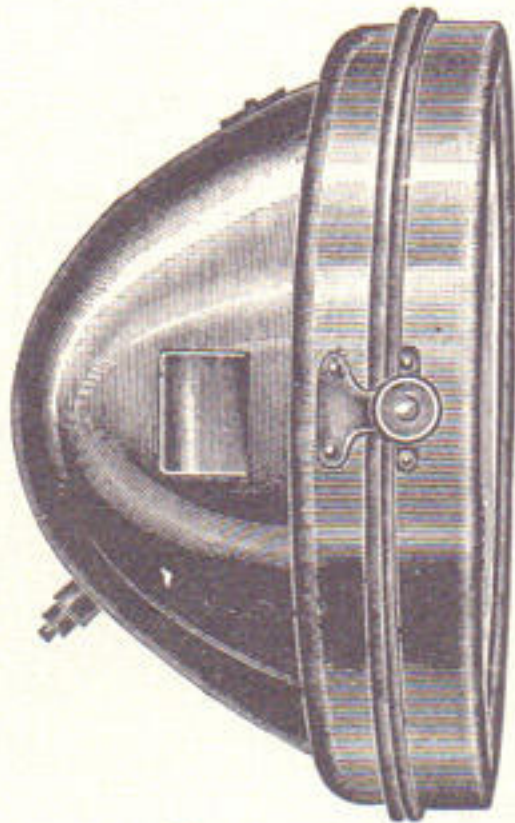
|                             | Volts | C. P. | Amps. Consumed |      |
|-----------------------------|-------|-------|----------------|------|
| 2 Headlights                | 6     | 10    | 1.50 ea.       | 3.00 |
| 2 Sidelights                | 6     | 2     | .40 ea.        | .80  |
| 1 Tail Light                | 6     | 2     | .40 ea.        | .40  |
| Total Amperes Consumed..... |       |       |                | 4.20 |

Headlights alone will burn 33 continuous hours. Headlights and tail lights will burn 29 continuous hours. Side and tail lights will burn 83 continuous hours. All lamps burning—24 continuous hours.

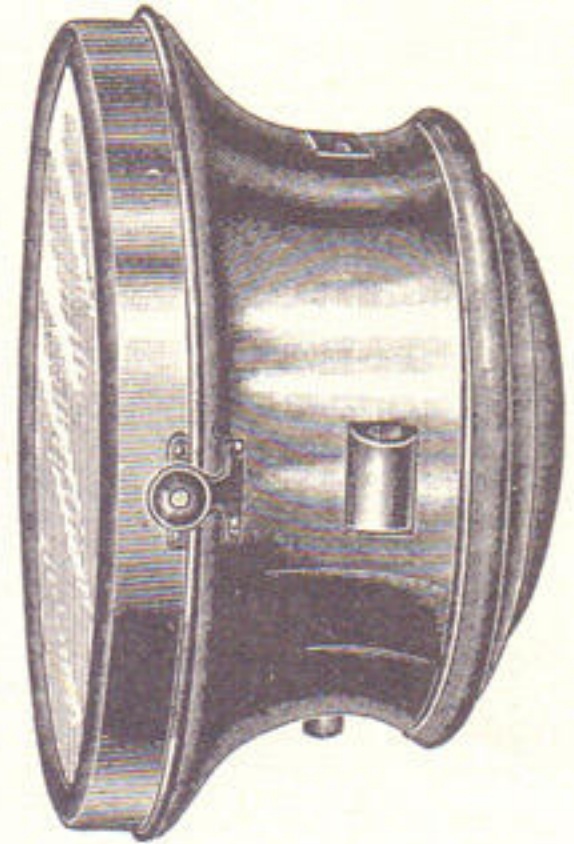
**Trouble.** If all your lights go out or fail to light, first look to the battery and see if both terminals are tight and making good contact. Then examine the switch for a loose terminal connection. If one light goes out, look first at your lamp connector and then at the bulb; if trouble continues, exchange this bulb for a lamp that is burning and if this test proves the bulb to be good, look for a break in your wire (or line) between this lamp and the battery. Wire smaller than No. 14 should never be used for headlights, or than No. 16 for side and tail lights. Our recommendation is the use of No. 14 all through. All wiring joints and connections should be soldered and well taped.

Highest Quality, Low Price, Prompt Shipments When You Buy From Us

**"TUNGSTEN" ELECTRIC HEADLIGHTS**



**Torpedo**



**Bullet**

These two types of electric headlights in the different sizes, are made to meet the requirements of all sizes of touring cars, roadsters, and runabouts; made of extra heavy gauge brass, body and flare being made of a single piece of heavy brass, carefully polished and finished, fitted with front parabolic silver plated reflectors fastened into the door, with focusing device, wired socket and connector. The reflectors are brought to a very high polish, so as to project an intense white light straight ahead on the road, and at the same time throw a milder diffused light to the sides. They will throw an excellent light 500 to 1,000 feet or over, depending entirely on the bulb equipment. A 10 c.p. Mazda bulb will give the same light as an ordinary acetylene headlight fitted with 3/4 ft. burner. Furnished in all brass, black and brass, nickel plated, and black and nickel plated finishes. Prices include a six-volt, 12, 16, 20 or 25 c.p. Mazda bulb. When ordering, specify the c.p.

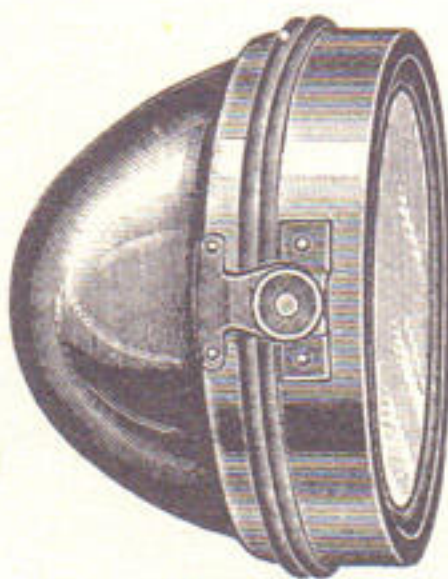
wanted. If no specifications are furnished, we will equip 8 1/2" lamps with 12 c.p. bulbs, 9 1/2" lamps with 16 c.p. bulbs, 11" lamps with 20 c.p. bulbs, and 12" lamps with 25 c.p. bulbs. The prices of Torpedo and Bullet designs are the same and when ordering, kindly state the type wanted. If no type is mentioned, we will furnish either model at our option.

| No.  | Diameter<br>Across<br>Front | Between<br>Prop<br>Centers | Finish                       | Reg. Price | Cut Price<br>Each |
|------|-----------------------------|----------------------------|------------------------------|------------|-------------------|
| 2000 | 8 1/2"                      | 7 1/4"                     | All Brass                    | \$8.25     | \$4.38            |
| 2001 | 8 1/2"                      | 7 1/4"                     | Body Black, Brass Trimmings  | 8.38       | 4.58              |
| 2002 | 8 1/2"                      | 7 1/4"                     | All Nickel                   | 9.00       | 4.79              |
| 2003 | 8 1/2"                      | 7 1/4"                     | Body Black, Nickel Trimmings | 9.00       | 4.79              |
| 2004 | 9 1/2"                      | 8 1/4"                     | All Brass                    | 8.38       | 4.65              |
| 2005 | 9 1/2"                      | 8 1/4"                     | Body Black, Brass Trimmings  | 9.00       | 4.87              |
| 2006 | 9 1/2"                      | 8 1/4"                     | All Nickel                   | 9.38       | 5.09              |
| 2007 | 9 1/2"                      | 8 1/4"                     | Body Black, Nickel Trimmings | 9.75       | 5.09              |
| 2008 | 11 "                        | 9 1/4"                     | All Brass                    | 9.75       | 5.45              |
| 2009 | 11 "                        | 9 1/4"                     | Body Black, Brass Trimmings  | 10.25      | 5.71              |
| 2010 | 11 "                        | 9 1/4"                     | All Nickel                   | 10.88      | 5.98              |
| 2011 | 11 "                        | 9 1/4"                     | Body Black, Nickel Trimmings | 10.88      | 5.98              |
| 2012 | 12 "                        | 10 1/4"                    | All Brass                    | 11.88      | 6.87              |
| 2013 | 12 "                        | 10 1/4"                    | Body Black, Brass Trimmings  | 12.38      | 7.20              |
| 2014 | 12 "                        | 10 1/4"                    | All Nickel                   | 12.75      | 7.54              |
| 2015 | 12 "                        | 10 1/4"                    | Body Black, Nickel Trimmings | 13.13      | 7.54              |

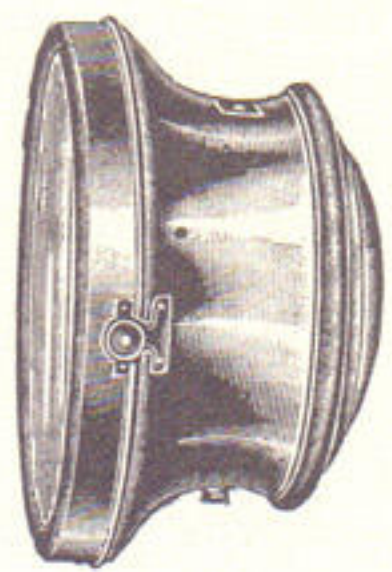
Average Net Weight 8 lbs.

Above Prices Include a Genuine Mazda (Tungsten) Bulb

**"TUNGSTEN" ELECTRIC SIDELIGHTS**



**Torpedo**



**Bullet**

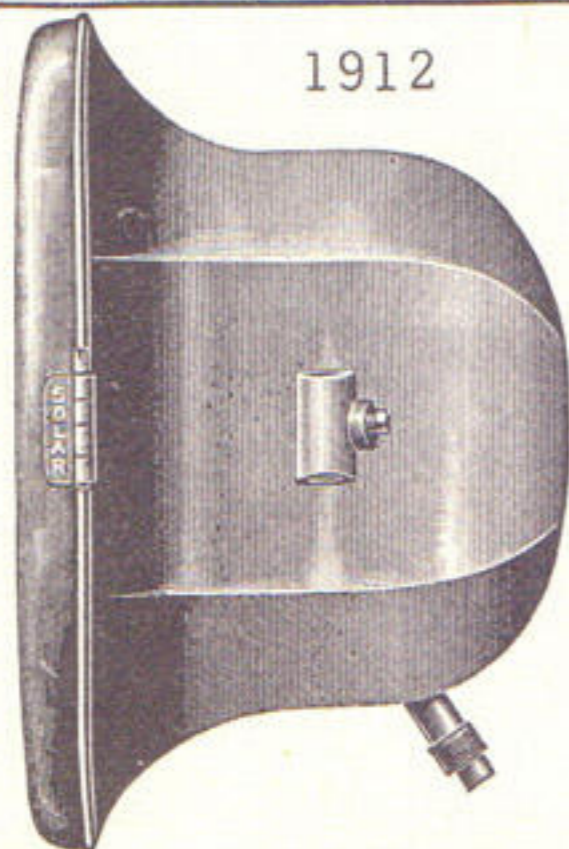
These electric side lights are made to correspond with the Tungsten Electric Headlights described above. Their construction is identical, and conforms in shape, finish, etc., the only difference being the size. These lamps are fitted with cast brass props to take flat brackets. Finished in all brass, black and brass, nickel plated, and black and nickel plated. They are equipped with four or six c.p. bulbs. When ordering specify the c.p. desired. If no specifications are furnished, we will supply 4 c.p. bulbs. The prices apply to both Bullet and Torpedo models, and when ordering be sure to state the type wanted. If no type is mentioned, we will furnish either at our option.

| No.  | Diameter<br>Across Front | Finish                       | Reg. Price | Cut Price<br>Each |
|------|--------------------------|------------------------------|------------|-------------------|
| 2032 | 5 1/2"                   | All Brass                    | \$4.75     | \$2.88            |
| 2033 | 5 1/2"                   | Body Black, Brass Trimmings  | 4.88       | 3.00              |
| 2034 | 5 1/2"                   | All Nickel                   | 5.13       | 3.15              |
| 2035 | 5 1/2"                   | Body Black, Nickel Trimmings | 5.25       | 3.15              |
| 2036 | 6 1/2"                   | All Brass                    | 5.25       | 3.13              |
| 2037 | 6 1/2"                   | Body Black, Brass Trimmings  | 5.62       | 3.28              |
| 2038 | 6 1/2"                   | All Nickel                   | 5.75       | 3.43              |
| 2039 | 6 1/2"                   | Body Black, Nickel Trimmings | 6.00       | 3.43              |

Average Net Weight 5 lbs.

Above Prices Include a Genuine Mazda (Tungsten) Bulb

Write For Any Article You Do Not See In This Catalogue, We Can Save You Money



1912

**"SOLAR" DELUXE COLONIAL TYPE ELECTRIC HEADLIGHT**

This headlight is the most exclusive and artistic electric headlight on the market; especially suitable for cars with straight line or enclosed type body. Of the highest grade of workmanship and materials, and made in one size only, viz: 12 1/2" outside diameter, 8 1/4" in depth, with props for fork brackets 9 1/4" between centers. Regularly supplied with adjustable focus type 20 c.p. Ediswan Tungsten 6 volt bulb, with an option of 16 or 25 c.p. bulb. Other voltage or c.p. bulbs 25c. per lamp extra.

| Our No. | Mfrs. No. | Diam. Between |              | Finish                   | Reg. Price | Cut Price |
|---------|-----------|---------------|--------------|--------------------------|------------|-----------|
|         |           | Across Front  | Prop Centers |                          |            | Each      |
| 2065    | E448      | 12 1/2"       | 9 1/4"       | All Brass                | \$12.50    | \$9.38    |
| 2066    | E448      | 12 1/2"       | 9 1/4"       | Body Blk., Brass Trmgs.  | 13.75      | 10.32     |
| 2067    | E448      | 12 1/2"       | 9 1/4"       | All Nickel               | 14.38      | 10.78     |
| 2068    | E448      | 12 1/2"       | 9 1/4"       | Body Blk., Nickel Trmgs. | 14.08      | 10.56     |

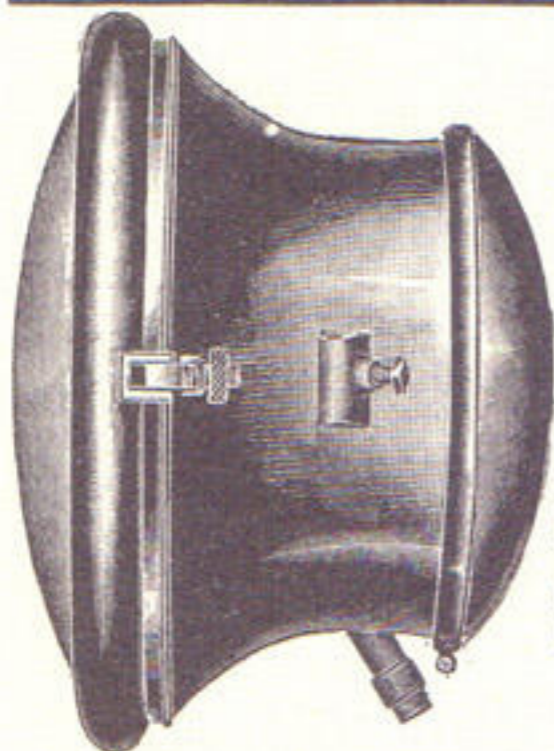
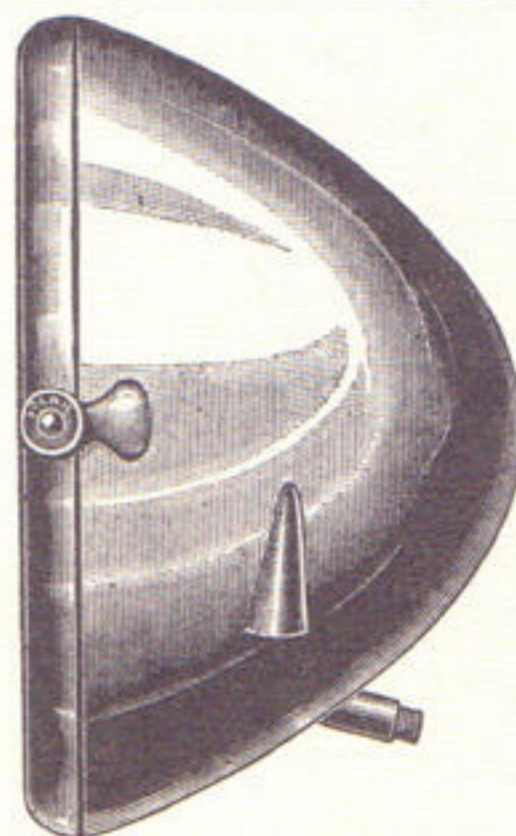
Average Net Weight 8 lbs. Each

**"SOLAR" TORPEDO TYPE ELECTRIC HEADLIGHT**

This headlight is paraboloid in shape, made in two sizes, both fitted with concealed props for fork brackets. The larger is 13" outside diameter, 7 3/4" in depth, with props for brackets 9 1/4" between centers, and fitted with 20 c.p. 6 volt Tungsten bulb, with an option of 16 or 25 c.p. bulb. The smaller is 11 3/4" outside diameter, 6 7/8" in depth, with props for brackets 8 1/4" between centers, and fitted with 16 c.p. 6 volt Tungsten bulb, with an option of 20 or 25 c.p. bulb. Other voltage or c.p. bulbs 25c. per lamp extra.

| Our No. | Mfrs. No. | Diam. Between |              | Finish                   | Reg. Price | Cut Price |
|---------|-----------|---------------|--------------|--------------------------|------------|-----------|
|         |           | Across Front  | Prop Centers |                          |            | Each      |
| 2073    | E387      | 11 3/4"       | 8 1/4"       | All Brass                | \$9.50     | \$7.13    |
| 2074    | E387      | 11 3/4"       | 8 1/4"       | Body Blk., Brass Trmgs.  | 10.45      | 7.84      |
| 2075    | E387      | 11 3/4"       | 8 1/4"       | All Nickel               | 10.93      | 8.20      |
| 2076    | E387      | 11 3/4"       | 8 1/4"       | Body Blk., Nickel Trmgs. | 10.69      | 8.00      |
| 2077    | E398      | 13"           | 9 1/4"       | All Brass                | 10.75      | 8.06      |
| 2078    | E398      | 13"           | 9 1/4"       | Body Blk., Brass Trmgs.  | 11.83      | 8.87      |
| 2079    | E398      | 13"           | 9 1/4"       | All Nickel               | 12.37      | 9.28      |
| 2080    | E398      | 13"           | 9 1/4"       | Body Blk., Nickel Trmgs. | 12.10      | 9.08      |

Average Net Weight 8 lbs. Each



**"SOLAR" ALPHA ELECTRIC HEADLIGHT**

This is the latest double-flare French type Solar Electric Headlight, made of heavy spun brass as per specifications below. Fitted with a 20 c.p. 6 volt Mazda Tungsten bulb, with option of any other size. This type headlight is very popular and is the regular equipment on some of the best cars made.

| No.  | Mfrs. No. | Diam. Between |              | Finish         | Reg. Price | Cut Price  |
|------|-----------|---------------|--------------|----------------|------------|------------|
|      |           | Across Front  | Prop Centers |                |            |            |
| 2040 | E330      | 12 1/2"       | 9 1/4"       | All Brass      | 12.00      | \$9.00 ea. |
| 2041 | E330      | 12 1/2"       | 9 1/4"       | Black & Brass  | 13.20      | 9.90 ea.   |
| 2042 | E330      | 12 1/2"       | 9 1/4"       | All Nickel     | 13.80      | 10.35 ea.  |
| 2043 | E330      | 12 1/2"       | 9 1/4"       | Black & Nickel | 13.50      | 10.13 ea.  |

Average Net Weight 8 lbs.

**"SOLAR" ACORN ELECTRIC HEADLIGHT**

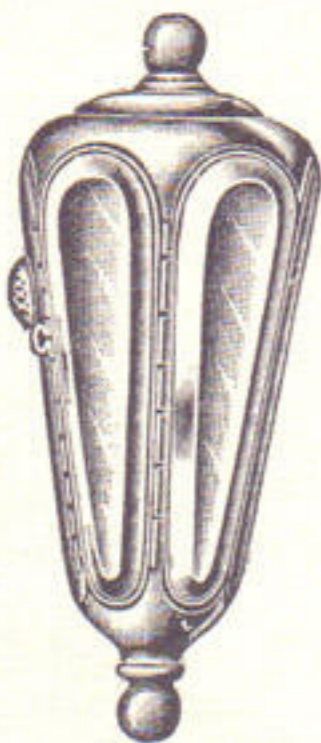
A popular-priced Solar Electric Headlight. The body is acorn shape and drawn from one piece of heavy gauge brass. Made in two sizes, as per specifications given below. Especially suitable for small touring cars and runabouts. Both lamps are fitted with 15 c.p. 6 volt Mazda Tungsten bulb, with option of 9 or 18 c.p.

| No.  | Mfrs. No. | Diam. Between |              | Finish         | Reg. Price | Cut Price  |
|------|-----------|---------------|--------------|----------------|------------|------------|
|      |           | Across Front  | Prop Centers |                |            |            |
| 2044 | E336      | 9 1/4"        | 7"           | All Brass      | \$7.50     | \$5.63 ea. |
| 2045 | E336      | 9 1/4"        | 7"           | Black & Brass  | 8.25       | 6.19 ea.   |
| 2046 | E336      | 9 1/4"        | 7"           | All Nickel     | 8.63       | 6.47 ea.   |
| 2047 | E336      | 9 1/4"        | 7"           | Black & Nickel | 8.44       | 6.33 ea.   |
| 2048 | E346      | 10"           | 8 1/4"       | All Brass      | 8.13       | 6.46 ea.   |
| 2049 | E346      | 10"           | 8 1/4"       | Black & Brass  | 8.94       | 6.71 ea.   |
| 2050 | E346      | 10"           | 8 1/4"       | All Nickel     | 9.34       | 7.01 ea.   |
| 2051 | E346      | 10"           | 8 1/4"       | Black & Nickel | 8.14       | 6.86 ea.   |

Average Net Weight 8 lbs.



**"SOLAR" HEXAGON LIMOUSINE LAMPS**

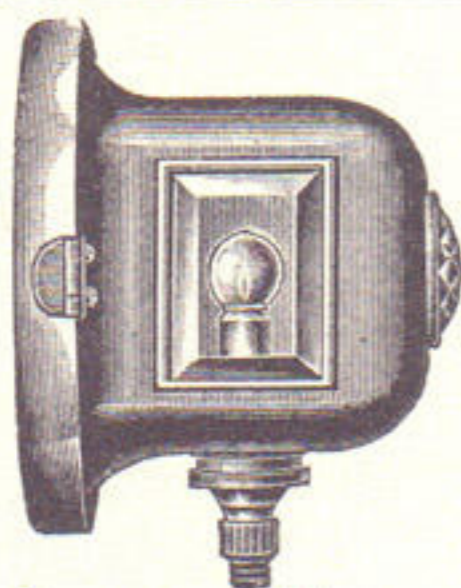


An artistic, tapered Hexagon Limousine Electric side lamp, 12 1/8" high and 5 1/8" at its greatest diameter. Has three, round end, taper shaped, beveled plate glass sides, the other three being metal panels, similar in outline, which, with the rounded top and bottom and ball mounting give the entire lamp a graceful appearance. The three metal panels and top of lamp have heavily silvered linings, the top lining being an inverted curved cone forming socket and bulb holder. Has combination prop to fit flat or round bracket and made so as to hold outside electric connector. Regularly supplied with 4 c. p. 6 volt Ediswan Tungsten bulb. When finished in black, ball mountings and glass mouldings are either nickel or brass as ordered.

| No.  | 1912             | Reg. Price | Cut Price |
|------|------------------|------------|-----------|
| 2386 | Brass            | \$12.50    | \$9.38    |
| 2387 | Black and Brass  | 13.75      | 10.34     |
| 2388 | Black and Nickel | 14.07      | 10.73     |

Average Net Weight 5 lbs.

**"SOLAR" DELUXE COLONIAL TYPE ELECTRIC SIDE LAMP**



This side light is made to match Model E448, and is a most exclusive and artistic electric side lamp, especially suitable for cars with straight line or enclosed type body; of the highest grade of material and workmanship and made in one size only, viz.: 6 5/8" outside front diameter, 5 1/2" in depth, 2" rear red jewel, white side glass 2 1/8" x 2 3/4", and prop for flat bracket. Fitted with 4 c.p. Ediswan Tungsten bulb, with an option of 2 c.p. or 6 c.p. With 6" optical front lens \$1.00 per pair extra. Other voltage or c.p. bulbs 25c. per lamp extra.

| Our No. | Mfrs. No. | Diameter Across Front | Finish                       | Reg. Price | Cut Price Each |
|---------|-----------|-----------------------|------------------------------|------------|----------------|
| 2089    | E228      | 6 5/8"                | All Black                    | \$7.00     | \$5.25         |
| 2090    | E228      | 6 5/8"                | Body Black, Brass Trimmings  | 7.70       | 5.78           |
| 2091    | E228      | 6 5/8"                | All Nickel                   | 8.05       | 6.04           |
| 2092    | E228      | 6 5/8"                | Body Black, Nickel Trimmings | 7.88       | 5.91           |

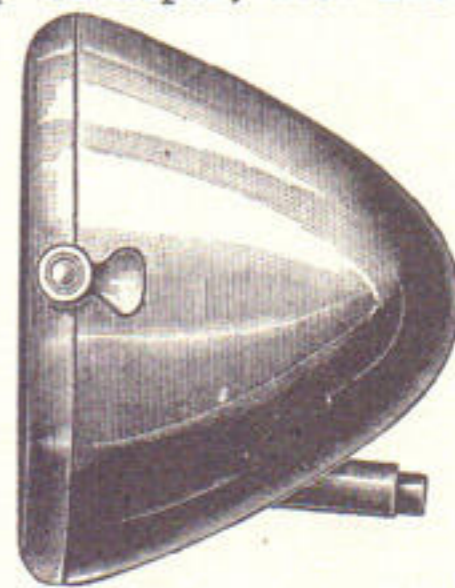
Average Net Weight 5 lbs. Each

**"SOLAR" TORPEDO TYPE ELECTRIC SIDE LAMP**

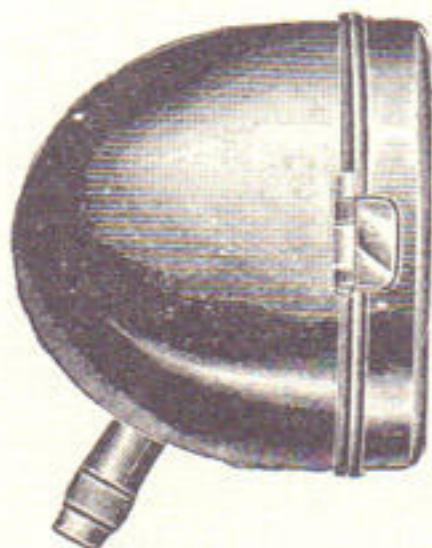
This side lamp is paraboloid in shape, and made in two sizes. The larger is 7 3/16" outside diameter, 5 3/4" in depth. Has adjustable focus and is fitted with 8 c.p. 6 volt Ediswan Tungsten bulb, with an option of 6 c.p. The smaller is 6 3/4" outside diameter, 5 1/4" in depth, with fixed focus and is fitted with 4 c.p. 6 volt Ediswan Tungsten bulb, with an option of 6 c.p. Both sizes have prop casting concealed in body for flat brackets and are wired to outside double Solar Ediswan connector. Other voltage or c.p. bulbs 25c. per lamp extra.

| Our No. | Mfrs. No. | Diameter Across Front | Finish                   | Reg. Price | Cut Price Each |
|---------|-----------|-----------------------|--------------------------|------------|----------------|
| 2097    | E225      | 6 3/4"                | All Brass                | \$5.00     | \$3.75         |
| 2098    | E225      | 6 3/4"                | Body Blk., Brass Trmgs.  | 5.50       | 4.13           |
| 2099    | E225      | 6 3/4"                | All Nickel               | 5.75       | 4.31           |
| 2100    | E225      | 6 3/4"                | Body Blk., Nickel Trmgs. | 5.63       | 4.22           |
| 2101    | E266      | 7 3/16"               | All Brass                | 6.25       | 5.06           |
| 2102    | E266      | 7 3/16"               | Body Blk., Brass Trmgs.  | 7.43       | 5.57           |
| 2103    | E266      | 7 3/16"               | All Nickel               | 7.77       | 5.83           |
| 2104    | E266      | 7 3/16"               | Body Blk., Nickel Trmgs. | 7.60       | 5.70           |

Average Net Weight 5 lbs. Each



**"SOLAR" ACORN ELECTRIC SIDE LAMP**



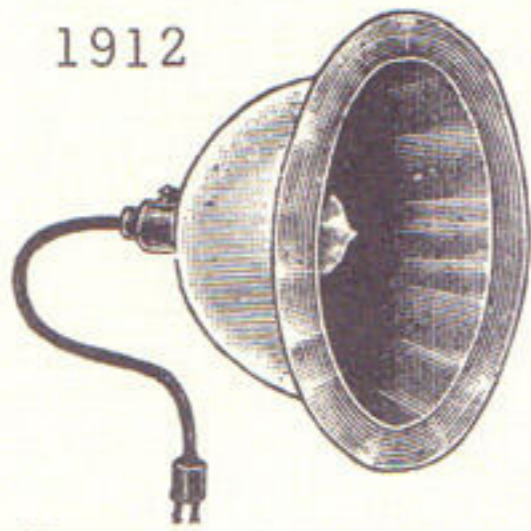
This popular priced electric side lamp is made to match Solar Electric Headlights E336 and E346 and made in one size only. Has prop concealed in body for flat bracket and is made as per specifications below. It is wired with No. 14 wire to outside double Solar Ediswan connector fitted with 4 c.p. 6 volt Mazda Tungsten bulb, with option of 2 or 6 c.p.

| No.  | Mfrs. No. | Diam. Across Front | Finish         | Reg. Price | Cut Price  |
|------|-----------|--------------------|----------------|------------|------------|
| 2106 | E7        | 5 1/2"             | All Brass      | \$4.75     | \$3.56 ea. |
| 2107 | E7        | 5 1/2"             | Black & Brass  | 5.23       | 3.92 ea.   |
| 2108 | E7        | 5 1/2"             | All Nickel     | 5.42       | 4.10 ea.   |
| 2109 | E7        | 5 1/2"             | Black & Nickel | 5.35       | 4.01 ea.   |

Average Net Weight 5 lbs.

A Quick Way of Ordering Means a Quick Way of Getting. Order Today

1912



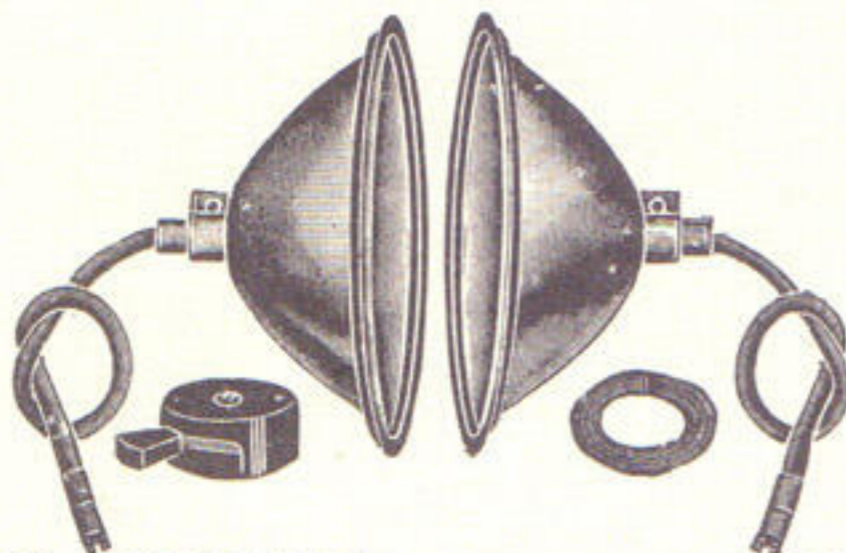
**"TUNGSTEN" PARABOLIC SILVER-PLATED REFLECTORS**

These reflectors are of the same quality as used in the best makes of lamps; designed for use in transforming acetylene lamps into electric headlights. Made with a flange that can be trimmed to fit a lamp having front diameter given in table below. To be fastened inside of lamp door. Each reflector is wired complete, and fitted with special Ediswan base socket, and may be fitted with any size bulb to meet your particular requirements. We do not furnish bulbs at the prices quoted below. Measure the inside diameter of your lamp door, and order the size that will best fit your lamp. The flange can be trimmed about 1/2 inch if necessary.

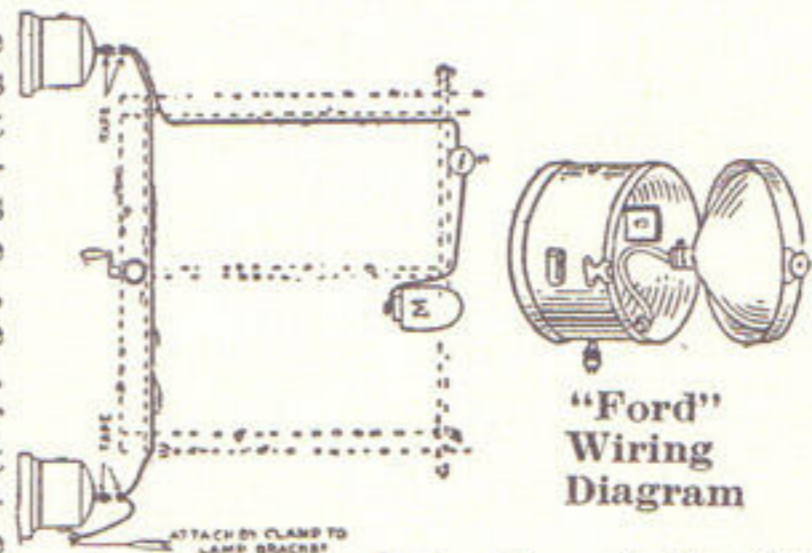
| No.  | Diameter Over All | Diameter of Reflector | Reg. Price | Each | Cut Price |
|------|-------------------|-----------------------|------------|------|-----------|
| 2130 | 6 in.             | 5 in.                 | \$3.00     |      | \$1.15    |
| 2131 | 7 "               | 6 "                   | 3.50       | "    | 1.20      |
| 2132 | 8 "               | 7 "                   | 3.75       | "    | 1.35      |
| 2133 | 9 "               | 8 "                   | 4.25       | "    | 1.50      |
| 2134 | 10 "              | 9 "                   | 5.50       | "    | 1.75      |
| 2135 | 11 "              | 10 "                  | 5.75       | "    | 2.10      |
| 2136 | 12 "              | 11 "                  | 6.00       | "    | 2.70      |

NOTE: The above prices include Ediswan base sockets. Candelabra base fittings 25c. each less than the above prices. Average Shipping Weight 1 lb.

**"FORD" ELECTRIC OUTFIT**



On all Ford cars the magneto produces much more current than is needed for ignition, and the surplus is enough to operate two 12 c.p. headlights, without weakening the ignition of the motor. Having on your car the most important part of a lighting system, viz., the source



of current supply, you may remodel your gas headlights for electricity, and do the whole job of installing, including the wiring, in one-half hour. We furnish all the material for the complete outfit, assembled and ready to put on, with wiring, connectors, etc. This outfit consists of two reflectors, two Mazda lamps, 12 c.p. switch, wire, 4 connectors, and tape. The diagram shows the wiring, and complete detailed directions are sent with each outfit.

To install our outfit no experience is necessary. Ford cars have either of two different makes of head lamps. To place the Parabolic reflectors in "E. & J." Lamps, the wire ring which holds the glass in the doors is removed. Then the reflector is placed against the glass, and the wire ring is replaced. To place the reflectors in "Brown" lamps, solder three small machine screws or rivets in the door of the lamp. Make four V-shaped notches in the rim of reflector, place against the glass and turn slightly. The points will hold reflector firmly against the glass door.

| No.  | Reg. Price | Cut Price |
|--|------------|-----------|
| 2137 With Ediswan Base, connections throughout | \$10.00    | \$5.75    |
| 2138 With Candelabra Base, " "                 | 9.00       | 5.50      |

When ordering, be sure to state the diameter of front glass, and the year and model of your car. Average Net Weight 3 1/2 lbs.



**"ROSE" ELECTRIC LIGHTING OUTFIT**

This outfit consists of three 6-volt Mazda (Tungsten) lamps; (any c.p.) three hard rubber lamp connectors; three solderless attachments so that bulb and its attachments can be easily applied in combination with any oil lamp now in use; one two-point hard rubber switch; one box of insulated staples; tape; and enough wire for any car. It comes wired complete, ready to put in any lamp. The outfit can be used with any make Oil or Tail Lamp as well as Head Light if necessary. All parts used in making up this outfit are of the very best quality materials obtainable, with genuine Mazda-Tungsten bulbs. We usually furnish one 2 c. p. and two 4 c. p. bulbs suitable for a tail light and two side lamps, but will furnish any c. p. to specification. If ordered without specification, our regular stock outfit will be furnished.

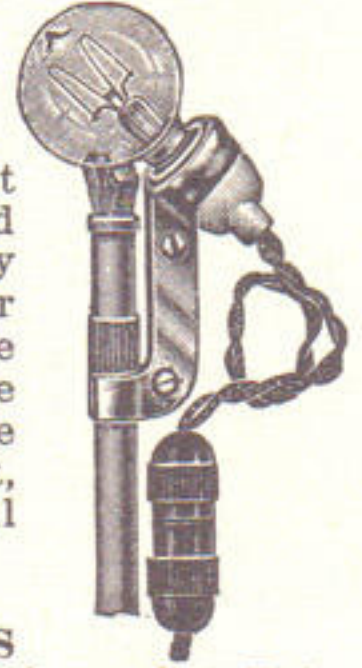
|                       |                     |                   |
|-----------------------|---------------------|-------------------|
| No. 2139.             | Reg. Price, \$7.50. | Cut Price, \$3.50 |
| Net Weight 2 1/2 lbs. |                     |                   |

A Quick Way of Ordering Means a Quick Way of Getting. Order Today

**1912 "MESCO" ELECTRIC CONVERTER FOR OIL AND GAS LAMPS**



This attachment permits the use of oil or gas burners without removing bracket. Made of spring brass, highly polished and nickel plated, strong and durable, and recommended particularly for use on oil lamps where you cannot afford to eliminate your regular oil lamp equipment. To use gas burner attachment, place it around gas burner nipple, and insert bulb directly over the centre of gas burner. When you desire to use gas, remove bulb and slide attachment down, leaving in lamp. To use oil lamp attachment, place clamp around nose of oil burner, connecting wires from oil burner apertures. When using oil, remove bulb.

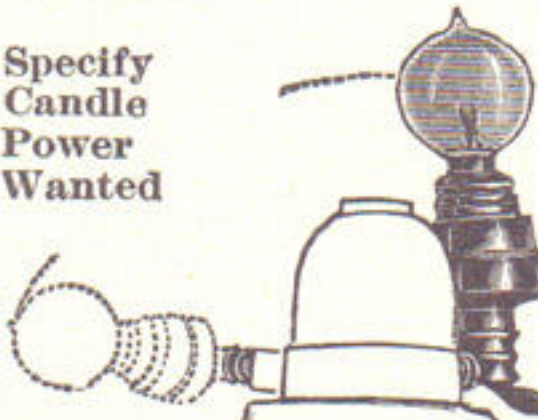


Average Shipping Weight 10 oz.

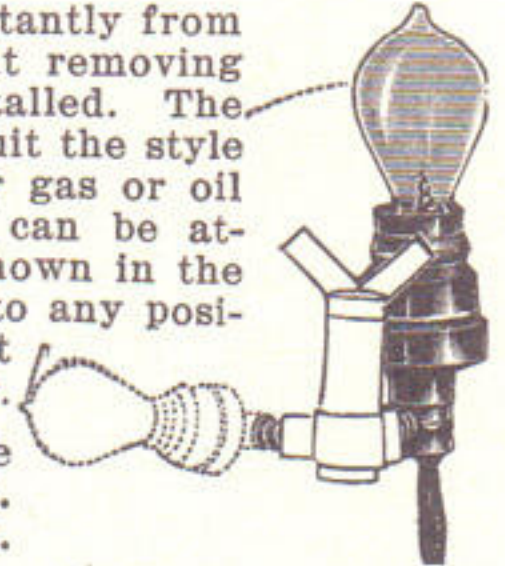
| FOR OIL LAMPS        |            |            | FOR GAS LAMPS        |            |            |
|----------------------|------------|------------|----------------------|------------|------------|
| No.                  | Reg. Price | Cut Price  | No.                  | Reg. Price | Cut Price  |
| 2162 Without Bulb    | \$1.00     | \$0.40 ea. | 2164 Without Bulb    | \$1.00     | \$0.40 ea. |
| 2163 With Mazda Bulb | 1.50       | .90 ea.    | 2165 With Mazda Bulb | 1.50       | .90 ea.    |

**"DUPLEX" ELECTRIC CONVERTER FOR OIL AND GAS LAMPS**

Specify  
Candle  
Power  
Wanted



This attachment makes it possible to convert instantly from oil or gas to electric light, or vice versa, without removing either bulb or burner. It is quickly and easily installed. The electric bulb may be readily raised or lowered to suit the style of the burner. This device is adaptable to either gas or oil lamps instantly without any special fitting, and can be attached in a few seconds to any oil lamp, just as shown in the illustration. When not in use it can be adjusted to any position, enabling you to use electricity or oil at will. It can be turned down out of the way.



| No.               | Reg. Pr. | Cut Price  | No.               | Reg. Pr. | Cut Price  |
|-------------------|----------|------------|-------------------|----------|------------|
| 2170 Without Bulb | \$1.00   | \$0.40 ea. | 2172 Without Bulb | \$1.00   | \$0.40 ea. |
| 2171 With Mazda   | 2.00     | .90 ea.    | 2173 With Mazda   | 2.00     | .90 ea.    |

Average Shipping Weight 10 oz.

**"Fowler" Oil Lamp Electric Converter**



This device is threaded and intended to be inserted into any standard make of oil lamp, permanently, by drilling 1/2" hole in the back or side of the kerosene burner. It is very easy to attach, and requires no soldering; being a permanent fixture, it does away with the necessity of removing the electric attachment or the bulb.

| No.                  | Reg. Price | Cut Price  |
|----------------------|------------|------------|
| 2177 Without Bulb    | \$1.25     | \$0.40 ea. |
| 2178 With Mazda Bulb | 2.00       | .90 ea.    |

Average Net Weight 6 oz.

**"Fits-All" Oil Lamp Electrifiers**

Consists of a double spring brass clip, which grips the burner firmly and is equipped with a wired socket ready to be spliced to battery wires or switch; does not require removal of the kerosene, wick and burner. With this attachment the burner is not disturbed and oil can be used at any time should electric current give out.



| No.                  | Reg. Price | Cut Price  |
|----------------------|------------|------------|
| 2179 Without bulb    | \$0.50     | \$0.20 ea. |
| 2180 With Mazda bulb | 1.25       | .70 ea.    |

**ELECTRIC DASH LAMPS**

These lamps are used on the dashboard, which enables the driver to distinguish any mechanical contrivance, such as gauges, oilers, clocks, speedometers, foot pedals, etc. They give plenty of light, and are not expensive, as the current consumption need not exceed 1/4 of an ampere hour. Will give perfect satisfaction on 6 volt battery. Equipped with 2 c.p. Mazda (Tungsten) bulbs. We will furnish any c.p. on specification.

We furnish three different types to meet all ordinary requirements, Styles A and B being used for lighting gauges, sight feed oilers, etc., and Style C for speedometers.



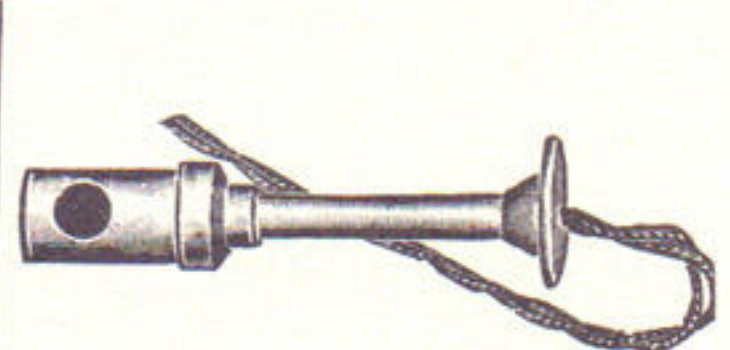
Style A

| No.               | Reg. Price | Cut Price |
|-------------------|------------|-----------|
| 2324 Without Bulb | \$1.00     | \$0.50    |
| 2325 With Bulb    | 2.50       | 1.00      |



Style B

| No.               | Reg. Price | Cut Price |
|-------------------|------------|-----------|
| 2326 Without Bulb | \$1.00     | \$0.50    |
| 2327 With Bulb    | 2.50       | 1.00      |



Style C

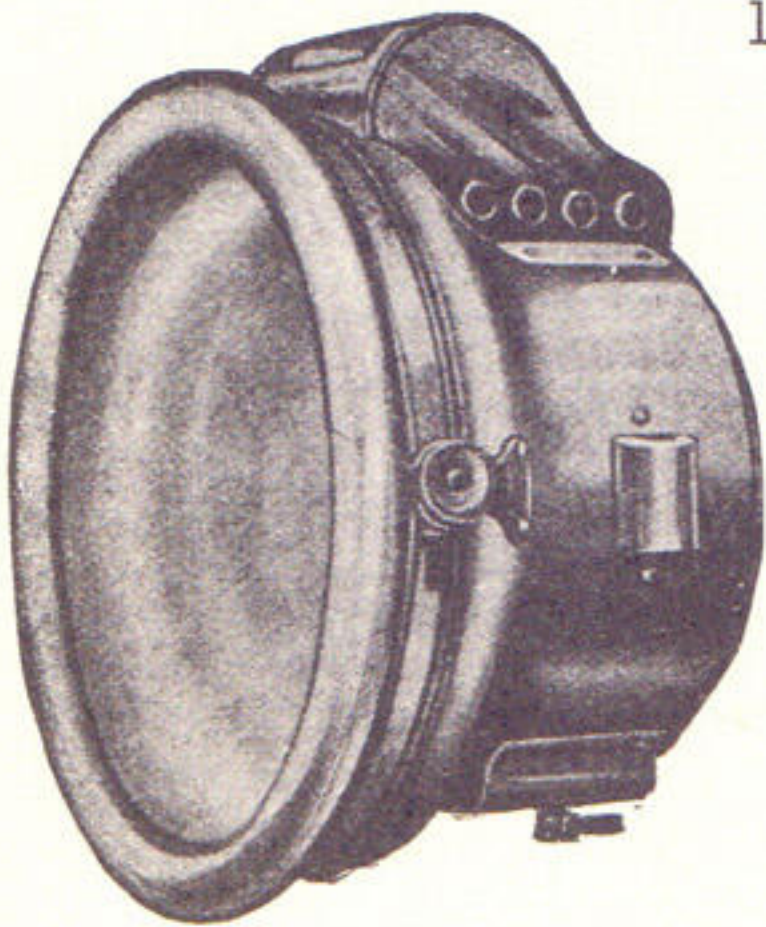
| No.               | Reg. Price | Cut Price |
|-------------------|------------|-----------|
| 2328 Without Bulb | \$1.00     | \$0.50    |
| 2329 With Bulb    | 2.50       | 1.00      |

Average Net Weight 4 oz.



**B. & L. Special  
One Piece Headlight**

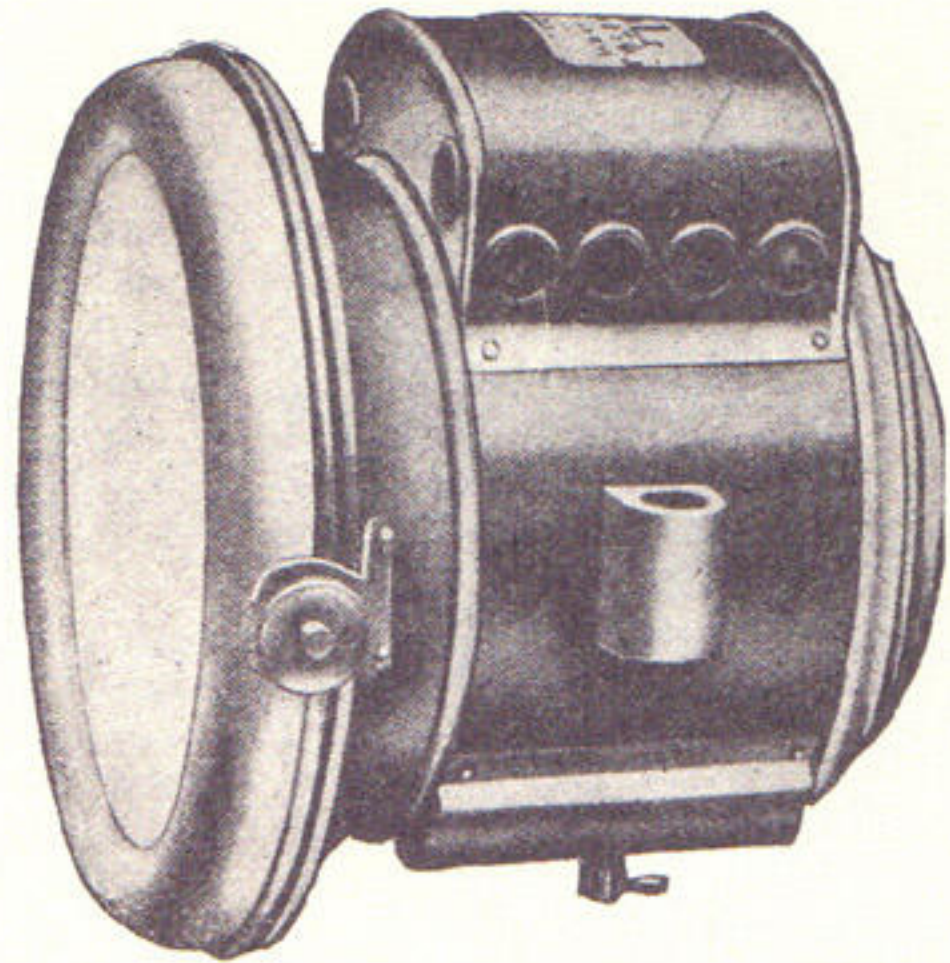
1912



- No. 406 9½ inch front, 6 inch barrel,  
6¾ inch prop center, each.....\$10.00
- No. 407 10½ inch front, 7 inch barrel,  
7¾ inch prop center, each..... 11.00

This headlight is made of extra heavy brass, one piece body, genuine mangin mirror, containing silver reflector and shifting gas chamber.

**B. & L. Gas Headlight**



- No. 106 8 inch front, 6 inch barrel,  
6¾ inch prop to prop center, each..\$5.50
- No. 107 9 inch front, 7 inch barrel,  
7¾ inch prop to prop center, each.. 6.50
- No. 108 10 inch front, 8 inch barrel,  
8¾ inch prop to prop center, each.. 8.00

This lamp is the latest flare front on the market, made of extra heavy brass, shifting gas chamber, French mirror, made with interior screws to produce a perfectly smooth exterior surface for cleaning.

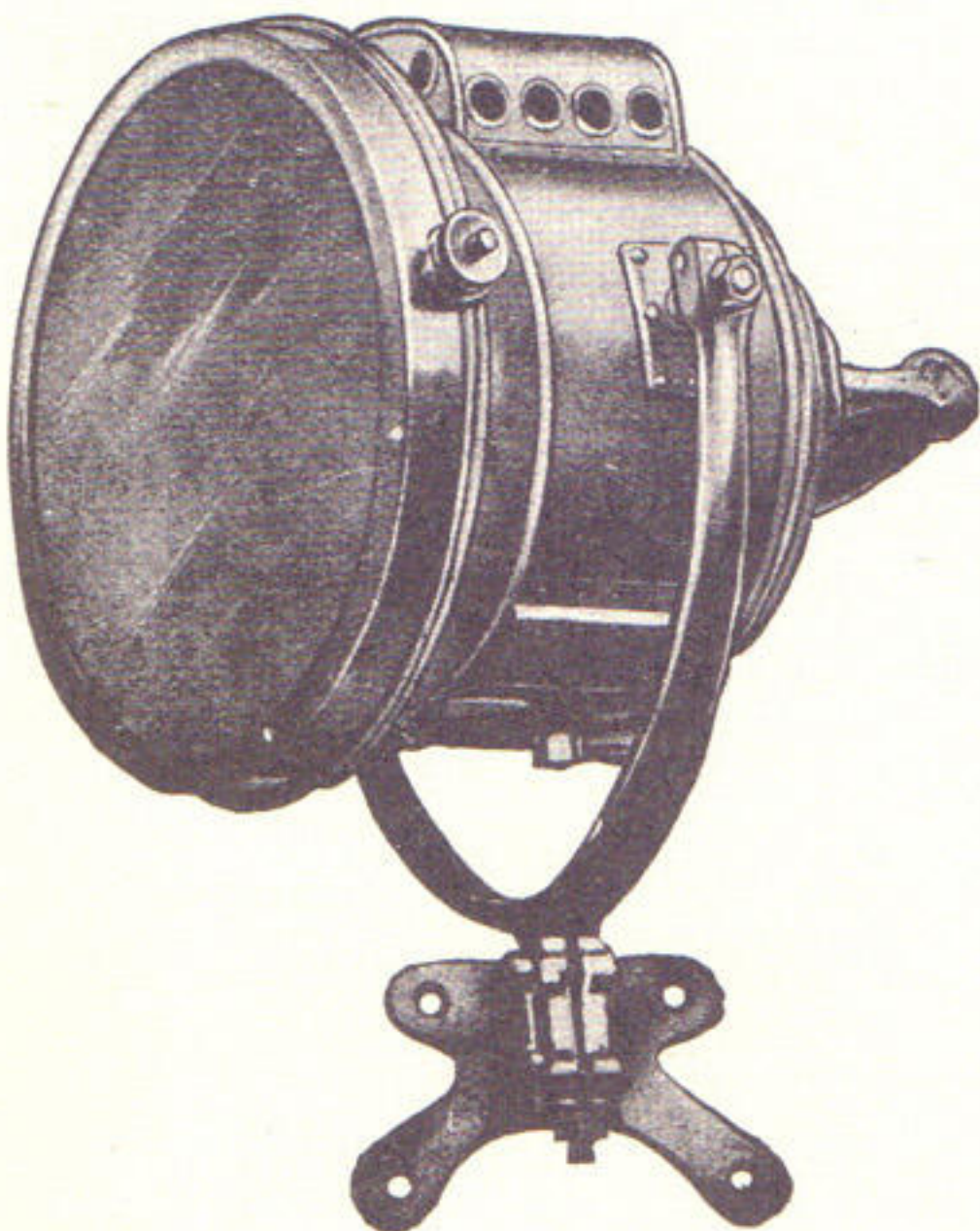
**B. & L. Swivel Searchlight**

Used on auto trucks, auto wagons, taxicabs, large touring cars and motor boats. Specially adapted for touring and cross-country runs.

This searchlight is made of extra heavy brass, with swing bracket handle, has vertical and lateral movement, or can be locked in one position, furnished with side or deck base if desired. With French mirror. Same with Mangin mirror \$1.00 extra.

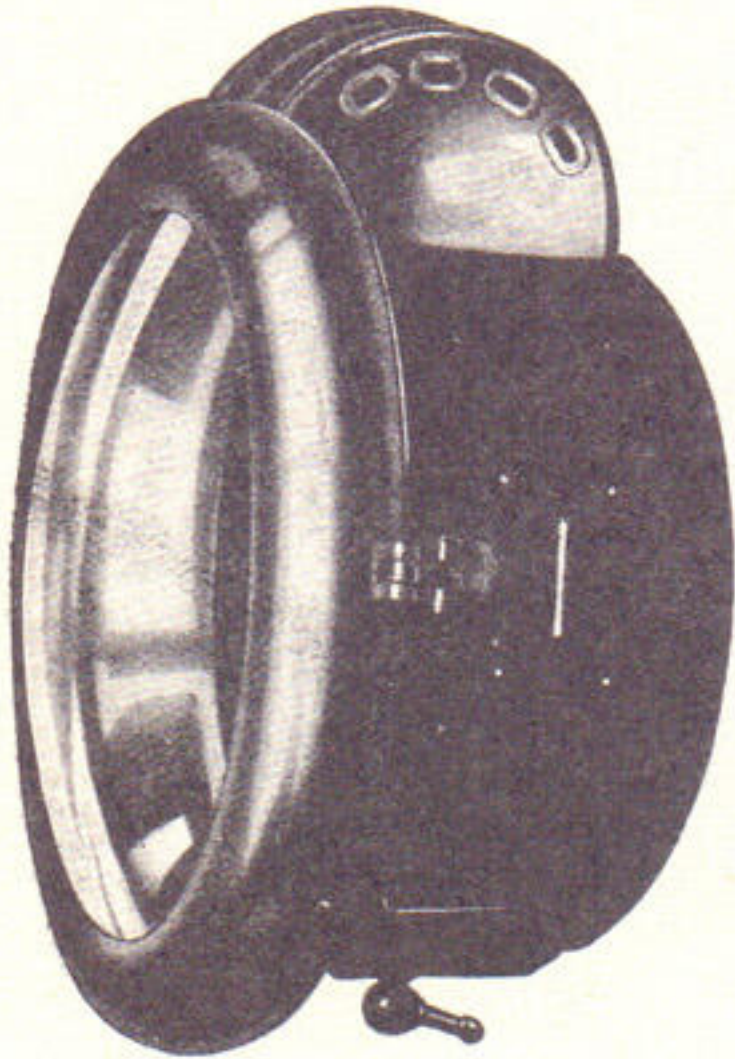
- No. 86—8 inch front, 6 inch barrel,  
each .....\$10.00
  - No. 87—9 inch front, 7 inch barrel,  
each ..... 11.00
- Same lamp in electric, \$2.00 extra.

Extra charge for black enamel and nickel plated.



GRAY AND DAVIS LAMPS

1912 **Close-Coupled**



Embodies the very latest ideas of the art of lamp making. The body is drawn from sheet brass, and is all one piece up to door. The brass is carefully selected and annealed. The head, or hood, is also drawn in one piece and is clinched to body of lamp and secured by screws from the inside. The mirror and front glass are secured by concealed screws and are readily replaced.

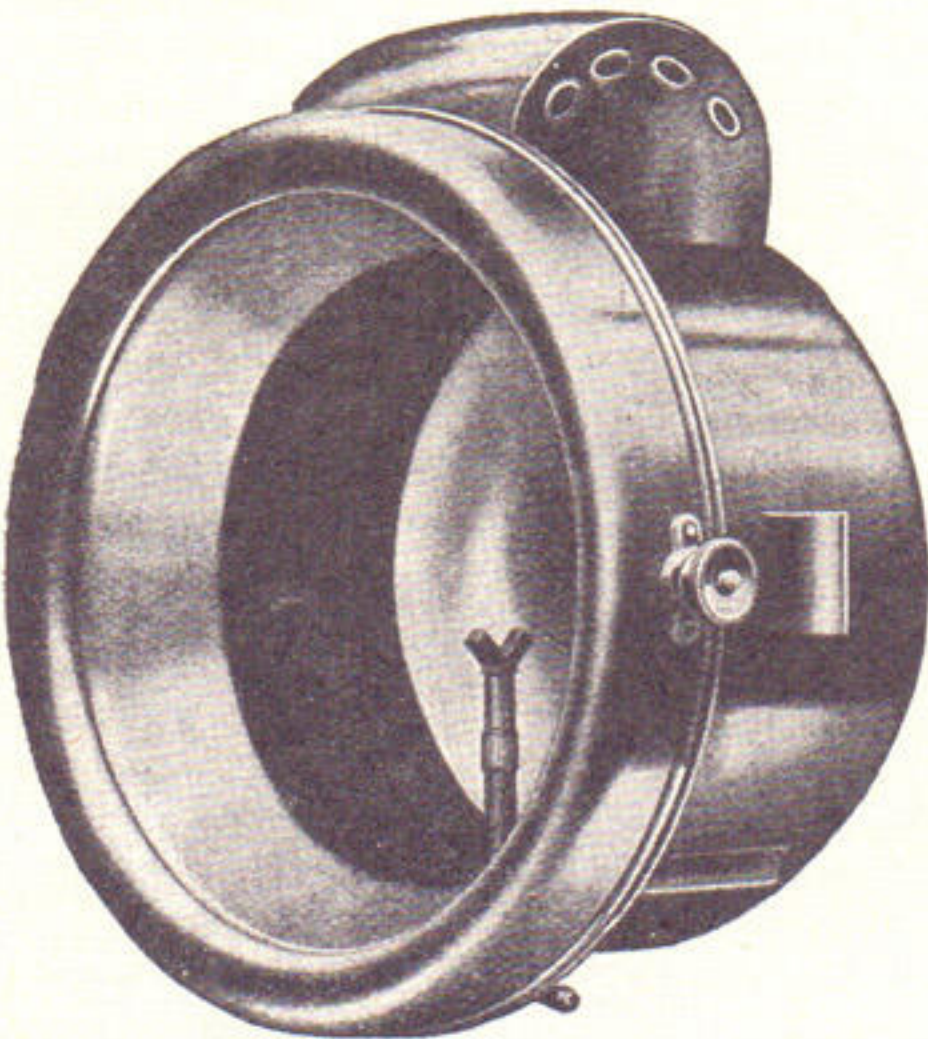
Lens mirrors are made of the best imported white glass, carefully annealed, ground and silvered and give the best of results, and they are optically correct.

|                           | Style 126            | Style 127            | Style 128            | Style 129            |
|---------------------------|----------------------|----------------------|----------------------|----------------------|
| Price each .....          | \$10.00              | \$12.50              | \$15.00              | \$17.50              |
| Diameter of Flange .....  | 10 $\frac{3}{8}$ in. | 11 $\frac{3}{8}$ in. | 12 $\frac{3}{8}$ in. | 12 $\frac{3}{8}$ in. |
| Extreme Length .....      | 7 $\frac{3}{8}$ in.  | 8 $\frac{1}{2}$ in.  | 9 in.                | 9 in.                |
| Extreme Height .....      | 11 $\frac{3}{8}$ in. | 12 $\frac{3}{4}$ in. | 13 $\frac{7}{8}$ in. | 13 $\frac{7}{8}$ in. |
| Distance between Props .. | 8 9-16 in.           | 9 5-16 in.           | 10 $\frac{1}{4}$ in. | 10 $\frac{1}{4}$ in. |
| Diameter of Lens Mirror   | 6 in.                | 7 in.                | 8 in.                | 9 in.                |

Fifteen per cent. extra for Nickel Finish. Five per cent. extra for Enameled Black or Black and Brass.

**Close-Coupled Flare Front**

This style has a small flaring front—more on the order of the searchlight.



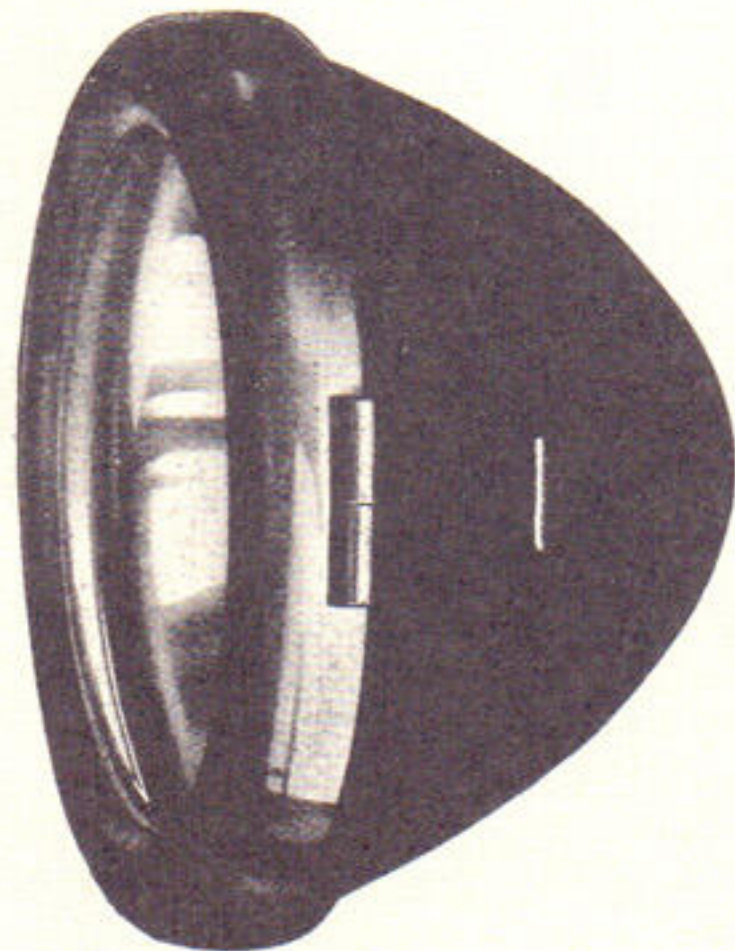
|                               | Style 118            | Style 119            |
|-------------------------------|----------------------|----------------------|
| Price each .....              | \$12.50              | \$17.00              |
| Diameter of Flange .....      | 10 $\frac{3}{4}$ in. | 11 $\frac{7}{8}$ in. |
| Extreme Length .....          | 7 $\frac{1}{2}$ in.  | 9 in.                |
| Extreme Height .....          | 12 $\frac{1}{8}$ in. | 13 $\frac{1}{2}$ in. |
| Distance between Props .....  | 9 $\frac{1}{8}$ in.  | 10 $\frac{1}{4}$ in. |
| Diameter of Lens Mirror ..... | 8 in.                | 9 in.                |

This style has a large flaring front for those who like a wide beam of light.

|                           | Style 106            | Style 107            | Style 108            |
|---------------------------|----------------------|----------------------|----------------------|
| Price each .....          | \$7.50               | \$10.50              | \$14.00              |
| Diameter of Flange .....  | 9 $\frac{5}{8}$ in.  | 10 $\frac{3}{4}$ in. | 11 $\frac{7}{8}$ in. |
| Extreme Length .....      | 7 $\frac{1}{8}$ in.  | 8 in.                | 8 $\frac{3}{8}$ in.  |
| Extreme Height .....      | 10 $\frac{3}{8}$ in. | 12 in.               | 13 $\frac{1}{8}$ in. |
| Distance between Props .. | 7 $\frac{1}{8}$ in.  | 8 $\frac{1}{8}$ in.  | 9 $\frac{1}{8}$ in.  |
| Diameter of Lens Mirror.. | 6 in.                | 7 in.                | 8 in.                |

Fifteen per cent. extra for Nickel Finish. Five per cent. extra for Enameled Black or Black and Brass.

**Electric Headlight**



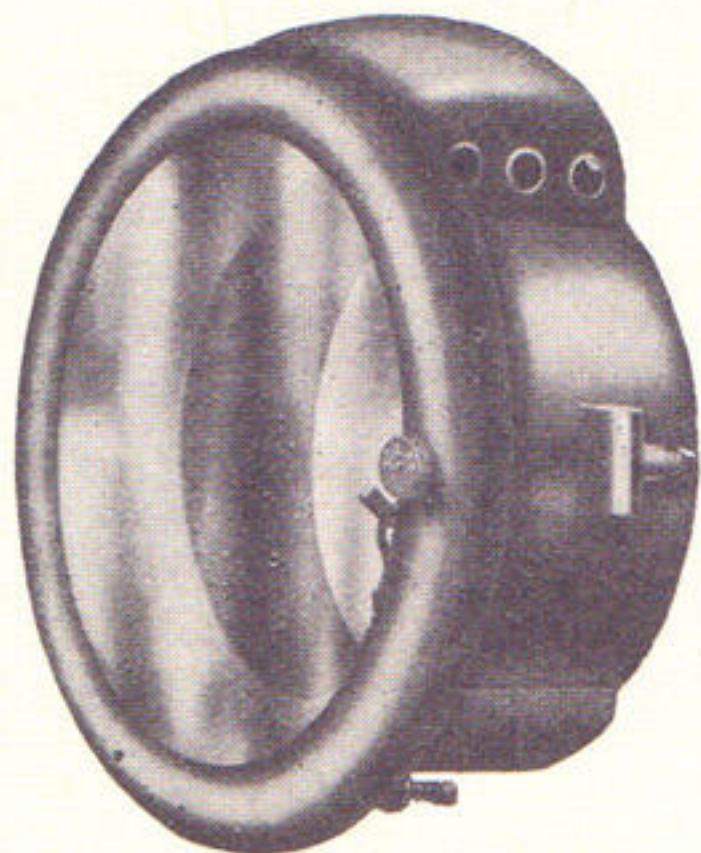
|                          | Type D-4            | Type D-7            |
|--------------------------|---------------------|---------------------|
| Price each .....         | \$8.00              | \$6.00              |
| Diameter of Flange ..... | 7 3-16 in.          | 6 $\frac{1}{8}$ in. |
| Extreme Length .....     | 5 $\frac{1}{4}$ in. | 4 $\frac{1}{2}$ in. |
| Extreme Height .....     | 7 3-16 in.          | 6 $\frac{1}{8}$ in. |

|                              | Type D-2             | Type D-3            |
|------------------------------|----------------------|---------------------|
| Price each .....             | \$15.00              | \$12.50             |
| Diameter of Flange .....     | 10 $\frac{1}{4}$ in. | 9 $\frac{1}{2}$ in. |
| Extreme Length .....         | 7 $\frac{5}{8}$ in.  | 6 $\frac{3}{4}$ in. |
| Extreme Height .....         | 10 $\frac{1}{4}$ in. | 9 $\frac{1}{2}$ in. |
| Distance between Props ..... | 9 $\frac{1}{8}$ in.  | 7 $\frac{1}{2}$ in. |

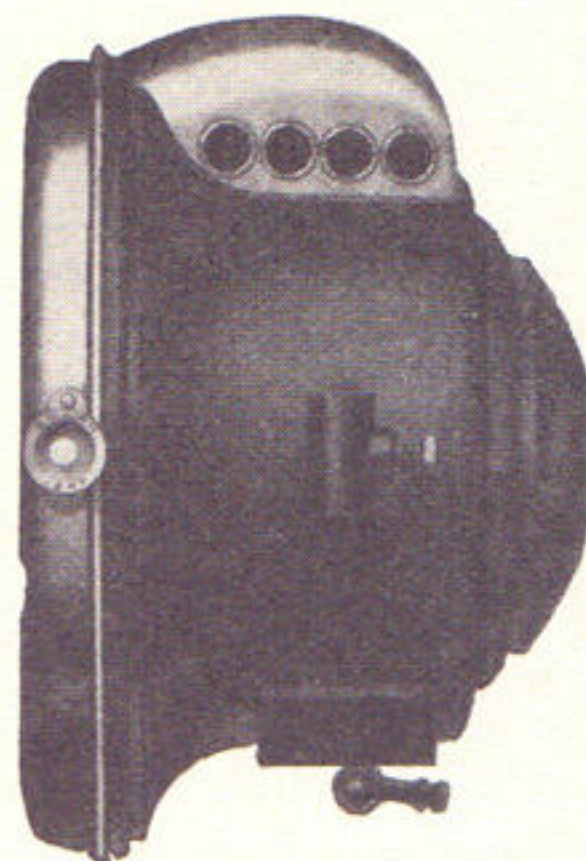
|                              | Type B-2             | Type B-3             |
|------------------------------|----------------------|----------------------|
| Price each .....             | \$17.50              | \$15.00              |
| Diameter of Flange .....     | 12 $\frac{3}{8}$ in. | 11 $\frac{3}{8}$ in. |
| Extreme Length .....         | 8 $\frac{3}{4}$ in.  | 7 $\frac{3}{4}$ in.  |
| Extreme Height .....         | 12 $\frac{3}{8}$ in. | 11 $\frac{3}{8}$ in. |
| Distance between Props ..... | 10 $\frac{1}{2}$ in. | 9 $\frac{1}{8}$ in.  |

SOLAR LAMPS

1912



Torpedo Type Headlight



Model 12 Headlight

|        | Lens        | Door         | Each    |      | Lens Mirror | Door        | Each   |
|--------|-------------|--------------|---------|------|-------------|-------------|--------|
| 1287H. | Brass 7 in. | 11 11-16 in. | \$8.75  | 1236 | 6 in.       | 9½ in.      | \$6.25 |
| 1288H. | Brass 8 in. | 11 11-16 in. | \$10.00 | 1246 | 6 in.       | 10 9-16 in. | \$6.75 |
| 1299H. | Brass 9 in. | 12¾ in.      | \$12.50 | 1247 | 7 in.       | 10 9-16 in. | \$7.50 |



Standard Oil Side Lamp

Medium size lamp, specially suitable for all types of cars. Is 12½ inches high with 4¼-inch square front and side beveled glass; 1½-inch ruby rear signal, and burnished silver linings. Has Solar patent safety oil fount catch and prop for flat brackets. Burns 24 hours, guaranteed wind and jar proof, and to stay alight under all conditions of motor car use. All Solar oil burners lock into place, preventing leakage of oil.

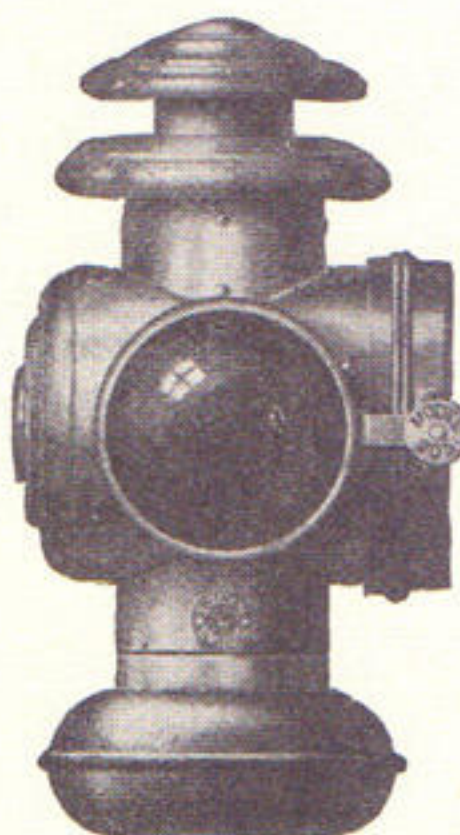
- 1133—12½-inch high x 4¼ x 4¼, pair.....\$10.50
- 1233c—Electric and Oil\*, pair..... 13.50

\*Tungsten electric bulb wired so that oil or electricity can be used as desired.

Security Tail

Suitable for all cars. Wind and jar proof and guaranteed to stay lighted under all conditions.

- 1205 9½ in. high, each .....\$3.25
- 1205C. Electric and Oil,\* each .. 4.75



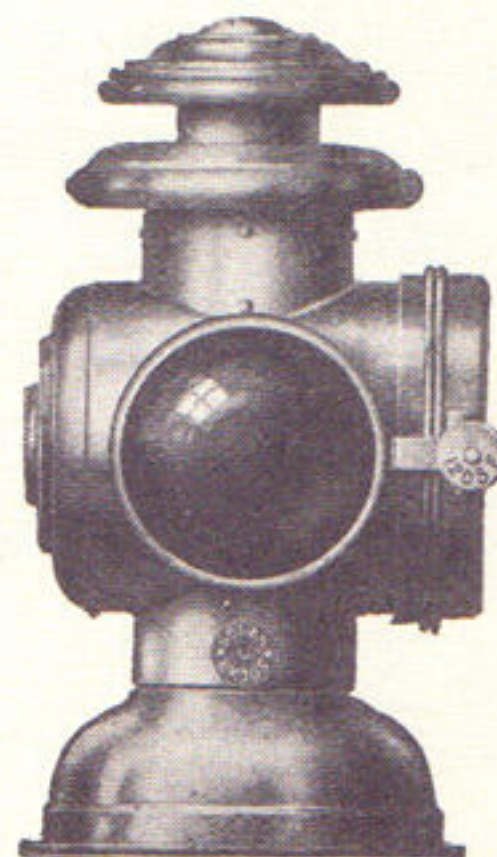
Security Tail

Fender Tail

Same as above but fastens to fender. No brackets necessary

- 1205F. Brass, each .....\$3.50
- C205F. Electric and Oil, each ..... 5.00

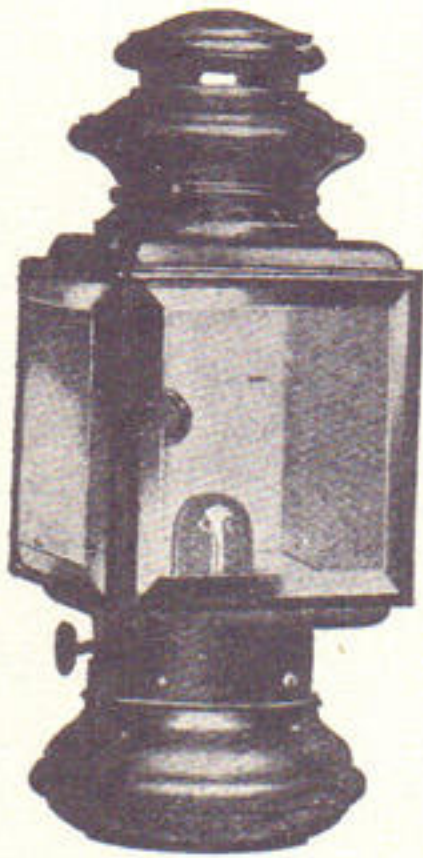
\*With Solar Ediswan wireless socket connector fitting and Tungsten bulb, so oil or electricity can be used.



Fender Tail

**Side and Tail Lamps**

Well made lamps at a popular price. Very neat.



**Victory Side**

**Victory Square Side**

Size 4 x 4½ x 12½ inches.

Pair .....\$6.50

**Sterling Square Side**

Size 4⅝ x 4⅝ x 13½ inches.

Pair .....\$7.50



**Sterling Side**

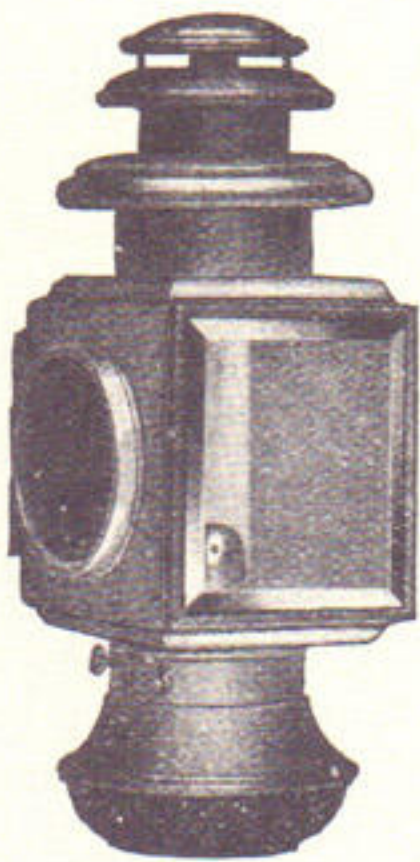
1912

**Regal Square Tail**

Size 4 x 4½ x 12½ inches.

Each .....\$4.00

The Regal tail matches the Victory.

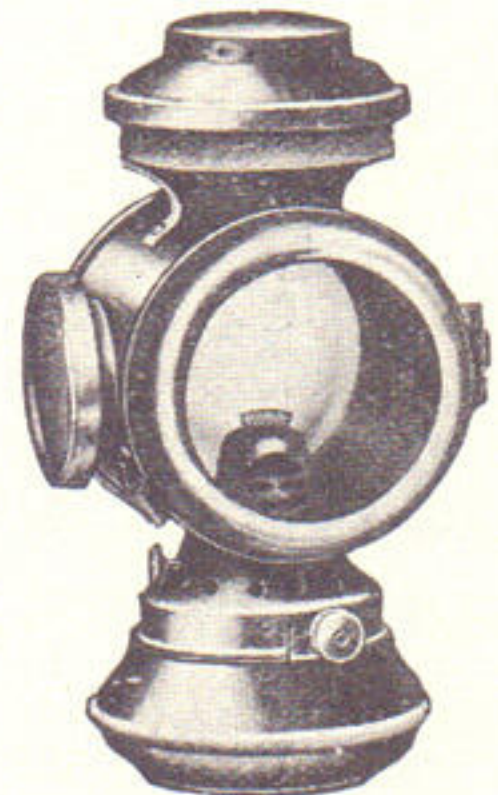


**Regal Tail**

**Petit Tail**

An excellent lamp that is as petit as its name. Constructed substantially throughout. Has large red jewel showing to rear and white light on number. Locked-in oil fount. Will positively stay lit. It has the "wont-go-out" qualities that are essential to good tail lamps.

Each .....\$3.00

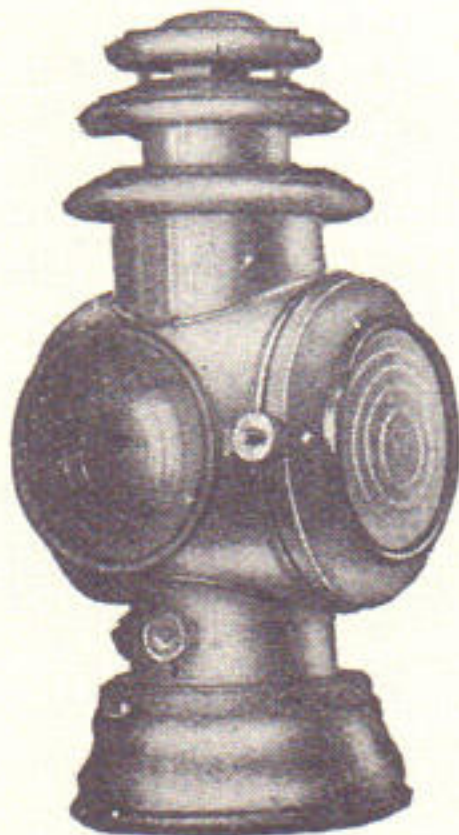


**Petit Tail**

**Daysee Tail**

Well made. Large rear signal and white light, both corrugated; 10½ in. high, 4¼ in. flange.

Each .....\$3.75



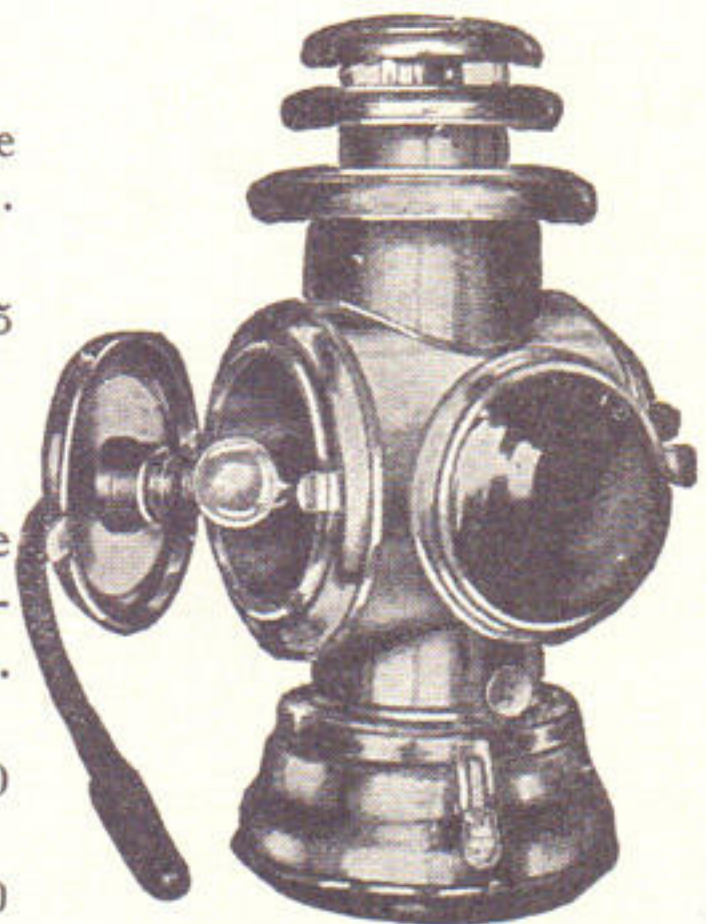
**Daysee Tail**

**Dietz Dainty Tail**

A well made tail lamp having a large rear signal and white light. Oil pot prevented from getting loose by patent catch. 10½ in. high, 4¼ in. flange.

Each .....\$4.00

Combination for oil and electricity, each ..... 6.00



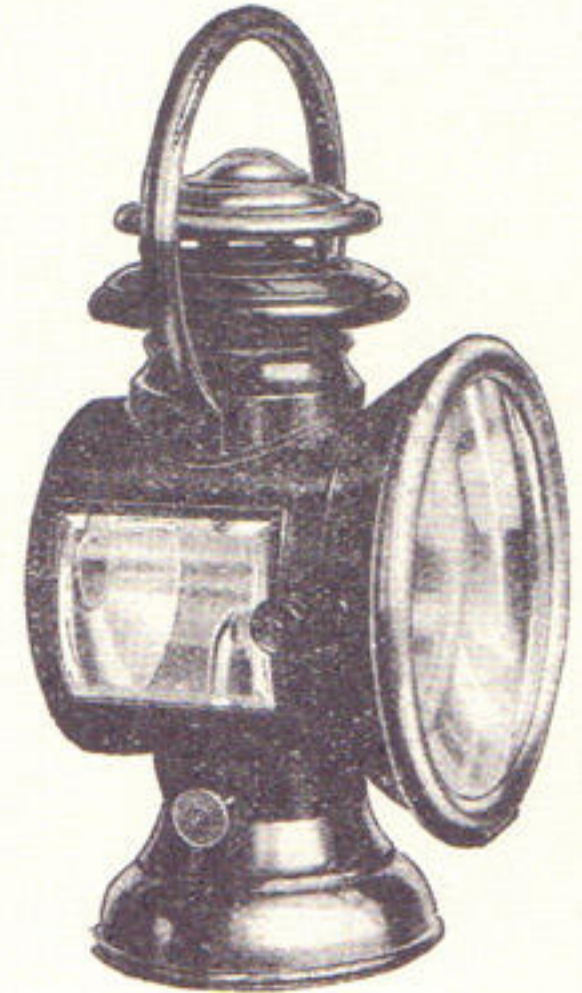
**Dietz Dainty Tail**

**GRAY & DAVIS LAMPS**



**Oil Side Lamp**

Price each—Style No. 114.....\$5.50  
 Size Body .....4¾ in. x 4¾ in.  
 Black and Brass finish as shown, five per cent extra.  
 Full Nickel, fifteen per cent extra.  
 Price with Electric Attachment \$1.50 extra.



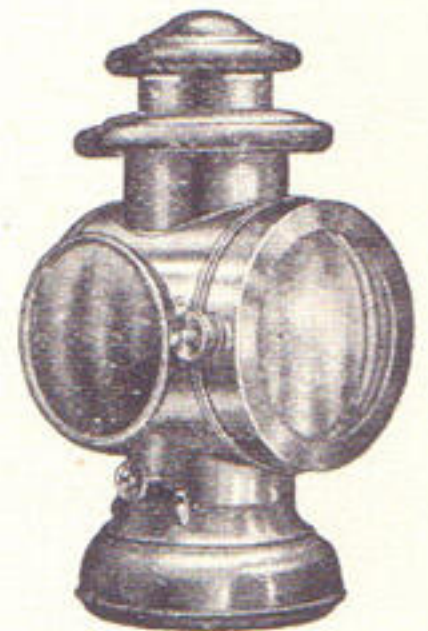
**Tubular Oil Lamp**

Price each—Style 219.....\$6.50  
 Diameter of Flange .....6⅝ inches  
 Extreme Length .....7 inches  
 Extreme Height .....12¾ inches



**Gray & Davis Oil Side Lamp**

Price each—Style No. 113 .....\$4.50  
 Size Body .....4¼ in. x 4¼ in.  
 Our New Small Square Lamp, a little beauty and suitable for medium or small cars.



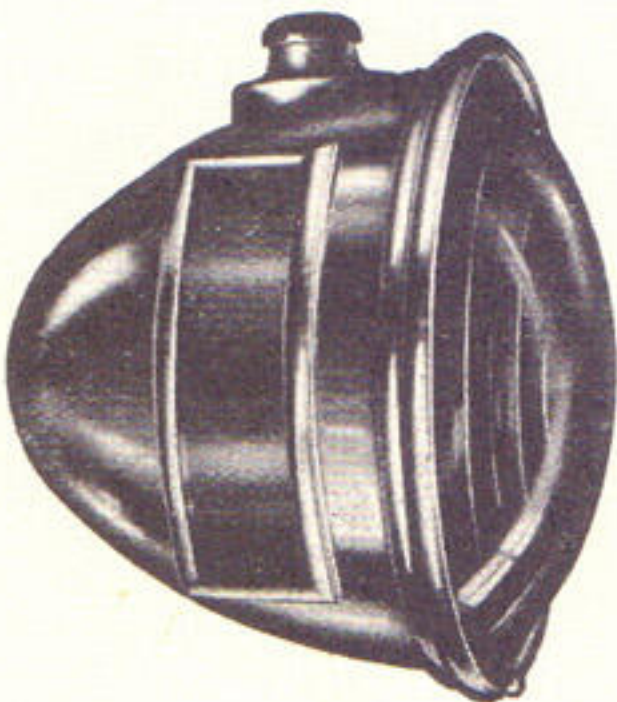
**Tubular Oil Tail Lamp**

For use on medium size cars  
 Price each—Style No. 16 .....\$3.50  
 Diameter of Flange .....4⅞ inches  
 Extreme Length .....5⅞ inches  
 Extreme Height .....9½ inches

1912

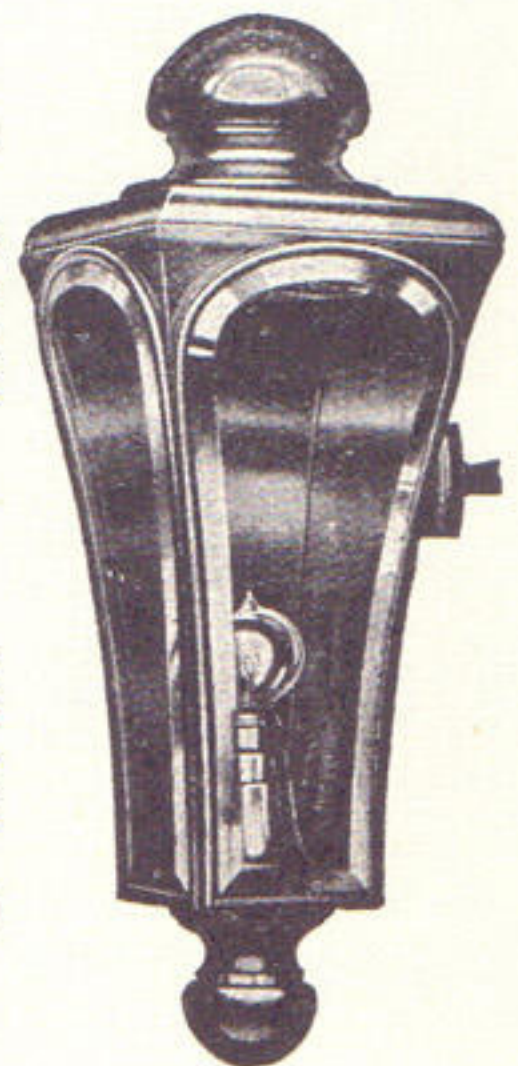
**Electric Tail Lamp**

Price includes bulb and cut-out plug.  
 Takes round or flat brackets.  
 Price each—Type B-5 .....\$4.00  
 Diameter .....3¾ inches  
 Extreme Length .....3⅜ inches  
 Extreme Height .....4 inches

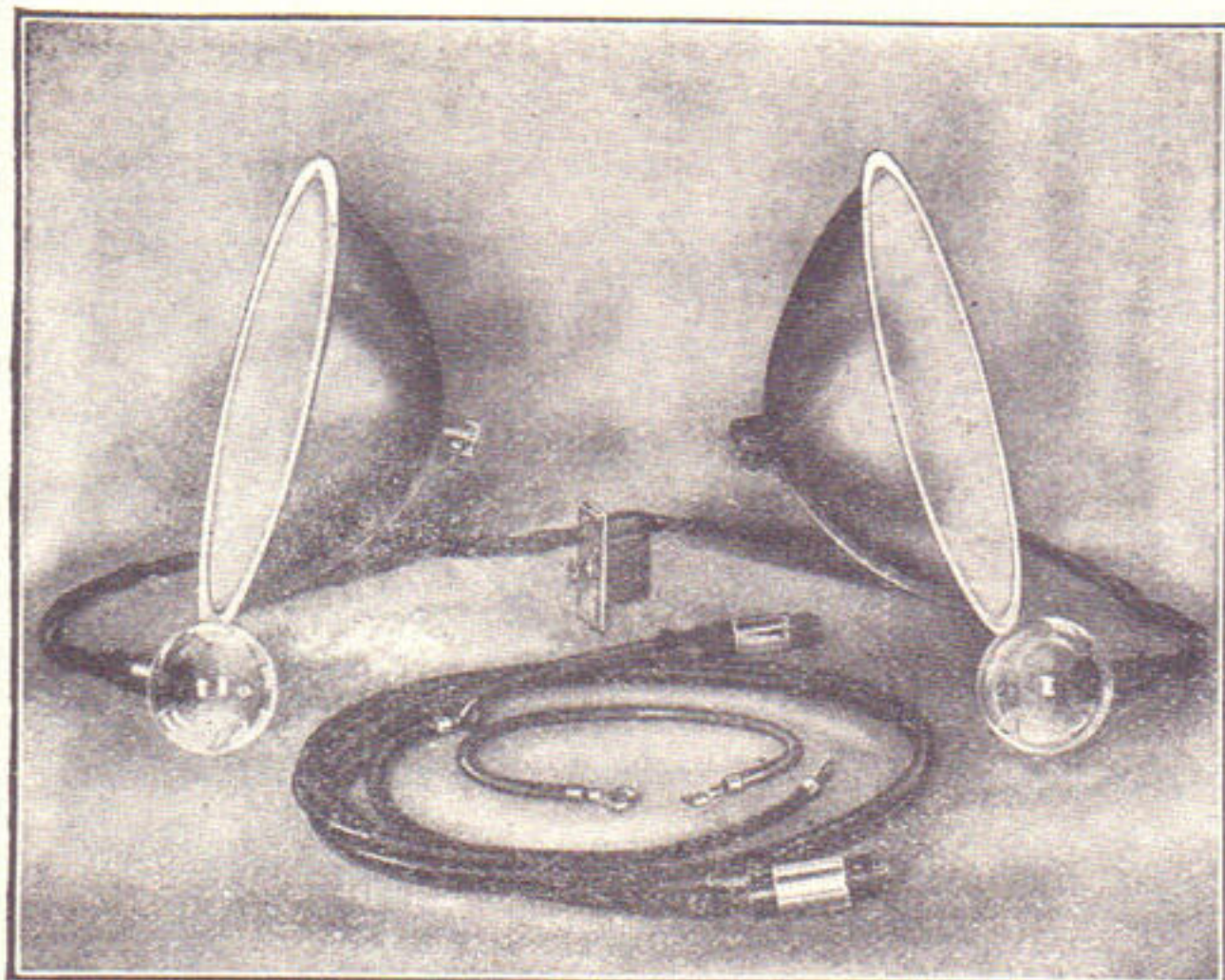


**Pillar Lamp**

For Limousines or Closed Cars  
 Furnished with 6 volt, 4 candle-power bulb and cut-out plug. Made to take round or flat bracket. Finish, all brass or brass and black enamel or nickel and enamel.  
 Price each—Type B-6 .....\$12.50  
 In any finish except all nickel. All nickel, \$5.00 extra per pair.



## FORD ELECTRIC LIGHTING SYSTEM



Little need to be said in regard to the advantages of electric lighting of an automobile.

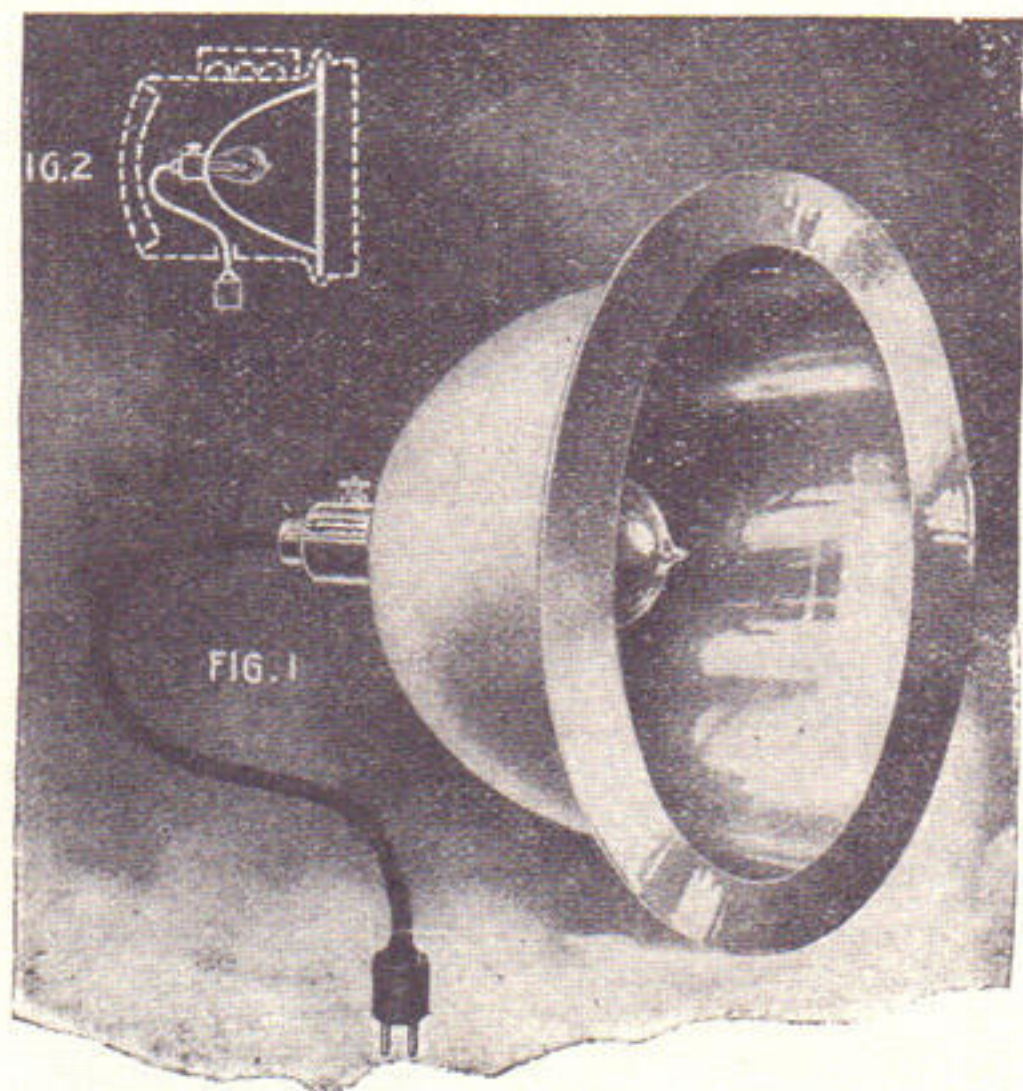
To install this system, an experienced wireman is not necessary, as the wiring comes to you all assembled with clips and connectors, ready to lay on the car.

Furnished with one size parabolic reflector, which has a  $\frac{3}{4}$ -inch flange. On this flange is spun a mark which acts as a guide for trimming the flange down to fit the smaller size lamps found on Ford cars, and the whole reflector will fit the large size lamps.

1912

Furnished complete and consists of the following:  
 1 pair of silver-plated true parabolic reflectors.      2 Ediswan sockets.  
 2 special Mazda lamps (Ediswan base).              1 high-grade lighting switch.  
 High grade wire, 2 Ediswan connectors, 4 copper terminal clips, soldered, taped and assembled, ready for installation.  
 Complete outfit .....\$10.00

### Parabolic Reflectors



To convert a gas lamp into an electric, is a simple matter with the use of these reflectors. They are easily and quickly attached. Well made.

- No. 300, size 6 in., less bulb, each.....\$2.00
- No. 301, size 7 in., less bulb, each..... 2.25
- No. 302, size 8 in., less bulb, each..... 2.50
- No. 303, size 9 in., less bulb, each..... 3.00
- No. 304, size 10 in., less bulb, each..... 3.75

### Light Your Ford Headlights by Electricity

The K-W outfits manufactured for this purpose are complete in every detail, designed to work in connection with the ignition, both deriving their supply of electric current from the Ford magneto.

The outfit complete, which is all you need, consists of:

- 1 pair complete 8-in. head lamps with parabolic reflectors with  $1\frac{1}{8}$  in. focus.
- 2 Tungsten bulbs. Size of bulb, 2 1-16 in. diameter.
- 12 feet wire.
- 1 Diamond switch.
- Instruction sheet for wiring.

The best results in electric lighting cannot be obtained by the use of reflectors put in gas lamps. The highly bur-

nished silvered surface must be protected in a dust-proof lamp.

The reflectors have a  $1\frac{1}{8}$ -in. focus, which throws a strong beam ahead, as well as lighting both sides of the road brightly.

The LAMPS are made entirely of one piece of brass drawn from steel dies, have no soldered joints, easy to polish, and are 8-inch over all making a handsome lamp for the Ford cars. They fit the forks furnished on the Ford cars.

The light which this outfit gives is vastly superior to either a generator or gas tank.

The bulbs have a Tungsten filament of the proper voltage and amperage, which will not interfere with the ignition, and have Edi Swan or Bayonet base, impossible to fall out and injure the silver reflector like the screw base.

The price for the complete outfit is.....\$15.00

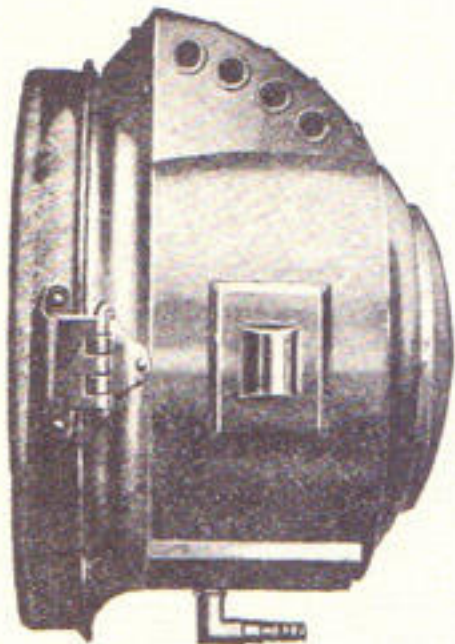
The regular \$50.00 K-W lighting outfit is the same as the above with the addition of a K-W low tension magneto and is intended for all cars that do not have the Ford fly-wheel magneto.

## GAS HEADLIGHTS

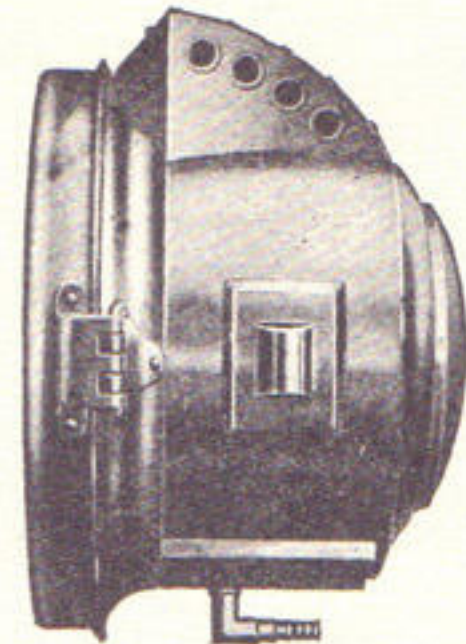
### RUSHMORE HEADLIGHTS

#### Short Coupled—One Piece Body

This is a headlight of absolutely new design, in which the cylinder body, with flare complete, is formed in a huge drawing press from a single sheet of brass. It is of **Rushmore** construction, which guarantees the best, and it is the best looking, most efficient and most durable headlight that has been offered to date. We carry these headlights in all finishes.



Rushmore Close Coupled Headlight



Rushmore Close Coupled Headlight

#### Price List per Pair

| No.  | Size | All Brass | All Black | All Nickel | Black and Brass | Black and Nickel |
|------|------|-----------|-----------|------------|-----------------|------------------|
| 706  | 7    | \$15.00   | \$15.75   | \$16.50    | \$15.75         | \$17.00          |
| 806  | 8    | 19.50     | 20.50     | 21.50      | 20.50           | 22.00            |
| 906  | 9    | 25.00     | 26.25     | 27.50      | 26.25           | 28.50            |
| 1006 | 10   | 32.50     | 34.15     | 35.75      | 34.15           | 36.75            |

1912

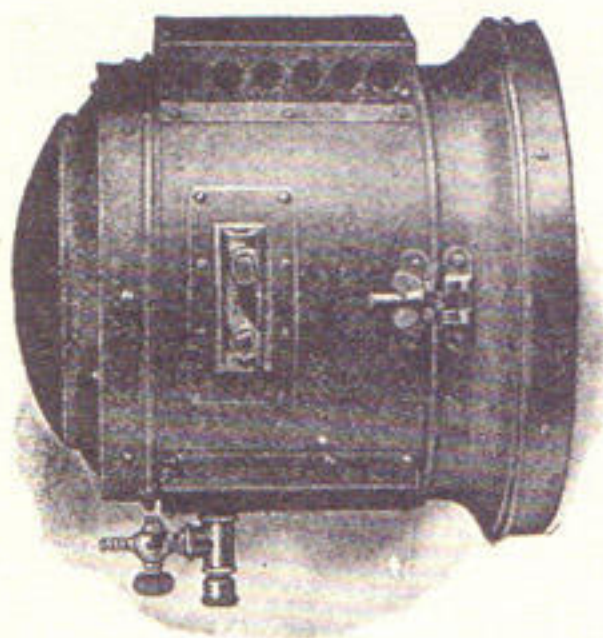
### RUSHMORE HEADLIGHTS

#### Rigid Flare—Brass Only

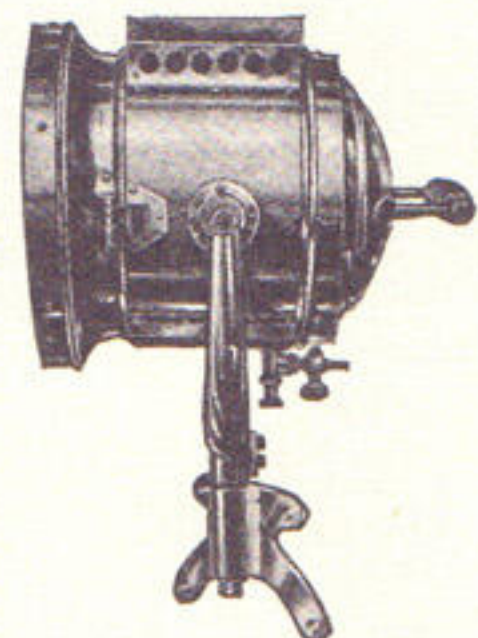
|              |                |         |
|--------------|----------------|---------|
| 6 inch.....  | Price per pair | \$15.50 |
| 7 inch.....  | Price per pair | 20.00   |
| 8 inch.....  | Price per pair | 25.00   |
| 9 inch.....  | Price per pair | 31.50   |
| 10 inch..... | Price per pair | 40.00   |

#### Flare with Swing Bracket

|              |            |         |
|--------------|------------|---------|
| 6 inch.....  | Price each | \$12.75 |
| 7 inch.....  | Price each | 16.25   |
| 8 inch.....  | Price each | 19.00   |
| 9 inch.....  | Price each | 23.25   |
| 10 inch..... | Price each | 29.00   |



Rushmore Rigid Flare



Rushmore Swing Flare

### VICTOR HEADLIGHTS

All Victor lamps are fitted with genuine ground Mangin mirrors, secured with heavy screwed-in steel lugs and backed with asbestos, making a fine line of lamps.

#### No. 101

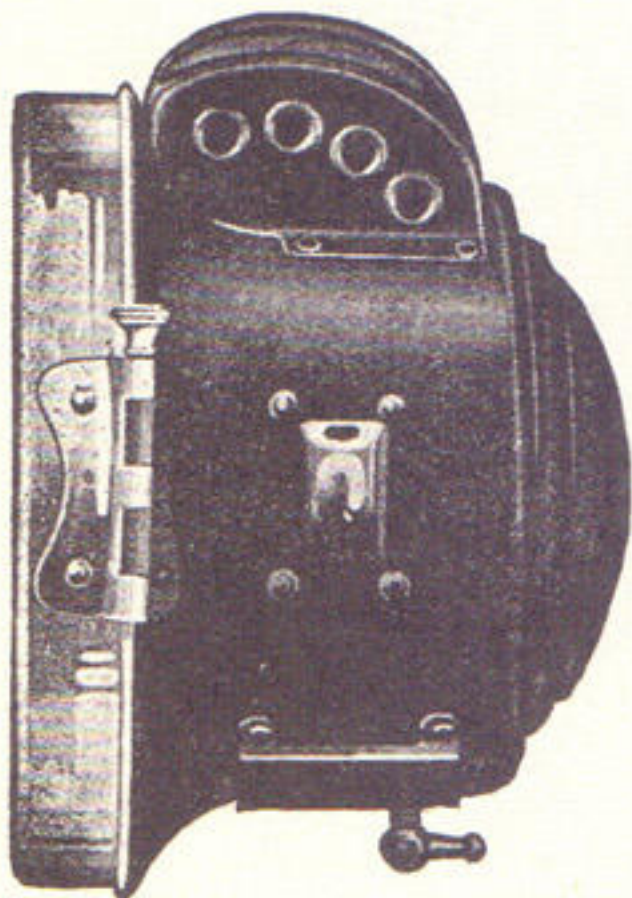
Size—Front diameter 9 $\frac{3}{8}$  inches, extreme length 6 inches, between props 6 inches.

|                               |                |         |
|-------------------------------|----------------|---------|
| No. 101—All brass.....        | Price per pair | \$15.00 |
| No. 101—Black and brass.....  | Price per pair | 15.00   |
| No. 101—Black and nickel..... | Price per pair | 16.50   |

#### No. 102

Size—Front diameter 10 inches, extreme length 6 $\frac{1}{2}$  inches, between props 8 inches.

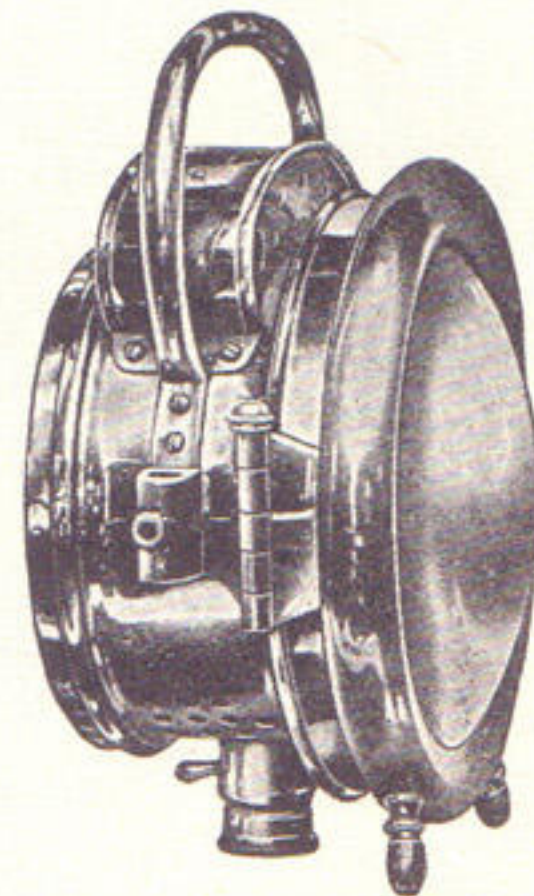
|                               |                |         |
|-------------------------------|----------------|---------|
| No. 102—Brass.....            | Price per pair | \$17.00 |
| No. 102—Black and brass.....  | Price per pair | 17.00   |
| No. 102—Black and nickel..... | Price per pair | 18.50   |



No. 102

#### Victor Gas Headlights

Victor lamps when furnished in black and brass, or black and nickel, will be constructed of heavy drawn steel bodies and finished with three coats of enamel baked on.



Solarclipse Headlight

### SOLARCLIPSE HEADLIGHT

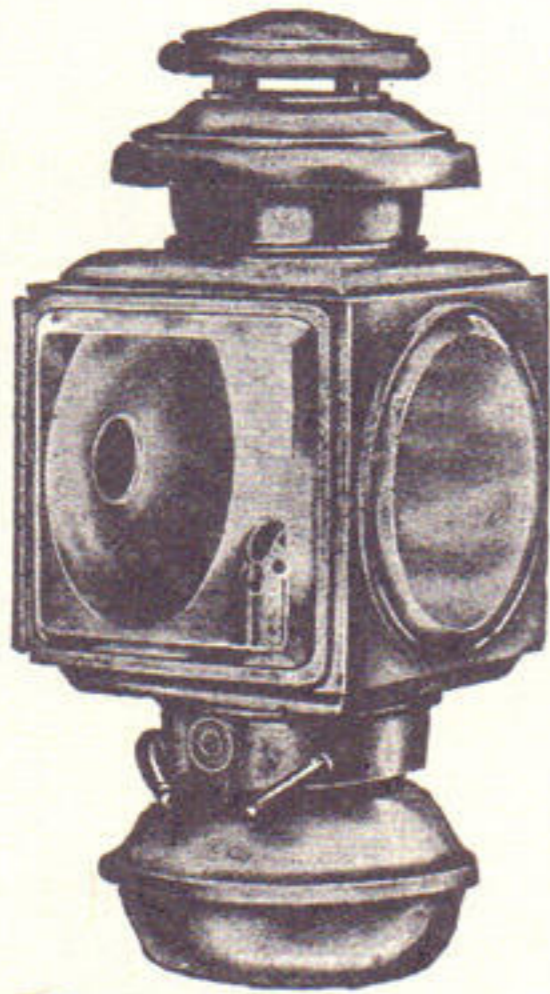
Model 1150 of this type is the most powerful light produced, designed for use on large touring cars. Model 1149 is smaller in size and light power, same design and construction, intended for use on medium sized cars. Both sizes have ground and polished glass lens reflector and front plano convex lens and are of highest grade workmanship. A headlight guaranteed without an equal.

#### Price List

|                        |         |
|------------------------|---------|
| No. 1149—Per pair..... | \$70.00 |
| No. 1150—Per pair..... | 85.00   |

**SQUARE SIDE LAMPS**

1912



**No. 3A Side Oil Lamp**  
Size body 4x4 inches.  
Ex. height 10¼ inches.

**E. & J. SIDE OIL LAMPS**

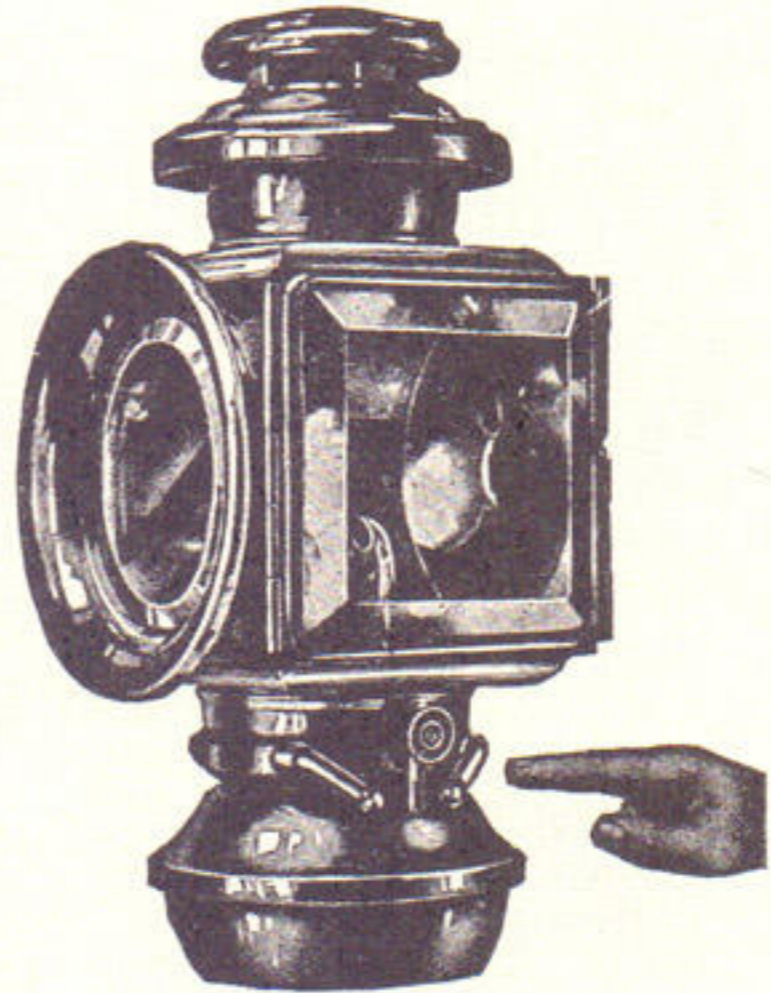
Scientific construction and perfect draught insure steady, smokeless light of highest candle power.

Note Patented Lock Fount Fastener on E. & J. Lamps.

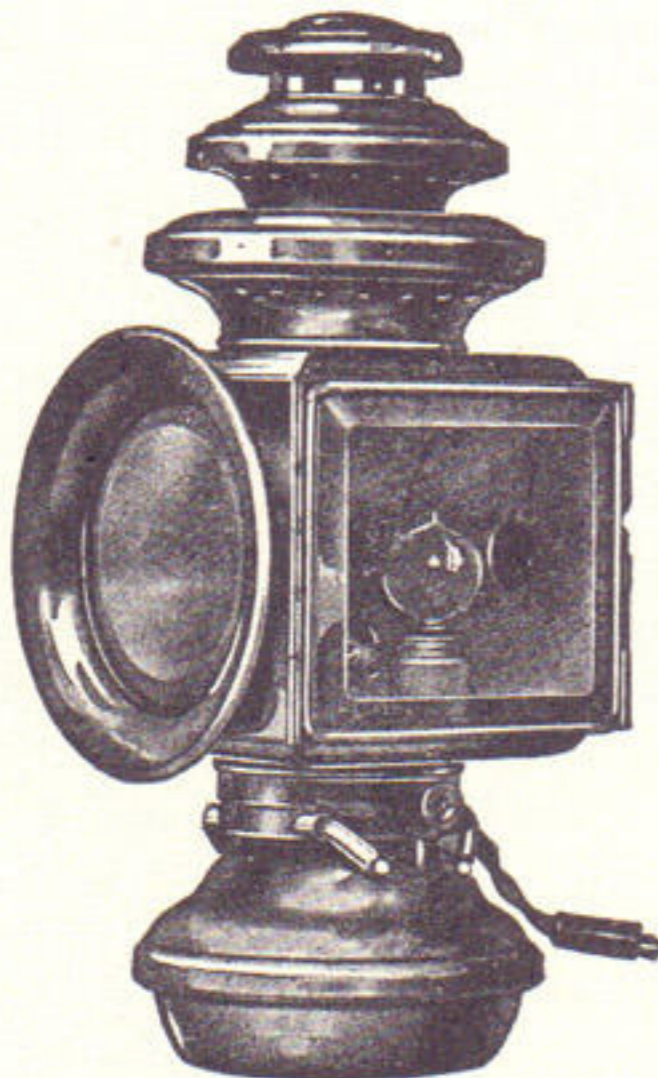
**E. & J. COMBINATION OIL AND ELECTRIC SIDE LAMPS**

These lamps are very handy and up-to-date.

Furnished in three sizes:  
No. 3E same size as No. 3;  
No. 4E same size as No. 4.



**No. 3 Side Oil Lamp**  
Size body 4x4 inches.  
Ex. height 10¼ inches.



**No. 4E Combination Oil and Electric**

Size body 4¾x4¾ inches.  
Ex. height 12 inches.

**No. 4 Side Oil Lamp**

Size body 4¾x4¾ inches.  
Ex. height 12 inches.

**E. & J. SIDE LAMPS**

**Price Each**

|             |        |
|-------------|--------|
| No. 3A..... | \$3.25 |
| No. 3.....  | 4.00   |
| No. 4.....  | 4.50   |
| No. 3E..... | 5.50   |
| No. 4E..... | 6.50   |

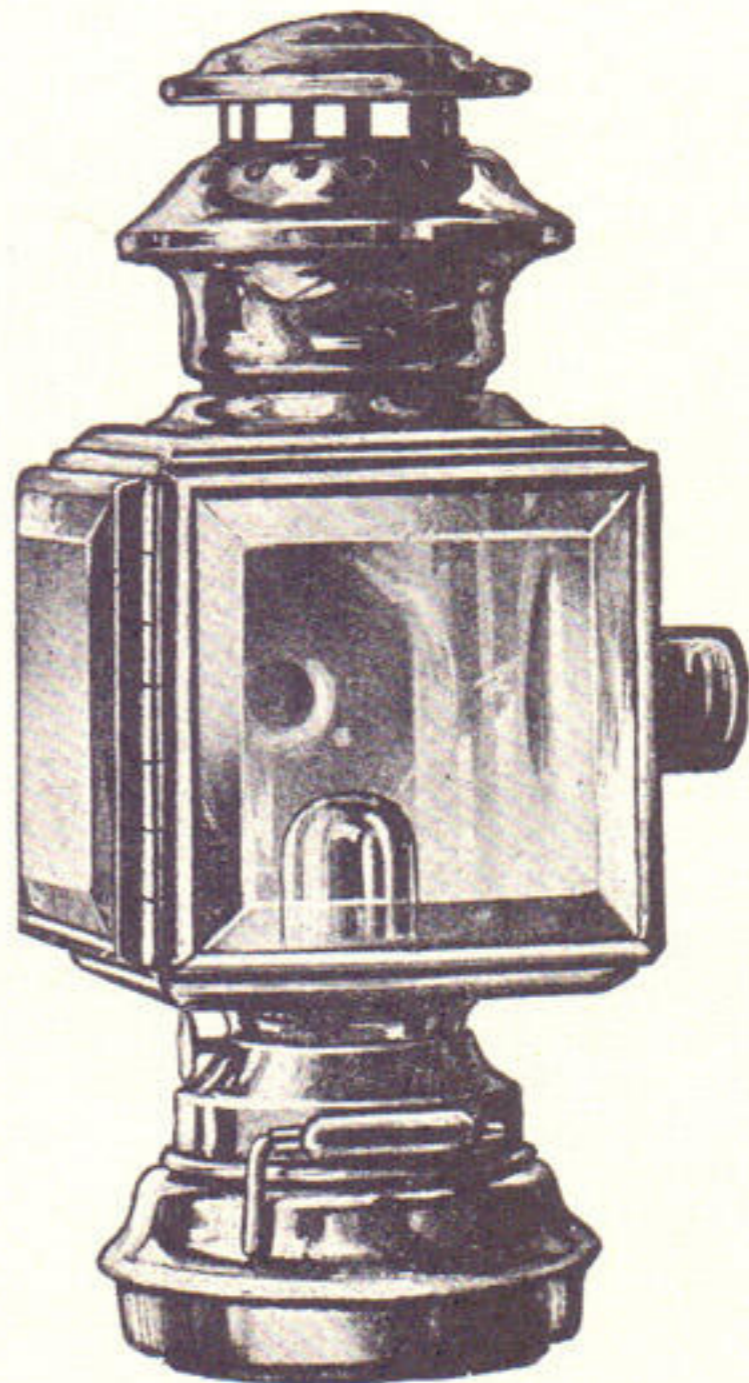
**INDIANA SIDE OIL LAMP**

The size we show is one adaptable for almost any car. It is constructed in the best mechanical fashion of heavy gauge brass and is an ideal lamp for truck work. The glasses are all best French plate beveled.

Furnished in brass, black and brass or black and nickel.

All brass or black and brass.. Price each \$3.25

Black and nickel, ..... Price each \$3.50

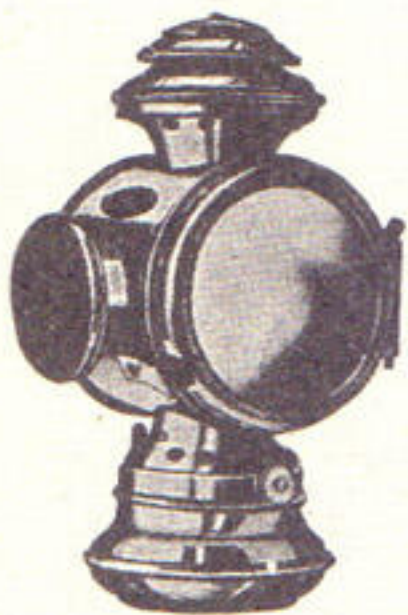


**Indiana Side Oil Lamp**

Size body 4¼x4¼ inches.  
Ex. height 10¾ inches.



## OIL AND COMBINATION TAIL LAMPS



No. 1

In selecting this line we have passed upon practically everything made in the line of oil lamps, and regard them as the best value and the most up-to-date of any on the market.

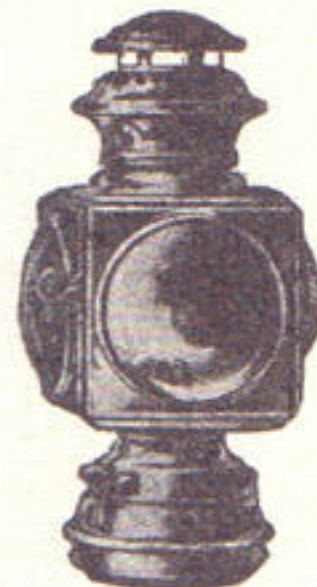
### NO. 1 TAIL LAMP

This is the best of all low priced and up-to-date tail lamps. Finished in polished brass. Height 9¼ inches. Price each .....\$2.00

### INDIANA TAIL LAMP

A high class square pattern tail lamp. Made of heavy gauge brass and beautifully finished in three color combinations. Size of body 4¼x4¼ inches, height 11 inches.

|                       |            |        |
|-----------------------|------------|--------|
| Polished brass.....   | Price each | \$3.50 |
| Black and brass.....  | Price each | 3.50   |
| Black and nickel..... | Price each | 3.75   |

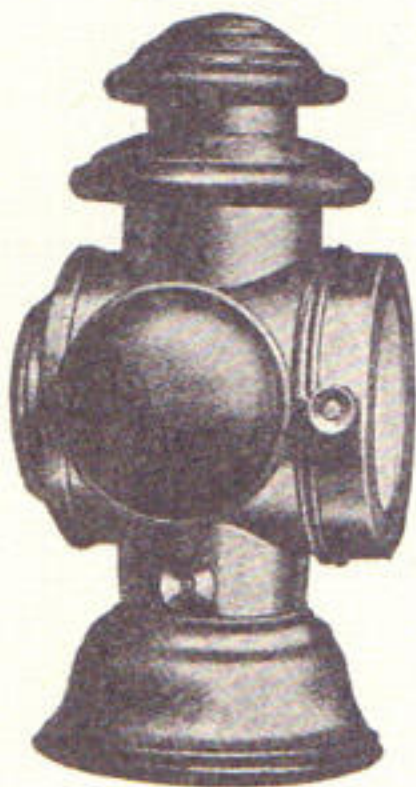


Indiana

### LAUREL TAIL LAMP

Has a silver plated reflector, burns perfectly and is one of the best lamps made; size of body 4x5 inches, height 10 inches.

|                       |            |        |
|-----------------------|------------|--------|
| Polished brass.....   | Price each | \$3.00 |
| Black and brass.....  | Price each | 3.00   |
| Black and nickel..... | Price each | 3.25   |

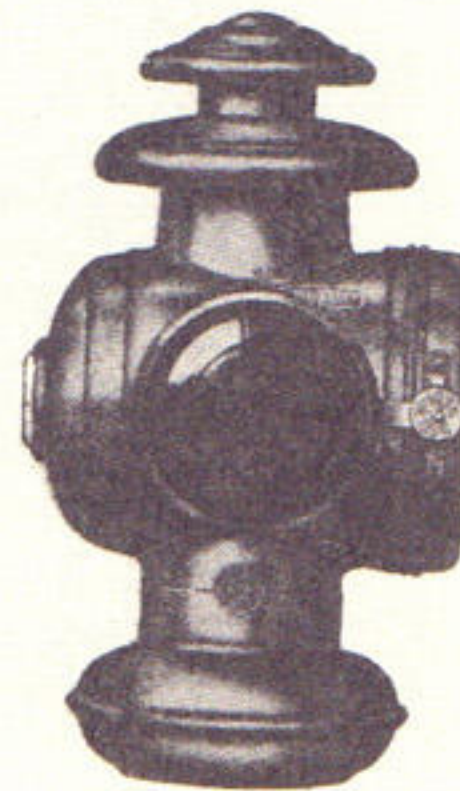


Laurel

### SOLAR TAIL LAMP

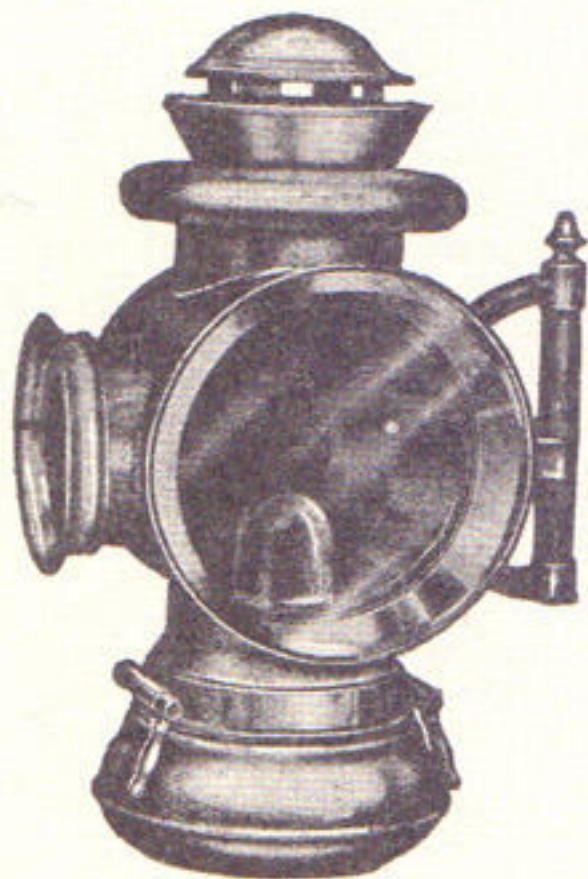
This is a popular size, cold blast lamp, suitable for all cars. It is 9½ inches high, has aluminum reflector and is made of heavy drawn brass and riveted. Guaranteed wind and jar proof.

|   |            |        |
|---|------------|--------|
| No. 1205—Polished brass.....                              | Price each | \$3.25 |
| No. 1205—Black enamel.....                                | Price each | 3.75   |
| No. 1205C—Brass, combination oil and electric.....        | Price each | 4.75   |
| No. 1205C—Black enamel, combination oil and electric..... | Price each | 5.50   |



Solar

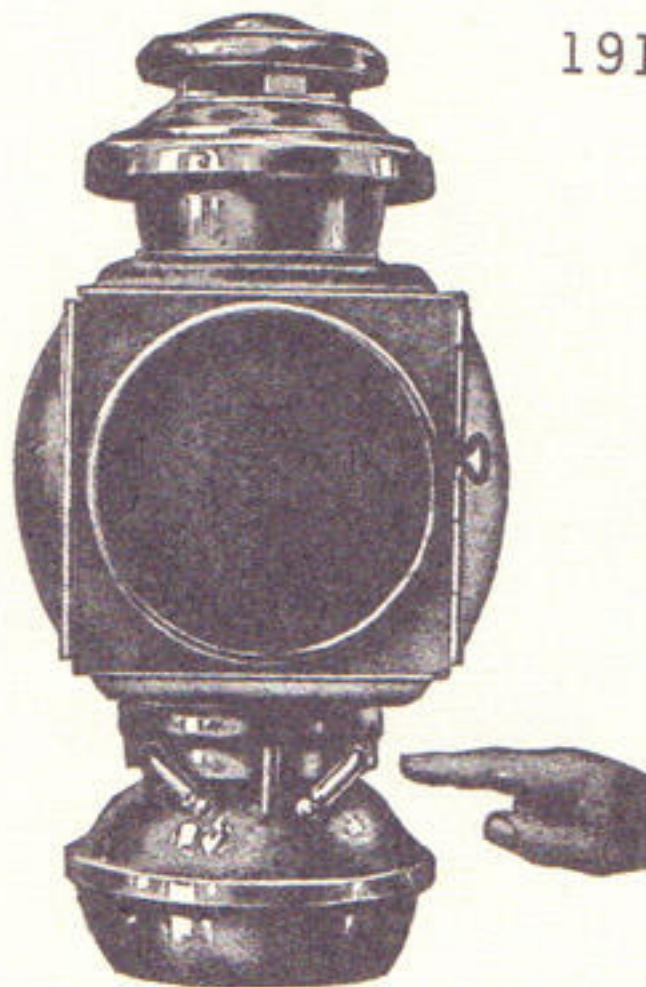
1912



Hams Vigilant Tail Lamp

Fitted with improved safety locking handle, making it convenient for inspecting car. Height 10 inches.

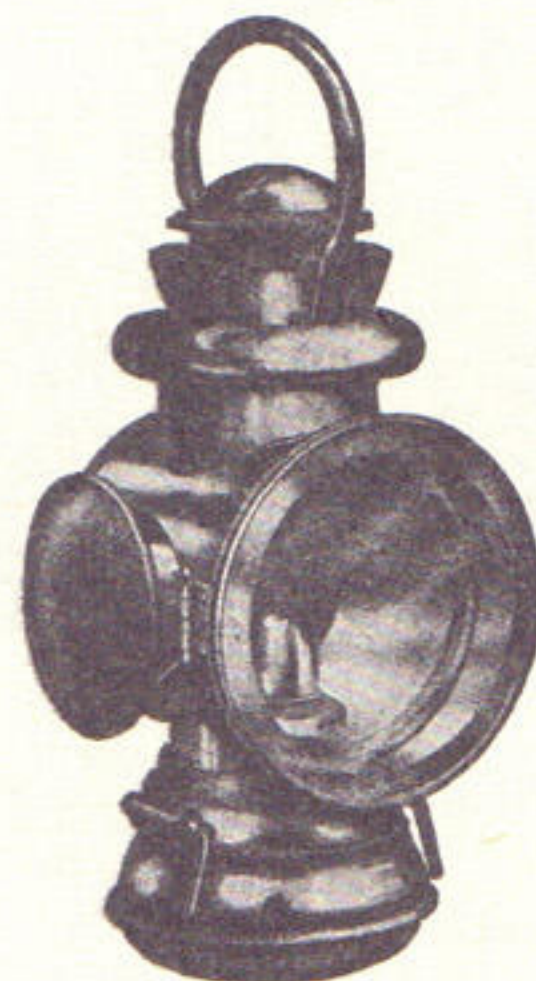
Price each .....\$4.50



No. 1 E. & J. Tail Lamp

Fitted with Patented Lock Fount Fastener. Gives a steady smokeless light. Height 10 inches.

Price each .....\$3.50



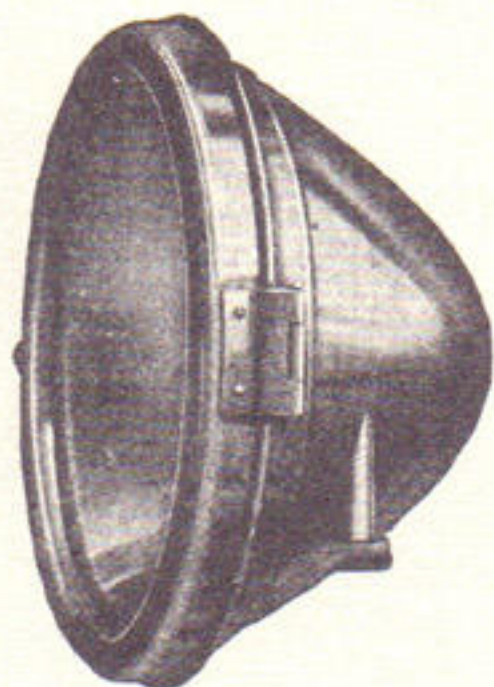
Hams Venus Tail Lamp

This lamp is the same as the "Vigilant" with exception of handle. Height 12 inches.

Price each .....\$4.50

# EA FEATHERSTONE

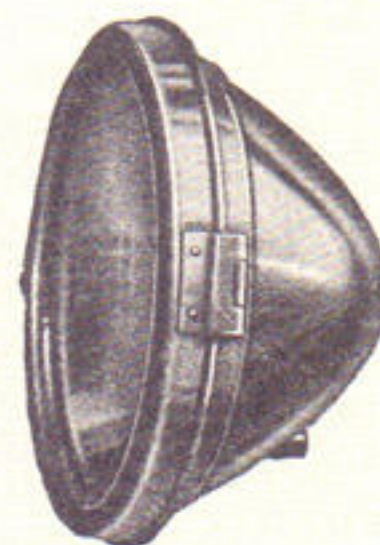
## ELECTRIC HEAD AND SIDE LAMPS



Model 920 (Head Lamp)

### RUSHMORE ELECTRIC HEAD AND SIDE LAMPS

1912



Model 620 (Side Lamp)

The new electric head lamps and side lamps are of the same substantial construction and elegant finish that have made the Rushmore Lens Mirror Searchlight famous the world over. They are produced entirely in the draw press and drop hammer with practically no hand work.

The reflectors are of heavy copper, quadruple plated and burnished, and are mounted upon substantial hinges so they may be swung out for focusing the lamps. As the front door makes an air-tight joint, moisture or dirt cannot enter to tarnish the reflecting surface. They therefore require no attention whatever.

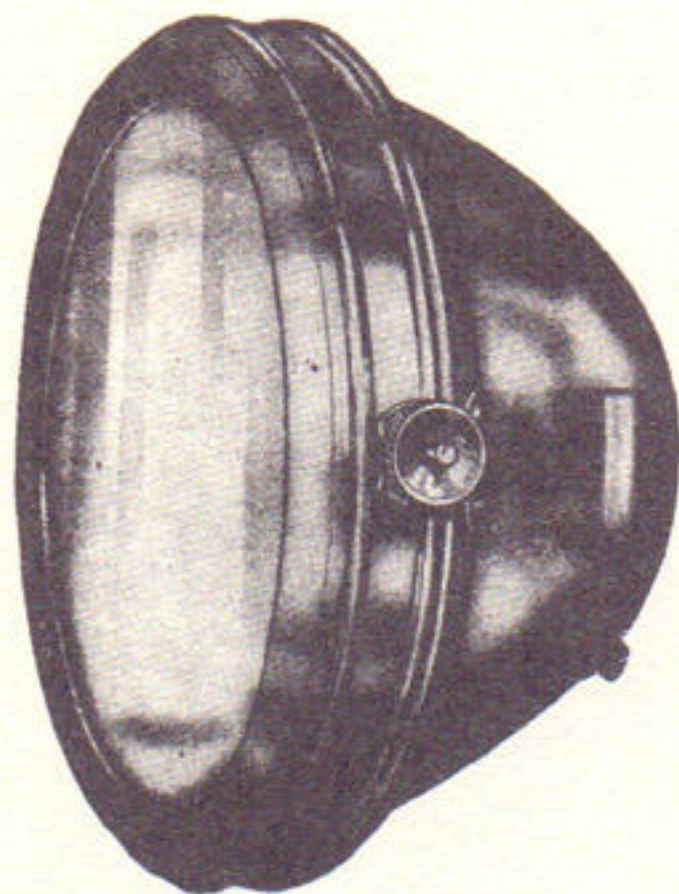
#### Price List

Model 920—11 $\frac{1}{8}$  in. front.....Per pair \$21.00  
Model 1020—12 $\frac{1}{4}$  in. front.....Per pair 26.00

#### Price List

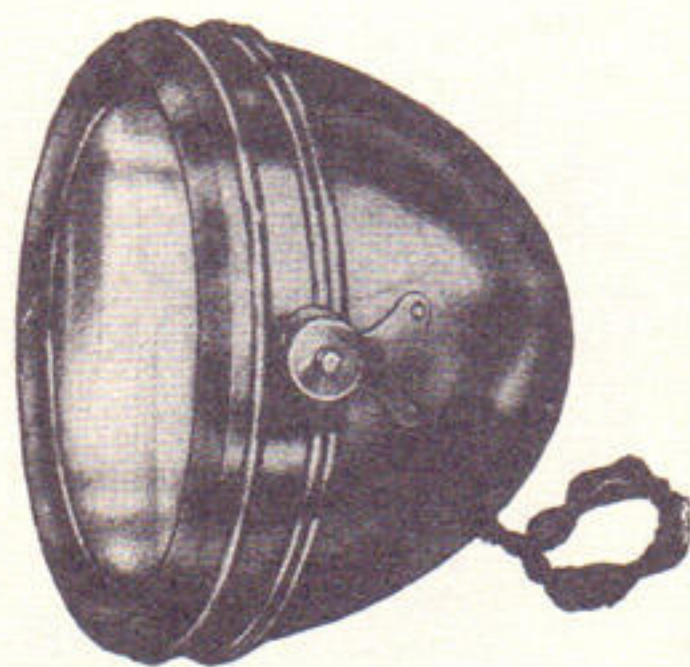
Model 620—7 $\frac{1}{4}$  in. front.....Per pair \$12.50

Note.—If special finishes are desired, add 15 per cent for all nickel, 10 per cent for black and nickel 5 per cent for all black or brass and black. This applies to all lamps listed on this page.

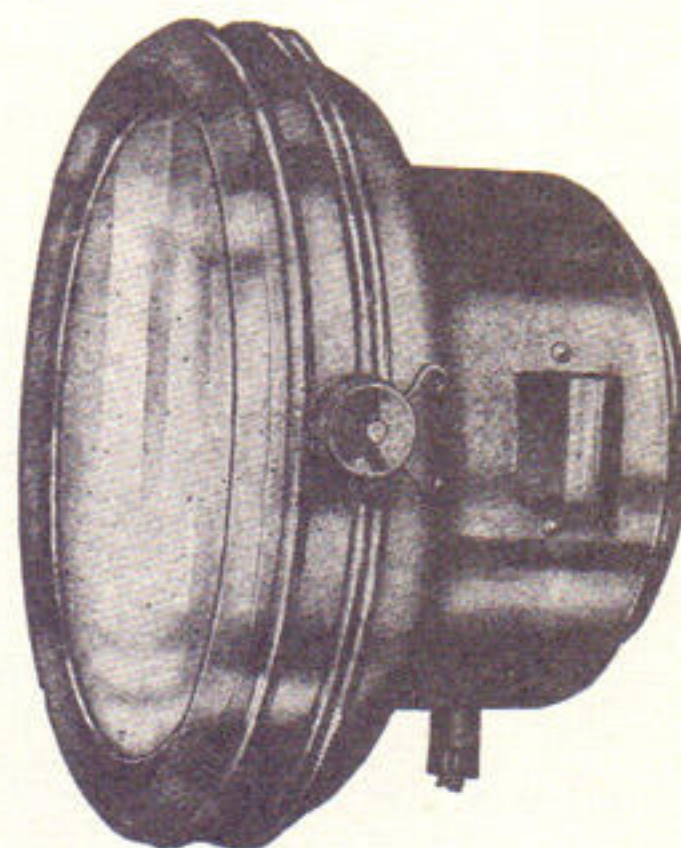


No. 166 (Head Lamp)

### B and L ELECTRIC LAMPS



No. 5 (Side Lamp)



No. 607 (Head Lamp)

The electric lamps illustrated above are all made of heavy gauge brass and fitted with sterling silver parabolic reflectors.

#### Price List

No. 166—9 in. front, Pr. \$15.00  
No. 167—10 in. front, Pr. 16.00  
No. 168—11 in. front, Pr. 18.00

#### Price List

No. 5—5 $\frac{1}{2}$  in. front, Pr. \$10.00  
No. 5 $\frac{1}{2}$ —6 $\frac{1}{2}$  in. front Pr. 12.00

#### Price List

No. 607—10 in. front, Pr. \$16.00  
No. 608—11 in. front, Pr. 18.00

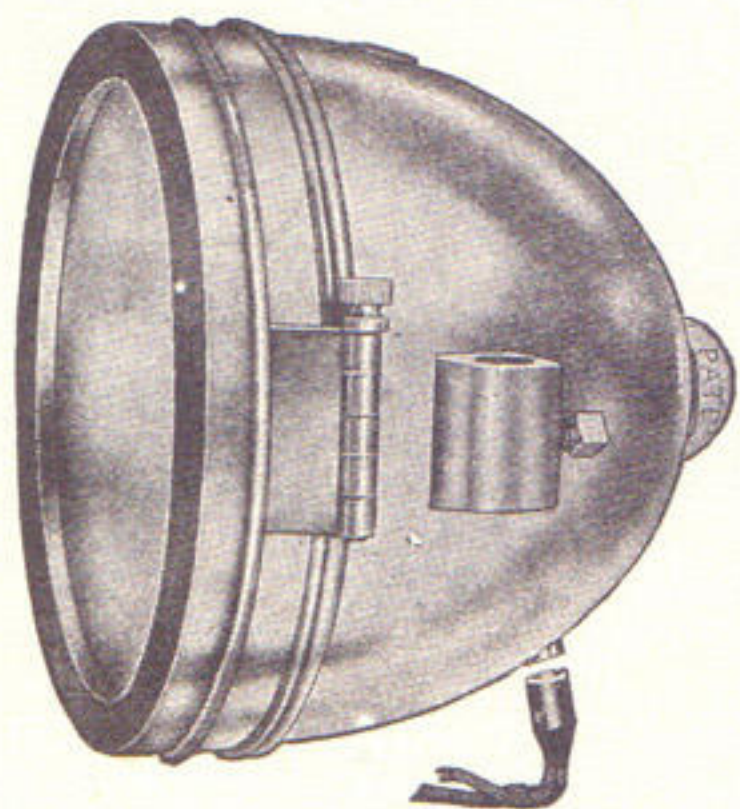
### SWIVEL ELECTRIC SEARCHLIGHTS

No. 606-S—With bracket.....Each \$11.50 No. 607-S—With bracket.....Each \$12.50

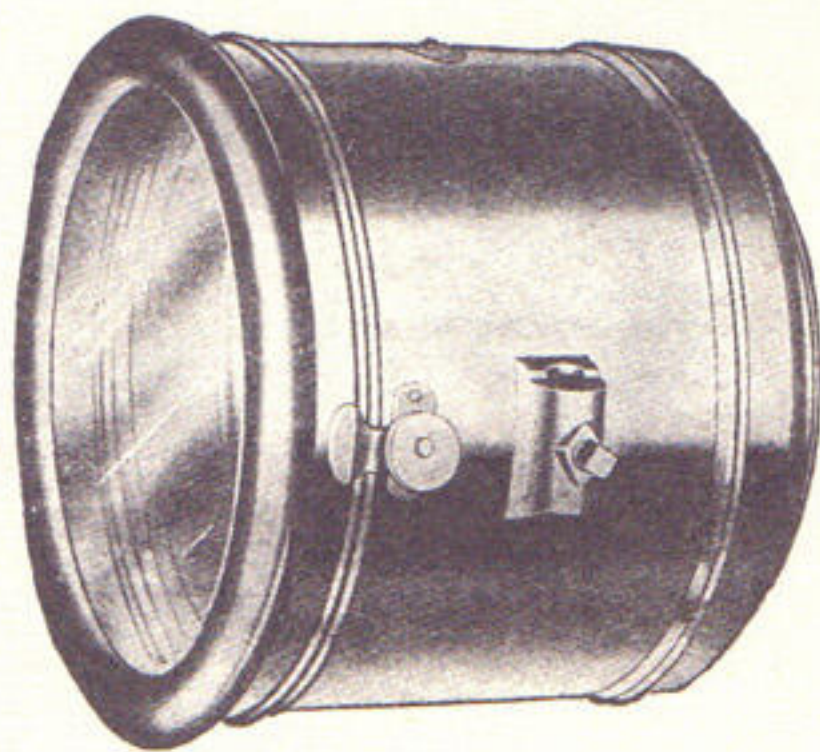
All lamps furnished with Tungsten bulbs of a suitable size.

## VESTA ELECTRIC LAMPS

The Vesta line of electric lamps for the automobile is the most complete line on the market. We furnish head lamps in various sizes and in two distinct styles. The proper focus of the bulb in an electric head lamp is absolutely essential for the best results. A small button in the back of each Vesta head lamp enables the operator to adjust the focus for either a spreading or concentrated light; fitted with double connector for removal of lamps without cutting the wires.



Acorn Type



Barrel Type

All Vesta  
Head Lamps  
are Fitted with  
Special Tungsten Bulbs  
with  
Anchored Filaments

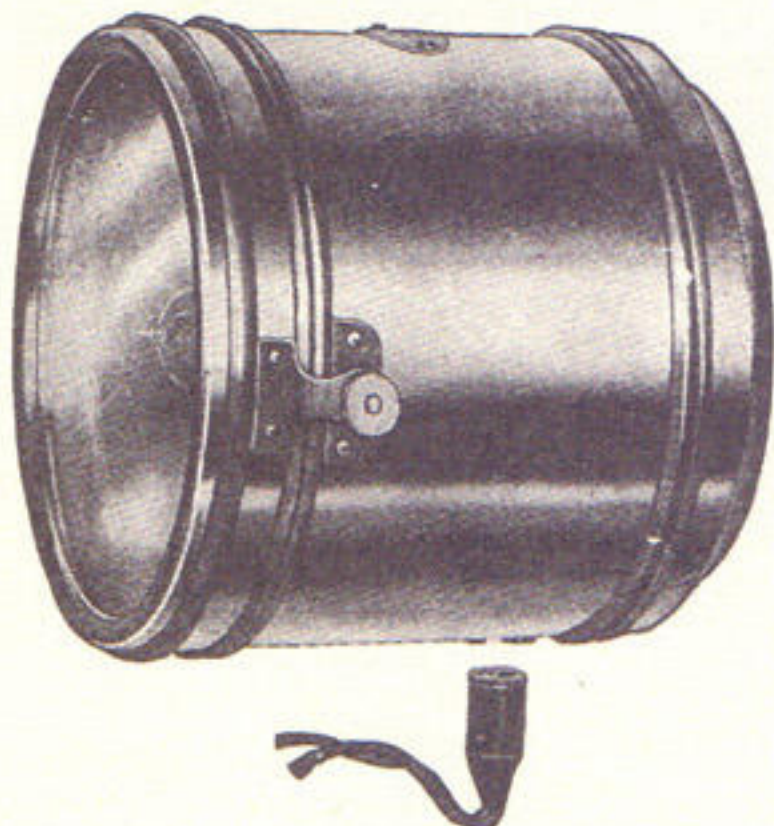
1912

| No.  | Outside<br>Diam., in. | Diam.<br>Reflec., in. | Prop<br>Distance<br>in. | Price<br>per<br>pair |
|------|-----------------------|-----------------------|-------------------------|----------------------|
| A-6  | 6½                    | 6                     | 6¾                      | \$ 16.00             |
| A-8  | 8½                    | 7½                    | 9¼                      | 20.00                |
| A-10 | 10                    | 8¾                    | 10¾                     | 28.00                |
| A-12 | 12                    | 10                    | 11½                     | 36.00                |

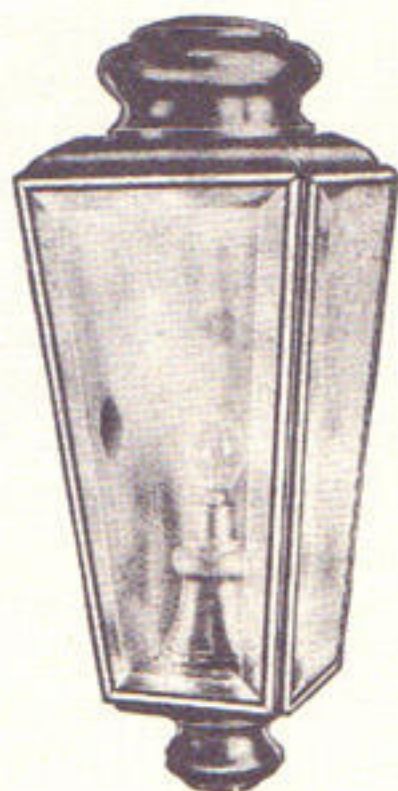
| No. | Diam.<br>Reflec., in. | Prop<br>Distance, in. | Price<br>per pair |
|-----|-----------------------|-----------------------|-------------------|
| B-5 | 5¾                    | 6¾                    | \$13.00           |
| B-6 | 6½                    | 7½                    | 16.00             |
| B-8 | 8                     | 9                     | 20.00             |

**Note.**—Above prices apply to polished brass lamps. Add 10 per cent for black enamel or nickel finish.

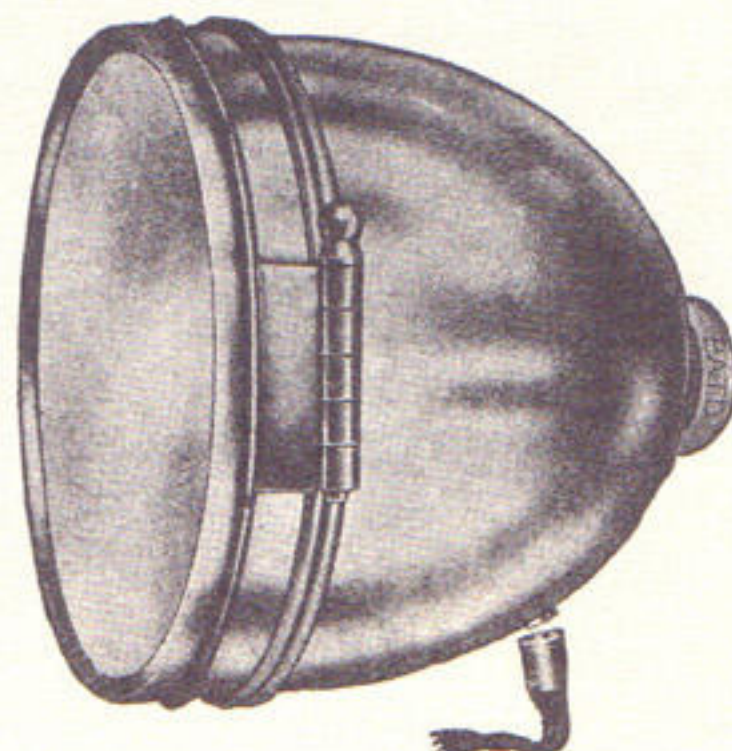
The side lamps shown below are extremely popular, due particularly to the great amount of light obtained. If a car is equipped with a pair of these lamps, it is not necessary to use the head lamps at all when in the city. They are equipped with our patented focusing device and parabolic silver plated reflector.



No. 205



No. 411



No. 215

|   |                |         |
|---|----------------|---------|
| No. 204—3½ inches in diameter. Barrel type.....     | Price per pair | \$ 7.50 |
| No. 205—5¾ inches in diameter. Barrel type.....     | Price per pair | 10.00   |
| No. 411—5x5x13 inches in height. Keystone type..... | Price per pair | 20.00   |
| No. 215—5¾ inches in diameter. Acorn type.....      | Price per pair | 12.00   |

## ELECTRIC TAIL LAMPS

The electric tail lamp for the automobile is increasing in popularity all the time. No jarring or blowing out, as in the case of the oil lamp. Compact and clean, and consumes very little current from the battery.

1912

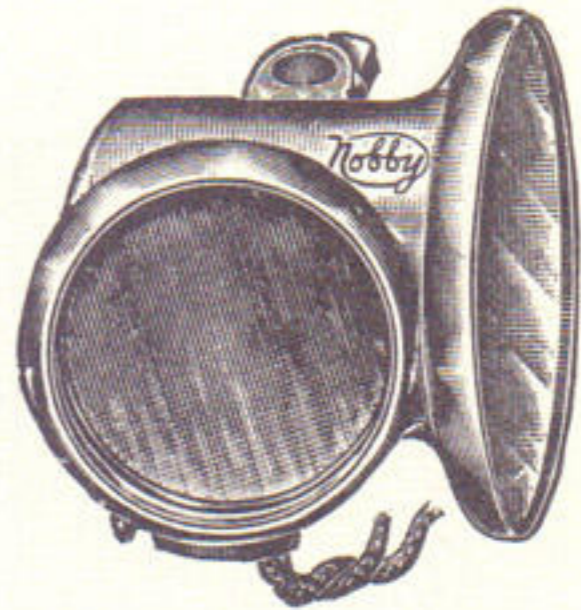


No. 21E—E and J

### "NOBBY"

We consider the "Nobby" the best for the money. Made from one solid casting. Will not shake to pieces. Furnished with 6 volt Carbon bulb.

No. 10—Brass.....Price each \$1.50  
 No. 15—Black.....Price each 1.50

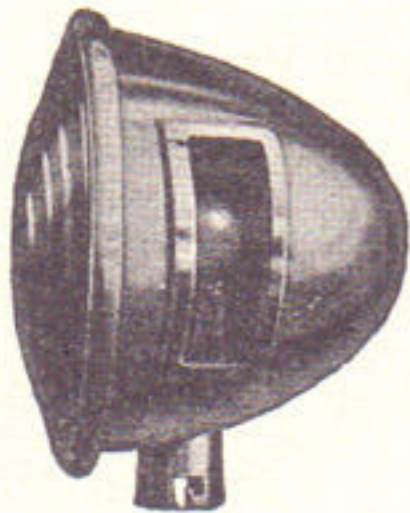


"Nobby"

### No. 21-E—E and J

A very neat lamp. Regular equipment on the Cadillac. Diameter of front  $3\frac{7}{8}$  inches. Size of side glass  $1\frac{1}{8} \times 2\frac{3}{8}$ . Furnished with 6 volt Tungsten bulb.

Brass.....Price each \$2.50  
 Black Enamel.....Price each 2.75



No. 420

### COLUMBIA

This lamp is acorn shape, finely finished and neat in appearance. Can be used with any style head or side lamps. Furnished with 6 volt Carbon bulb.

No. 1—Brass.....Price each \$2.25  
 No. 2—Gun Metal.....Price each 2.25



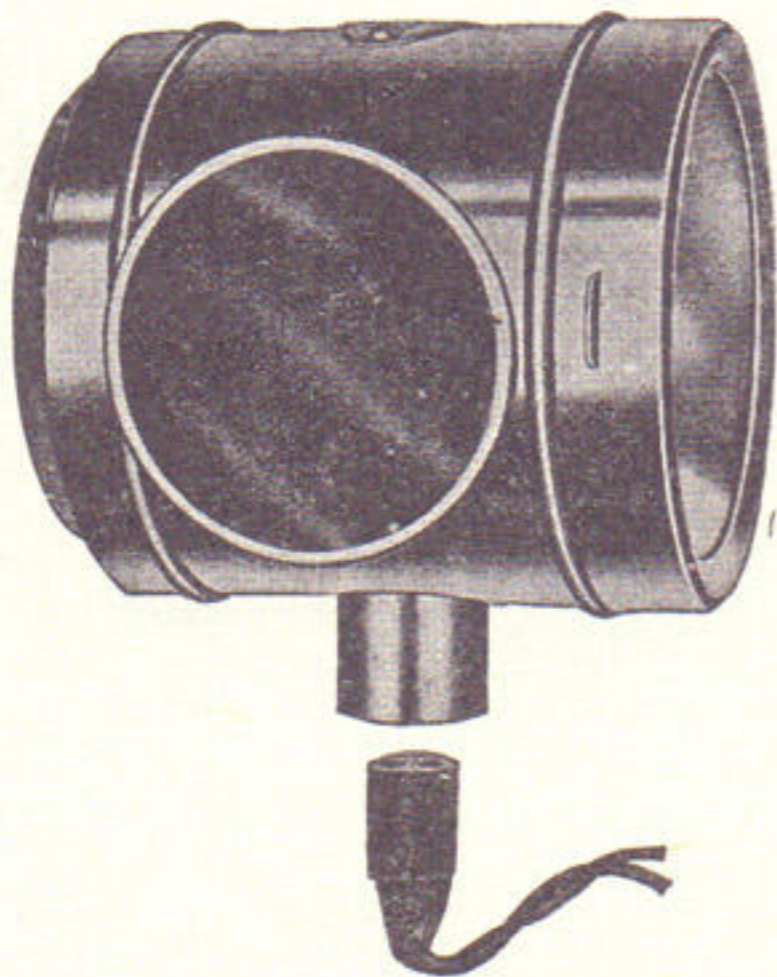
Columbia

### No. 420—RUSHMORE

Made from a single piece of brass. Interior surface heavily silver plated and burnished. Has ruby lens and white side glass to illuminate number plate. Furnished with 6 volt Tungsten bulb.

Brass.....Price each \$3.75

Rushmore  
 Electric Tail Lamp



No. 323

### No. 323

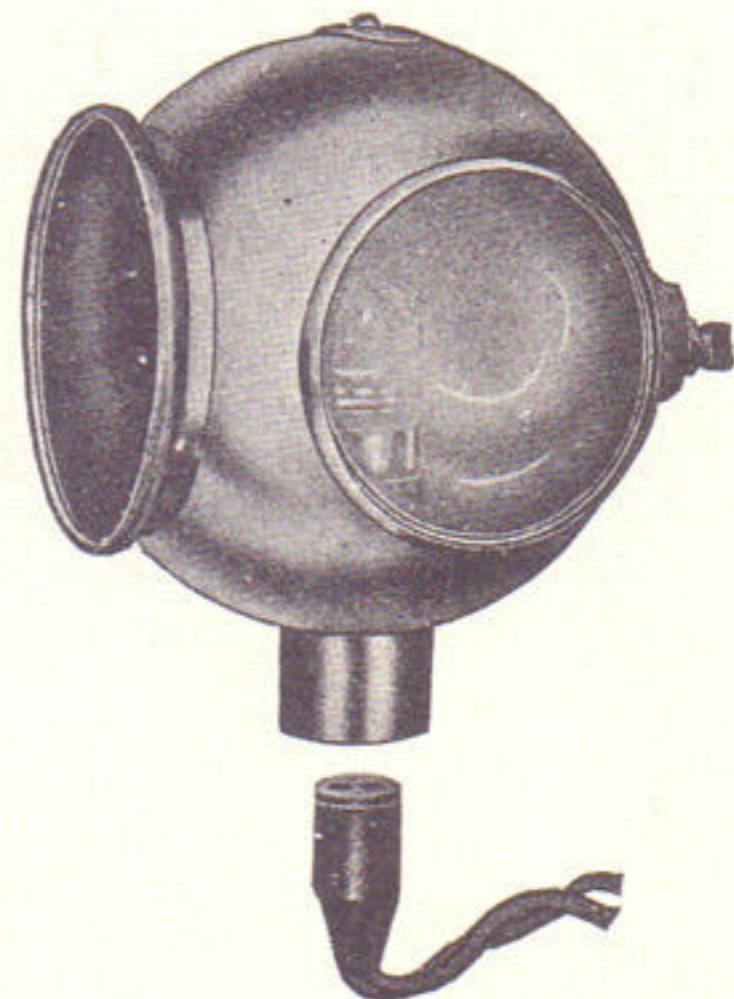
This lamp is barrel shape; very popular and up-to-date. Fitted with 6 volt Carbon bulb. Size 3x4 inches long.

Brass....Each \$2.50

### No. 303

A popular lamp, very neat and meets the demand perfectly. Ball shaped and finished in brass. Size  $3\frac{1}{2}$  inches in diameter.

Brass....Each \$3.50

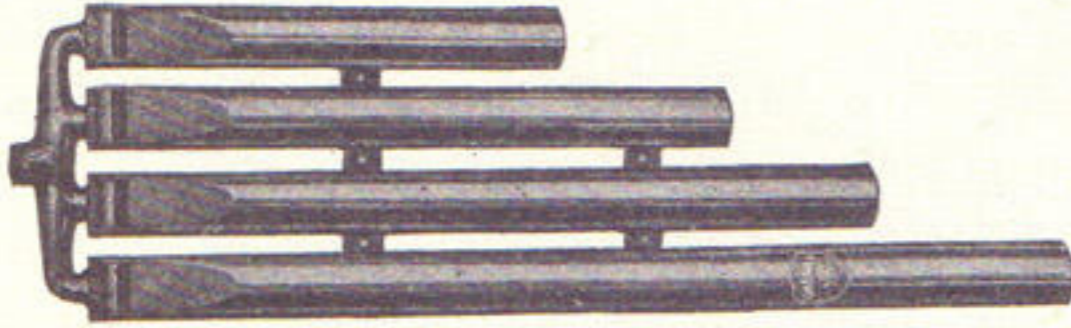


No. 303

1906

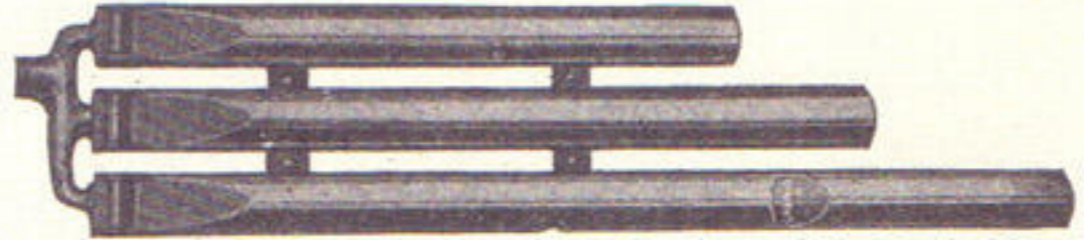
**GABRIEL HORNS**

**Four-Chime Horn.**



Model A. A.—Large size—made in 2-inch tubing. Occupies space 10x35 inches. Price .....\$35.00  
 Model A. A.—Small size—made in 1½ inch tubing. Occupies space 8x26 inches. Price.....\$30.00

**Three-Chime Horn.**



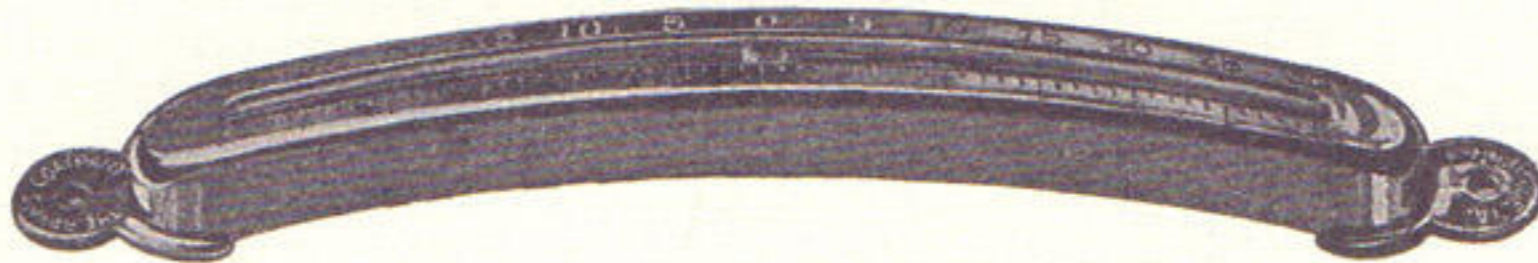
Model A.—Large size—made in 2½-inch tubing. Price .....\$30.00  
 Model A.—Medium size—made in 2-inch tubing. Occupies space 7½x34 inches. Price.....\$25.00  
 Model A.—Small size—made in 1½ inch tubing. Occupies space of 5½x25 inches. Price.....\$20.00

**Two-Chime Horn.**



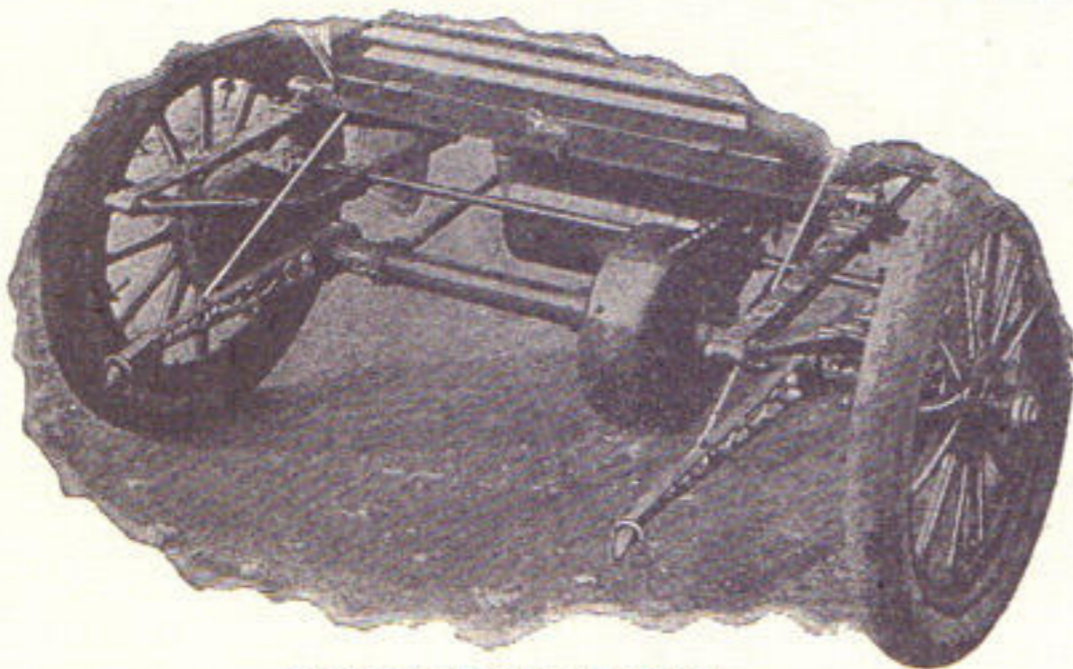
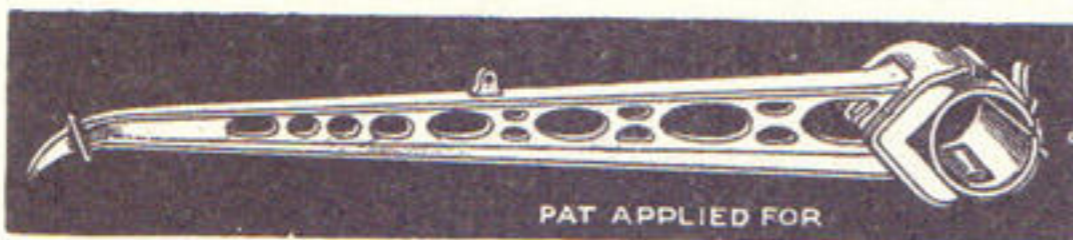
Model C.—Large size—made in 2½-inch tubing. Occupies space of 6x32 inches. Price.....\$20.00  
 Model C.—Medium size—made in 2-inch tubing. Occupies space of 6x32 inches. Price.....\$18.00  
 Model C.—Small size—made in 1½-inch tubing. Occupies space 3½x25 inches. Price.....\$15.00  
 Our 1½-inch horn is manufactured especially for motor boats and small automobile cars.

**ADAMS GRADOMETER**



Tells what grade you climb; 6½ inches long.  
 Price, each.....\$1.50

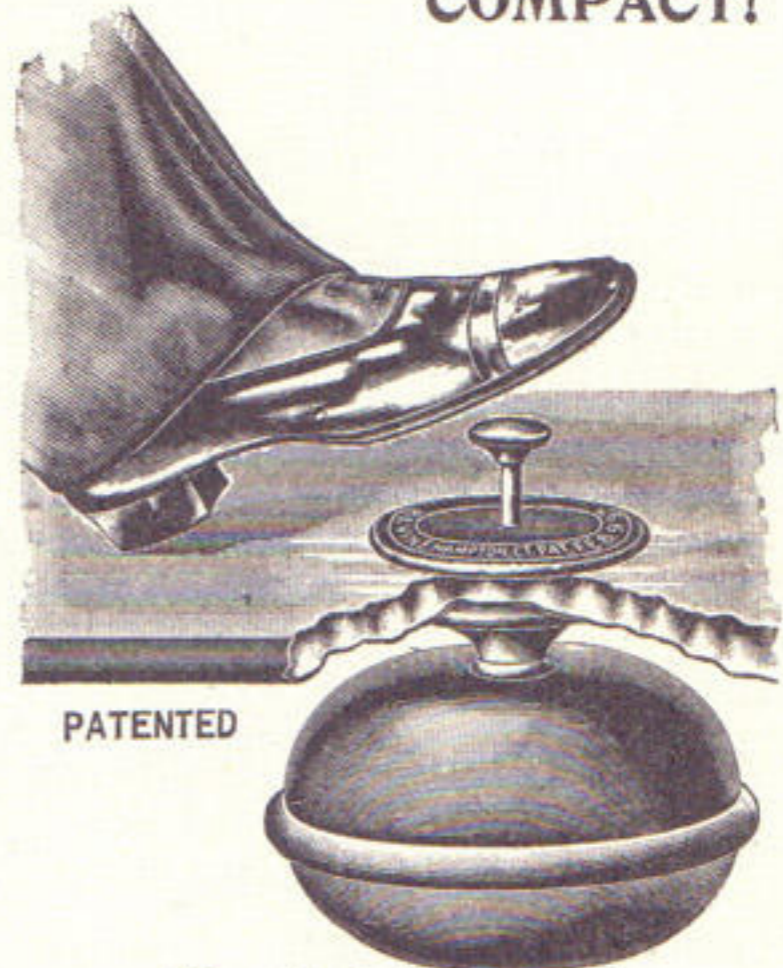
**THE PERFECT DROP BRAKE**



**Showing Brake Raised.**

The Perfect Drop Brake comes in two sizes, the smaller suitable for 28, 30 and 32-inch wheels, the larger for 34 and 36-inch wheels.  
 Price, small size .....\$2.00 each  
 Price, large size ..... 2.50 each

**SIMPLE! SUBSTANTIAL!  
 COMPACT!**



**All parts interchangeable.**

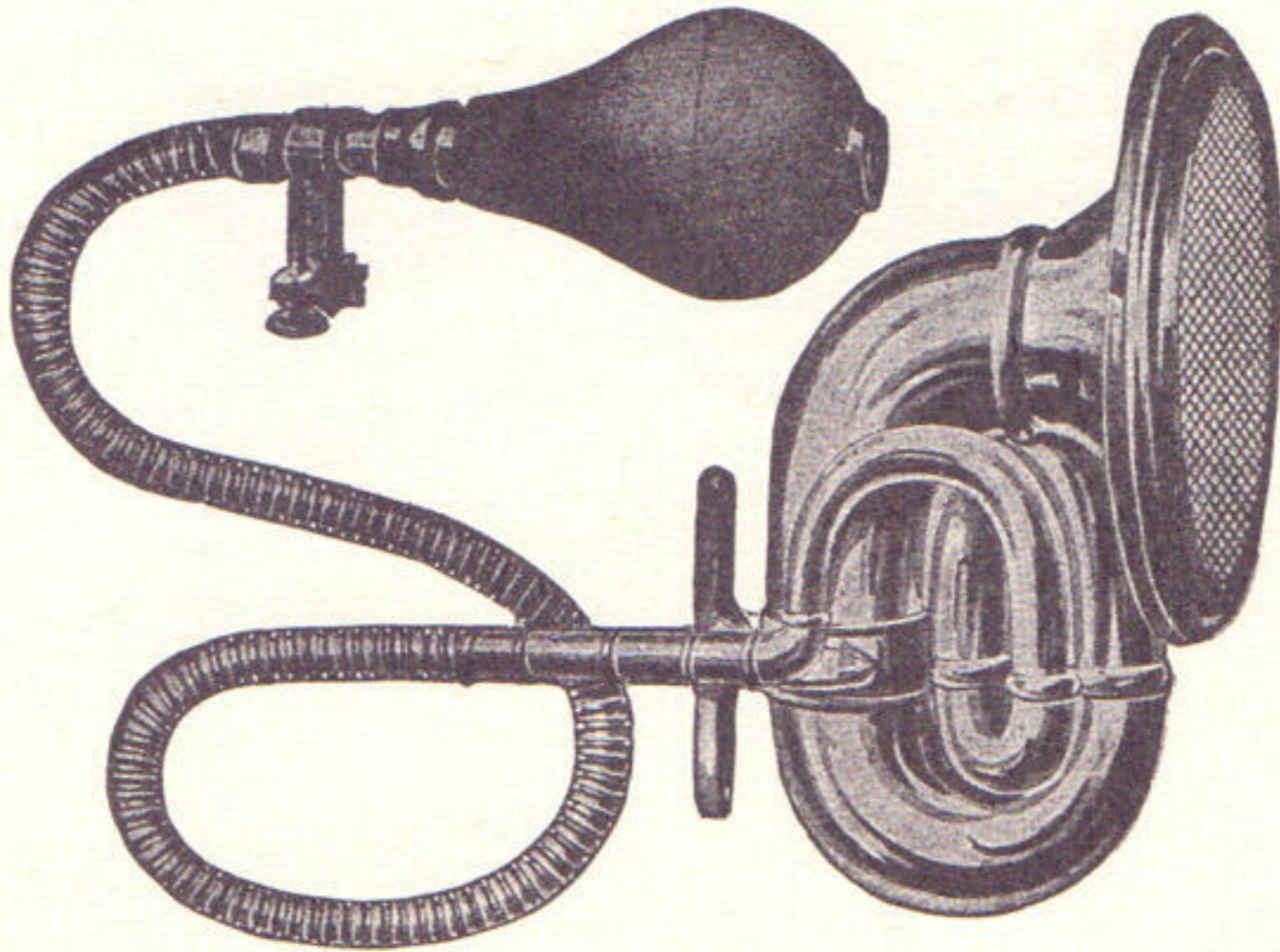
The gongs are attuned to accord, and produce a delightful sound.

**PRICE, EACH.**

No. 61. 5-inch Gongs .....\$3.00  
 No. 62. 3-inch Gongs ..... 2.00



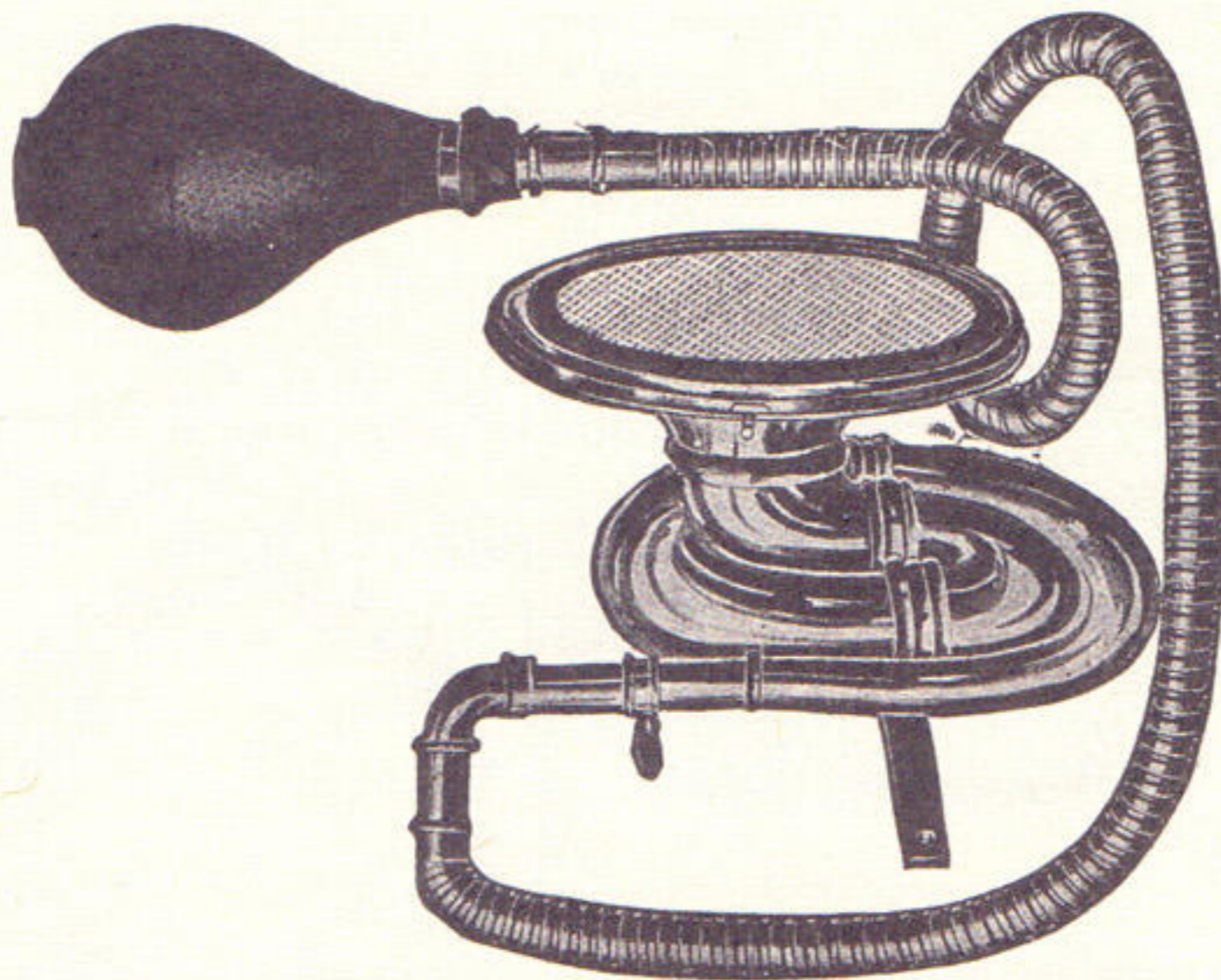
FRENCH HORNS.



This Horn has a beautiful double turn, producing a very musical sound, and is also made with oval-shape bell.

| List No. | Size of Bell. | Length of Tubing. | Price. | List No. | Size of Bell.                      | Length of Tubing. | Price.  |
|----------|---------------|-------------------|--------|----------|------------------------------------|-------------------|---------|
| 346      | 6½ inches     | 40 inches         | \$9.00 | 348      | 8 inches                           | 40 inches         | \$11.60 |
| 347      | 7¼ " "        | 40 " "            | 10.00  | 418      | Same as above, with oval bell..... |                   | 16.50   |

1907  
FRENCH HORNS.



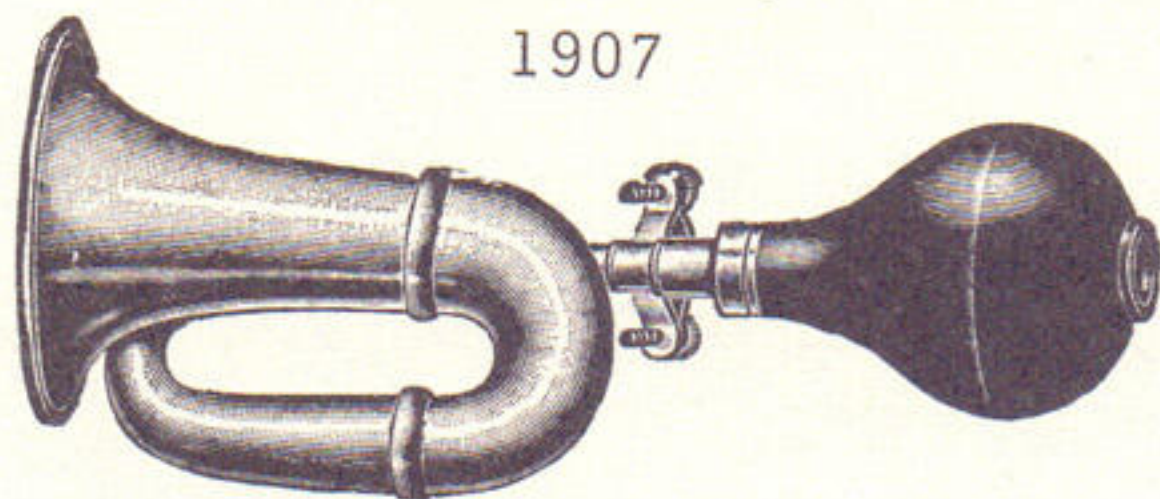
A beautiful Horn with a deep musical tone. Adapted to fit any car.

| List No.  | Price.  |
|---|---------|
| 367 Bell 7¼ inches diameter, tubing 40 inches long. . . . . | \$12.50 |

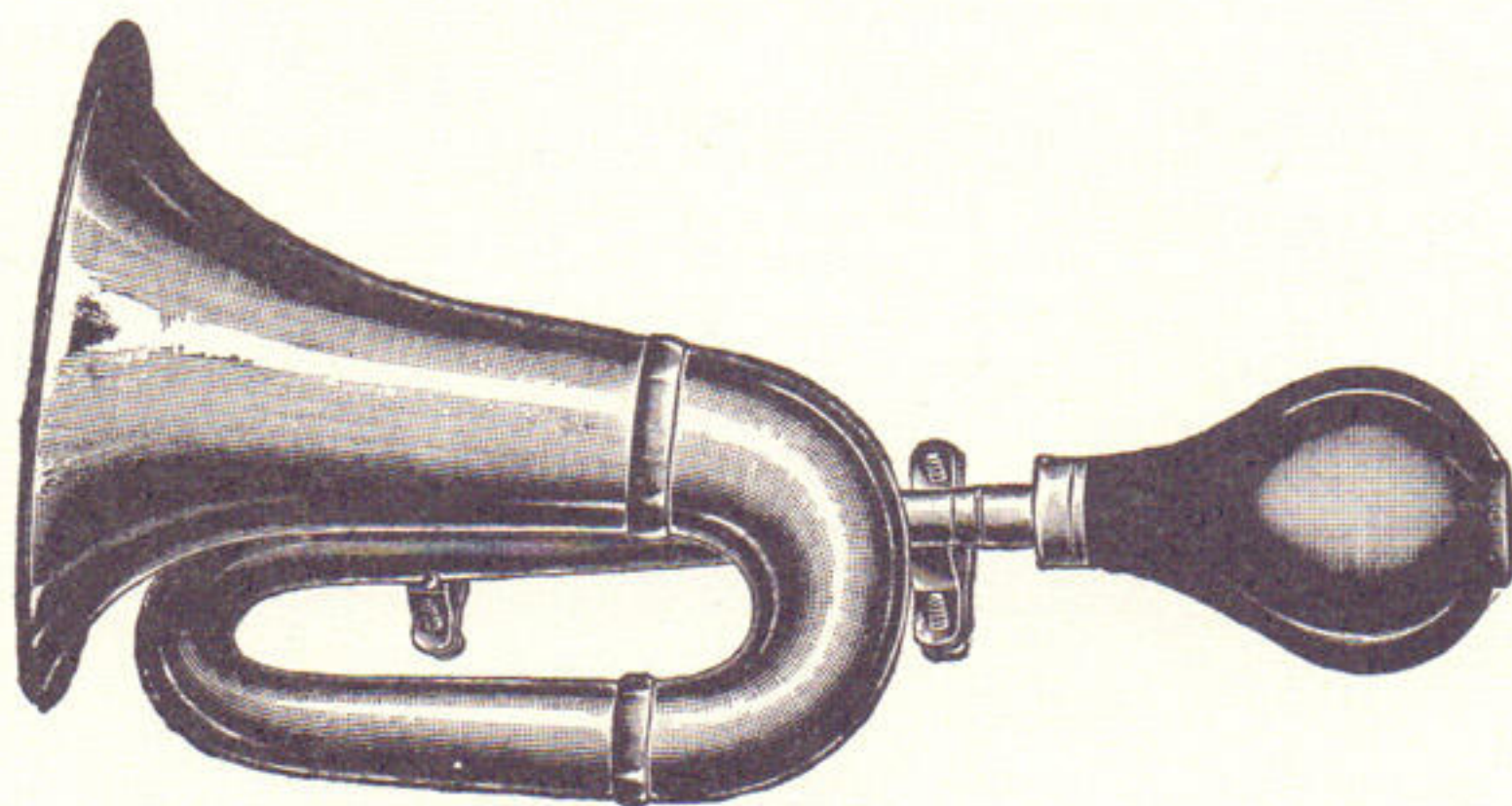
SIBLEY AND PITMAN.

FRENCH HORNS

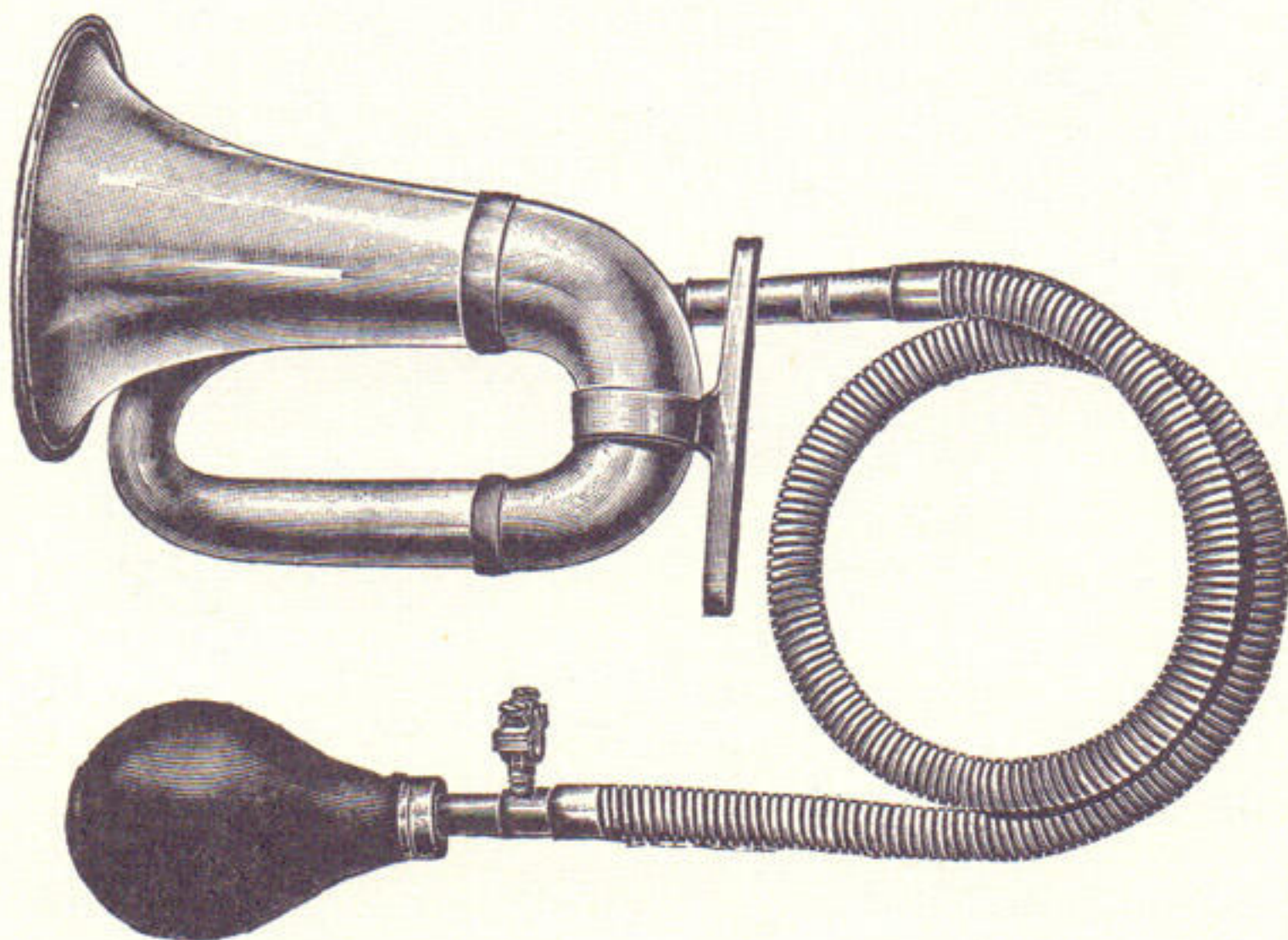
1907



| List No.       | Diameter of Bell | Length    | Price Each |
|----------------|------------------|-----------|------------|
| 01106          | 2 3/4 in.        | 8 3/4 in. | \$2.00     |
| 01108          | 3 3/4 "          | 10 1/4 "  | 2.70       |
| 01110          | 4 1/4 "          | 12 "      | 3.50       |
| 01112          | 5 1/4 "          | 14 "      | 4.75       |
| 01114-2 clamps | 6 1/2 "          | 15 1/2 "  | 6.25       |
| 01118          | 9 3/4 "          | 21 1/2 "  | 13.50      |



| List No.       | Diameter of Bell | Length     | Price Each |
|----------------|------------------|------------|------------|
| 01806          | 3 in.            | 10 1/2 in. | \$2.10     |
| 01808          | 4 1/2 "          | 11 3/4 "   | 2.80       |
| 01810          | 5 1/4 "          | 13 3/4 "   | 4.00       |
| 01812-2 clamps | 6 3/4 "          | 15 1/2 "   | 5.50       |
| 01814          | 8 "              | 17 1/2 "   | 7.00       |

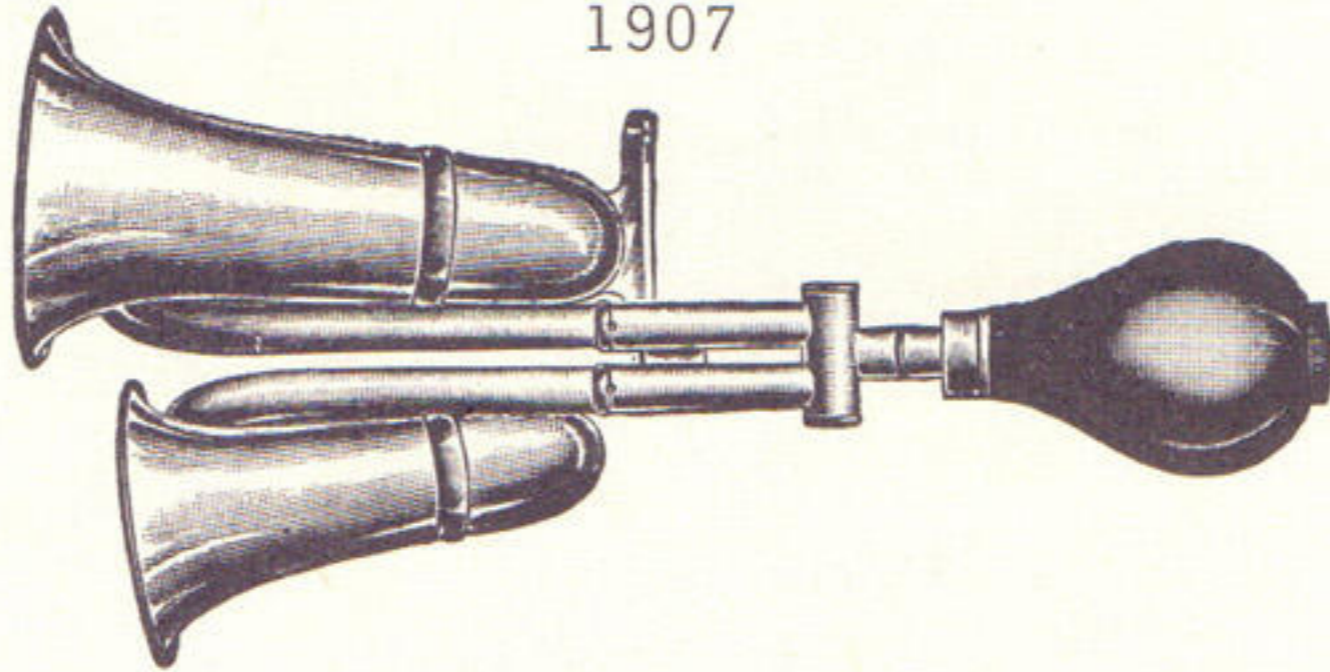


| List No. | Diameter of Bell | Length   | Price Each |
|----------|------------------|----------|------------|
| 02112    | 5 1/4 in.        | 14 in.   | \$7.25     |
| 02114    | 6 1/2 "          | 15 1/2 " | 8.50       |



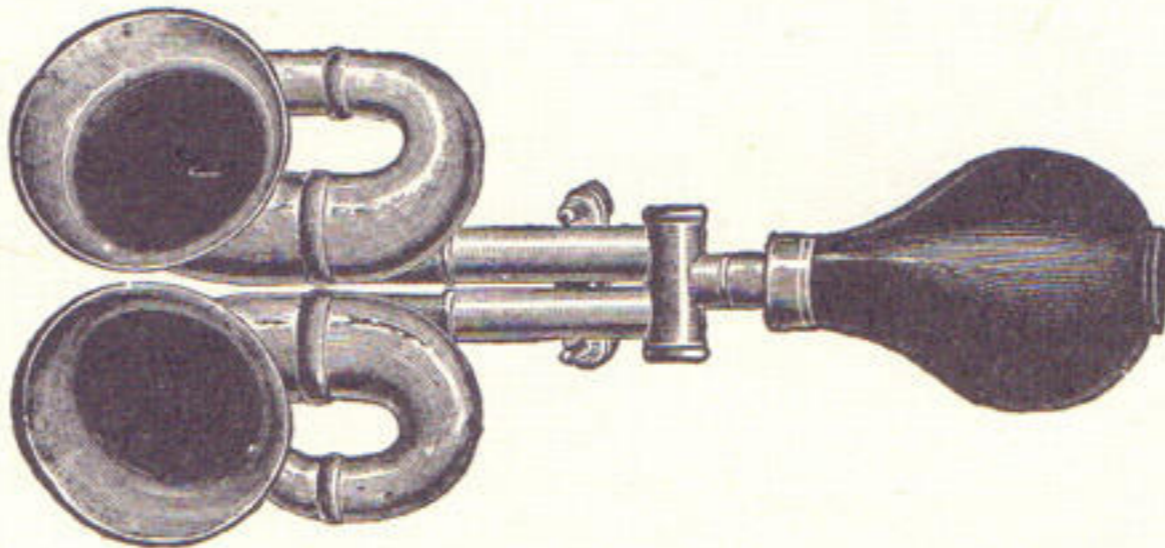
CHIMED HORNS.

1907



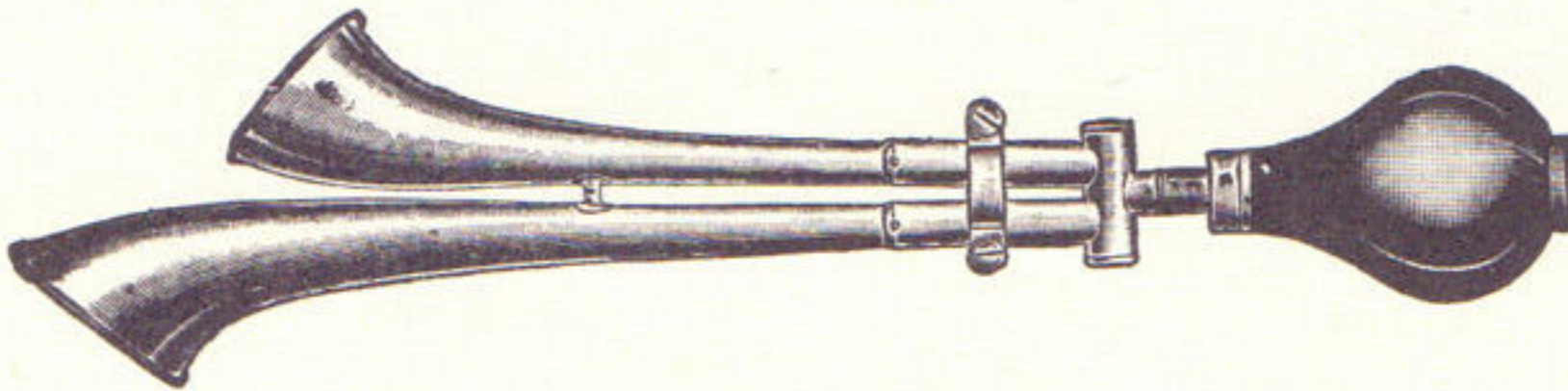
Chimed Horn. Diameter of bells  $4\frac{1}{2}$ — $5\frac{1}{4}$  inches respectively. Length 18 inches.

|          |            |              |
|----------|------------|--------------|
| List No. |            | Price, Each. |
| 822      | Each ..... | \$10.00      |



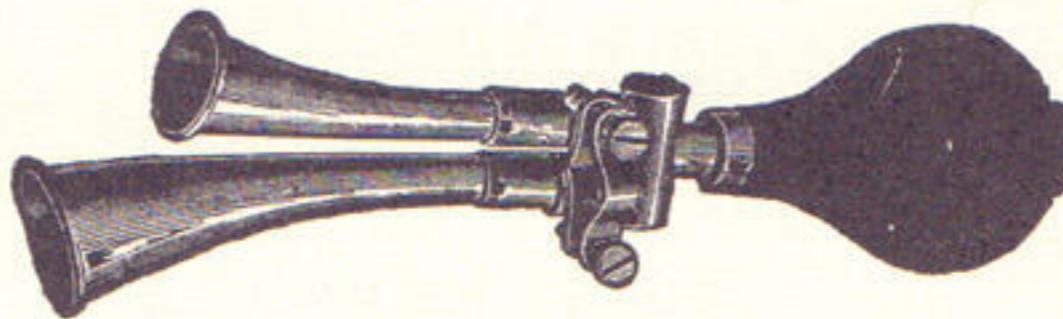
Diameter of bells  $3\frac{1}{2}$  inches. Length  $13\frac{1}{4}$  inches.

|          |            |              |
|----------|------------|--------------|
| List No. |            | Price, Each. |
| 825      | Each ..... | \$7.00       |



Length 21 inches.

|          |            |              |
|----------|------------|--------------|
| List No. |            | Price, Each. |
| 823      | Each ..... | \$6.50       |



Length  $11\frac{1}{4}$  inches.

|          |            |              |
|----------|------------|--------------|
| List No. |            | Price, Each. |
| 824      | Each ..... | \$2.50       |

FRENCH HORN PARTS.

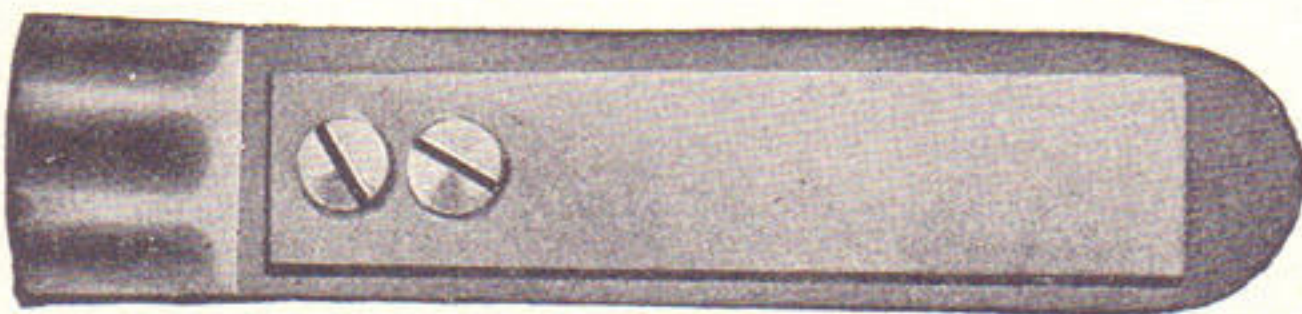
1907



REEDS.

ONE PIECE.

| List No.             | Price Each |
|----------------------|------------|
| 239 Size 4 to 8..... | \$0.30     |
| 239 " 9 to 12.....   | .50        |



REEDS.

ADJUSTABLE.

| List No.              | Price Each |
|-----------------------|------------|
| 240 Size 9 to 12..... | \$0.50     |

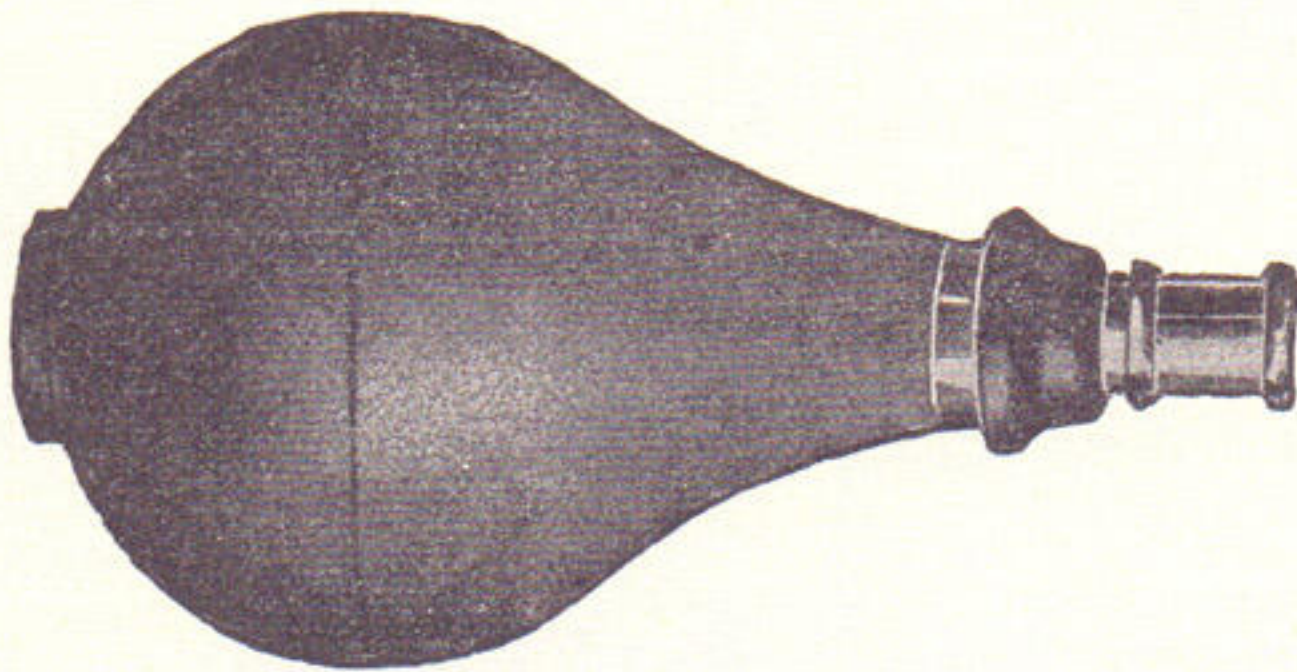
When ordering state size of horn.



SCREENS.

| List No. | Size of Bell                          | Price Each |
|----------|---------------------------------------|------------|
| 384      | 4 <sup>3</sup> / <sub>8</sub> in..... | \$0.45     |
| 385      | 5 <sup>1</sup> / <sub>2</sub> ".....  | .50        |
| 386      | 6 <sup>1</sup> / <sub>2</sub> ".....  | .60        |
| 387      | 7 <sup>1</sup> / <sub>4</sub> ".....  | .75        |
| 388      | 8 ".....                              | .85        |

Made of heavy brass. Fitted with very fine wire gauze.



CHEMICALLY CURED BULBS.

| List No. | Size                    | Price Each |
|----------|-------------------------|------------|
| 394      | 4.....                  | \$0.60     |
| 396      | 6.....                  | .75        |
| 398      | 8.....                  | .90        |
| 400      | 10.....                 | 1.25       |
| 402      | Extra large and heavy.. | 2.00       |

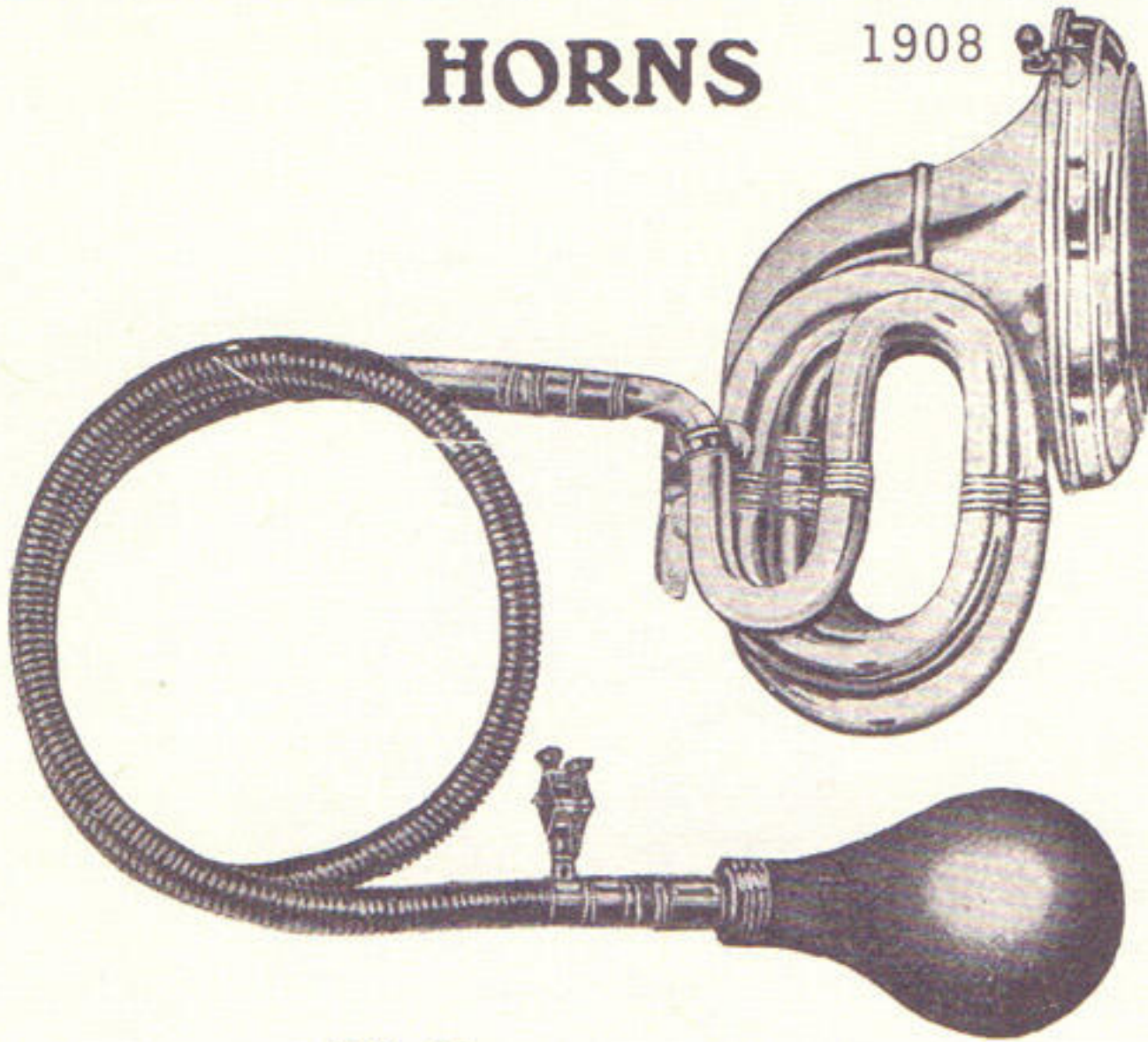
The best quality Bulbs made and are furnished in several different threads. Give maker's name and number of horn when ordering.

FLEXIBLE TUBING.

A Flexible Tubing, first-class in every respect, will not break or pull to pieces like some of the inferior makes.

| List No. | Diameter | Length           | Price Each |
|----------|----------|------------------|------------|
| 230      | 1/2 in.  | 40 in. long..... | \$0.90     |
| 231      | 1/2 "    | 50 " ".....      | 1.10       |
| 232      | 1/2 "    | 60 " ".....      | 1.30       |
| 233      | 5/8 "    | 40 " ".....      | 1.30       |
| 234      | 5/8 "    | 50 " ".....      | 1.60       |
| 235      | 5/8 "    | 60 " ".....      | 1.90       |
| 236      | 5/8 "    | 72 " ".....      | 2.25       |

**HORNS** 1908



**NO. 51.**

**"IL BASSO DRAGON TYPE."**

Made only with 6½ in. bell. An exceptionally powerful and clear toned horn, very attractive design.

40 or 50-in. tubing.  
No. 15 bulb.

PRICE:  
Complete .....\$8.00

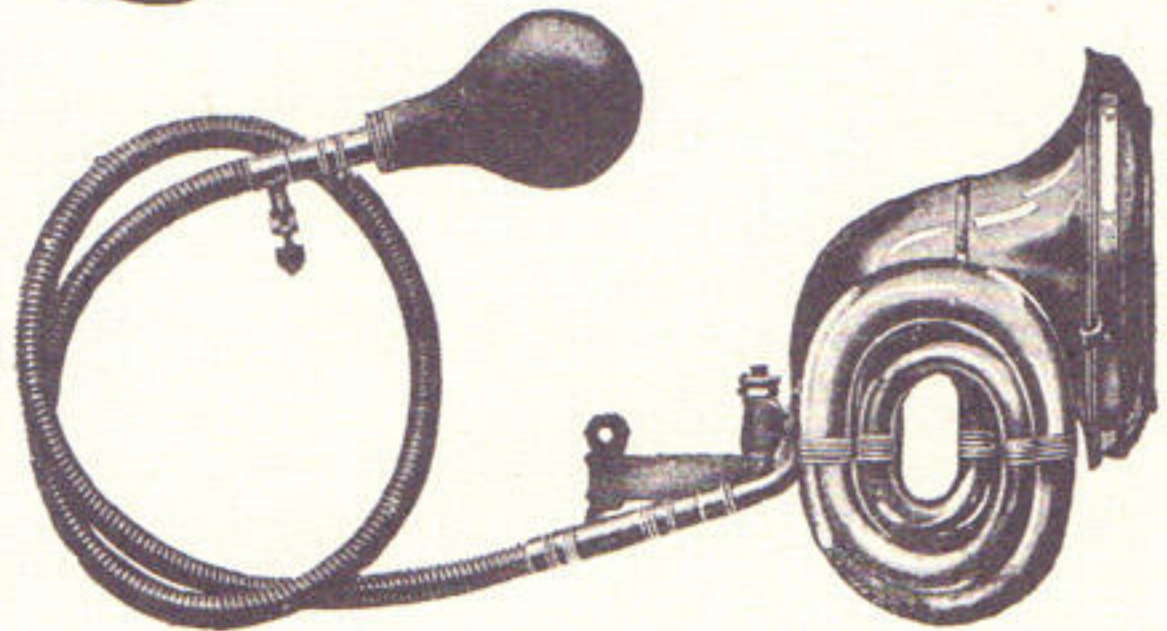
**NO. 41.**

**TRIPLE TWIST.**

The well known and popular triple twist Horn. Beautiful in design, unexcelled in tone qualities.

7-in. bell. 40 or 50-in. tubing.  
No. 15 bulb.

Complete .....\$7.75

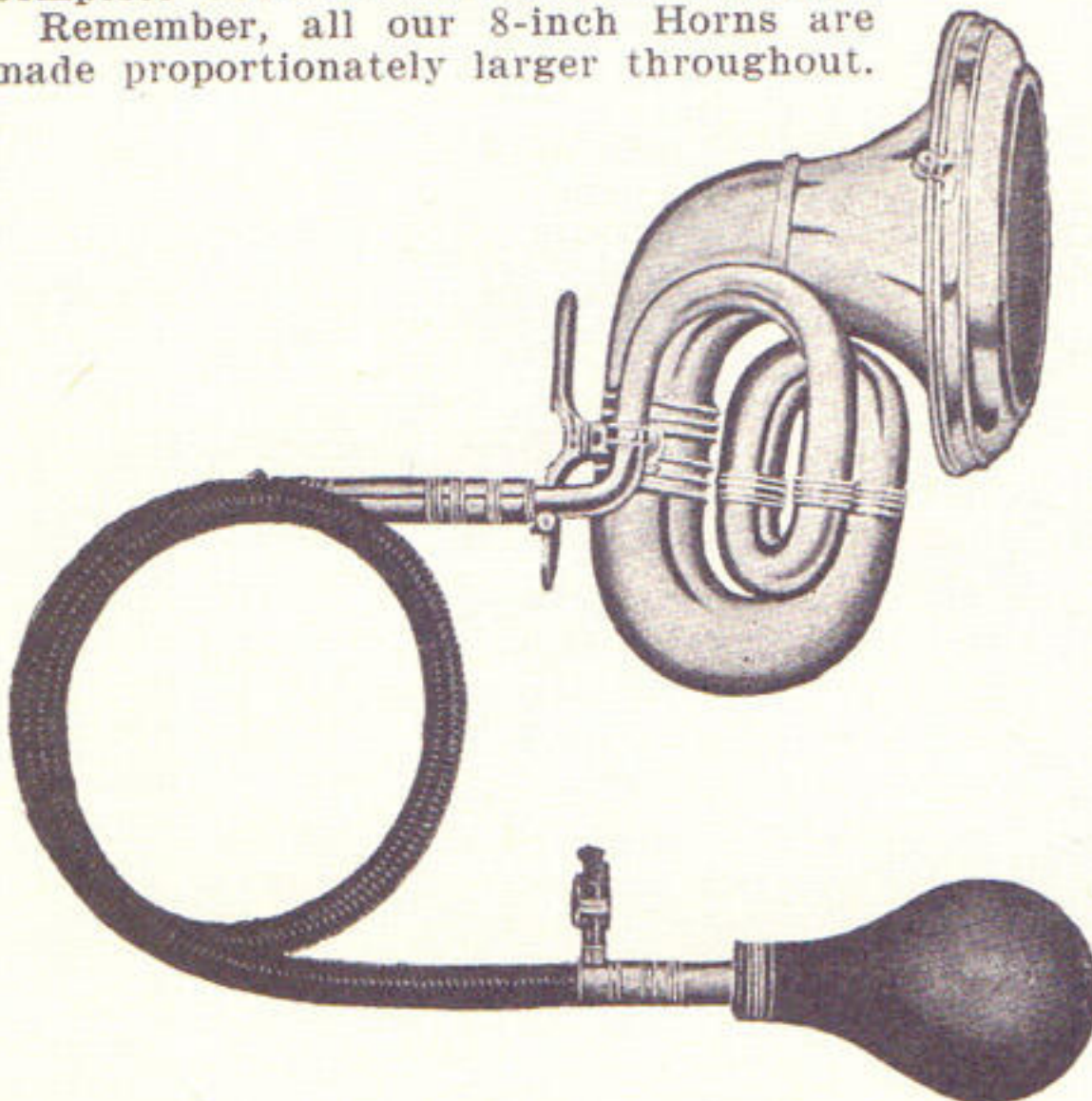


**NO. 42.**

Same Horn with 8-in. bell, 50 or 60-in. tubing, No. 20 bulb.

Complete .....\$10.00

Remember, all our 8-inch Horns are made proportionately larger throughout.



**NO. 39.**

**THE WINNER DRAGON STYLE.**

Our leaders for 1908. We believe that in beauty of design, depth of tone, and general excellence these models will stand unrivalled.

7-in. bell. 50-in. tubing.  
No. 20 bulb.

Price, complete .....\$8.00

**NO. 40.**

Same as Model 39, with 8-in bell, 50 or 60-in. tube, No. 20 bulb.

Price, complete .....\$9.00

# HORNS

1908

NO. 37.

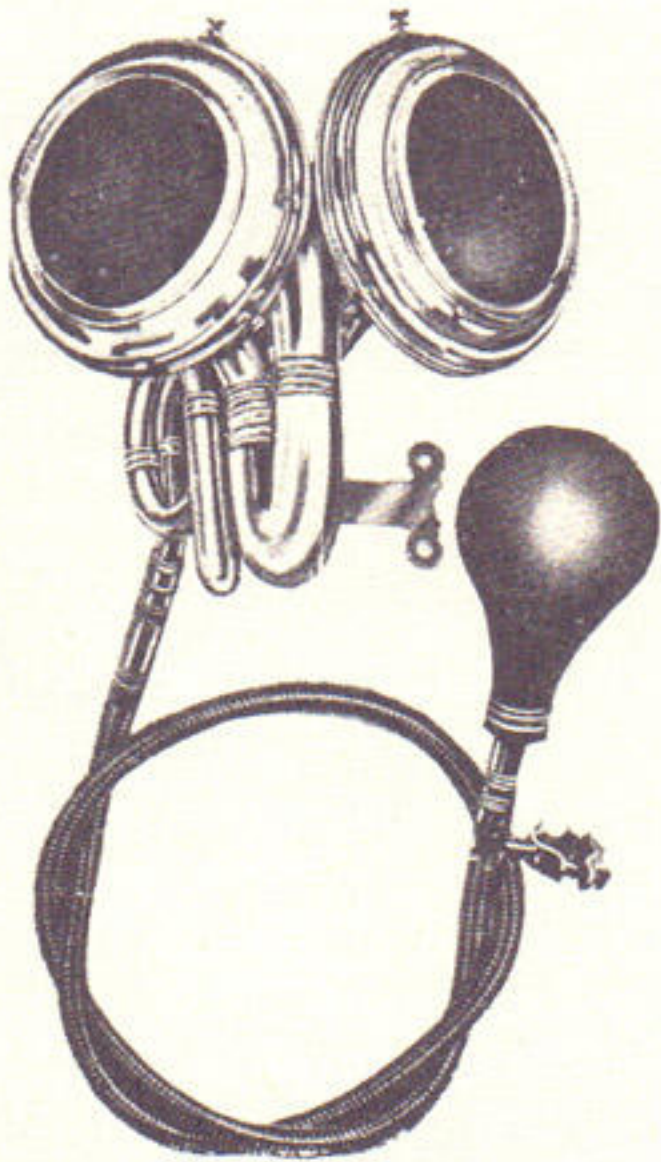
## "THE SIEMESE."

Dragon and Triple Twist styles combined in one Horn, producing a beautiful chimed tone.

Will please the many drivers who are looking for something different.

6 1/2-in. bells. 50 or 60-in. tubing.  
No. 20 bulb.

Price, complete .....\$18.00



NO. 36.  
GEMELLO.

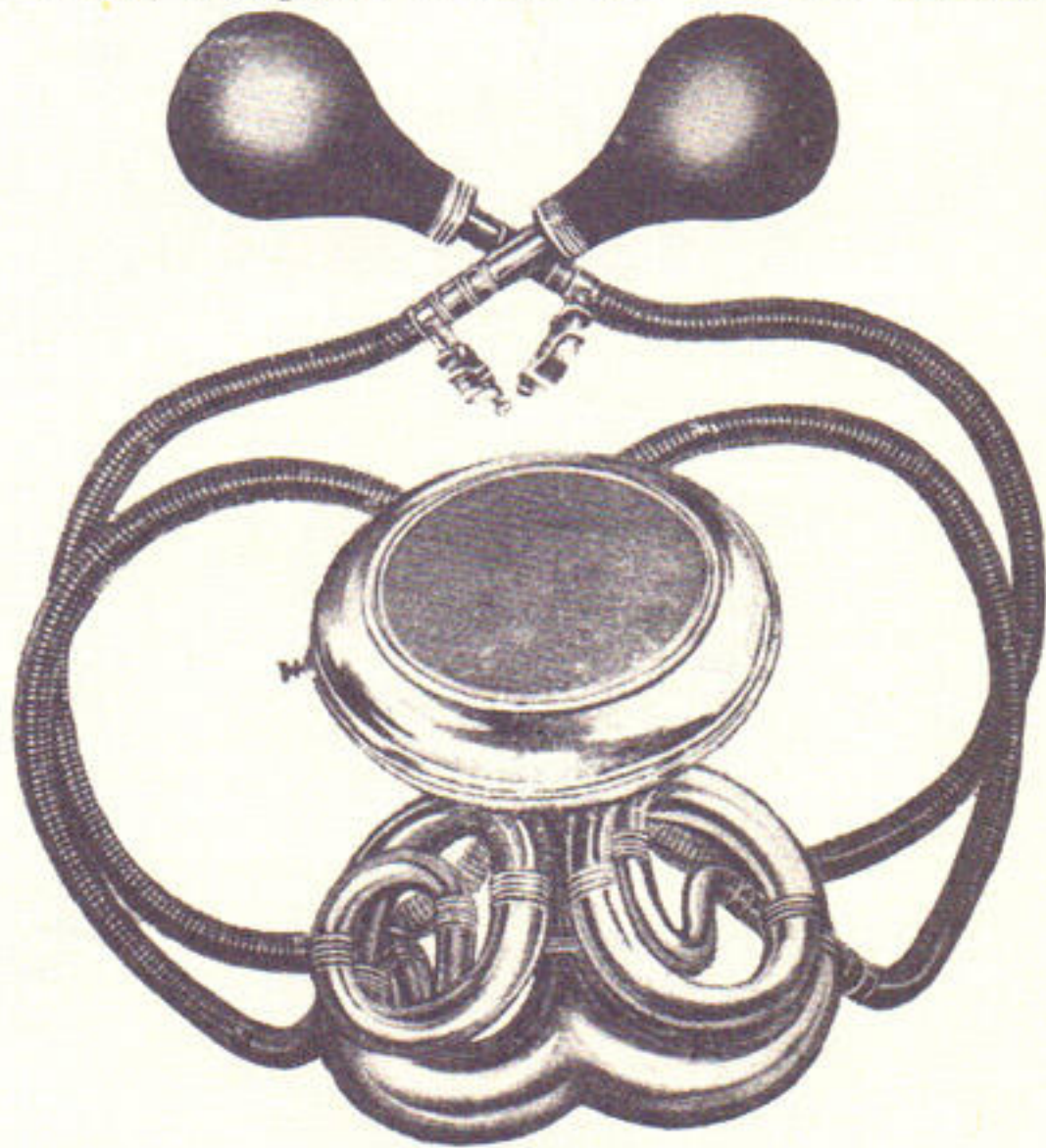
"Two Horns in One."

Triple Twisted and Dragon.

This model is very popular in Europe, fitted with two flexible tubes which can be operated from both sides of car at the same time.

8 1/2-in bell. 60 to 80-in. tubings.  
No. 20 bulbs.

Price, complete .....\$20.00



NO. 46.  
DRAGON.

The Standard Dragon Model. Neatness of design combined with a clear, powerful tone, has made this type of Horn very popular.

6 1/2-in. bell. 40-in. tubing.  
No. 15 bulb.

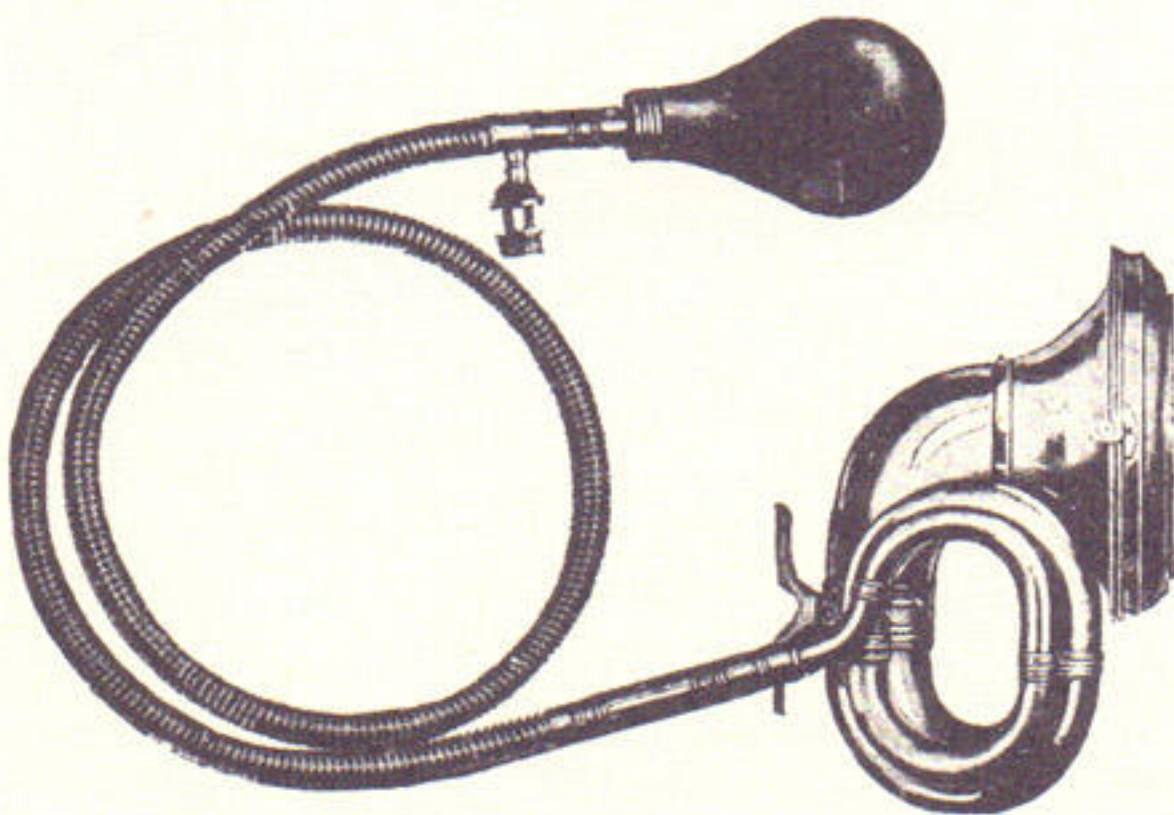
Price, complete .....\$7.00

## NO. 47.

Same as Model 46, with 8-in. bell. A very powerful Horn.

50 or 60-in. tube. No. 20 bulb.

Price, complete .....\$8.25



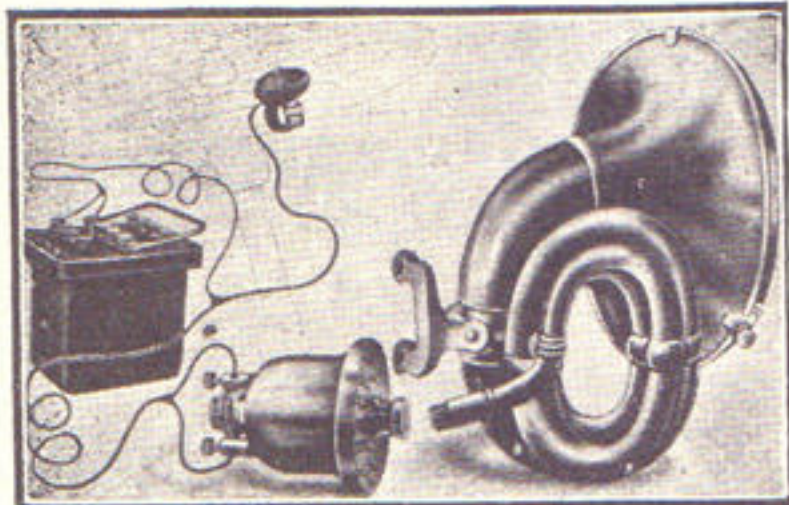
## BULBS.

### PRICES:

No. 10.....\$1.00 each    No. 15.....\$1.10 each    No. 20.....\$1.20 each  
Horn Reeds .....30 cents each

## Electric Horn Attachment

Is Dustproof and Waterproof and Gives a Loud, Continuous Sound.



Easily Attached to Any Standard Horn.

Practicable for Automobile or Motorboat.

Electric Horn Attachment, including wire and push button, is:

|  |         |
|--|---------|
| Without horn .....                       | \$15.00 |
| With Bugle Horn .....                    | 20.00   |
| With Dragon Horn, like illustration..... | 22.50   |

The Operation: All that is necessary is to press the button, and the horn will sound, and will continue as long as the button is pressed.

### VOLIER HORNS AND "RIVAL" HORNS.

Each Genuine Imported French Volier Horn is composed of these elements:

A Spun Brass Bell of graceful design and musical quality, finished with characteristic French care for detail.

A Reed of special, non-corrosive, vibratory metal, the composition and tempering of which are secret. The reed is unaffected by weather, and is the only kind that will not lose its tone in service.

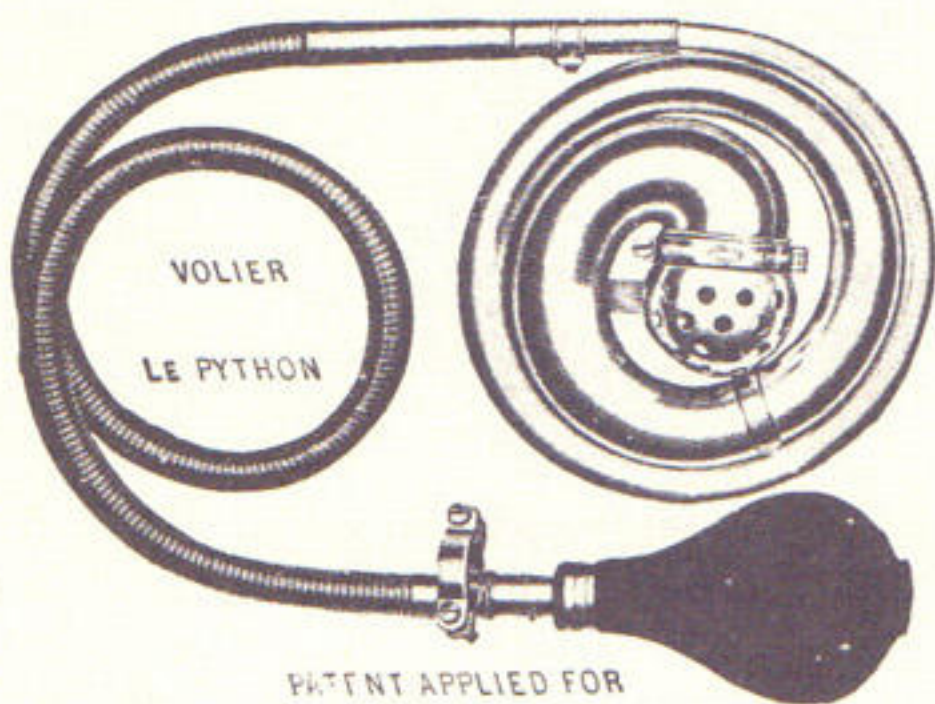
A Bulb quite different from that on ordinary horns, in that it is cured by a chemical process instead of by steam. Steam cured bulbs split and crack from use and vibration, and rot around the ferrule. The Volier chemically cured bulb is soft, tough and pliable, and remains so in use.

A Name—"Volier"—which has every year been a guarantee of a perfect horn, and which assures perfect satisfaction and service.

Our "Rival" Horns are imported horns, next to the Volier in quality.

1908

### THE LE PYTHON HORN.



PATENT APPLIED FOR

This is the sensation of the French automobile trade. The fact alone that it is being so universally adopted for equipment for 1908 by the important foreign motor car manufacturers bespeaks its popularity.

It is a well known fact that with all Dragon or other horns having bells pointing forward, there is a back pressure greater than the pressure from the bulb when the car travels forty or fifty miles per hour. The Le Python Horn, however, with its new and novel shape, is so constructed that no matter how fast the car travels, there is no back pressure on the bulb, and in consequence the faster the car travels, the louder the noise, as the wind rapidly rushing through the perforated holes as shown in the illustration fairly draws the tone from the horn.

Another feature of this horn is its peculiar deep long drawn out tone, which is obtained by the air passing through the gradual curves in the coils of the horn.

Another advantage of the use of this horn on modern cars is, that it can be easily attached to the dashboard or side of frame and does not interfere with the mud guard or the raising of the hood, as it is very narrow, measuring only 3 inches in diameter.

The bracket is so constructed that the horn may be detached from the car instantly in the event of washing the car, although the construction of the horn is such with the bell pointing downward, that it is well nigh impossible for rain or water to get into the horn.

The peculiar depth and length of tone of this horn together with its novel shape and construction is bound to make it the most popular horn in America.

Number 510—8½ in. diameter, each, \$12.00. Complete with 40-inch tube.

# Volier Horns

1908

1908

Each Genuine Imported French Volier Horn is composed of these elements:

A Spun Brass Bell of graceful design and musical quality, finished with characteristic French care for detail.

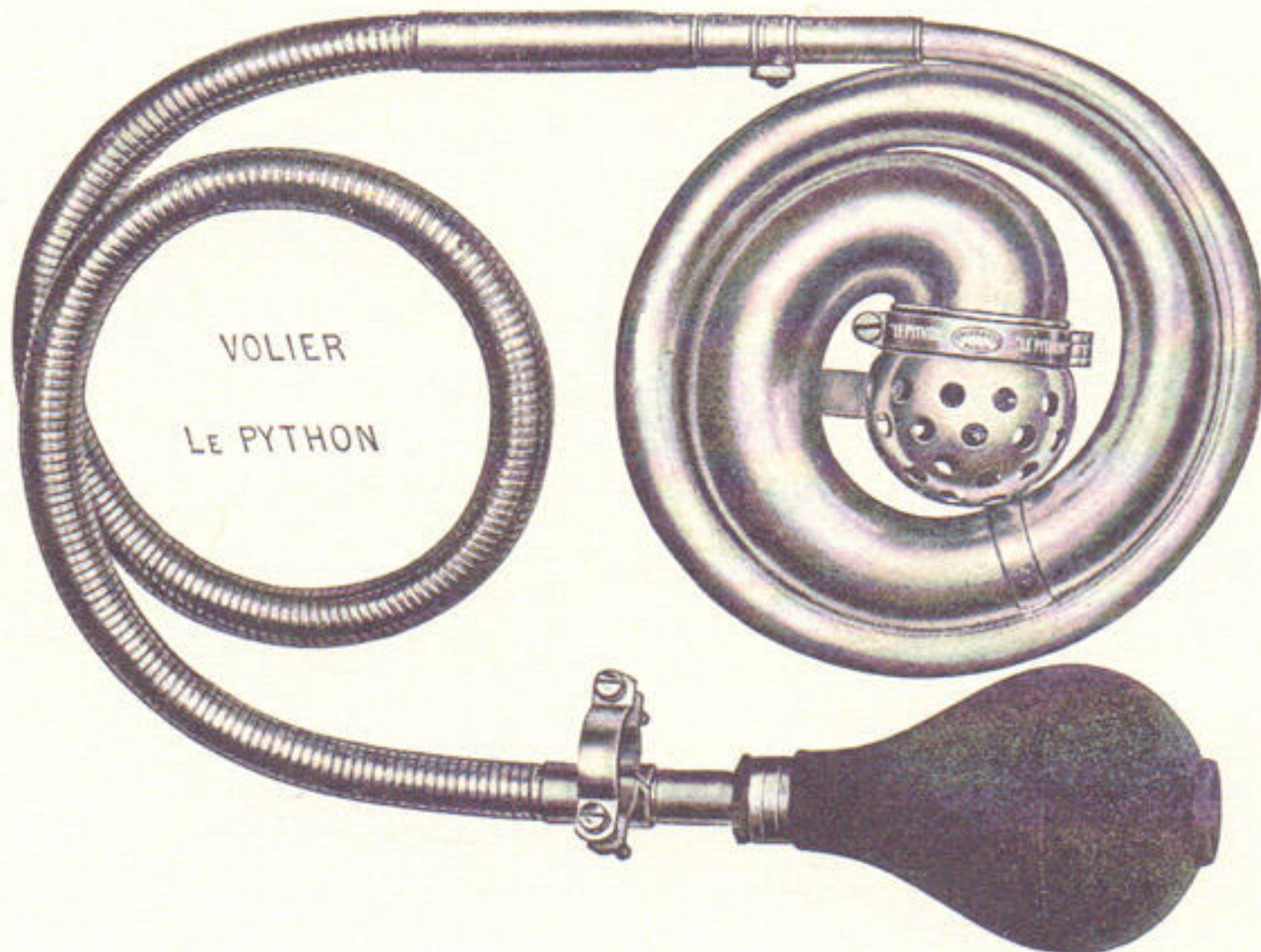
A Reed of special, non-corrosive, vibratory metal, the composition and tempering of which are secret. The reed is unaffected by weather, and is the only kind that will not lose its tone in service.

A Bulb quite different from that on ordinary horns, in that it is cured by a chemical process instead of by steam. Steam cured bulbs split and crack from use and vibration, and rot around the ferrule. The Volier chemically cured bulb is soft, tough and pliable, and remains so in use.

A Name—"Volier"—which has every year been a guarantee of a perfect horn, and which assures perfect satisfaction and service.

Our "Rival" Horns are imported horns, next to the Volier in quality.

## The Le Python Horn.



This is the sensation of the French automobile trade. The fact alone that it is being so universally adopted for equipment for 1908 by the important foreign motor car manufacturers bespeaks its popularity.

It is a well-known fact that with all Dragon or other horns having bells pointing forward, there is a back pressure greater than the pressure from the bulb when the car travels forty or fifty miles per hour. The Le Python Horn, however, with its new and novel shape is so constructed that no matter how fast the car travels, there is no back pressure on the bulb, and in consequence the faster the car travels, the louder the noise, as the wind rapidly rushing through the perforated holes as shown in the illustration fairly draws the tone from the horn.

Another feature of this horn is its peculiar deep long drawn out tone, which is obtained by the air passing through the gradual curves in the coils of the horn.

Another advantage of the use of this horn on modern cars is, that it can be easily attached to the dashboard or side of frame and does not interfere with the mud guard or the raising of the hood, as it is very narrow, measuring only 3 inches in diameter.

The bracket is so constructed that the horn may be detached from the car instantly in the event of washing the car, although the construction of the horn is such with the bell pointing downward, that it is well nigh impossible for rain or water to get into the horn.

The peculiar depth and length of tone of this horn together with its novel shape and construction is bound to make it the most popular horn in America.

Number 510. 8½ in. diameter, Each \$12.00.  
Complete with 40 inch tube.



**Volier Oval "Dragon."**

The new oval Dragon marks perfection in beautiful horn design. The bell is a graceful oval which projects the sound more directly forward than is the case with the wide arc round bell. This horn is already adopted as equipment by a number of the leading manufacturers.

| Number | Bell | Dia. of Bell                          | Each    |
|--------|------|---------------------------------------|---------|
| 810    | Oval | 6 $\frac{3}{8}$ " x 4 $\frac{7}{8}$ " | \$ 9.00 |
| 811    | Oval | 7 $\frac{1}{8}$ " x 5 $\frac{1}{8}$ " | 10.00   |
| 812    | Oval | 8 " x 6 $\frac{3}{8}$ "               | 12.50   |

Above horns regularly equipped with screens and forty-inch tubes.

50" tubes, extra, \$ .25  
60" tubes, extra, .50

**Volier "Serpentine."**

A new model, very deep in tone, suitable for the finest cars.

| No.  | Bell  | Dia. of Bell | Each    |
|------|-------|--------------|---------|
| 1140 | Round | 6"           | \$11.50 |
| 1141 | Round | 7"           | 12.50   |
| 1142 | Round | 8"           | 14.00   |

Equipped with screen and forty-inch tube.

50" tubes, extra, \$ .25  
60" tubes, extra, .50

1908

**Royal Siren Horns.**

**Oval Bell.**

This is the latest, improved mechanical horn, which we supply complete with all the necessary fittings. Its range is from a low humming sound, up through the clear, musical middle tones, to a piercing shriek, according to how hard the foot-button is pressed. Has oval bell, the latest French design.

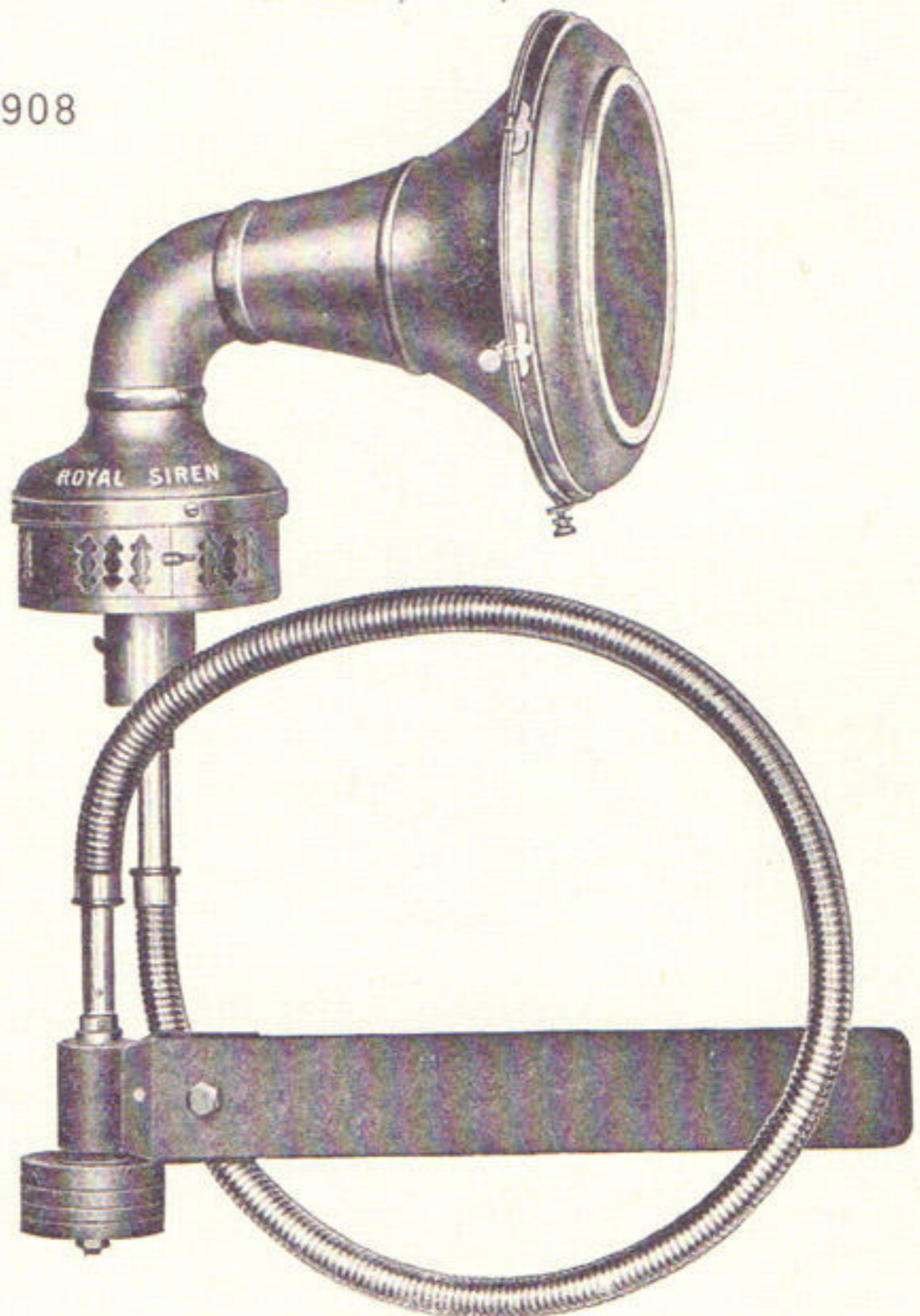
The leather friction pulley is pressed down on the top of the fly-wheel, whereupon it revolves, and by means of the encased flexible shaft, whirls the mechanism in the base of the horn itself.

There is an extraordinary demand for these Royal Sirens for large cars. Complete, each \$25.00.

**Royal Siren.**

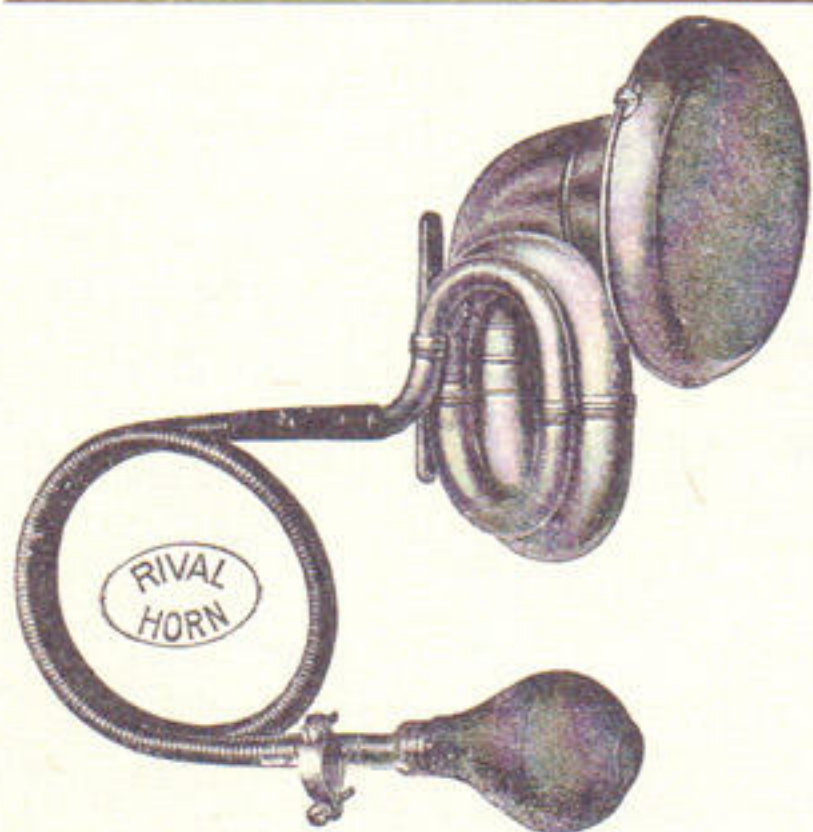
8" Round Bell

\$20.00



RIVAL IMPORTED HORNS.

Rival "Dragon."



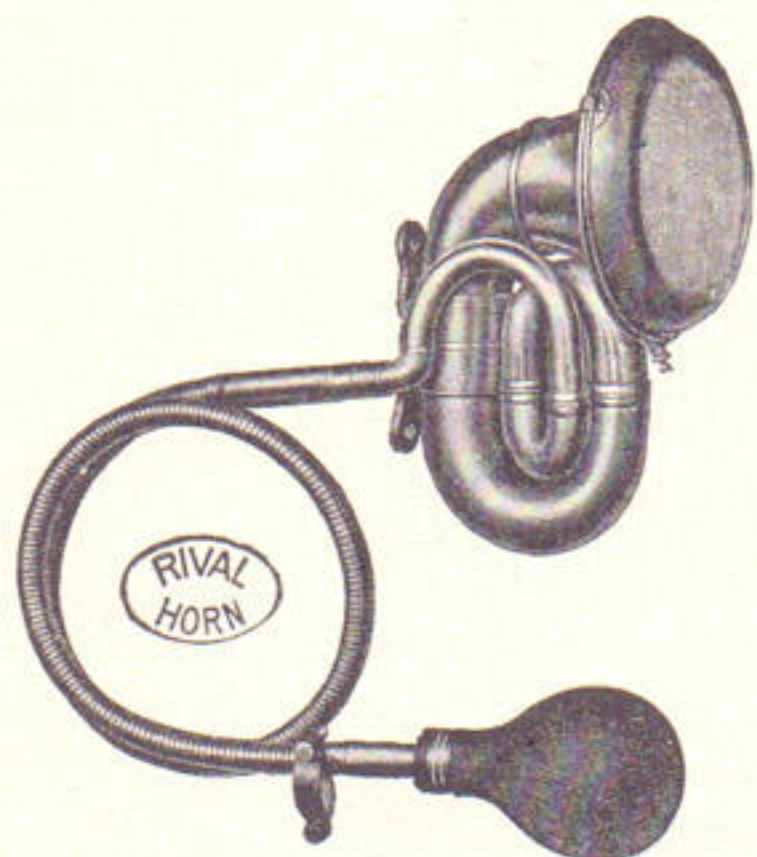
This is a foreign copy of the Volier "Dragon." We have made the prices exceedingly low on these horns for the purpose of eliminating the competition of the cheap inferior imitations made in this country. This horn is well made, highly finished and symmetrically shaped, with chemically cured bulb and a reed that will not change its tone. It has a deep, penetrating tone.

| Number | Bell  | Dia. of Bell | Each   |
|--------|-------|--------------|--------|
| 540    | Round | 6 1/8"       | \$6.50 |
| 545    | Round | 7 "          | 7.50   |

Above horns equipped with screens and forty-inch tubes.

50" tubes, extra, \$ .25  
60" tubes, extra, .50

Rival "Cobra."



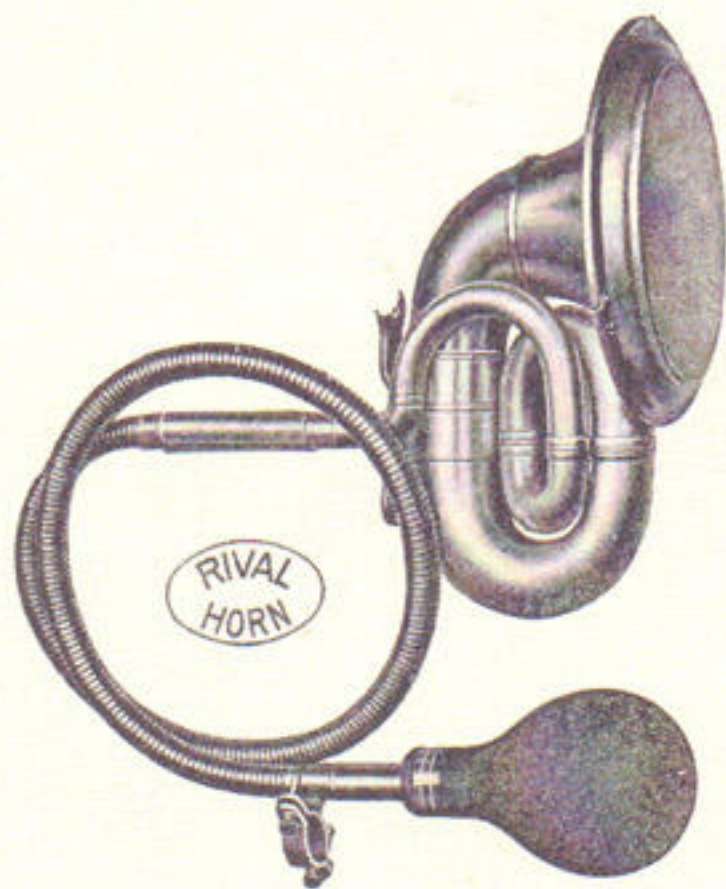
A new model for 1908. Gives a deep, powerful, penetrating tone.

| Number | Bell  | Dia. of Bell | Each   |
|--------|-------|--------------|--------|
| 940    | Round | 6 1/8"       | \$7.00 |
| 945    | Round | 7 "          | 8.00   |
| 950    | Round | 8 "          | 9.00   |

Above horns equipped with screens and forty-inch flexible tubes.

50" tubes, extra, \$ .25  
60" tubes, extra, .50

Rival Oval "Cobra."



The latest oval style, very compact in design, sure to be popular.

| Number | Bell | Dia. of Bell    | Each   |
|--------|------|-----------------|--------|
| 818    | Oval | 7 1/8" x 5 1/8" | \$8.00 |
| 820    | Oval | 8 " x 6 3/8"    | 9.00   |

Equipped with screen and forty-inch flexible tube.

50" tubes, extra, \$ .25  
60" tubes, extra, .50

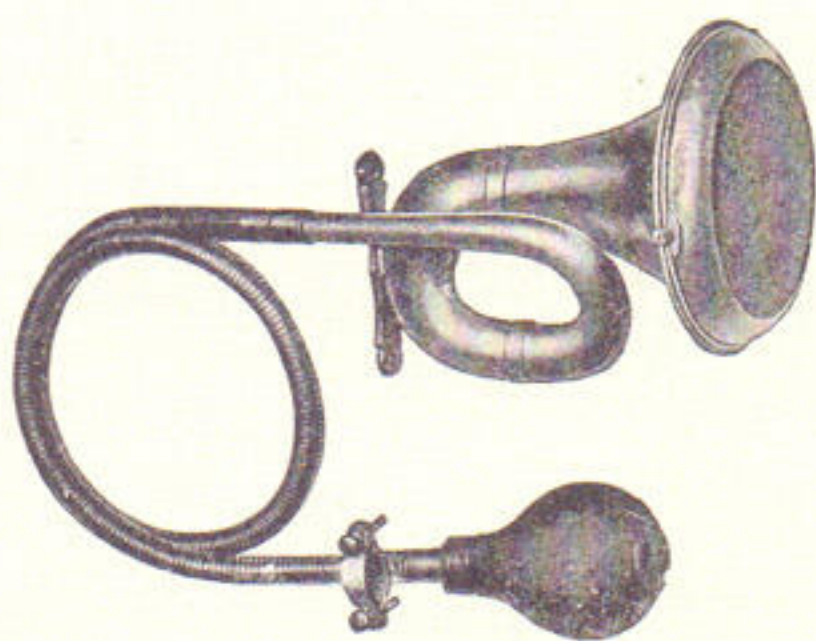
1908

Rival Tube "Bis."

Complete with forty-inch flexible tube and screen. Brass finish.

| Number | Dia. of Bell | Length of Tube | Each   |
|--------|--------------|----------------|--------|
| 10     | 5 1/2"       | 40"            | \$4.25 |
| 20     | 6 1/8"       | 40"            | 4.75   |

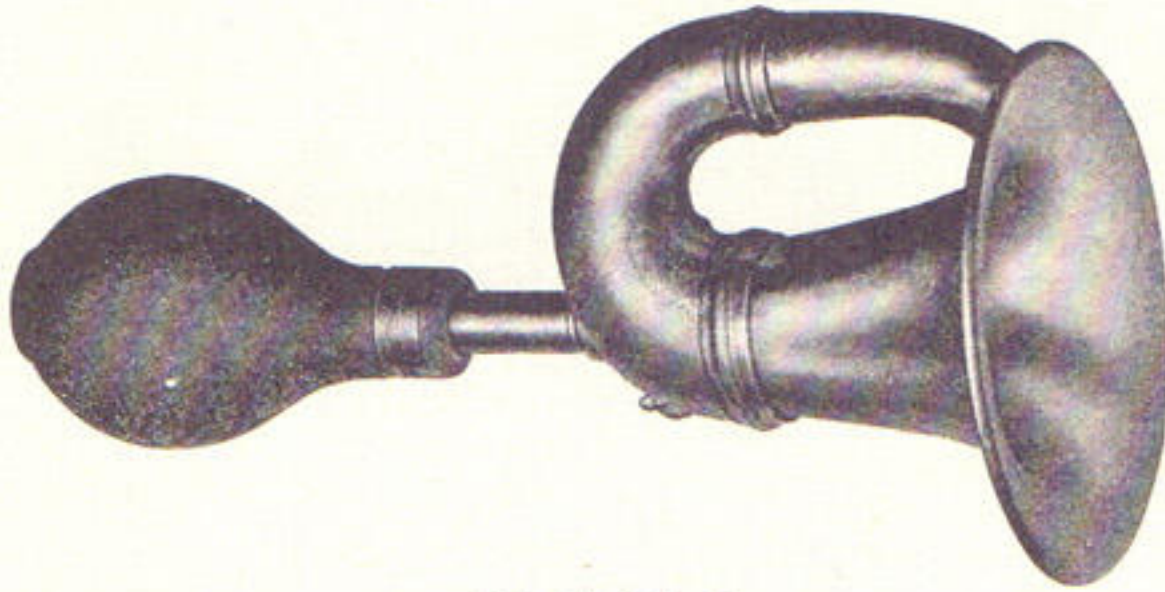
Above horns with 50" tubes, extra, \$ .25  
Above horns with 60" tubes, extra, .50





RIVAL HORNS AND PARTS, PARAFLEX BULBS. -

Rival "Bis."



Rival "Bis."

Nos. 130 and 133 for use on steering posts.

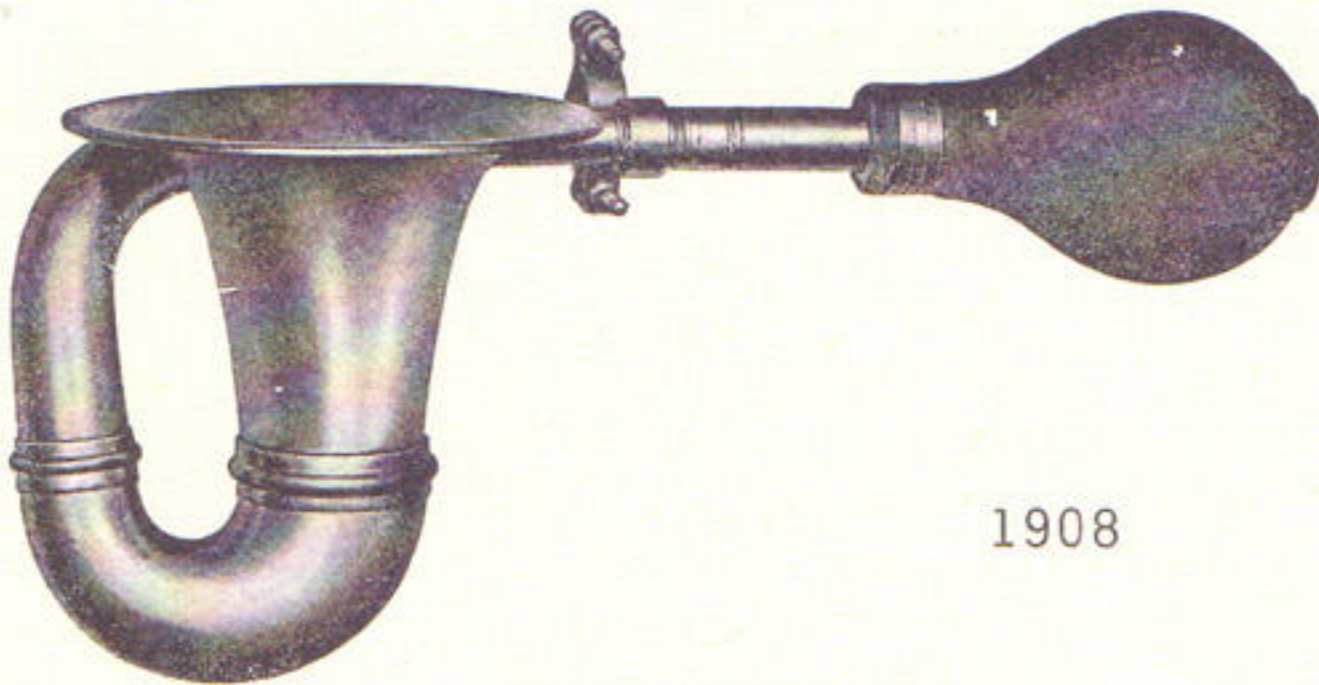
Nos. 116, 119, 123, 127, suitable for motorcycles.

Nos. 116, 119, 123, 127, Nickel Finish.

Nos. 127, 130, 133, Brass Finish.

| No. | Dia. of Bell | Length  | Each   |
|-----|--------------|---------|--------|
| 116 | 2 1/2"       | 8 "     | \$1.25 |
| 119 | 2 7/8"       | 8 1/2"  | 1.50   |
| 123 | 3 1/2"       | 9 "     | 2.00   |
| 127 | 4 1/2"       | 11 "    | 2.50   |
| 130 | 5 "          | 12 "    | 2.75   |
| 133 | 5 3/4"       | 13 1/4" | 3.50   |

Rival "Ter."



Rival "Ter."

1908

Nos. 327 and 330 for use on steering post and sides of cars.

Nos. 319, 323, 327, suitable for motorcycles.

Nos. 319, 323, 325, Nickel Finish.

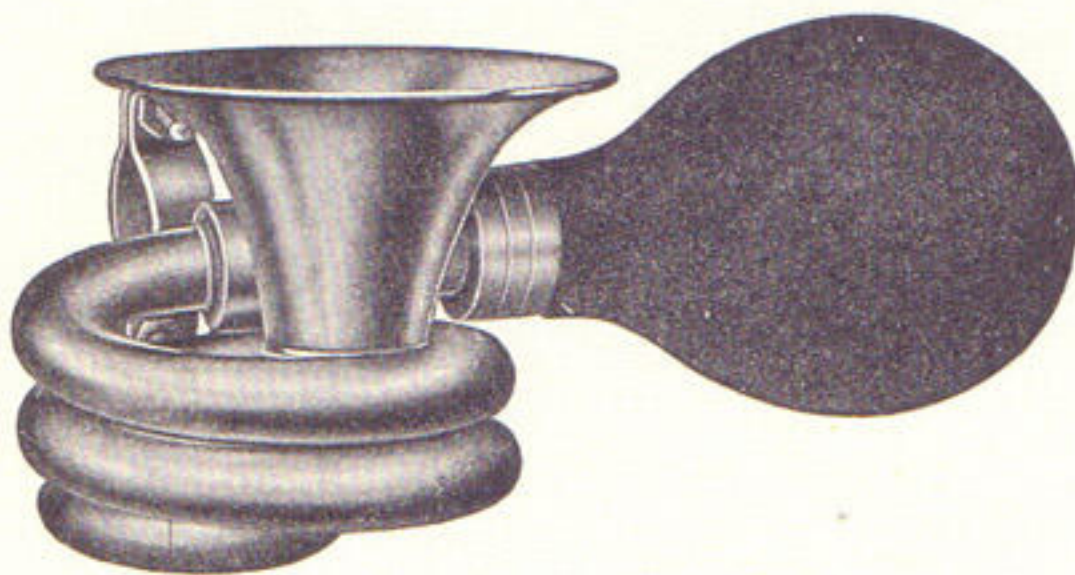
Nos. 325, 327, 330, Brass Finish.

| No. | Dia. of Bell | Length  | Each   |
|-----|--------------|---------|--------|
| 319 | 2 7/8"       | 9 "     | \$1.50 |
| 323 | 3 1/2"       | 9 1/4"  | 2.00   |
| 325 | 4 1/2"       | 11 "    | 2.50   |
| 327 | 5 "          | 13 "    | 2.75   |
| 330 | 5 3/4"       | 14 1/4" | 3.50   |

Motorcycle Horn.

A new style for 1908. Will be very popular.

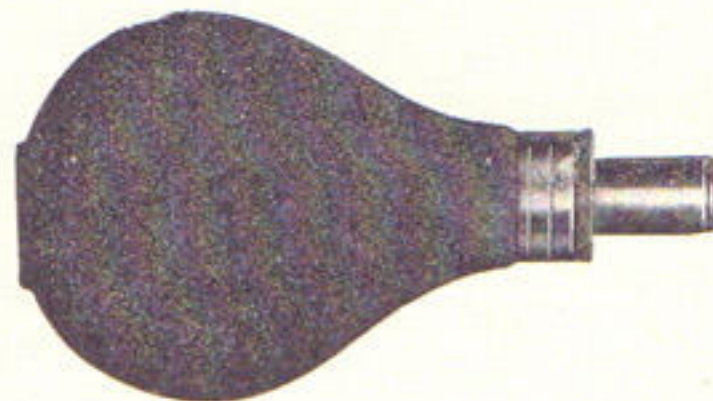
NICKEL OR BRASS FINISH.



No. 710 Motorcycle.

| No. | Dia. of Bell | Length | Each   |
|-----|--------------|--------|--------|
| 710 | 3 1/4"       | 8"     | \$3.00 |

Para Flex Bulbs.



Made of best Para gum. Complete with band and ferrule. These bulbs are made for us exclusively by the largest manufacturer of pure rubber moulded goods in America.

Rival Reeds.



| No. | To Fit Horns Nos.                      | Each   |
|-----|--|--------|
| 1   | 119, 123, 127, 319, 323, 325           | \$ .15 |
| 2   | 130, 327                               | .20    |
| 3   | 133, 330, 710, 10, 20                  | .25    |
| 4   | 540, 545, 550, 940, 945, 950, 818, 820 | .35    |

| No. | To Fit Horns Nos.                         | Each   |
|-----|---|--------|
| 2   | 119, 319                                  | \$ .35 |
| 3   | 123, 323                                  | .45    |
| 5   | 127, 325                                  | .55    |
| 7   | 130, 133, 330, 540, 940, 10, 20, 327, 710 | 1.00   |
| 8   | 545, 945, 818                             | 1.25   |
| 10  | 820                                       | 1.50   |
| 12  | 510, 950                                  | 1.75   |

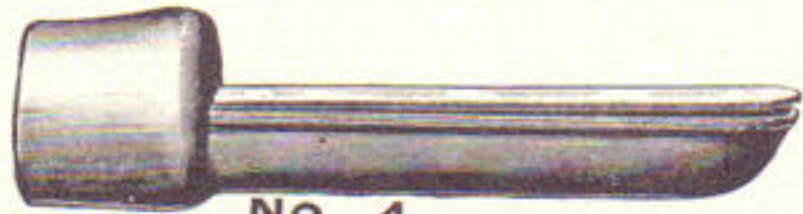
VOLIER HORN PARTS.



No. 6



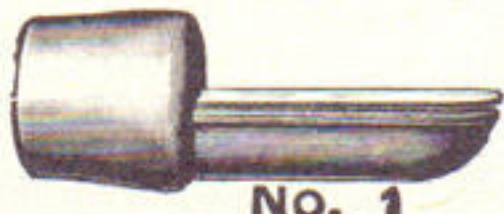
No. 5



No. 4



No. 3



No. 1



No. 0

Cut Actual Size.

Volier Reeds.

Made in one piece of special, vibratory, non-corrosive metal.

The kind that always blow.

| No. | To Fit Horns Nos.    | Each  |
|-----|----------------------|-------|
| 0   | 00, 0, 1, Depose     | \$.10 |
| 1   | A, B, C,             | .15   |
| 3   | 60 and D,            | .25   |
| 4   | 61, E,               | .30   |
| 5   | 810, 811, 1140       | .45   |
| 6   | 812, 1141, 1142, 510 | .65   |

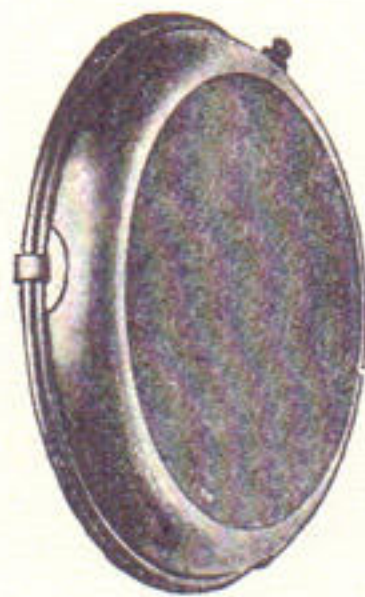
Volier Bulbs.  
Guaranteed Imported.



Chemically Cured. Complete with band and ferrule.

| No. | To Fit Horns Nos. | Each  |
|-----|-------------------|-------|
| 00  | Depose            | \$.30 |
| 0   | "                 | .35   |
| 1   | 1 " A             | .40   |
| 2   | B                 | .45   |
| 3   | C                 | .55   |
| 5   | D and 60          | .90   |
| 6   | E and 61          | 1.00  |
| 8   | 810               | 1.50  |
| 9   | 811, 1141, 1140   | 1.75  |
| 10  | 812, 510, 1142    | 2.40  |

1908



Round.



Oval.

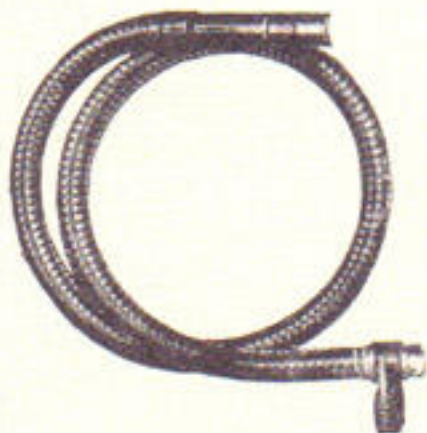
New Model L'Ideale Screens.

BRASS FINISH.

| Size   | Style | To Fit Horns Nos.     | Each  |
|--------|-------|-----------------------|-------|
| 135mm. | Round | 60, 10                | \$.75 |
| 155mm. | Round | 61, 810, 20, 540, 940 | .80   |
| 175mm. | Round | 811, 945, 545         | .90   |
| 200mm. | Round | 812, 950              | 1.00  |
| 160mm. | Oval  | 810                   | .90   |
| 180mm. | Oval  | 811                   | 1.10  |
| 200mm. | Oval  | 812                   | 1.25  |

Flexible Tubes.

BRASS FINISH.

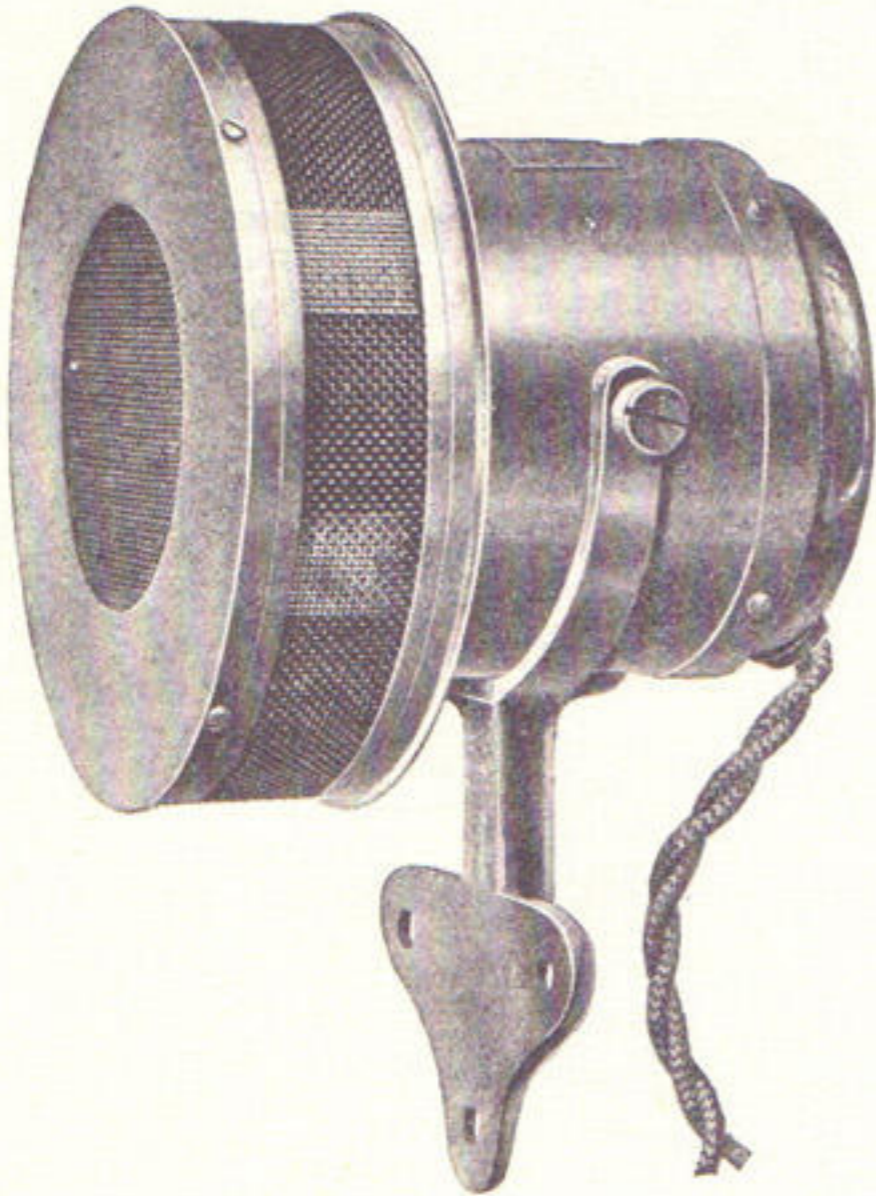


The tubes on all genuine Volier horns are double, the spiral on the inside and that on the outside running in opposite directions. Between the two there is asbestos packing, making the tubes air tight. One-half inch inside diameter.

|  |        |
|--|--------|
| 40" long, complete with clamps and screws, | \$1.25 |
| 50" " " " " "                              | 1.50   |
| 60" " " " " "                              | 1.75   |
| 40" " 5/8" diam. " " "                     | 1.50   |
| 50" " 5/8" diam. " " "                     | 1.75   |

**THE SIRENO ELECTRIC SIREN HORN.**

1908



Cut, one-half actual size  
Weight complete, 4 pounds.  
Each, \$35.00.

The Sireno is constructed throughout in the best possible manner and of the best raw materials procurable on the market.

**The Working Principle.**

Sound is produced through the well-known principle of centrifugal force; air is drawn in through the front opening of the casing and is driven out at the side openings. This current of air is generated by a rapidly revolving turbine, driven by an electric motor.

**The Operation.**

To put in operation it is only necessary to press a push-button conveniently located. The tone, whether high or low, can be regulated by the length of contact.

**The Installation.**

Can easily be installed in ten minutes. It is only necessary to connect up the wires to the ignition battery already installed on the car.

**The Care.**

The Sireno needs no more care than the ordinary electric fan. There is nothing to adjust, no vibrator to stick or cause trouble. The copper brushes should be renewed about once a season.

**The Advantages.**

The Sireno is *not* operated by a flexible shaft and friction pulley. Flexible shafts break and friction pulleys slip.

Can be operated in crowded streets. The Sireno picks up much quicker than the other types of sirens and it is not necessary to throw out your clutch and speed your motor to get the required tone.

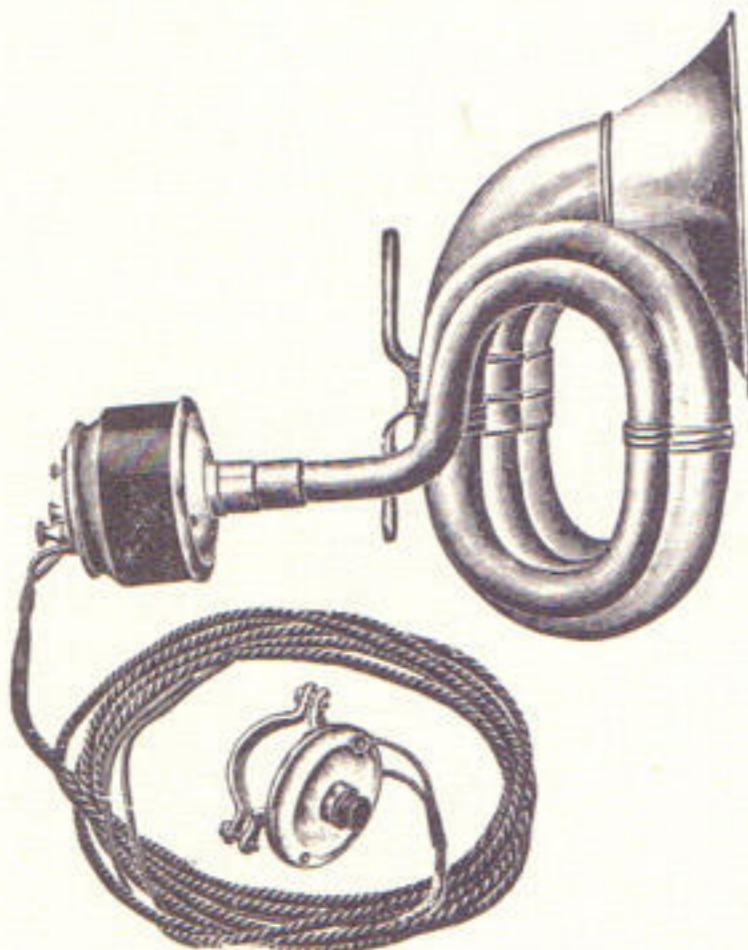
Does not drag down the ignition battery. The current consumed is small and the Sireno is only used intermittently. Will operate from six dry cells. Current consumption, *three* amperes.

Light in weight and very compact. The smallest great noise producer on the market.

The standard Sireno is wound for six volts. Special voltages to order.

**Prices**

Price of the Sireno, polished brass, complete with push-button and all directions for installing, \$35.00.



No. 1000 With Horn.

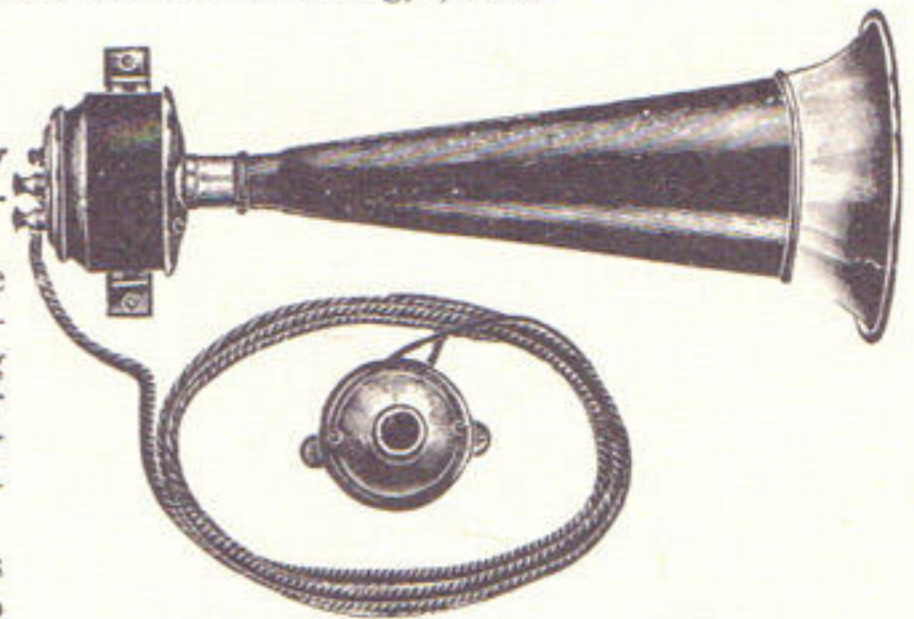
**Treco Electric Horn Attachment.**

Can be attached to any Auto-Horn. Simple, durable, low price.

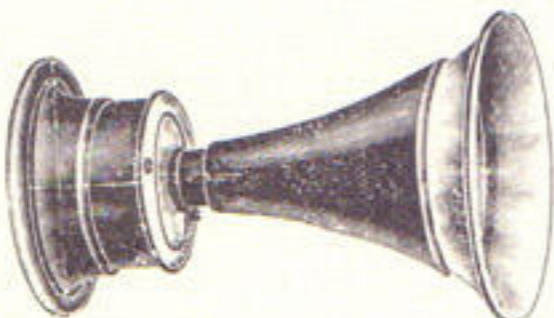
Signal under absolute control at all times. Operates from the steering wheel, also by the foot or any other part of the car by connecting with storage battery or dry cells.

Complete Outfit Less Horn: 1 Treco Auto Whistle, 1 Treco Clamp Push Button, 1 Terminal Block, 1 set of wires and connections. Price, \$5.00.

Dragon Type of Horn, Extra \$5.00.



No. 1050. Boat Outfit.

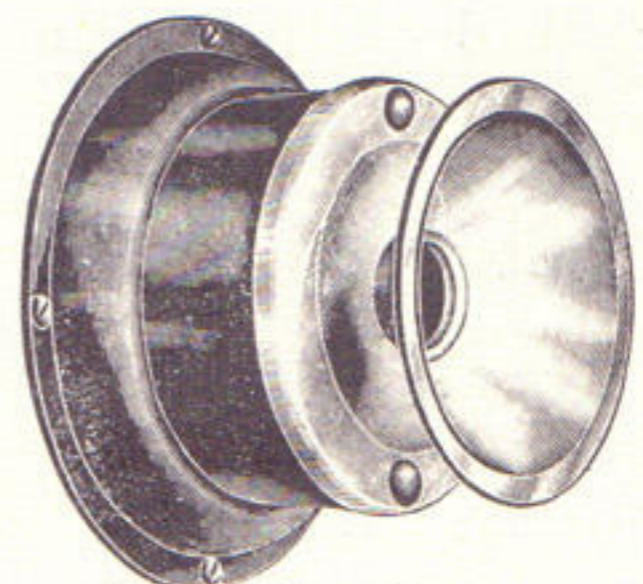


No. 999 Boat Whistle.

**No. 1050 Outfit Complete.**  
1 Large Size Treco Boat Whistle, 1 Water-Proof Push Button with Bracket, 1 14-inch Horn, Threaded, 1 Set of Wires for Connecting, 1 Special Bracket for Whistle. Each, \$6.00.

**No. 999 Marine Type.**  
A loud and durable whistle fitted with 14-inch horn, \$2.00.

**No. 998 House or Office Type.**  
Can be adjusted to any tone—it takes the place of the electric bell. Each, \$1.50.



No. 998 Office Type.

## Horns and Accessories

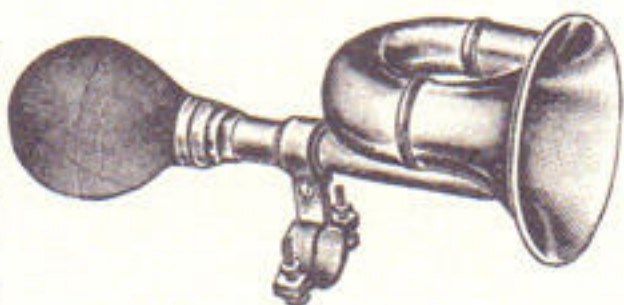


A classy horn of the bugle type. Gives a deep melodious alarm which

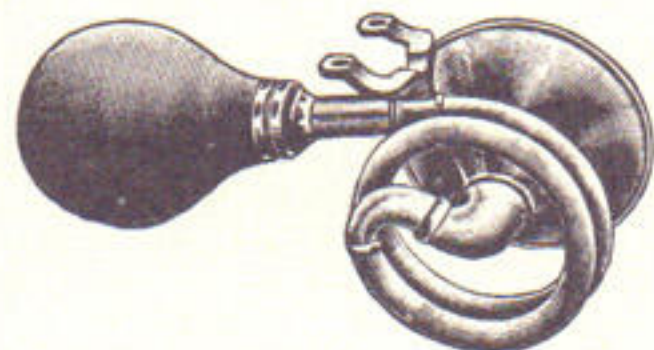
can be heard at a distance. Made of polished spun brass, nickel plated. Length, 8 inches; diameter of bell, 2¾ inches. High grade rubber bulb. Shipping weight, 10 ounces.

No. 19C6300 Bugle Type Horn.  
Price .....83c

This reliable horn is finished in highly polished brass with extra quality rubber bulb; artistic in appearance and musical in tone. It is furnished in three sizes.



| Cat. No. | Length  | Diameter of Bell | Diameter of Bulb | Shipping Weight | Price  |
|----------|---------|------------------|------------------|-----------------|--------|
| 19C6305  | 11½ in. | 4⅝ in.           | 2¾ in.           | 1 lb.           | \$1.57 |
| 19C6306  | 13 in.  | 5 in.            | 3¼ in.           | 1¼ lbs.         | 1.93   |
| 19C6307  | 14¼ in. | 6 in.            | 4¼ in.           | 1½ lbs.         | 2.29   |



This horn is furnished in brass, heavily nickel plated. Cannot be surpassed in tone and finish for a horn of this type.

| Cat. No. | Length    | Diameter of Bell | Shipping Weight | Price  |
|----------|-----------|------------------|-----------------|--------|
| 19C6320  | 8 inches  | 2¾ inches        | 1 lb.           | \$1.60 |
| 19C6322  | 9¾ inches | 4 inches         | 1½ lbs.         | 1.98   |

Our Import Multi-Tone Horn is one of the most attractive yet introduced.

In reality three horns in one. A slight pressure of the bulb produces a sound similar to the harmonious blending of several horns blown in unison, and so unique is the sound that anyone within its range cannot but stop to listen. Finished in heavy brass, highly polished. Length with bulb, 21 inches. Shipping weight, 1¾ pounds.

No. 19C6330 Import Multi-Tone Horn.  
Price .....\$5.44



Our Import Two-Tone Horn is fitted with two reeds of different tone. Produces a

sound entirely different from that found on a one-reed horn. Easy to blow and produces an attractive, penetrating sound. Finished in heavy highly polished brass, with best quality bulb. Length with bulb, 22½ inches. Shipping weight, 30 ounces.

No. 19C6335 Import Two-Tone Horn.  
Price .....\$3.80



Tapered Reed.

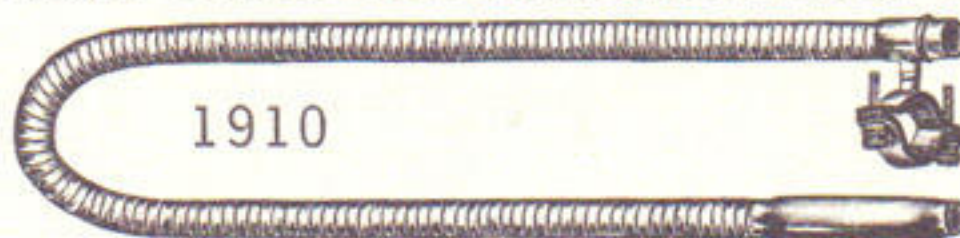
The reeds used in our horns have been carefully selected with a view to eliminating the usual reed troubles. They will be found extremely satisfactory in tone, quality and endurance. We are in position to supply them both plain and tapered. Tapered reeds will fit any large horn. Our reeds are of noncorrosive vibratory composition and are of high musical quality. Weather will not affect them.



Plain Reed.

No. 19C6350 Plain Reeds for small type of horn. Shipping weight, 1 ounce. Price.....8c

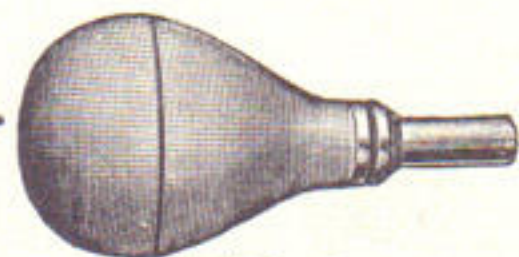
No. 19C6352 Tapered Reeds. Shipping weight, 1 ounce. Price..... 10c



We carry horn tubes made up complete, ready for use, as shown in illustration above. Made of flexible brass. One end is finished in a reed chamber with standard thread for screwing on a horn of any regular make; the other end is provided with a screw for attaching to the bulb and double clip for attaching to the steering post or such part of the car as may be desired.

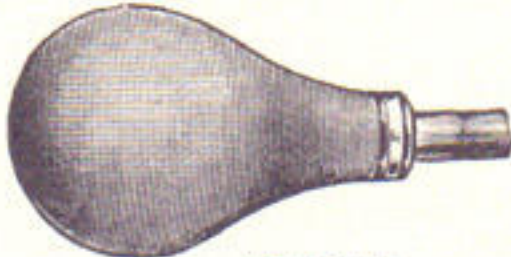
| Cat. No. | Length, inches | Diameter, inches | Shipping Weight | Price |
|----------|----------------|------------------|-----------------|-------|
| 19C6360  | 40             | ½                | 12 oz.          | 64c   |
| 19C6362  | 50             | ½                | 16 oz.          | 79c   |
| 19C6364  | 60             | ½                | 20 oz.          | 93c   |

The bulbs used in these horns are "A" grade and of the finest quality chemically cured rubber. They are soft, pliable and springy, and respond to the slightest pressure.



"A" Grade.

They should not be considered as inferior bulbs because we quote such extraordinarily low prices on them. The "B" grade bulbs shown herewith are of a grade which usually command from one-third to one-half more money. Though they are not made of as fine a selection of rubber as the "A" grade bulbs, they will be found satisfactory for practically every purpose.

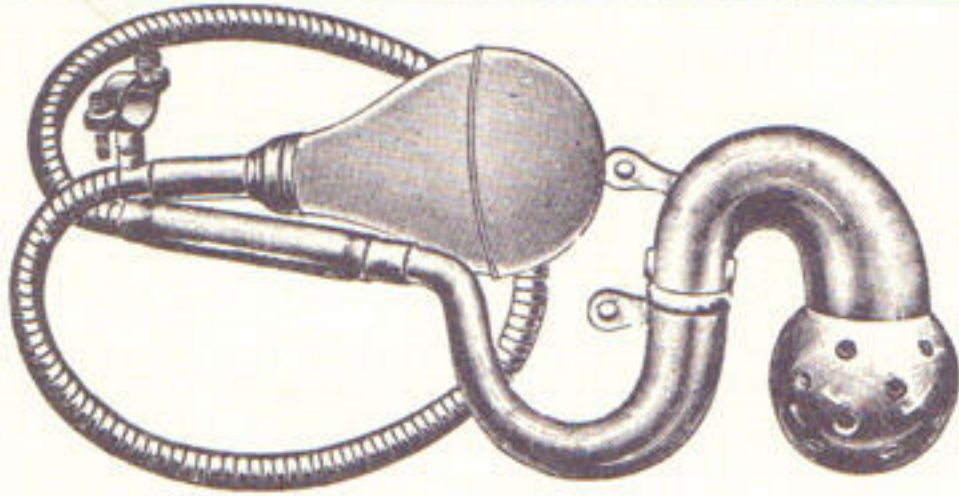


"B" Grade.

| Cat. No. | Model No. | Diameter | Shipping Weight | Price "A" Grade | Price "B" Grade |
|----------|-----------|----------|-----------------|-----------------|-----------------|
| 19C6380  | 2         | 2¼ in.   | 4 oz.           | 26c             | 22c             |
| 19C6382  | 4         | 2½ in.   | 4 oz.           | 29c             | 25c             |
| 19C6384  | 6         | 2¾ in.   | 5 oz.           | 39c             | 33c             |
| 19C6386  | 8         | 3¼ in.   | 7 oz.           | 48c             | 42c             |
| 19C6388  | 12        | 3¾ in.   | 8 oz.           | 55c             | 47c             |
| 19C6390  | 15        | 3½ in.   | 8 oz.           | 61c             | 53c             |
| 19C6392  | 23        | 3¾ in.   | 10 oz.          | 67c             | 59c             |
| 19C6394  | 27        | 3¾ in.   | 11 oz.          | 74c             | 64c             |
| 19C6396  | 50        | 4 in.    | 12 oz.          | 77c             | 67c             |

## Automobile Horns

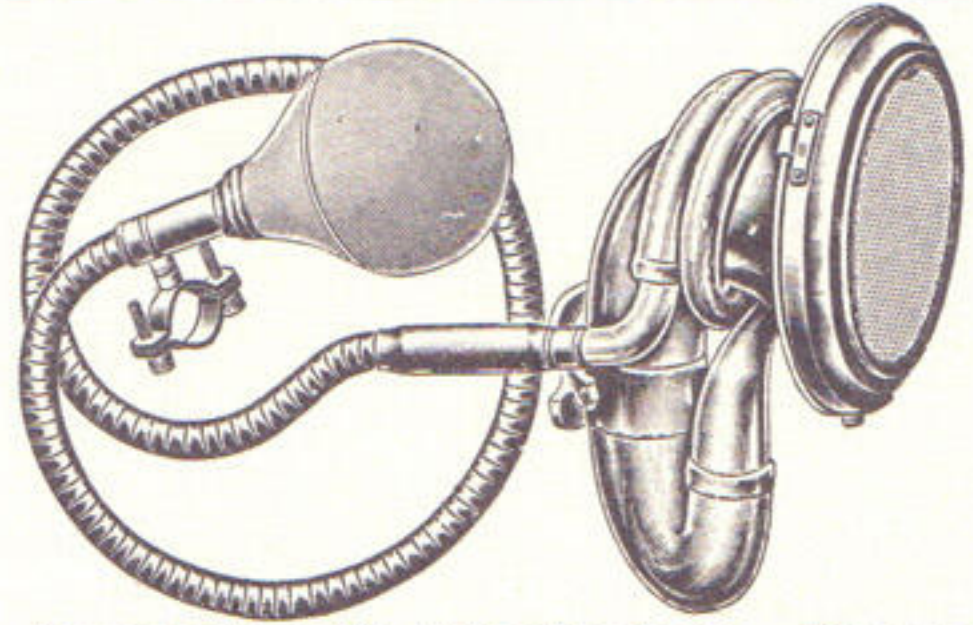
1910



The Famous Question Mark Horn, latest novelty of its kind. Water or dirt cannot enter into the horn. Very deep tone, the reed being in the center of the tube. Finished in beautifully polished brass. Rubber bulb is of extra quality. Shipping weight, 2¾ pounds.

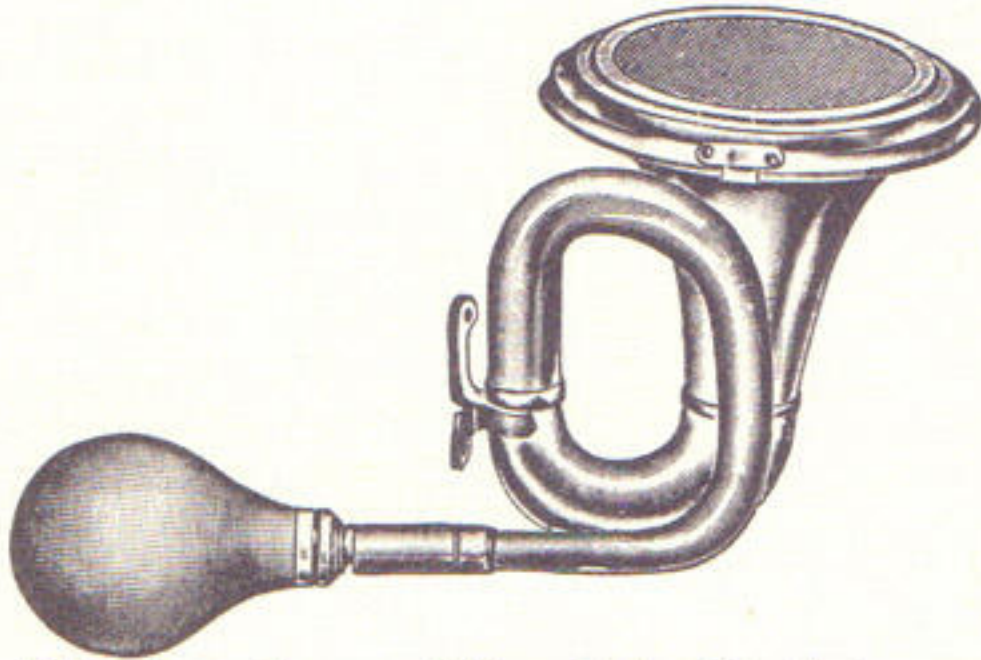
No. 19C6250 Question Mark Horn.

Price .....\$2.86



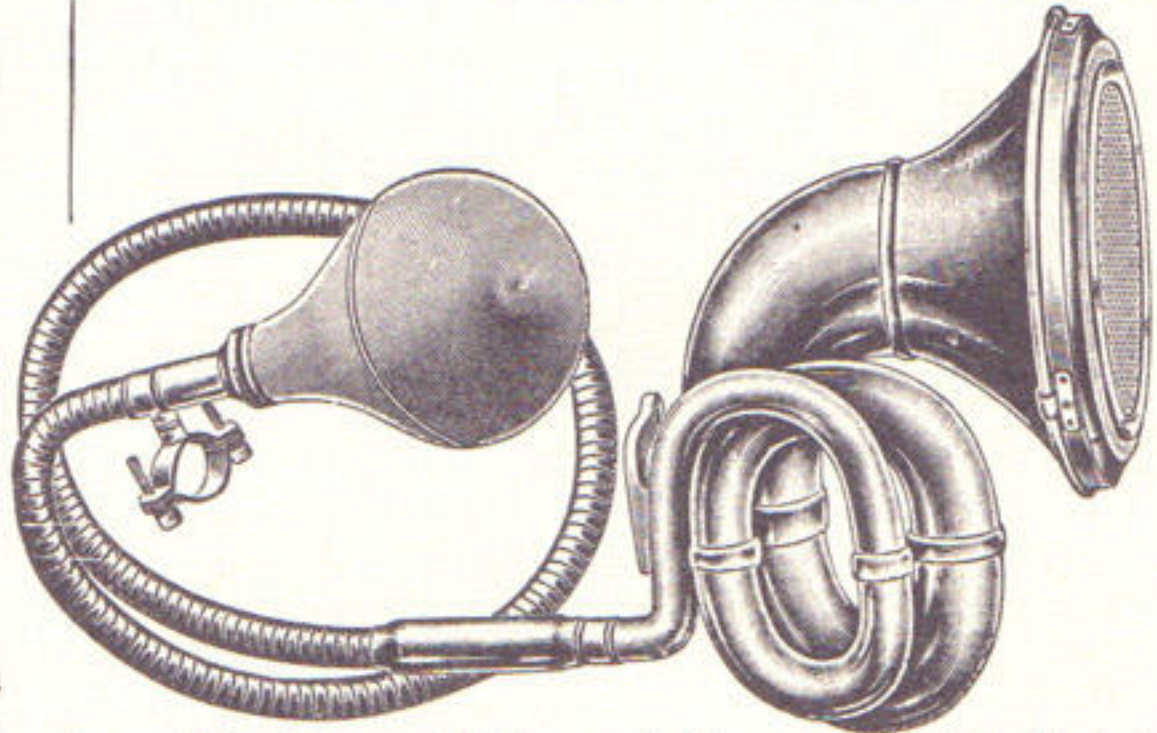
An exceptionally attractive horn. Diameter of bell, 6 inches. A double coil tube extends around the bell. Complete with screen and 40-inch tube. Made of beautifully polished brass. Workmanship, materials and tone qualities are of the highest grade. Shipping weight, 3¼ pounds.

No. 19C6265 Price.....\$4.28



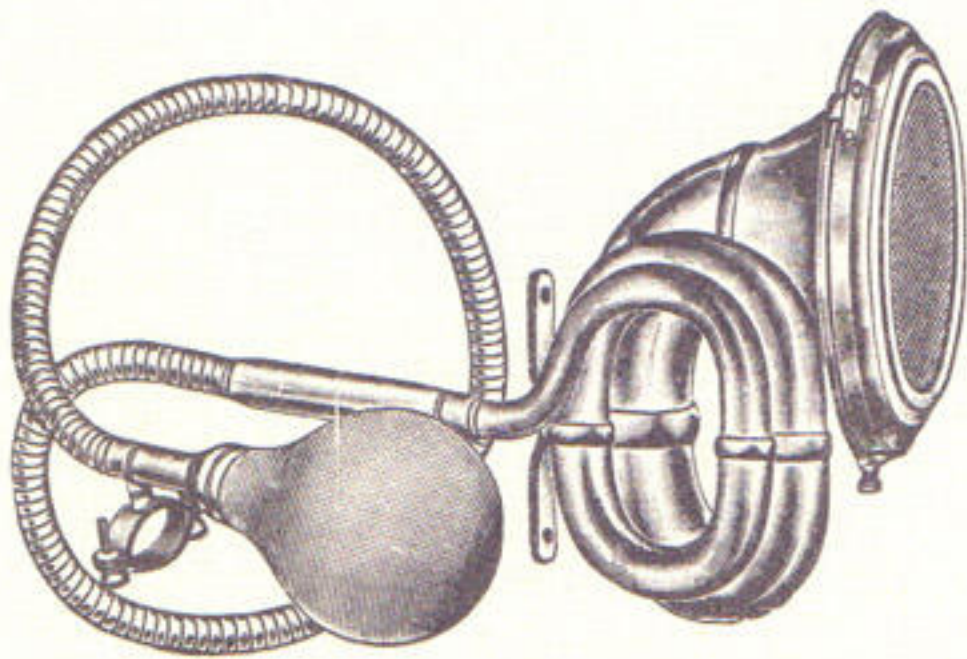
This horn is especially adapted to fasten on the side of runabouts or commercial cars. Diameter of bell, 6½ inches. Construction is of the very best, beautifully polished brass and extra quality rubber bulb combining to make an attractive appearance and finish. Tone is superb. Shipping weight, 2¾ pounds.

No. 19C6255 Price.....\$2.87



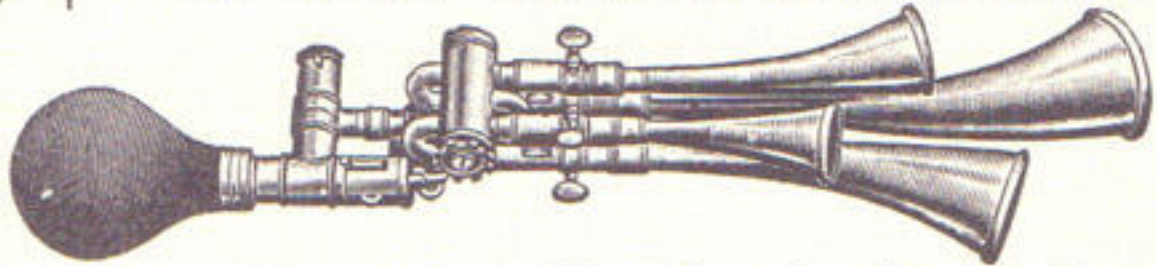
Handsome, high grade horn. Oval bell, 8x6 inches. Complete with screen and 40-inch tube. Made of heavy, highly polished brass. No expense has been spared to make this a superior horn and an artistic success in every respect. Shipping weight, 4 pounds.

No. 19C6270 Price.....\$5.93



A very popular style of horn. Oval bell, size 7x5 inches, with lyre bracket, screen and 40-inch tube. Made of all brass, rubbed to a high polish, extra quality rubber bulb. Has all the refinements of a high grade horn. Shipping weight, 3 pounds.

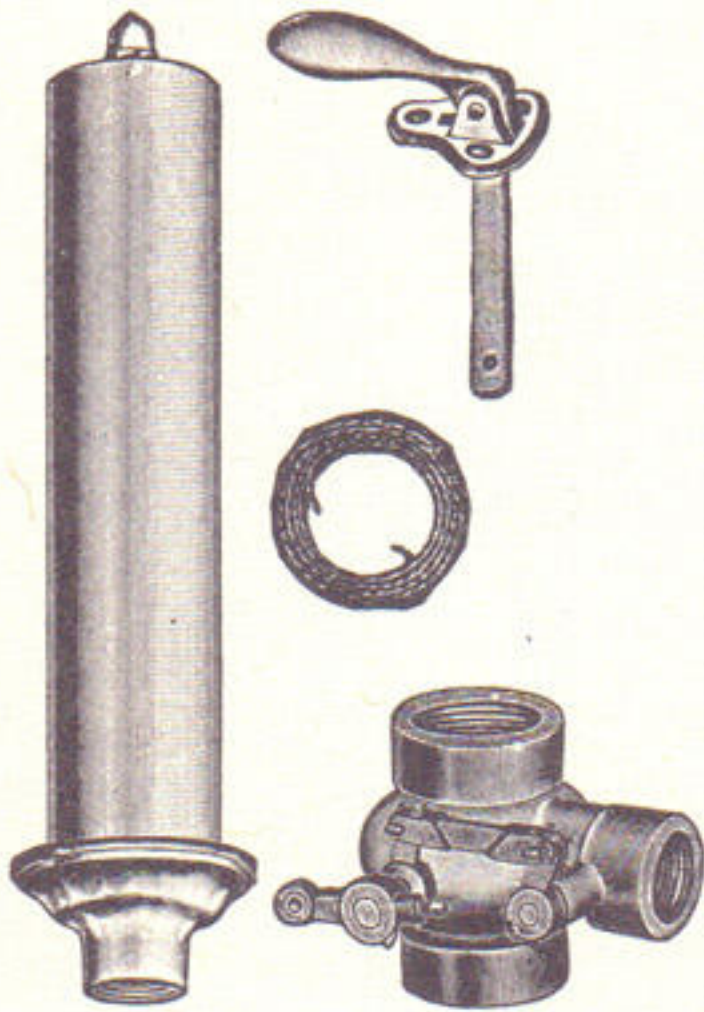
No. 19C6260 Price.....\$4.14



The Testophone Horn has a bugle call effect. An automatic distribution of air to the four trumpets in turn produces a beautiful musical combination. By adjusting the valve and changing the different tubes the combination can be varied at will. In operation it resembles an ordinary bulb horn. Pressing the bulb lightly several times in rapid succession gives a resemblance to the bugle call, the different notes being sounded in turn and sometimes in combination. The most popular horn novelty ever introduced. The calls are so unusual as to instantly attract attention anywhere. A removable bracket permits the horn to be detached from the car for safe keeping. Constructed of heavy brass, beautifully polished. Length, 26 inches. Shipping weight, 4¼ pounds.

No. 19C6275 Testophone Horn. Four tones. Price .....\$15.63

## The Barco Horn



The Barco Horn or Motor Chime is the best mechanically operated chime of this style. Has four musical notes that blend harmoniously, whether blown softly or with full volume. Tube is divided into four chambers of varying dimensions. Constructed of solid brass highly polished. Sounding this horn at high speed will not result in the shriek one often hears under similar conditions. Tone, workmanship and material are perfect. Not affected perceptibly by soot and readily unscrewed from the bell for cleaning without removing valve or bell. Valve is malleable iron and is constructed on the double opposed butterfly principle and is guaranteed not to burn out, stick or leak. The tone is regulated by the amount the valve is opened and not by the engine speed. Valves are furnished either threaded for 1¼, 1½ or 2-inch iron pipe, or smooth for 1¼, 1⅜, 1¾ or 2¼-inch steel tube. Furnished in two sizes.

**No. 19C6400 Small Barco Horn.** Size, 2 inches wide and 11½ inches long. Shipping weight, 6¾ pounds. Price.....\$3.87

**No. 19C6402 Large Barco Horn.** Size, 2¼ inches wide and 14½ inches long. Shipping weight, 7½ pounds. Price.....\$5.54

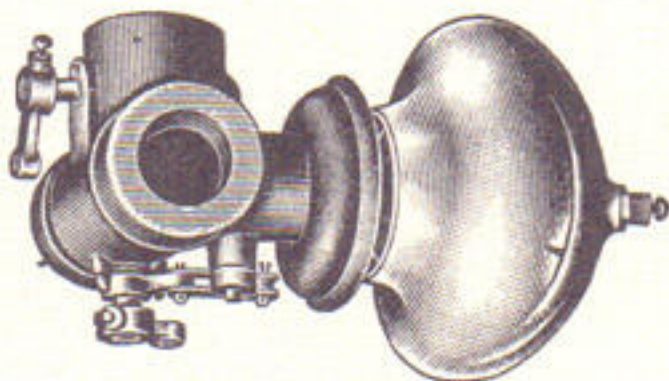
**NOTE**—Iron pipe measurements are inside dimensions, steel tube measurements outside. State size of valve when ordering and whether for iron pipe or steel tubing.

## “Husk” Chimes and Gongs

The New “Husk” Motor Gong.

1910

“Husk” Adjustable Motor Gong.



The latest idea in exhaust blown whistles. This gong has a special dome of great carrying quality. Will not shriek or clog up with soot or oil and cannot burn out or leak. The adjustment of the dome will suit any motor made by simply rotating the dome from right to left. Dome is cast of special alloy almost the equal of silver in tone producing qualities, the outer surface being highly polished. Made in sizes as listed below:

| No.     | Hub Capacity   | Shipping Weight | Price  |
|---------|----------------|-----------------|--------|
| 19C6410 | 1 to 1½ inches | 5 pounds        | \$4.05 |
| 19C6412 | 1½ to 2 inches | 6 pounds        | 4.49   |
| 19C6414 | 2 to 2½ inches | 7¾ pounds       | 4.97   |
| 19C6416 | 2½ to 3 inches | 9½ pounds       | 5.43   |

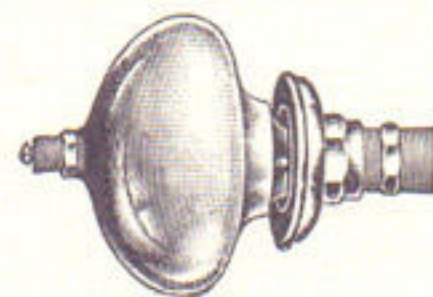
“Husk” Elongated Adjustable Motor Gong.



The adjustable motor gong is furnished elongated as illustrated, as it can be connected more satisfactorily to some makes of cars than the model No. 19C6425 shown on this page. Shipping weight, 4½ pounds.

**No. 19C6420 Elongated Motor Gong.**

Price .....\$3.03



The new “Husk” Adjustable Motor Gong is an entirely new idea in exhaust blown signals for motor cars and marine boats. The bell and chime lug are of cast brass, accurately machined. The dome is a special mixture of polished aluminum, almost equal to silver in tone production. This gong is intended for use with our “Husk” valve and is adjusted for dome on any type of gas engine threaded for 1-inch iron pipe. Shipping weight, 3 pounds.

**No. 19C6425 Adjustable Motor Gong.**

Price .....\$3.23

“Husk” Tri-Tone Motor Chime.



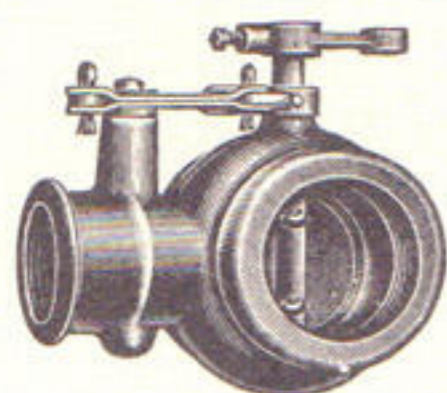
The “Husk” Old Style Brass Tri-Tone Motor Chime is furnished with a soot proof bell. This improved construction prevents clogging, which sometimes happens in this style of gong. This result is secured by a new expansion chamber in the bell separating the oil and soot. Constructed of the very finest brass castings and drawn seamless brass tubing, highly polished. Furnished complete with “Husk” valve, brass pedal, 10 feet of steel cable and pulley. Shipping weight, 5 pounds.

**No. 19C6430 Tri-Tone Motor Chime.**

Price .....\$3.25

**NOTE**—When ordering chimes be sure to give make and model of car or specify size and kind of exhaust tube.

**Genuine Husk Chime Valves.**



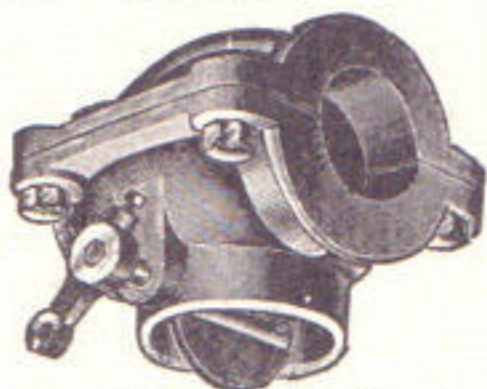
The excellence of this line of cut out valves is shown by the presence of many imitations now on the market. Material and workmanship used in these valves are the best obtainable and they are guaranteed not to burn

out, clog up, stick or leak. Made in five models to fit five sizes of pipe.

| No.     | Size of Pipe | Shipping Weight | Price  |
|---------|--------------|-----------------|--------|
| 19C6450 | 1 inch       | 1½ pounds       | \$0.71 |
| 19C6452 | 1¼ inches    | 2 pounds        | .85    |
| 19C6454 | 1½ inches    | 2 pounds        | 1.00   |
| 19C6456 | 2 inches     | 2½ pounds       | 1.25   |
| 19C6458 | 2½ inches    | 6 pounds        | 1.42   |

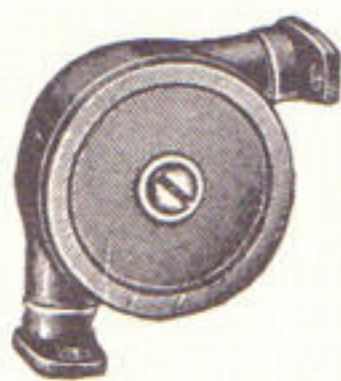
**Rudie Cut Out Valves.**

The Rudie Cut Out Valve is the only practical inexpensive device made for this work. Unnecessary to remove a section from the exhaust pipe; simply drill a number of holes or saw a V opening in the section of the pipe that comes between the hubs where the valve is bolted on. The steel disc at the outlet sits at an angle on the engine. Guaranteed not to leak. The Rudie is made in four models of finished hubs as listed below:



| No.     | Capacity of Hub | Ship. Wt. | Price  |
|---------|-----------------|-----------|--------|
| 19C6460 | 1 —1¾ inches    | 2 pounds  | \$0.83 |
| 19C6462 | 1½—1¾ inches    | 2½ pounds | 1.00   |
| 19C6464 | 2 —2¾ inches    | 5½ pounds | 1.17   |
| 19C6466 | 2½—3 inches     | 7 pounds  | 1.50   |

**Brass Cable Sheave.**



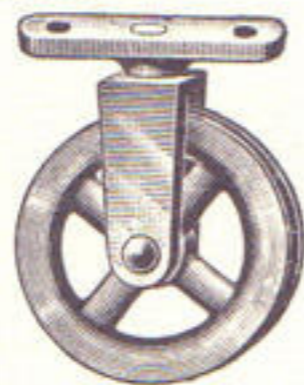
The Pull Easy Sheave is an enclosed pulley especially designed for operating the chime on cut out valves where right angle turns must be made with wire cable. Has an oiltight case and hubs threaded for ⅛-inch iron pipe so that cable may be enclosed from the

point of operation to valve if desired. Shipping weight, 14 ounces.

No. 19C6470 Pull Easy Sheave. Price..50c

**Swivel Cable Sheave.**

This Swivel Cable Sheave is provided with an extra deep groove for receiving wire cables. A swivel joint attaches the pulley and fork to base and permits the sheave to operate at any angle. Shipping weight, 1 pound.



No. 19C6475 Swivel Cable Sheave.

Price .....26c

**Brass Robe Rails and Foot Rests**

**Brass Robe Rails.**

An equipment of robe rails and foot rests adds much to the comfort of the occupants of the machine. The line of robe rails and foot rests we offer is the very best produced. Solid brass tubing reinforced with steel is used throughout. The prices we ask for our solid brass rails will be found even lower than the prices demanded by the brass plated rail manufacturers.

**V End Robe Rail.**



V End Robe Rail with 30-inch crossbar. Fastening brackets are V shape. A very attractive design. Shipping weight, 2¼ pounds.

No. 19C6490 V End Robe Rail. Price....84c

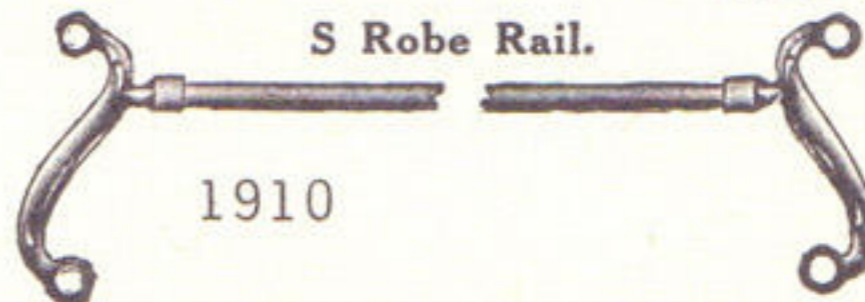
**D Handle Robe Rail.**



Solid brass tube, steel reinforced crossbar, 30 inches long and ⅝ inch in diameter. Shipping weight, 2¼ pounds.

No. 19C6495 D Handle Robe Rail. Price .....\$1.00

**S Robe Rail.**

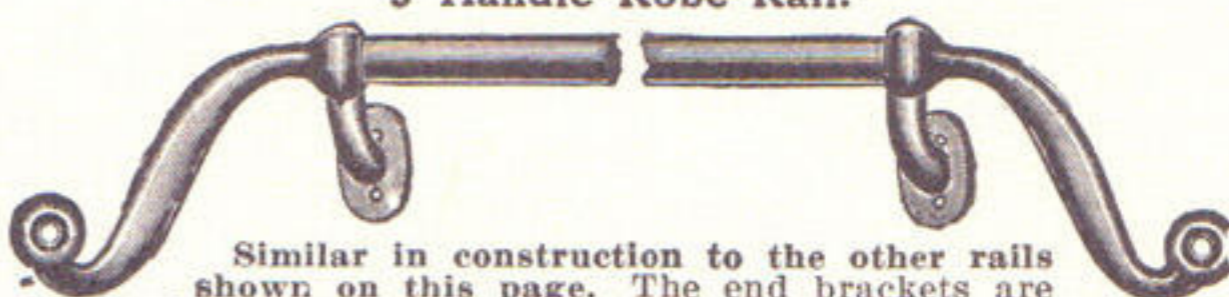


1910

Practically a necessity for every tonneau on either light or heavy touring cars. Its use prevents wraps and coats from being crushed or mused in the seat or bottom of the car. Solid brass tube steel reinforced, 30 inches long. Shipping weight, 3 pounds.

No. 19C6500 S Robe Rail. Price.....\$1.00

**J Handle Robe Rail.**



Similar in construction to the other rails shown on this page. The end brackets are made in the form of the letter J, hence the name. Shipping weight, 3 pounds.

No. 19C6505 J Handle Robe Rail. Price.\$1.17

**Brass Foot Rails.**

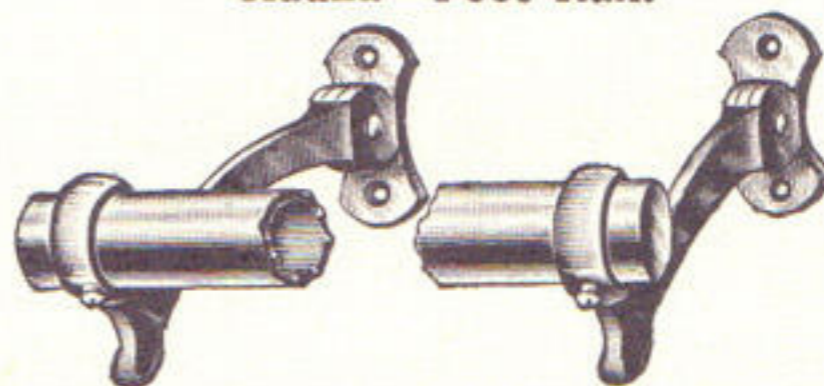
**Standard Foot Rail.**



Standard rail with 30-inch crossbar, made of 1-inch material. Strongly and handsomely constructed in every respect. Adds greatly to the comfort and convenience of the car's passengers. Shipping weight, 3 pounds.

No. 19C6520 Standard Foot Rail. Price.\$1.20

**"Hadka" Foot Rail.**

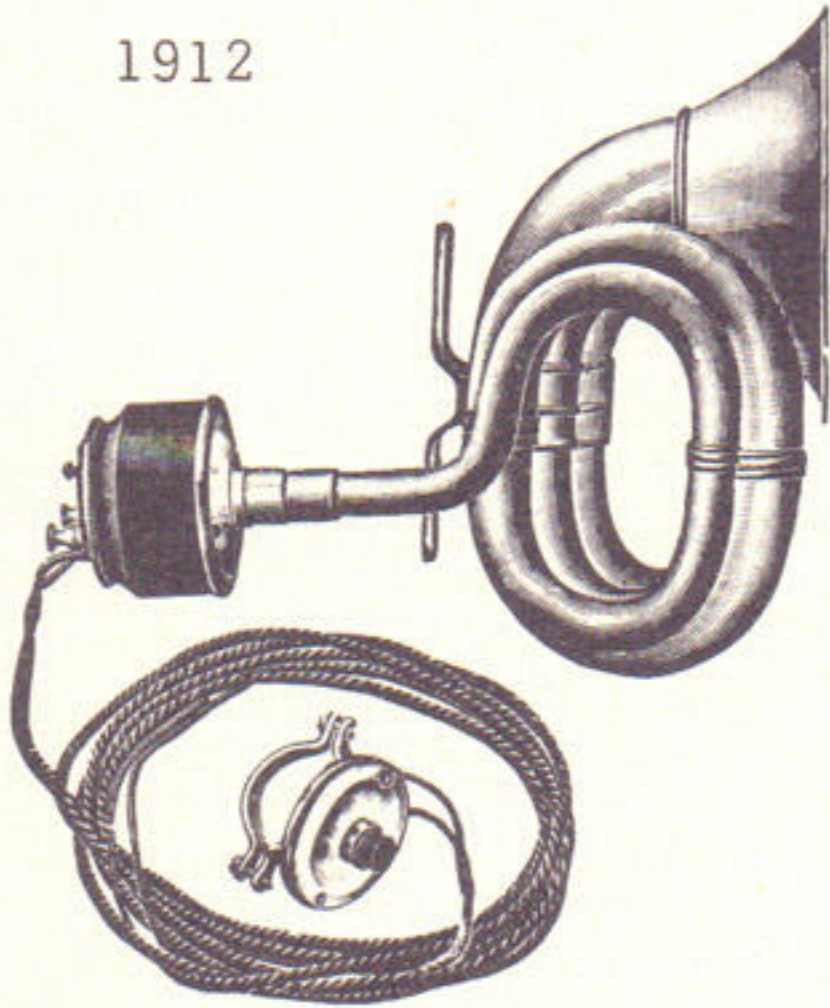


A very handsome design for high class cars. Constructed of brass castings and reinforced brass tubing, polished and buffed. Has crossbar 30x1¼ inches. The four brackets are adjustable for crossbar. Milled fore hinges. Shipping weight, 5 pounds.

No. 19C6525 "Hadka" Foot Rail. Price.\$1.87

## HORNS AND HORN PARTS

1912

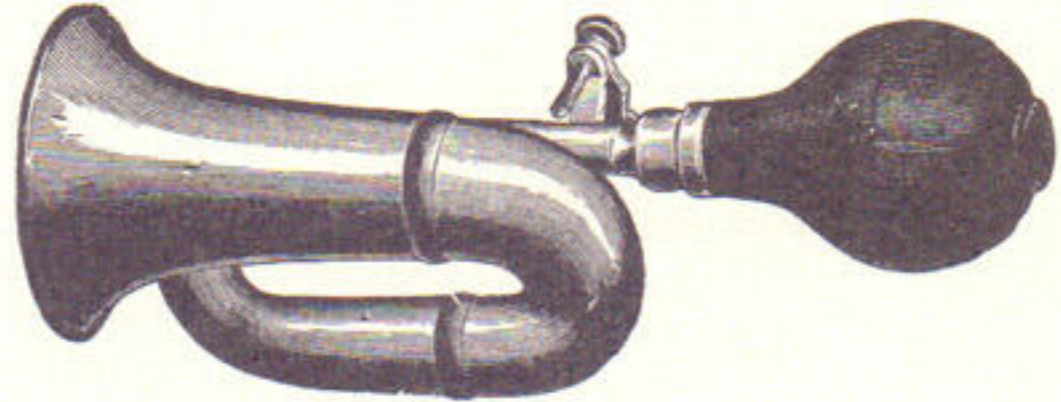


**No. 1500—Electric Horn Attachment**

Can be attached to any horn, as shown in illustration, discarding the old horn bulb and reed. Gives a sharp and penetrating sound.

Operated with storage battery or dry cells.

**Price complete (less horn) . . . . . \$5.00**

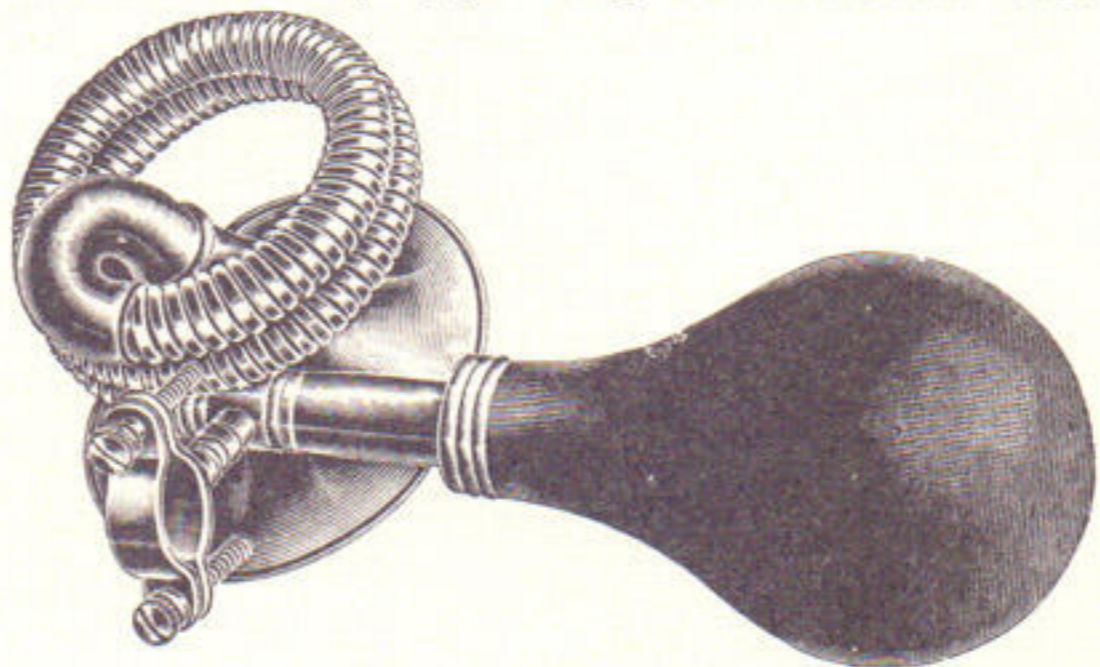


**Esco Horns**

Made in brass or nickel plated. Furnished with the best bulbs and reeds.

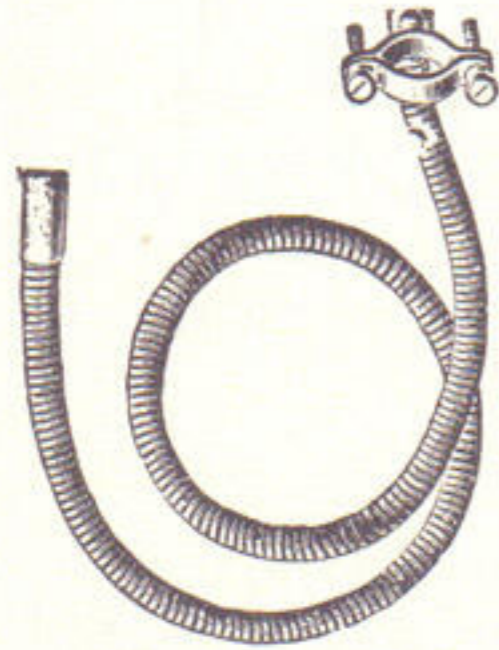
**Price List**

|   |        |
|---|--------|
| No. 20—3½ in. bell, 9¾ in. long . . . . . | \$2.00 |
| No. 24—5 in. bell, 13 in. long . . . . .  | 3.00   |
| No. 26—6 in. bell, 14½ in. long . . . . . | 3.50   |



**No. 18A—Motorcycle Horn**

Designed especially for motorcycles and bicycles.  
**Price each . . . . . \$2.00**



**Flexible Horn Tubing**

Air tight, will not break or pull apart.

**Price List**

|                   |        |
|-------------------|--------|
| 40 in. Price each | \$1.00 |
| 50 in. Price each | 1.25   |
| 60 in. Price each | 1.40   |

**Divided Tubes, with Reed in Center**

|                   |        |
|-------------------|--------|
| 40 in. Price each | \$1.50 |
| 50 in. Price each | 1.75   |
| 60 in. Price each | 2.00   |

For nickel plated horn tubes add 25 cents each to above prices.



**Nonpareil Horn Reeds**

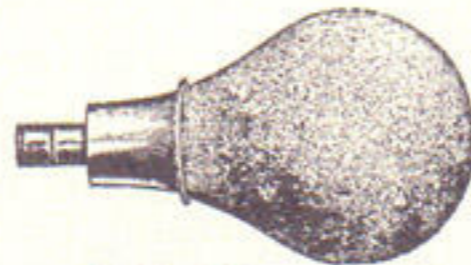
Non-corrosive, adjusted to give powerful sound.

**Price each . . . . . \$0.20**

**Wondertone Reeds**

The Wondertone meets the demand for a more satisfactory reed. Each reed packed in sealed box and guaranteed.

|                      |                   |
|----------------------|-------------------|
| Regular . . . . .    | Price each \$0.25 |
| In ferrule . . . . . | Price each .35    |



**Long Life Horn Bulbs**

Has ferrule at base of rubber to prevent cracking.

|  |        |
|--|--------|
| No. 10—Diam. 3½ in., length 5½ in. . . . . | \$1.25 |
| No. 12—Diam. 3¾ in., length 5¾ in. . . . . | 1.35   |
| No. 15—Diam. 4 in., length 6½ in. . . . .  | 1.50   |



**Horn Bulbs**

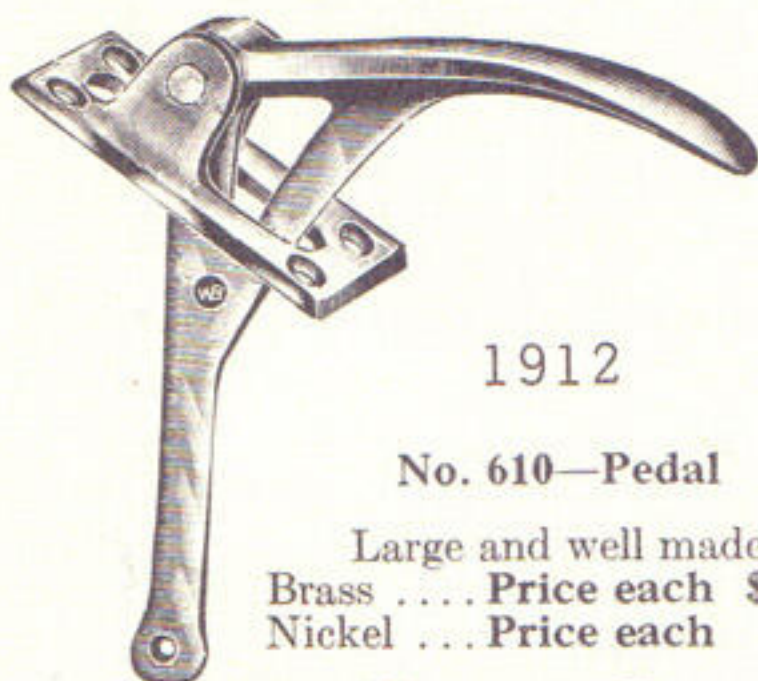
Extra quality seamless black bulbs; soft, pliable and springy.

|   |        |
|---|--------|
| No. 5—Small . . . . .                     | \$0.75 |
| No. 6—Medium . . . . .                    | .85    |
| No. 7—Large . . . . .                     | 1.00   |
| No. 8—Extra large . . . . .               | 1.15   |
| No. 15—Large, French thread . . . . .     | 1.50   |
| Extra for nickel trimming, Each . . . . . | .25    |



# E.A. FEATHERSTONE

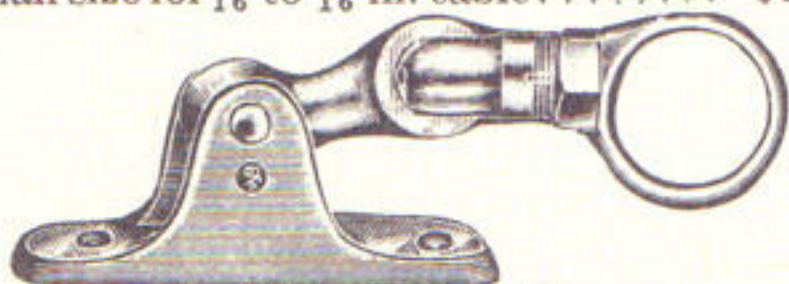
## CUT-OUT PEDALS, CABLE, PULLEYS AND SPRINGS



1912  
No. 610—Pedal  
Large and well made.  
Brass . . . . Price each \$0.75  
Nickel . . . Price each 1.00

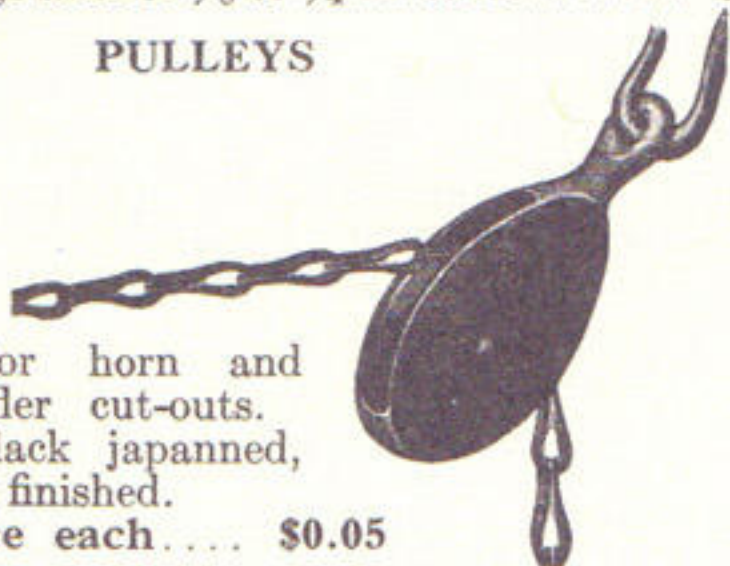


No. 700—Cut-out Lever  
Small size for  $\frac{1}{16}$  to  $\frac{3}{16}$  in. cable . . . . . \$0.75

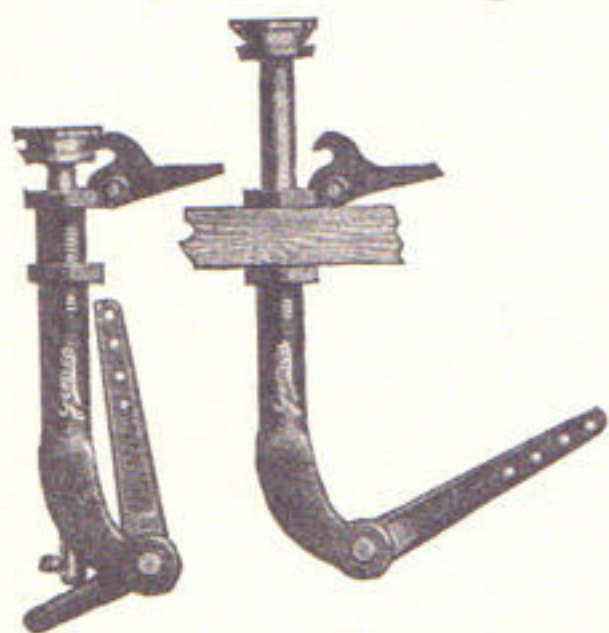


No. 710—Cut-out Lever  
Large size for  $\frac{1}{8}$  to  $\frac{1}{4}$  in. cable . . . . . \$0.90

### PULLEYS



For horn and muffler cut-outs.  
Black japanned, well finished.  
Price each . . . . \$0.05



### STYLE "O" AND "P" PEDAL

This is a very high grade, popular pedal. It is attached by boring a  $\frac{3}{4}$  inch hole through the floor board, removing the top and inserting threaded part of pedal in hole. The upper and lower nuts are adjustable and may be turned up or down to accommodate the thickness of the floor board. Made in two styles: "O" with lock, and "P" without lock.

#### Prices—Brass Only

|                     |        |
|---------------------|--------|
| Style "O" . . . . . | \$0.90 |
| Style "P" . . . . . | .75    |



STYLE-K      STYLE-L      STYLE-M  
HEEL BUTTON



STYLE-F      STYLE-G      STYLE-H

### Horn and Cut-out Pedals

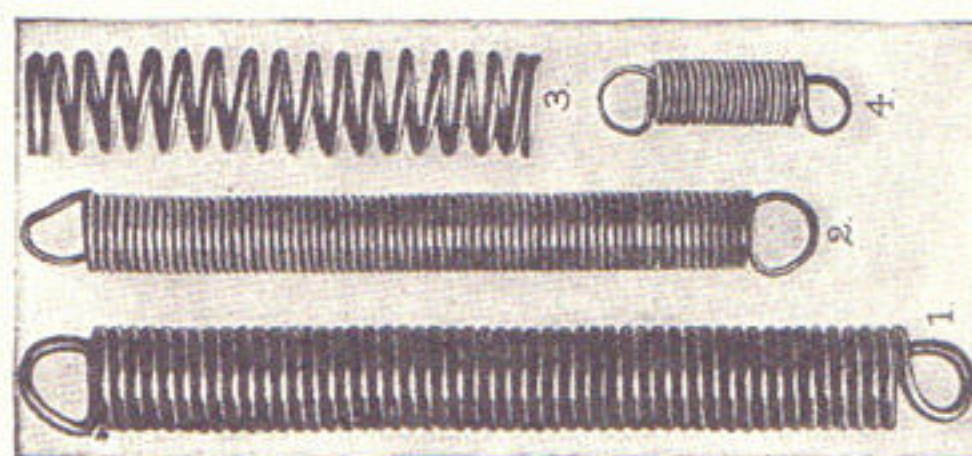
Style "K" can be locked at many different positions and will release by a tap of the toe.

Style "L" locks and releases by a simple movement of the toe.

Style "M" Heel Button is operated by the heel. It locks easily and releases by simply tapping it.

Styles "F," "G," "H" are strong, neat in appearance and easily fastened to the floor plate of the car.

|                              | Black  | Nickel Plated | Brass  |
|------------------------------|--------|---------------|--------|
| Style K . . . . .            | \$0.50 | \$0.85        | \$0.80 |
| Style L . . . . .            | .50    | .75           | .70    |
| Style M . . . . .            | .40    | .65           | .60    |
| Style F . . . . .            | .25    | .50           | .45    |
| Style G . . . . .            | .20    | .50           | .40    |
| Style H . . . . .            | .20    | .40           | .35    |
| Cable Chain, per ft. . . . . | .....  | .....         | .05    |



### Cut-out Springs

|  |        |
|--|--------|
| No. 1—Length 5½ in. . . . .                            | \$0.10 |
| No. 2—Length 4½ in. . . . .                            | .05    |
| No. 3—Length 3 in. . . . .                             | .05    |
| No. 4—Length 1½ in. . . . .                            | .05    |
| Assortment of twenty springs in box, convenient sizes. |        |
| Price per box . . . . .                                | \$0.50 |



### Steel Wire Cable

|                          |                   |                    |                   |                    |
|--------------------------|-------------------|--------------------|-------------------|--------------------|
| Size . . . . .           | $\frac{1}{8}$ in. | $\frac{3}{16}$ in. | $\frac{1}{4}$ in. | $\frac{5}{16}$ in. |
| Price per foot . . . . . | \$0.05            | \$0.05             | \$0.10            | \$0.10             |

**"NON-PAREIL" AUTO HORNS**

The popularity of NON-PAREIL HORNS is best demonstrated by the fact that they are being used by 90 per cent. of all the manufacturers of automobiles in the United States.

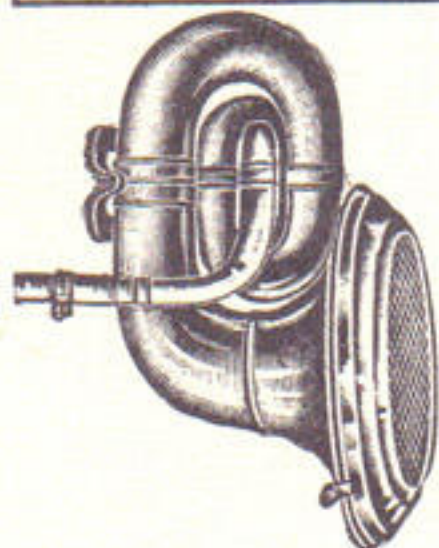
Every horn that we ship is carefully tested for sound; all the bulbs are made of chemically pure gum, and warranted not to crack or become hard. The assortment we furnish affords a variety suitable for all makes of cars from the smallest runabout to the largest touring car.

The prices include a standard length (40 or 50 in. long) flexible brass tubing and fine quality bulb. Specify length wanted.

Prices only apply to Horns in regular brass finish, but we are prepared to furnish all these types of Horns in the following finishes, at the following extra cost.

|   |        |   |        |
|---|--------|---|--------|
| All Black.....                                      | \$0.50 | All nickel.....                           | \$0.50 |
| Black finish, Horn and Tube, with brass screen..... | .50    | Horn and tube black, screen in nickel.... | .50    |
| Horns only in black, tube and screen brass          | .50    | Horn only black, tube and screen nickel.  | .50    |

1912



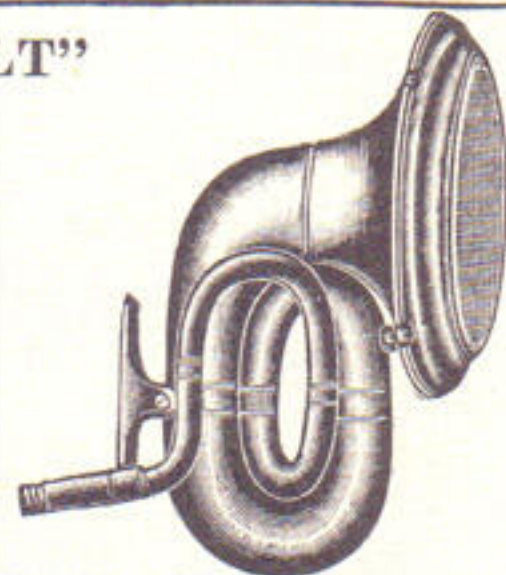
**THE "PACKARD"**

This horn is used exclusively on such cars as the Packard, Peerless, and Pierce-Arrow. It is the largest horn we have, and has a deep penetrating tone. The bell points down to prevent water from entering. Diameter of bell, 8 3/4".

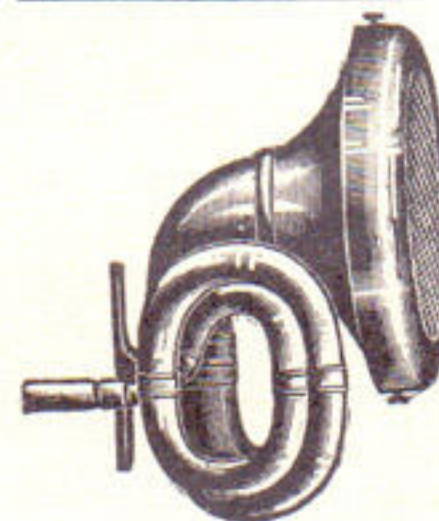
No. 3200. Reg. Price, \$13.00. Cut Price, \$6.00  
Net Weight 4 lbs.

**THE "RENAULT"**

A strictly new design and the latest novelty for 1912. It has an exceptionally deep tone; is well and carefully finished, and highly polished. It is neat and compact, and presents an exceptionally fine appearance. Diameter of bell, 8 1/2".



No. 3201. Reg. Price, \$10.00. Cut Price, \$4.80  
Net Weight 3 1/2 lbs.



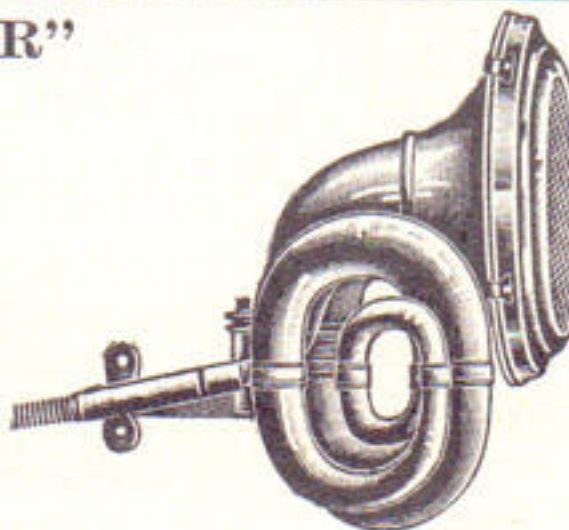
**THE "LOCO"**

A handsome high grade horn. One of the standard patterns and produces a deep penetrating tone. Suitable for medium sized touring cars. Diameter of bell, 7 3/4".

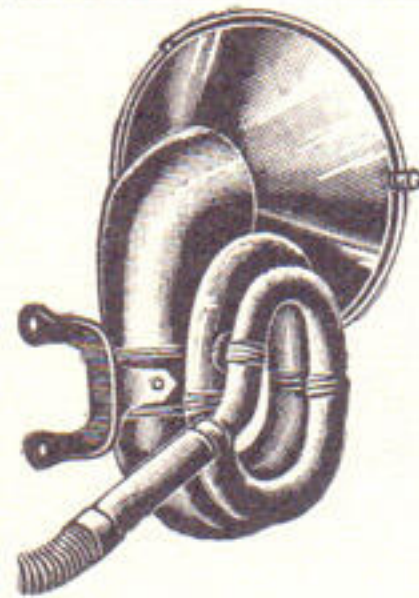
No. 3202  
Reg. Price, \$11.00  
Cut Price, \$3.20  
Net Weight 3 lbs.

**THE "LOZIER"**

This horn is somewhat similar to the horn described opposite, the only difference being that this horn is larger and has an additional large coil. Diameter of bell, 8 1/4".



No. 3203  
Reg. Price, \$13.00  
Cut Price, \$5.33  
Net Weight 3 1/2 lbs.



**THE "STANDARD"**

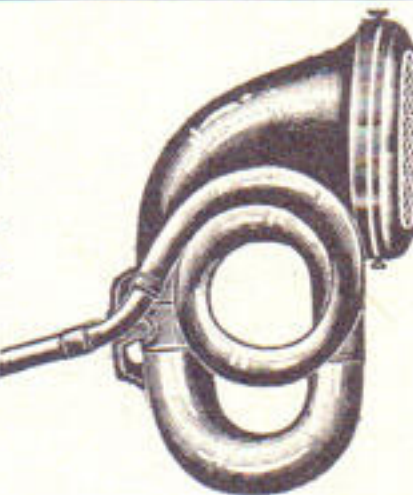
This is the ever popular Dragon having a deep penetrating tone. Suitable for any size touring car or runabout, but recommended mostly for small cars. Price includes tubing and bulb. Diameter of bell, 6 1/2".

No. 3204  
Reg. Price, \$6.00  
Cut Price, \$2.50  
Net Weight 3 lbs.

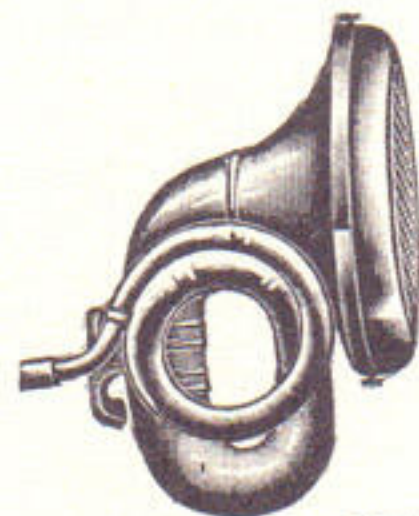
**"THE TORPEDO"**

One of the latest novelties of its kind. Has a very deep tone. It is exceptionally neat and compact, and particularly suitable for torpedo bodies.

The diameter of the bell is 5 1/4".



No. 3205  
Reg. Price, \$7.50  
Cut Price, \$3.13  
Net Weight 3 lbs.



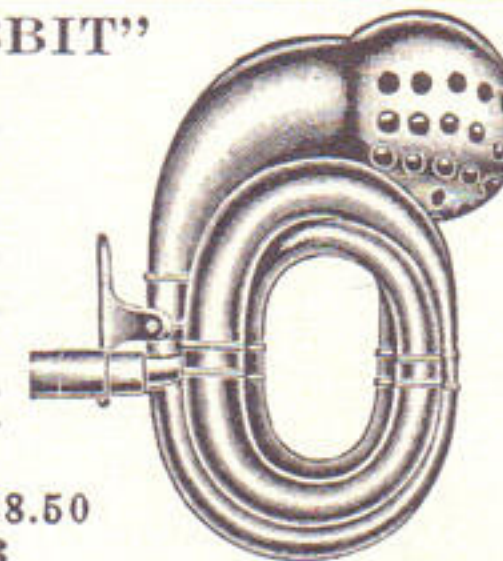
**THE "ROADSTER"**

One of the most popular designs; compact, narrow, and has oval bell. Its style is suitable for any size touring car or runabout. Fitted with 40 in. flexible tubing and chemically cured bulb. Diameter of bell, 7 3/4".

No. 3206  
Reg. Price, \$8.50  
Cut Price, \$3.33  
Net Weight 3 lbs.

**THE "JACK RABBIT"**

A distinct novelty and very "snappy" and tasty in design. Produces an exceptionally good tone, and made especially for those wanting a distinct novelty. Very narrow, and therefore requires little space. Diameter of bell, 3 1/2".



No. 3207. Reg. Price, \$8.50  
Cut Price, \$3.13  
Net Weight 3 lbs.

We Guarantee To Make Shipment of Your Order The Same Day As Received

**"NONPAREIL" HORN BULBS**



Finest quality, chemically cured, soft, pliable and springy. Will wear longer than any other bulb made. Mounted ready for use. We furnish one grade, and that is the very best, as an inferior bulb will not last one - quarter as

long as a good bulb.

| No.  | Size                | Reg. Price | Cut Price |
|------|---------------------|------------|-----------|
| 3232 | Small, No. 8        | \$1.00     | \$0.45    |
| 3233 | Medium, No. 10      | 1.50       | .50       |
| 3234 | Large, No. 12       | 1.75       | .55       |
| 3235 | Extra Large, No. 15 | 2.00       | .60       |

Average Net Weight 7 1/2 oz.

**"ASCO" HORN CAGE**



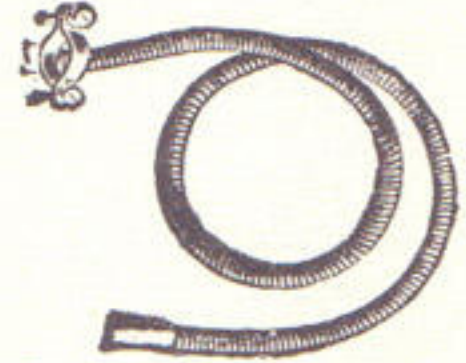
Save your bulbs by using the Asco horn bulb protector, prevent your good bulb from breaking at the neck, and will make your old bulb as good as new. Enameled black to match bulb with brass trimmings.

No. 3241. Reg. Price, \$0.50. Cut Price, \$0.25

Net Weight 6 1/2 oz.

**Flexible Horn Tubes**

The finest grade of horn tubing. It does not break or pull apart. Made of brass, lined with asbestos, to make it absolutely air-tight.



| No.  | Length | Inside Diam. | Reg. Price | Cut Price |
|------|--------|--------------|------------|-----------|
| 3236 | 40 in. | 1/2 in.      | \$1.25     | \$0.55    |
| 3237 | 50 in. | 1/2 in.      | 1.50       | .68       |
| 3238 | 40 in. | 5/8 in.      | 2.00       | .68       |
| 3239 | 50 in. | 5/8 in.      | 2.50       | .90       |

Average Net Weight 12 oz.

**"Nonpareil" Regular Horn Reeds**

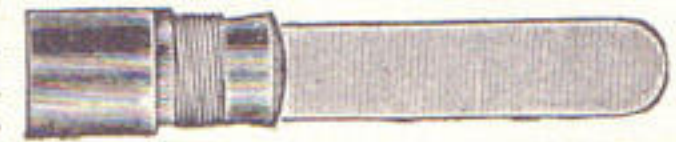
These reeds are the best made, one piece, specially annealed non-corrosive vibratory metal, durably constructed and accurately adjusted.



Net Weight 1 oz. No. 3240. Reg. Price, \$0.50. Cut Price, \$0.12

**"Nonpareil" Ferrule Horn Reeds**

These reeds are specially toned and guaranteed to give satisfaction. The ferrule fits into the horn, and the tubing into the ferrule. Is not damaged in fitting to horn, and positively will not jar loose. Put up one to box.

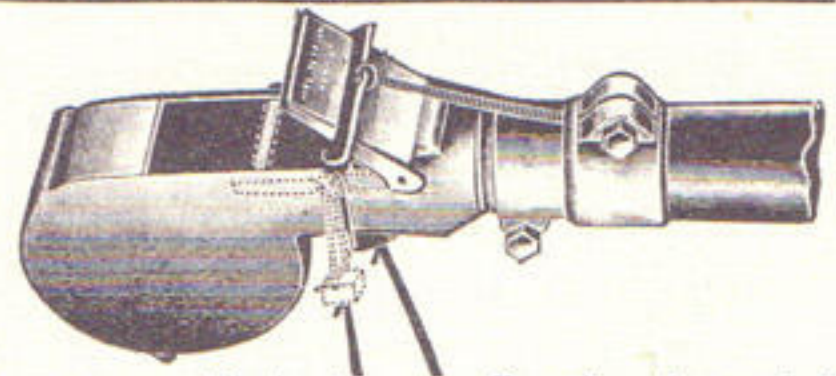


No. 3242. Reg. Price, \$0.75. Cut Price, \$0.16

Net Weight 1 oz.

**"JERICHO" EXHAUST HORN**

The Jericho is a signal measuring up to the present day requirements. It is easily operated. A simple pressure of the pedal gives a pleasing tone, clear and distinct at any speed without racing the motor. A tone that can be heard above the noise and bustle of the city street and around the curves of the country road far in advance. The Jericho is always installed in the rear of muffler—clamped over muffler stem by means of a special double clamp coupling, or screwed into the muffler by threaded coupling. These couplings are furnished free of charge with each horn. The free passage of the exhaust through the open throat of the horn makes it self-cleaning, and clogging or choking is impossible. Made of aluminum, therefore very light in weight. Furnished in four sizes; prices include all necessary fittings, couplings, cable, pedal, etc.

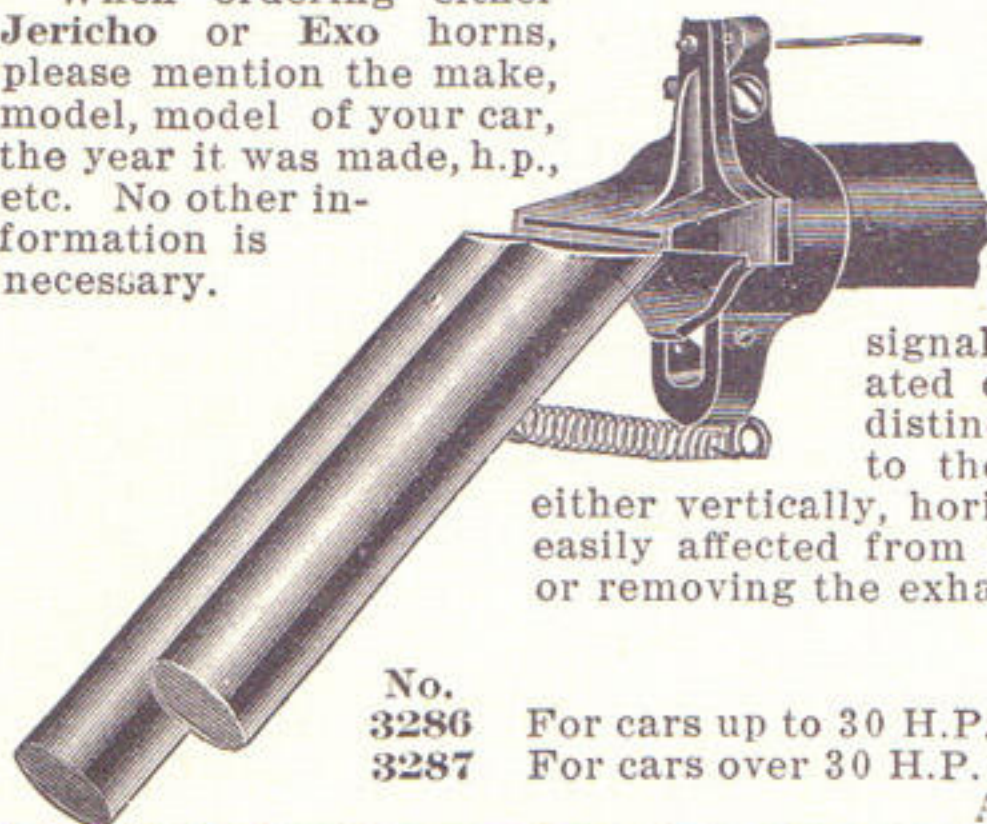


| No.  |                  | Reg. Price | Cut Price |
|------|------------------|------------|-----------|
| 3278 | For 10-20 H.P.   | \$7.00     | \$5.25    |
| 3279 | For 20-35 H.P.   | 8.00       | 6.00      |
| 3280 | For 35-45 H.P.   | 9.00       | 6.75      |
| 3281 | For over 45 H.P. | 10.00      | 7.50      |

Average Net Weight 2 1/2 lbs.

When ordering either Jericho or Exo horns, please mention the make, model, model of your car, the year it was made, h.p., etc. No other information is necessary.

When ordering either Jericho or Exo horns, please mention the make, model, model of your car, the year it was made, h.p., etc. No other information is necessary.



**"EXO" WARNING SIGNAL**

The Exo horn is a mellow chime of deep penetrating tone. It is operated the same as the Jericho, but is constructed of bronze instead of aluminum, with specially drawn seamless brass sounding tubes. It is always ready for service by simply pressing the foot pedal, thus causing the

signal to raise and the exhaust to flow through the elongated chamber and across the two brass tubes, giving two distinct mellow tones in accord, which are rich and pleasing to the ear. This signal may be placed in any position, either vertically, horizontally, or at any angle, operation being equally and easily affected from any point. Easily attached, without drilling, boring, or removing the exhaust pipe. Fits on end of exhaust. Made in two sizes.

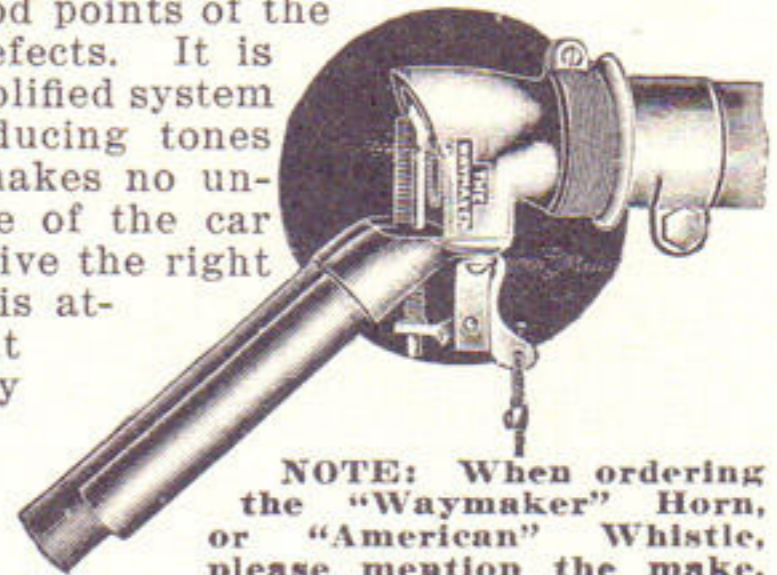
| No.  |                        | Reg. Price | Cut Price |
|------|------------------------|------------|-----------|
| 3286 | For cars up to 30 H.P. | \$5.00     | \$3.75    |
| 3287 | For cars over 30 H.P.  | 7.00       | 5.25      |

Average Net Weight 5 lbs.

Highest Quality, Low Price, Prompt Shipments When You Buy From Us

**The "Waymaker" Horn**

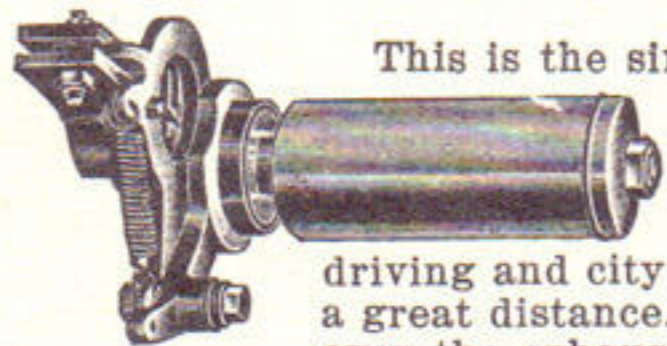
The newest automobile signal, designed to combine all the good points of the popular exhaust and electric horns without including their defects. It is easily attached to the outlet pipe of the muffler by a new and simplified system of couplings; sounds instantly at the slightest pressure, producing tones agreeable to the ear and graduated to the speed of the car; makes no unnecessary or annoying noises; clears the road well in advance of the car without frightening or antagonizing those who are expected to give the right of way, or the occupants of the car. The "Waymaker" Horn is attached to the outlet pipe at the rear of muffler and is blown out by the exhaust. It is very easily attached without the necessity of cutting holes in exhaust pipes or making any mechanical changes whatever.



**NOTE:** When ordering the "Waymaker" Horn, or "American" Whistle, please mention the make, model and year of your car, and H.P. No other information is necessary.

| No.  | For Cars      | Reg. Price | Cut Price |      |
|------|---------------|------------|-----------|------|
| 3266 | 10 to 20 H.P. | \$6.00     | \$4.50    | 1912 |
| 3267 | 20 to 35 H.P. | 7.00       | 5.25      |      |
| 3268 | 35 to 45 H.P. | 8.00       | 6.00      |      |
| 3269 | Over 45 H.P.  | 9.00       | 6.75      |      |

**The "American" Whistle**

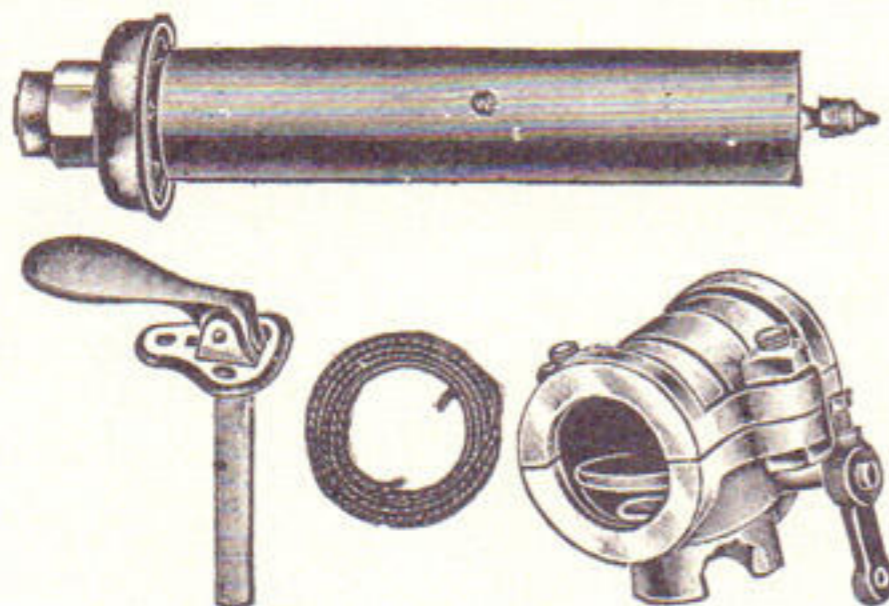


This is the simplest and one of the most practical whistles on the market. It can be instantly attached by simply clamping on the end of exhaust pipe near end of muffler. Fits any car; requires no special connections, as its attaching clamp will fit over all different sizes of exhaust pipes, excepting in extreme cases. Equally well adapted for country driving and city use, as the sound can be made so penetrating that it can be heard at a great distance. By pressing lightly on the pedal and throwing the whistle partially over the exhaust a mild tone is produced. Harder pressure produces a louder tone.

Each whistle is furnished complete with foot pedal, wire and pulley for connecting up. It works on all sizes of motors and is furnished with clamps to fit exhaust tails up to 1 3/4" in diam.

No. 3271. Reg. Price, \$5.00. Cut Price, \$3.33 Net Weight 3 1/2 lbs.

**"HUSK" FOUR-TONE EXHAUST CHIME**



This chime horn has the greatest tone volume of any horn made, owing to the fact that it takes very little exhaust pressure to operate same. At the same time, the sound is transmitted to a great distance. Has four musical notes that blend harmoniously, and the tone can be varied according to the volume desired, by regulating the pressure of the foot pedal. Made of brass, highly polished, the workmanship and material being the finest obtainable. Valve is of malleable iron, and is constructed on the double opposed butterfly principle, is guaranteed not to burn out, stick or leak, and is the new bolt-on type, as shown in the cut, and therefore it can be installed without removing the exhaust pipe, by merely cutting a section of pipe between hubs and bolt-on. This is a wonderful improvement over the old type valve, which necessitated the

removal of the exhaust pipe, and had to be either threaded or brazed. Husk chimes are furnished in two sizes, and prices given below are quoted with and without fittings. When chimes are ordered complete with fittings, the price includes horn, foot pedal, wire cable, pulley, and valve, complete, ready to be attached. The small chime is suitable for cars up to 15 H.P.; the large size from 15 H.P. up.

**PRICES & DIMENSIONS OF SMALL SIZE**

| No.  | L'gth | Diam. | With Fittings for Pipe Having | Reg. Price | Cut Price |
|------|-------|-------|-------------------------------|------------|-----------|
| 3248 | 12"   | 2"    | 1 1/4" Outside Diam.          | \$5.00     | \$2.60    |
| 3249 | 12"   | 2"    | 1 1/2" " "                    | 5.00       | 2.60      |
| 3250 | 12"   | 2"    | 1 3/4" " "                    | 5.25       | 2.70      |
| 3251 | 12"   | 2"    | 2" " "                        | 5.75       | 3.00      |
| 3252 | 12"   | 2"    | 2 1/4" " "                    | 6.00       | 3.10      |
| 3253 | 12"   | 2"    | 2 1/2" " "                    | 6.00       | 3.10      |
| 3254 | 12"   | 2"    | 2 3/4" " "                    | 6.50       | 3.40      |
| 3255 | 12"   | 2"    | 3" " "                        | 6.50       | 3.40      |
| 3256 | 12"   | 2"    | Without Fittings              | 3.00       | 1.25      |

Average Net Weight 4 1/2 lbs.

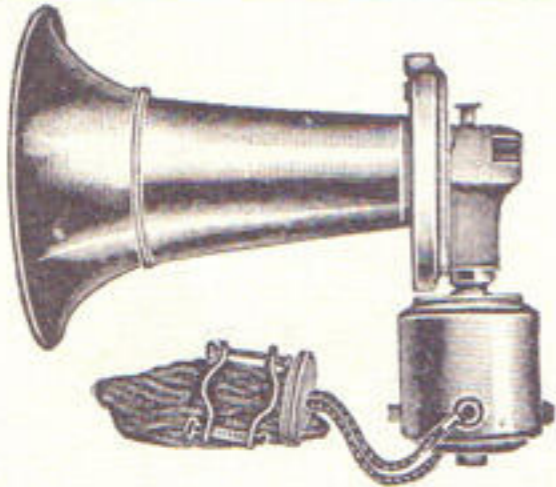
**PRICES & DIMENSIONS OF LARGE SIZE**

| No.  | L'gth | Diam.  | With Fittings for Pipe Having | Reg. Price | Cut Price |
|------|-------|--------|-------------------------------|------------|-----------|
| 3257 | 15"   | 2 1/2" | 1 1/4" Outside Diam.          | \$6.00     | \$3.05    |
| 3258 | 15"   | 2 1/2" | 1 1/2" " "                    | 6.00       | 3.05      |
| 3259 | 15"   | 2 1/2" | 1 3/4" " "                    | 6.50       | 3.25      |
| 3260 | 15"   | 2 1/2" | 2" " "                        | 6.75       | 3.50      |
| 3261 | 15"   | 2 1/2" | 2 1/4" " "                    | 7.25       | 3.70      |
| 3262 | 15"   | 2 1/2" | 2 1/2" " "                    | 7.25       | 3.70      |
| 3263 | 15"   | 2 1/2" | 2 3/4" " "                    | 7.75       | 4.00      |
| 3264 | 15"   | 2 1/2" | 3" " "                        | 7.75       | 4.00      |
| 3265 | 15"   | 2 1/2" | Without Fittings              | 4.00       | 1.65      |

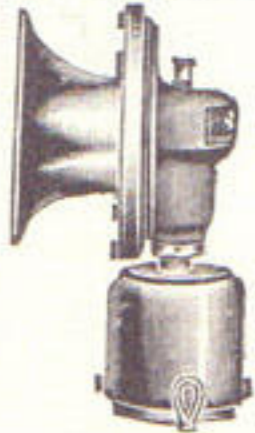
Average Net Weight 6 lbs.

**SPECIAL NOTICE**—The above sizes of exhaust valves are for steel tubing, which means outside diameter, as the exhaust pipes on most up-to-date cars are made of steel tubing, and not old-fashioned iron pipe. However, these cut-outs will fit on either steel tubing or iron pipe, and therefore only the outside measurements are necessary. If you want an exhaust valve for sizes other than listed above, kindly state so specifically, and remit the amount of the next larger size. In other words, if you want a valve to fit a steel tube having 1 1/8 in. outside diameter, the price will be the same as the 1 1/4 in. valve.

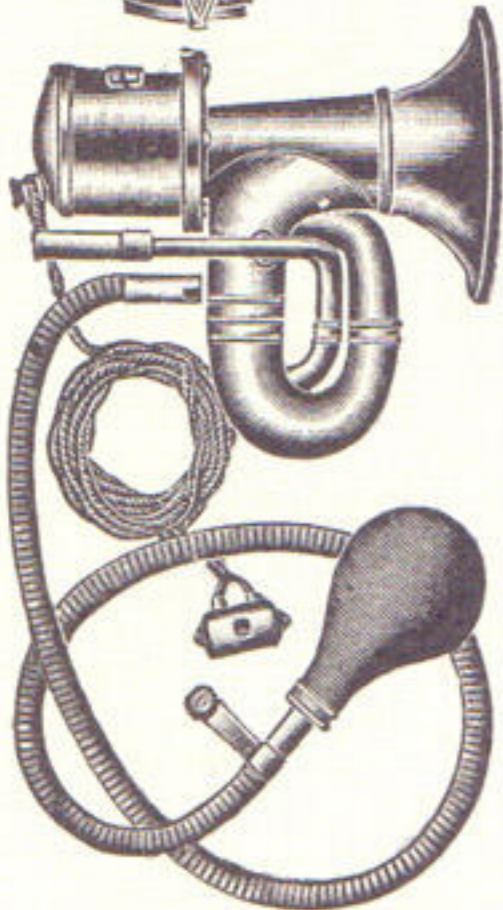
The exposed parts of this outfit, such as the chime itself, and the pedal are furnished usually in brass finish. However, we can furnish a nickel plated outfit for cars having nickel plated trimmings, at an additional charge of 50c. per outfit, extra. When ordering nickel plated outfits, kindly include this amount in addition to your regular remittance.



No. 3300—Type "L"  
9" projector, Price \$35.00



No. 3301  
Type "S"  
1 1/2" projector  
Price, \$30.00



**Combination Klaxonet**  
Combination of Klaxonet and best quality bulb horn. Horn for city use and touring combined.  
No. 3304. Price, \$35.00

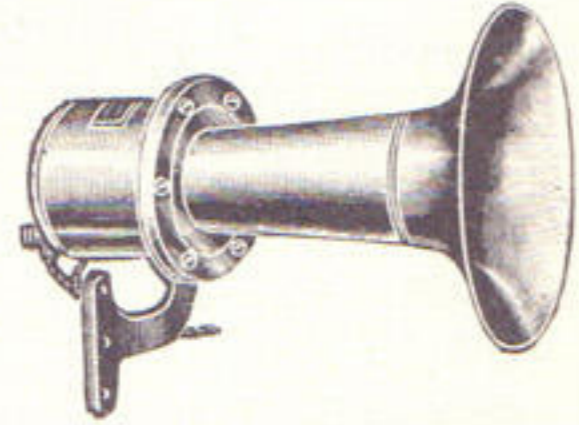
Average Net Weight 8 lbs.

Klaxon and Klaxonet horns are furnished in all black, all brass, black body with brass trimmings, black body with nickel trimmings, all at the same price; also in nickel, at an additional cost of 10%. 5% discount allowed, if order is accompanied by cash.

# KLAXON

*"The Public Safety Signal"*

The Klaxon is the most startling and effective warning signal ever devised for automobile. It is far more powerful and can be heard further than any other horn or whistle and by reason of its peculiar, attention-compelling tone, it dominates all other sounds. The Klaxon is run by an electric motor forming part of the device. An alloy steel diaphragm, 5 1/2 inches in diameter, with a hardened steel button in the centre, is vibrated by a tool steel ratchet wheel on the motor shaft. The Klaxon is bolted on the dashboard, and the push button for operating is placed in the most convenient position. As a mechanical noise-maker, the Klaxon stands alone. It has no flexible shaft to twist off, starts and stops instantly, and has no expensive platinum contacts to burn away.

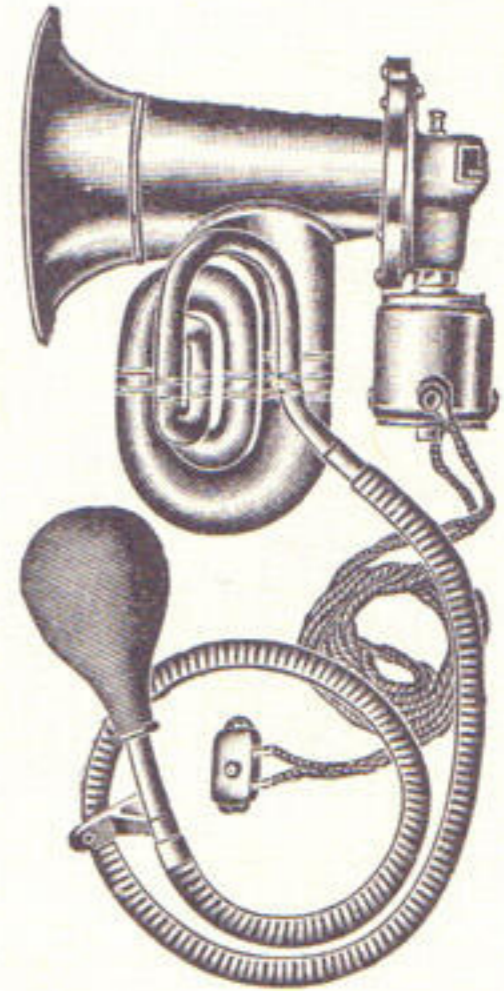


No. 3302—Klaxonet

Practically a smaller size of the Klaxon, operates on the same principle and has all the essential elements.

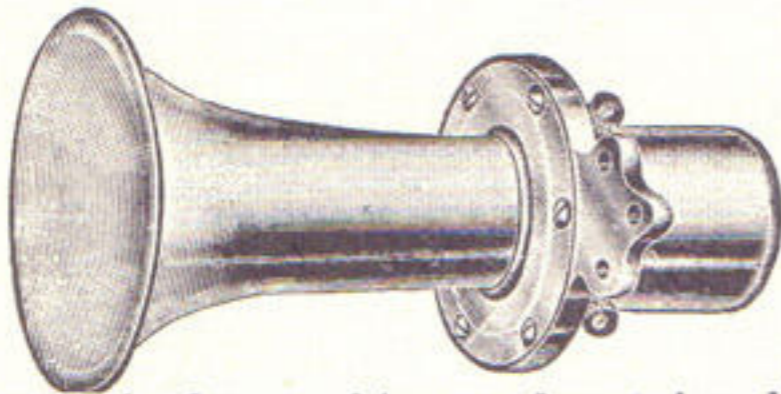
Automobile Type, Price \$20.00

1912



**Combination Klaxon**  
Combination of Type "L" Klaxon and best quality bulb horn. Horn for city use and touring combined.  
No. 3303. Price, \$50.00

## MESCO ELECTRIC SIGNAL HORN

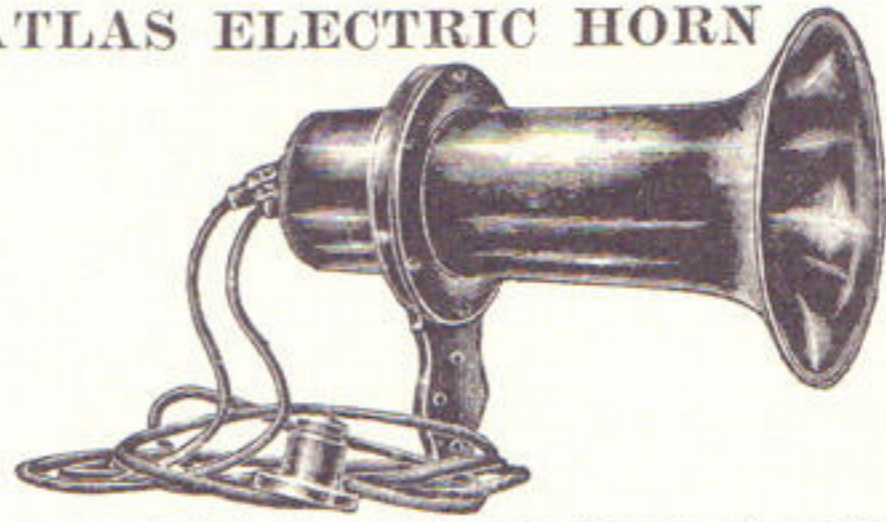


The Mesco electric signal horn radically different from the usual type of electric signal. Its note is far-reaching and not harsh. It warns politely but distinctly. Its tone may be heard at a great distance. It is made of brass, and is attached to the dashboard of any car by means of the lug or bracket which is cast in one piece with the body. Its length of service is practically unlimited. It has but three moving parts, the diaphragm and two magnets, which are hermetically sealed, and need no adjustment after leaving the factory. It is furnished complete with cord, push button, etc., ready to be attached to any part of the car, preferably on the left hand side of the dash with button on the steering post, or the right hand seat of the car. Height, 5"; length, 15"; width, 5".

| No.  | Finish                   | Reg. Price | Cut Price |
|------|--------------------------|------------|-----------|
| 3305 | All Brass                | \$15.00    | \$8.00    |
| 3306 | Blk. Body, Brass Trmgs.  | 16.00      | 8.75      |
| 3307 | All Nickel               | 16.00      | 8.75      |
| 3308 | Blk. Body, Nickel Trmgs. | 16.00      | 8.75      |

Net Weight 6 lbs.

## ATLAS ELECTRIC HORN

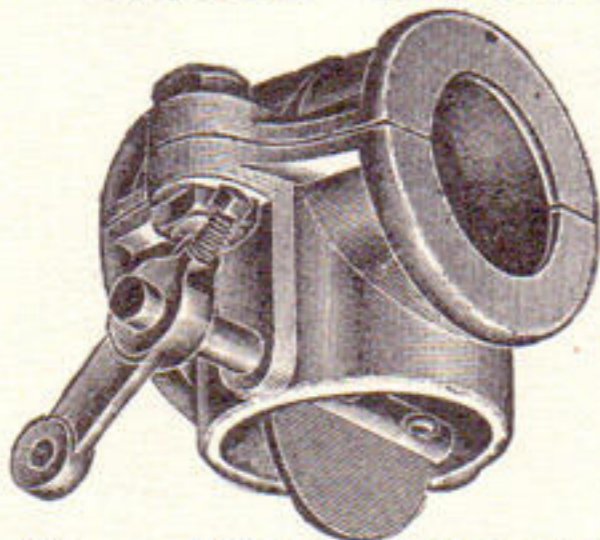


A powerful but courteous signal of warning produced by a simple and efficient mechanism of sturdy construction. Has a distinctive tone all its own, that attracts instant attention from everyone within range. The note is penetrating but not harsh and is not annoying to the occupants of your car; operating by means of a small button, fastened where most convenient to the driver's hand—a slight movement of one finger sounds a signal of any desired length, which may be heard at a great distance ahead. Consumes only 1 to 1 1/4 amperes at 6 volts. Complete with push button and wire. Length, 10 1/2"; height, 6 1/4"; width, 5".

| No.  | Finish                   | Reg. Price | Cut Price |
|------|--------------------------|------------|-----------|
| 3310 | All Brass                | \$10.00    | \$5.33    |
| 3311 | Blk. Body, Brass Trmgs.  | 11.00      | 5.71      |
| 3312 | All Nickel               | 11.00      | 5.95      |
| 3313 | Blk. Body, Nickel Trmgs. | 11.00      | 5.95      |

Net Weight 4 lbs.

**"RUDIE" MUFFLER CUT-OUT**

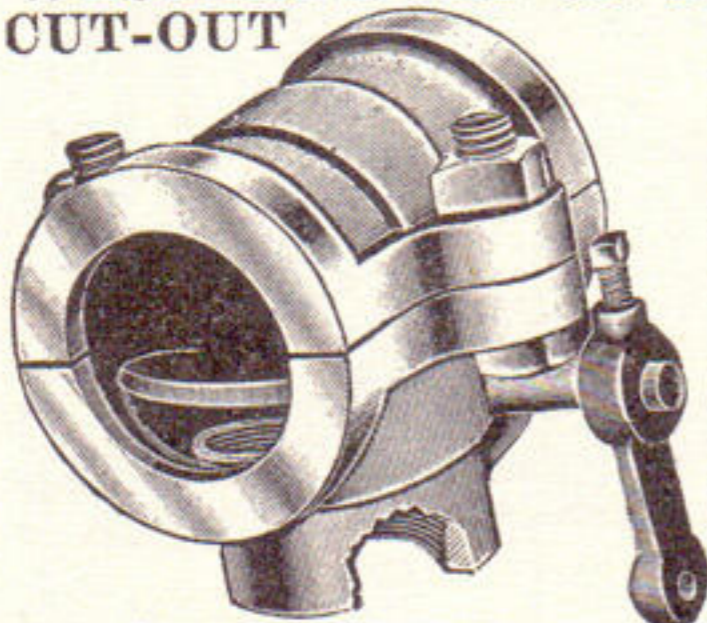


A strictly high grade article at a reasonable price, made of malleable iron, and can be quickly attached by cutting a V-shaped hole in the under side of the exhaust pipe. Steel disk at the outlet seats at an angle and makes a gas-tight fit.

| No.  | Fits Pipe Having     | Reg. Price | Cut Price |
|------|----------------------|------------|-----------|
| 3351 | 1 1/4" Outside Diam. | \$0.70     | \$0.47    |
| 3352 | 1 1/2" " "           | 1.00       | .67       |
| 3353 | 1 3/4" " "           | 1.00       | .67       |
| 3354 | 2" " "               | 1.25       | .84       |
| 3355 | 2 1/4" " "           | 1.25       | .84       |
| 3356 | 2 1/2" " "           | 1.50       | 1.00      |
| 3357 | 2 3/4" " "           | 1.50       | 1.00      |
| 3358 | 3" " "               | 1.50       | 1.00      |

Average Net Weight 2 lbs.

**WESTERN BOLT-ON TYPE CHIME CUT-OUT**



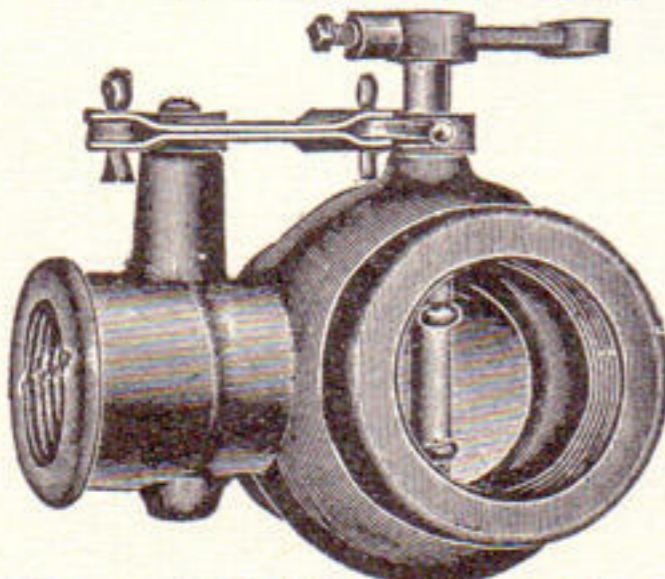
A real practical cut-out that can be installed on to any exhaust pipe by cutting a "V" shaped hole in the under side of the exhaust pipe. The construction of this cut-out is the same as the Husk chime described

opposite, with the added convenience of being the bolt-on type.

| No.  | Fits Pipe Having     | Reg. Price | Cut Price |
|------|----------------------|------------|-----------|
| 3370 | 1 1/4" Outside Diam. | \$1.25     | \$0.84    |
| 3371 | 1 1/2" " "           | 1.25       | .84       |
| 3372 | 1 3/4" " "           | 1.50       | 1.00      |
| 3373 | 2" " "               | 1.80       | 1.20      |
| 3374 | 2 1/4" " "           | 2.10       | 1.40      |
| 3375 | 2 1/2" " "           | 2.10       | 1.40      |
| 3376 | 2 3/4" " "           | 2.50       | 1.67      |
| 3377 | 3" " "               | 2.50       | 1.67      |

Average Net Weight 2 lbs.

**"HUSK" CHIME VALVES**



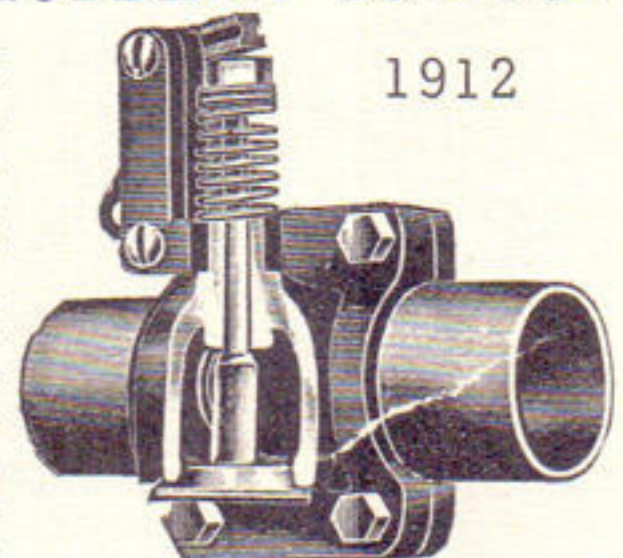
"Husk" Motor Chime Valves are manufactured under license from the inventor, and must not be compared with the imitations of an early model upon which refinements and improvements have been made.

| No.  | Fits Pipe Having     | Reg. Price | Cut Price |
|------|----------------------|------------|-----------|
| 3378 | 1 1/4" Outside Diam. | \$0.90     | \$0.50    |
| 3379 | 1 1/2" " "           | 1.10       | .50       |
| 3380 | 1 3/4" " "           | 1.30       | .60       |
| 3381 | 2" " "               | 1.50       | .60       |
| 3382 | 2 1/4" " "           | 1.70       | .60       |
| 3383 | 2 1/2" " "           | 1.90       | .65       |
| 3384 | 2 3/4" " "           | 2.10       | .65       |
| 3385 | 3" " "               | 2.10       | .75       |

Average Net Weight 2 lbs.

**"EJECTOR" MUFFLER CUT-OUT**

This valve will work in any position, and can be attached by any one by simply cutting a hole in the under side of the pipe and clamping the valve in place. The yoke which carries the lever is free to turn around the valve stem, and can be



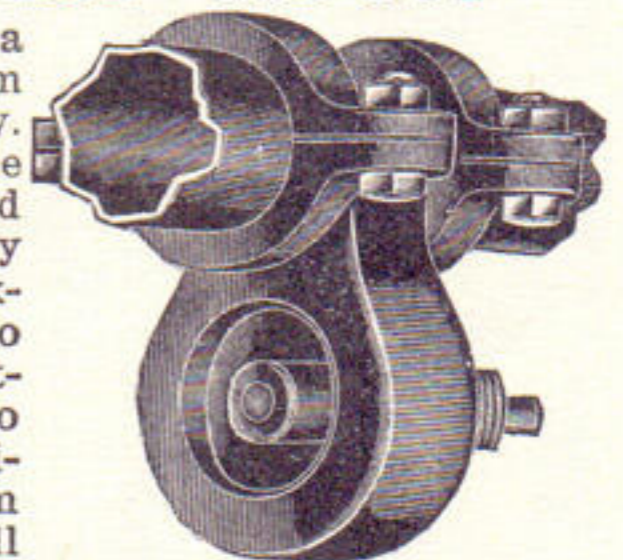
1912

| No.  | Fits Pipe Having     | Reg. Price | Cut Price |
|------|----------------------|------------|-----------|
| 3343 | 1 1/4" Outside Diam. | \$1.80     | \$1.20    |
| 3344 | 1 1/2" " "           | 1.80       | 1.20      |
| 3345 | 1 3/4" " "           | 2.00       | 1.34      |
| 3346 | 2" " "               | 2.00       | 1.34      |
| 3347 | 2 1/4" " "           | 2.50       | 1.67      |
| 3348 | 2 1/2" " "           | 2.50       | 1.67      |
| 3349 | 2 3/4" " "           | 3.00       | 2.00      |
| 3350 | 3" " "               | 3.00       | 2.00      |

Average Net Weight 2 1/4 lbs.

**"MILWAUKEE" CUT-OUT**

The valve is in a pocket at the bottom and opens inwardly. It cannot leak, as the conical valve is held against the side by pressure of the exhaust in addition to the spring. The cut-out forms a pocket to accumulate the residue and carbon from the engine, and will clear itself automatically.

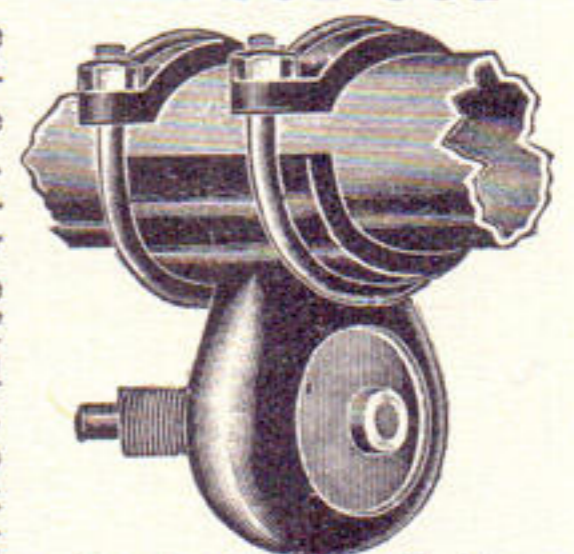


| No.  | Fits Pipe Having     | Reg. Price | Cut Price |
|------|----------------------|------------|-----------|
| 3359 | 1 1/4" Outside Diam. | \$2.60     | \$1.74    |
| 3360 | 1 1/2" " "           | 2.60       | 1.74      |
| 3361 | 1 3/4" " "           | 2.75       | 1.84      |
| 3362 | 2" " "               | 3.00       | 2.00      |
| 3363 | 2 1/4" " "           | 3.00       | 2.00      |
| 3364 | 2 3/4" " "           | 3.25       | 2.17      |
| 3365 | 2 1/2" " "           | 3.25       | 2.17      |
| 3366 | 3" " "               | 3.50       | 2.34      |

Average Net Weight 2 lbs.

**"S. B. R." MUFFLER CUT-OUT**

A strictly high grade article, and the original quick - detachable type muffler cut-out. It is easily and quickly applied by simply sawing a small piece from the under side of the exhaust pipe and clamping in position. It is a good idea to pack the joint with flat asbestos sheet packing in order to get the very best results. It is a high class article, well finished and made of good quality malleable iron.



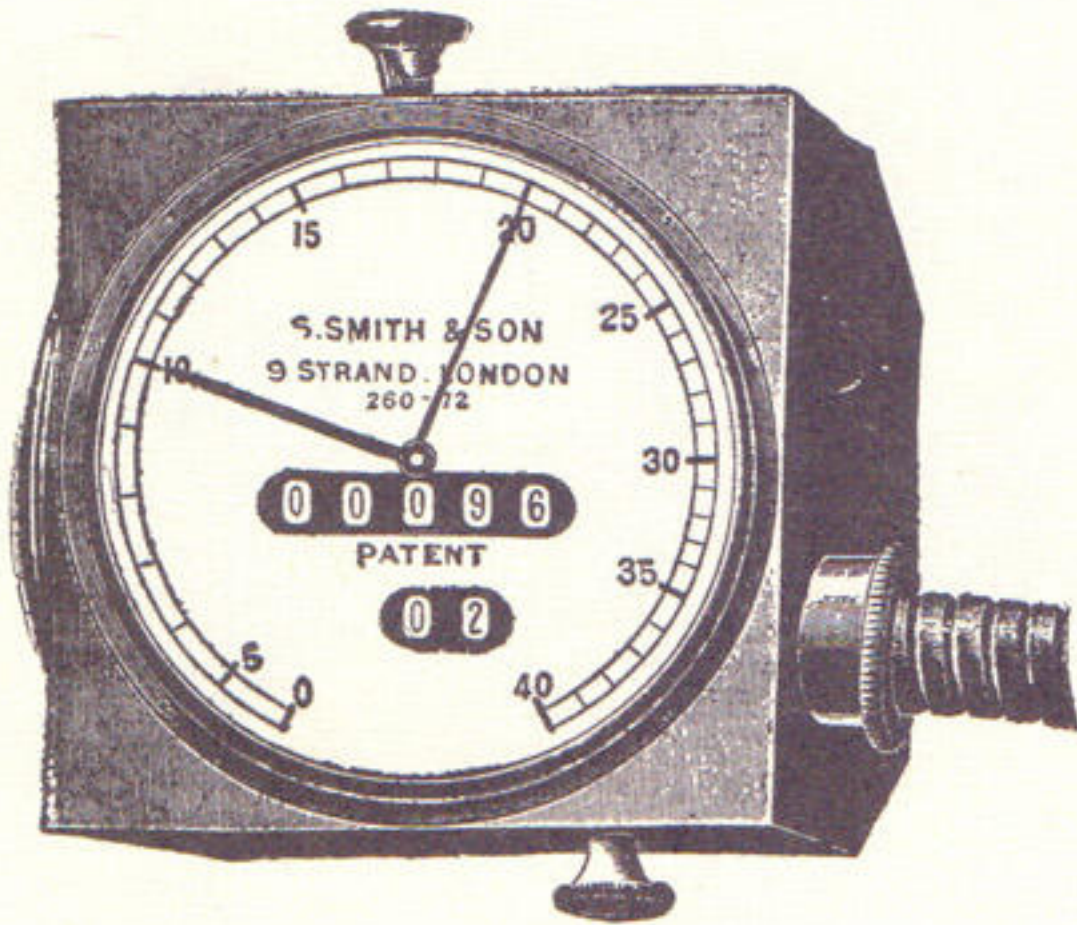
| No.  | Fits Pipe Having     | Reg. Price | Cut Price |
|------|----------------------|------------|-----------|
| 3335 | 1 1/4" Outside Diam. | \$3.50     | \$2.34    |
| 3336 | 1 1/2" " "           | 3.50       | 2.34      |
| 3337 | 1 3/4" " "           | 4.00       | 2.67      |
| 3338 | 2" " "               | 4.00       | 2.67      |
| 3339 | 2 1/4" " "           | 4.00       | 2.67      |
| 3340 | 2 1/2" " "           | 4.50       | 3.00      |
| 3341 | 2 3/4" " "           | 4.50       | 3.00      |
| 3342 | 3" " "               | 4.50       | 3.00      |

Average Net Weight 2 1/2 lbs.

S. SMITH & SONS PERFECT SPEED INDICATOR

1907

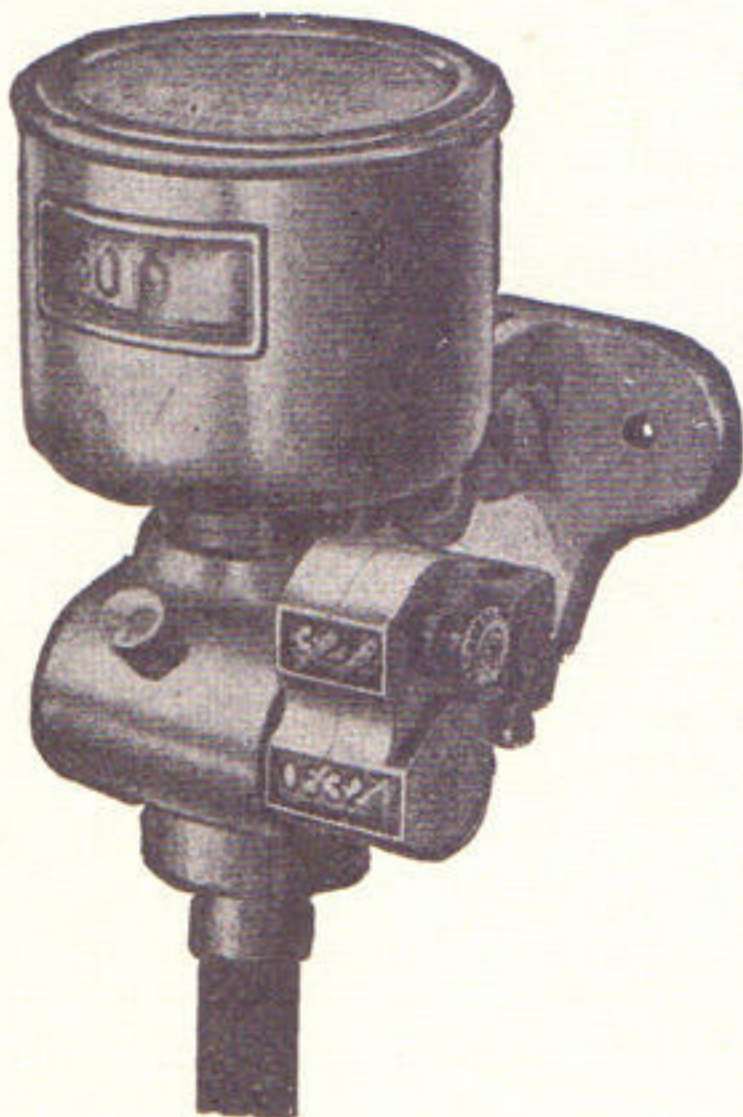
AWARDED A SPECIAL GOLD MEDAL IN THE A. C. G. I. TRIALS.



Every dial calibrated by hand to the individual springs of each instrument which assures a steady hand and clear dial. The maximum hand is latest invention and fills a long felt want as it indicates the highest speed attained during any period. This may be switched back to the ordinary indicating hand by pressing button on top of case.

|   |          |
|---|----------|
| List No.                                  | Price    |
| 0498 Type I fitted with maximum hand..... | \$100.00 |

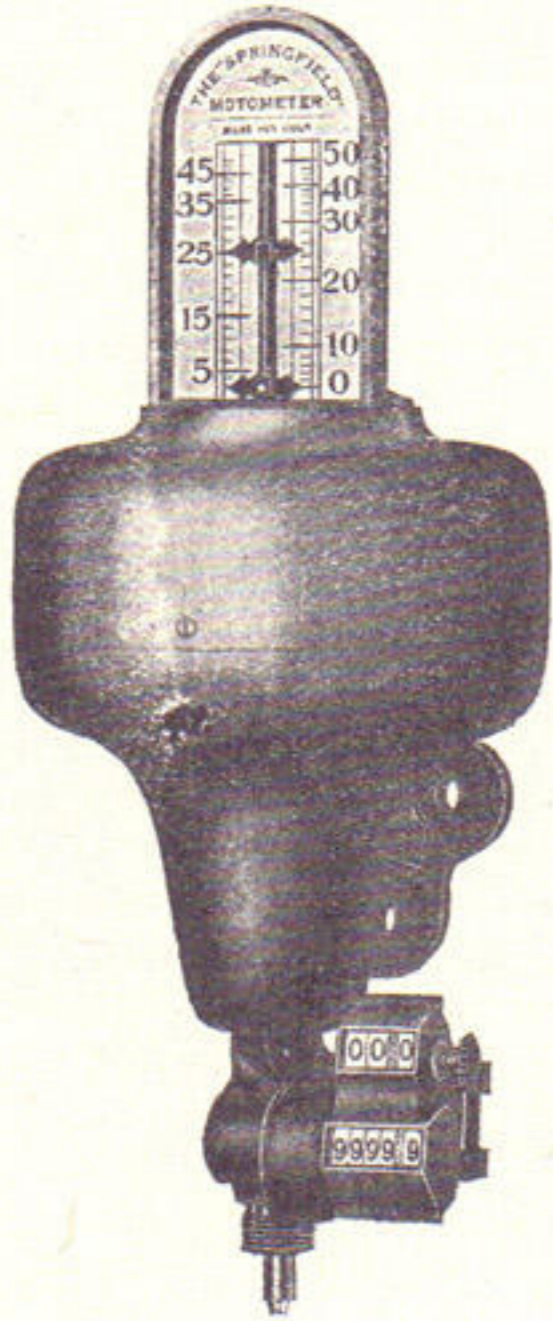
THE WARNER AUTOMETER.



Dial is not influenced by the speed of the car, speed alone moves it. A powerful magnet is the secret of its success.

It has no spiral springs, cams or other sliding parts to wear or get out of order; as accurate at low speeds as at higher speeds; it has a bevel gear drive at the hub.

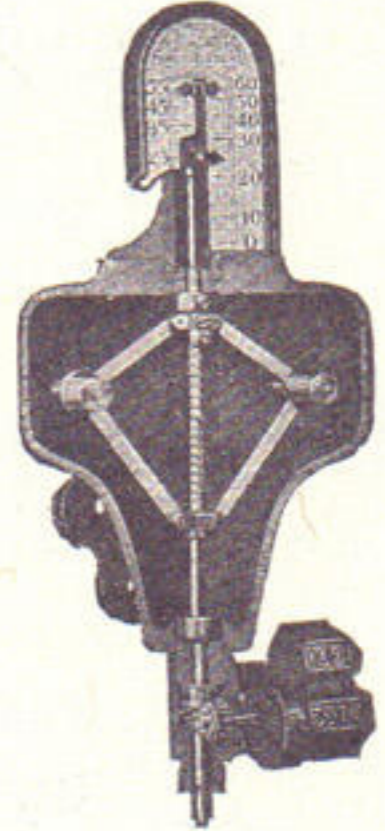
|                                 |         |
|---------------------------------|---------|
| List No.                        | Price   |
| 0499 Complete for any car ..... | \$75.00 |



# The Springfield Motometer

Shows at a glance  
 How fast you are going,  
 How far this trip,  
 How many miles for season.  
 The price is right—  
 Fair to us, fair to you.

Its appearance and  
 finish are in keeping  
 with its quality.

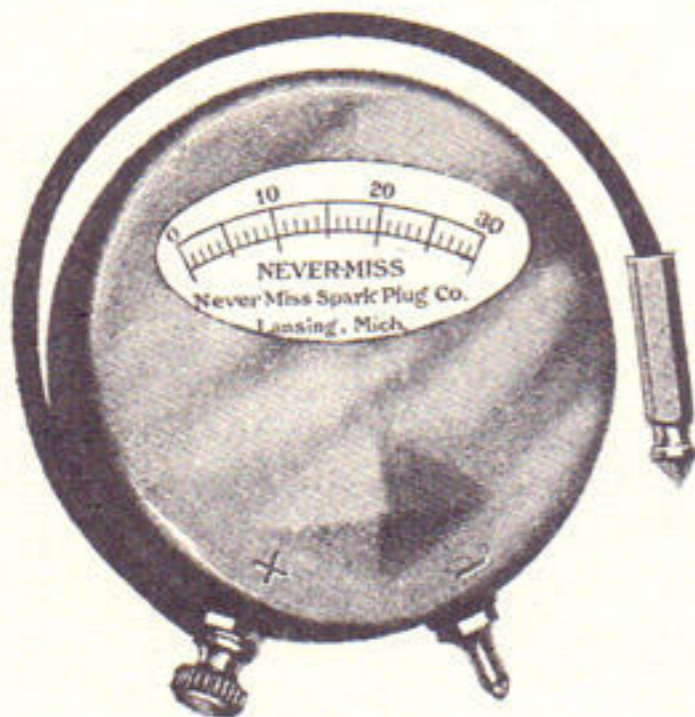


|   |              |
|---|--------------|
| Price—50-Mile Model, with fittings for any car..... | \$35.00      |
| Price—60-Mile .....                                 | 40.00        |
| Price—100-Mile, for high-power cars.....            | 50.00        |
| Price, with maximum speed hand.....                 | \$5.00 extra |

1908

# Never-Miss Ammeter

For ampere-reading the most perfect on the market.



Price of Never-Miss Ammeter.....\$3.00

Price of Never-Miss Volt-Ammeter, including  
 leather case ..... 5.00

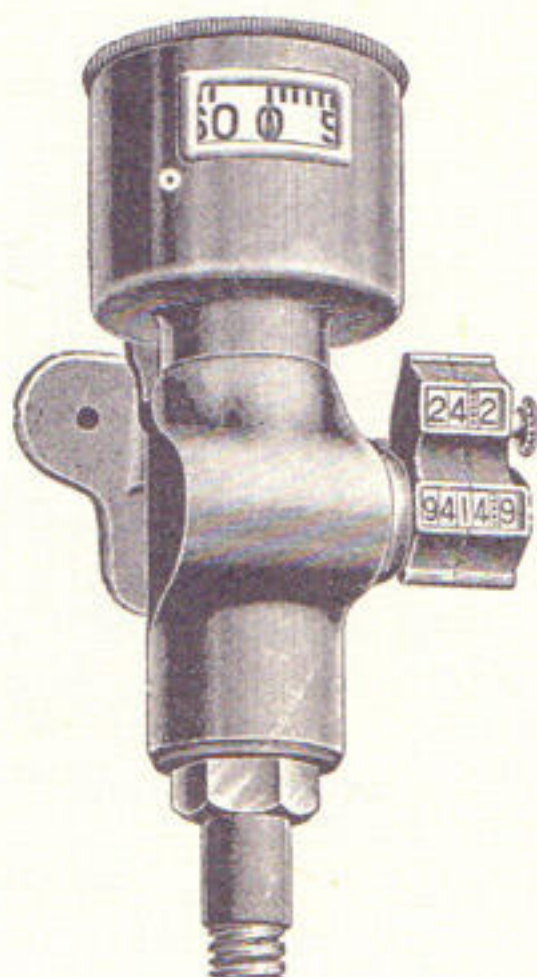


# TIME SPEED DISTANCE

DAY OR NIGHT

## WARNER AUTO-METER

You  
Get  
What



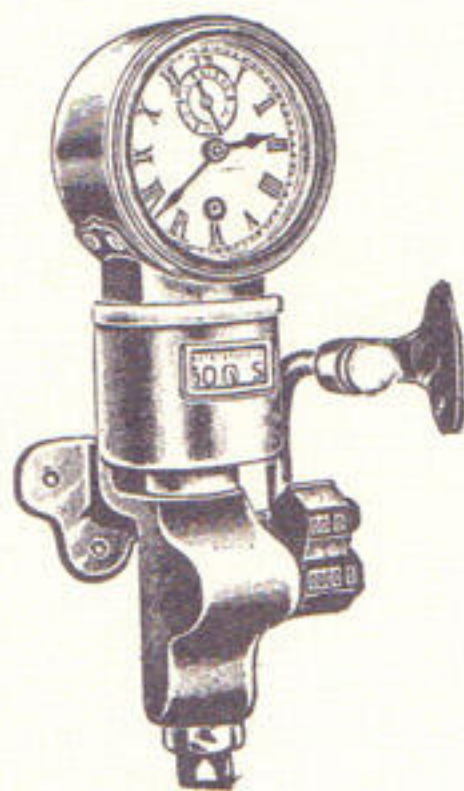
It indicates the rate of speed in miles per hour and registers the total season and trip mileage. Its principle is magnetism. It has a six-inch scale length. The magnet is guaranteed for ten years. It is permanently accurate at all speeds. It has a bevel gear drive at the hub and a flexible shaft made of links of tool steel. The manufacturers guarantee its accuracy within one per cent. and against all defects and breakage for one year. Immediate deliveries for all cars. For 60 or 100 mile scale Auto-Meter, complete and ready to attach to car finished in nickel or brass.

Price, each .....\$75.00

In ordering please mention make, model and year of car instrument is desired for.

1908

You  
Pay  
For



To meet the high standard demanded and exacted by us, the Chelsea Clock Company have devised and made "to order" without doubt the most perfect Auto Clock ever manufactured. Very accurate, compact and especially readable on account of location just over the speed dial.

It is an eight-day clock, having Compensation Balance, Breguet Hair Spring, hardened ground and polished pivots and pinions, short distances between bearings, especially thick front and back plates. It is built particularly for the hard usage an Auto Clock is subjected to.

Equipped with Duplex Cast Brass Screw Bezel Case and beyond dispute the most thoroughly waterproof clock offered to the trade.

Built as a companion for the Auto-Meter, and, like the Auto-Meter, accurate, reliable and long lived.

The combination instrument with clock and lamp attachment is finished in brass only.

Price .....\$125.00  
Either Scale,  
60 or 100-mile.

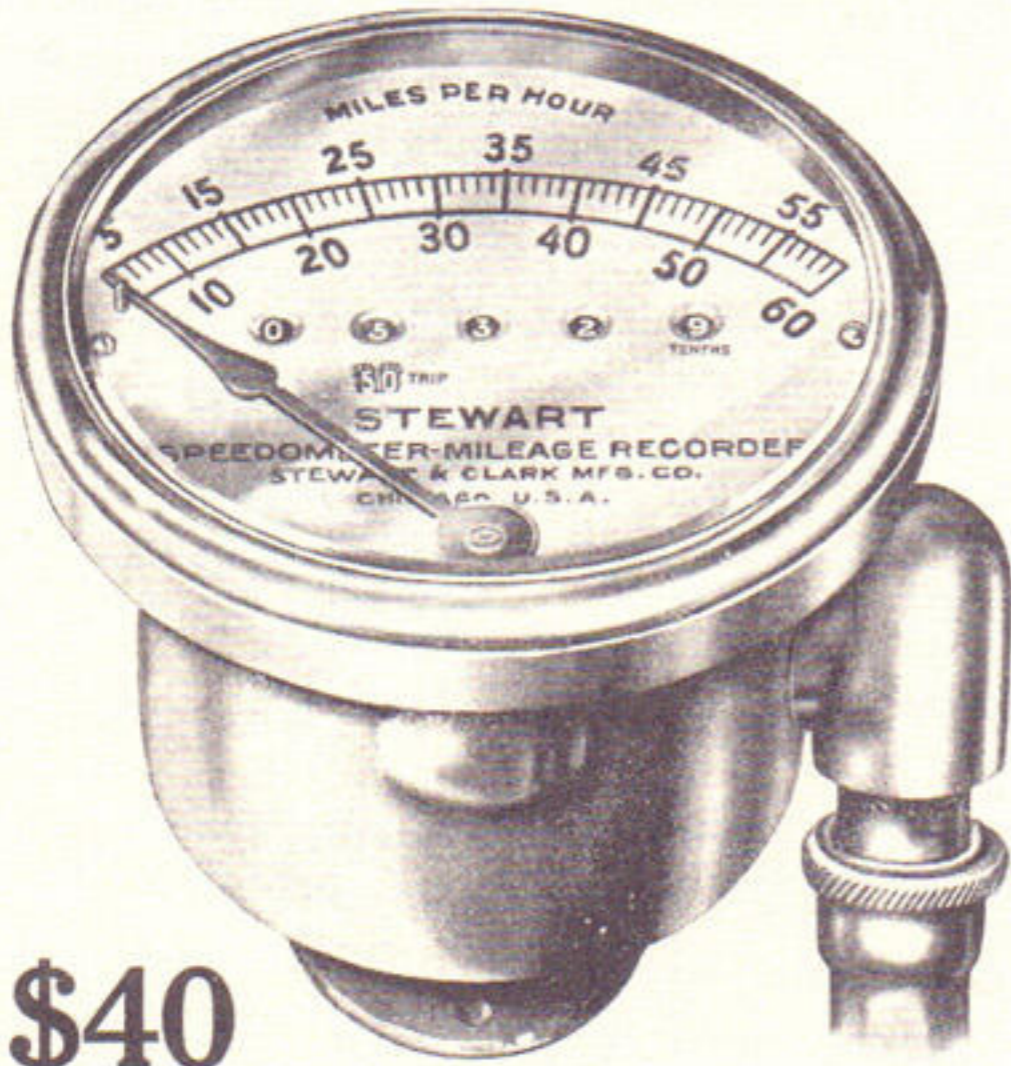
1908

We are New England Distributors for  
STEWART and AMERICAN STEEDOMETERS  
We can fit any car

# Stewart Speedometer

Covered by

## An Ironclad Guarantee Against Everything but Misuse



**\$40**

No. 4 Combination Speedometer-Odometer full size  
4-inch dial, 60 miles . . . . . \$40.00

No. 5 Combination Speedometer-Odometer full size  
4-inch dial, 90 miles . . . . . \$75.00

**STEWART SPEEDOMETERS** are covered by the manufacturer's ironclad guarantee against everything but misuse. This is the one speedometer that has always, under all conditions, made good. It is being used on the high grade cars to the exclusion of all other makes. This speedometer is indisputably accurate; an attractive feature is the non-vibrating pointer, which steadily indicates the exact speed; no jumping of the hand, even under the severest road conditions. It also instantly indicates all changes in speed as quickly as they occur, and without wavering or hesitation. The principle is centrifugal force.

No speedometer in the world, and so far as we know, no accessory used in connection with the automobile trade, has made so distinct and decided a success as the **Stewart Speedometer**. The design of the Stewart was so carefully considered before manufacture was begun that it was found unnecessary to modify in the slightest degree any part of the indicating or mechanical detail.

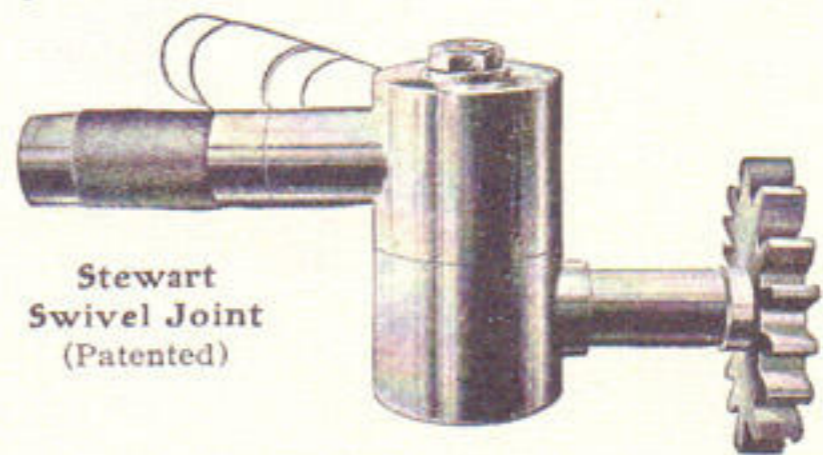
**The mechanism** is perfectly designed and of high-grade, serviceable construction, making possible the **iron-clad guarantee**. The case is well proportioned, handsome in appearance and finished beautifully in polished brass. The dial is four inches in diameter, silver finished, figures in black enamel, large and easily read from any part of the car. The scale is evenly spaced, enabling one to read the speed instantly without confusion. No part of the speedometer or equipment requires lubrication—this has been taken care of by the manufacturers in assembling.

**All models are equipped with odometers** which register the distance traveled in miles and tenths. The season register records up to 10,000 miles and repeats. The trip register is of very simple construction, all the figures are on one dial, which can be set to any figure at will by means of a thumb piece. This odometer is directly driven and so strongly made that the manufacturers are willing to guarantee it for 20 years.

**The Stewart Flexible Shaft** is of sturdy construction, link type, encased in a coil ribbon of hardened steel, which is covered with a highly polished brass dust-proof case. This construction prevents crystallization, wear and breakage.

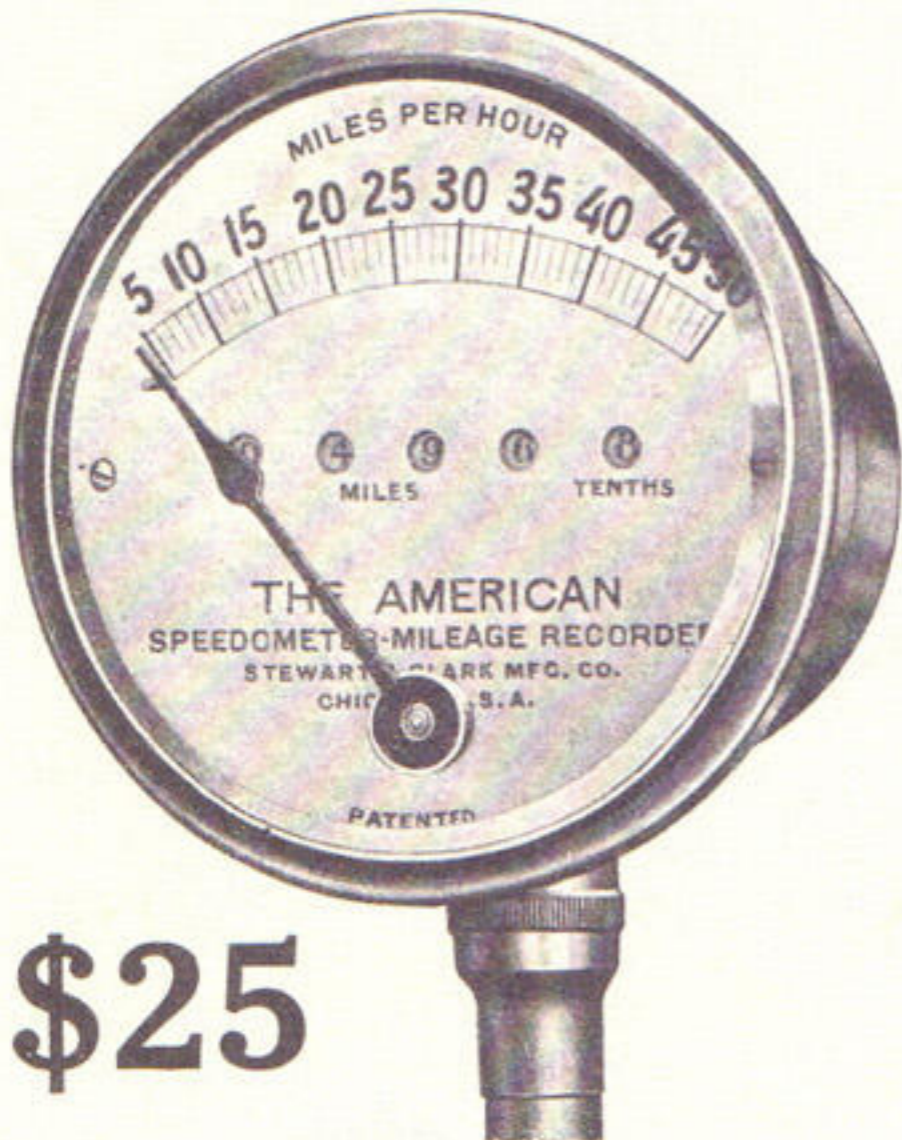
**The Stewart Swivel Joint** used on the flexible shaft is a unique and distinct advance in speedometer construction. Its use permits the flexible shaft to be carried straight back along the frame to the dash without passing under or through springs, and without the right angle bend required on all other constructions. This adds greatly to the life of shaft, the steadiness of the instrument, and appearance of the whole installation.

**The Universal Wheel Attachment** is designed to fit all cars without any special fixtures, making it unnecessary to carry in stock special fittings for each different car.



In ordering, state name and model of car, also diameter of tire on front wheel.

# The American Speedometer



**\$25**

1908

**Covered by an  
Ironclad Guarantee  
Against Everything but Misuse**

No. 7. THE AMERICAN Combination Speedometer-Odometer, 4-inch dial, 50-mile . . . . \$25.00

The American Speedometer is made by the STEWART & CLARK MANUFACTURING CO., makers of the famous Stewart Speedometer. This in itself is a guarantee that The American is all that skill and genius can devise. The manufacturers give an ironclad guarantee on this Speedometer against everything but misuse, the best possible evidence that the instrument is one to be depended upon under all conditions.

While the price is astonishingly low and heretofore unheard of in the speedometer business, it cannot be stated too strongly that there has been no sacrifice of quality or workmanship, no skimping in size, no substitution.

Don't confound this exceedingly low-priced but high-grade instrument with others built merely to meet price competition, that are not backed by an ironclad guarantee and that are not made to give lasting service.

The American is the only low-priced Speedometer of quality. The manufacturers' guarantee that it is better made and of better materials than those of any other make, regardless of the price that may be asked for them. The STEWART & CLARK MFG. CO. were pioneers in selling quality Speedometers at rock-bottom prices. Their policy was an innovation; it set a new standard, a higher degree of excellence and a price astoundingly low.

They have perfected a mechanism so exceedingly simple, and so positively accurate within a radius of fifty miles, and which can be made at a cost so low that it makes possible a further step in price reduction. No car need now be without a Speedometer. The American is good enough for the highest priced and most elegantly equipped automobile, and yet is within the means of those who have purchased lower priced cars, or whose cars are not required to travel at speeds exceeding 50 miles per hour.

The American is guaranteed absolutely accurate in indicating speed within a limit of 50 miles. The pointer is steady at all speeds and is not affected by rough roads. Changes in speed are instantly indicated.

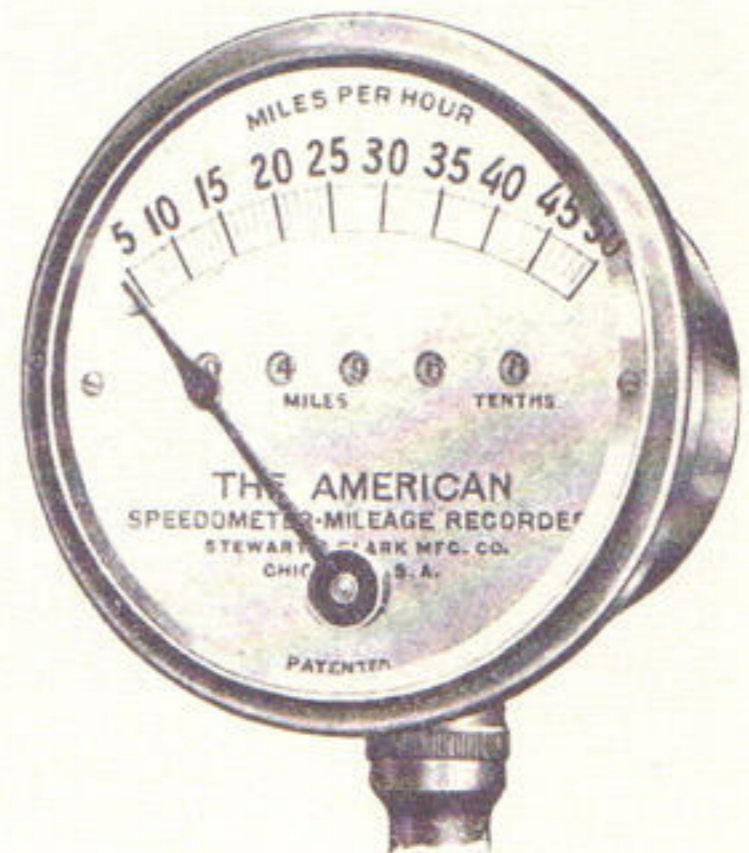
The Stewart Flexible Shaft is of sturdy construction, link type, encased in a coil ribbon of hardened steel, which is covered with a highly polished brass dust-proof case. This construction prevents crystallization, wear and breakage.

The Stewart Swivel Joint used on the flexible shaft is a unique and distinct advance in speedometer construction. Its use permits the flexible shaft to be carried straight back along the frame to the dash without passing under or through springs, and without the right angle bend required on all other constructions. This adds greatly to the life of shaft, the steadiness of the instrument and appearance of the whole installation.

The Universal Wheel Attachment is designed to fit all cars without any special fixtures, making it unnecessary to carry in stock special fittings for each different car.

### American Junior Speedometer.

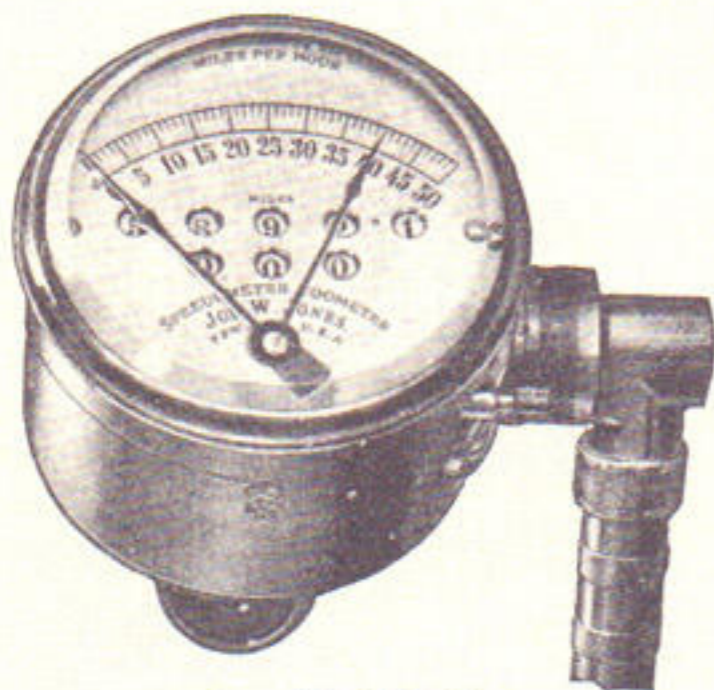
This is the regular Stewart "American" Speedometer equipped with a wire core shaft in place of the famous Stewart link type flexible shaft, and a non-swivel bevel gear drive in place of the Stewart swivel joint. The wire core shaft supplied is superior in quality and stronger in construction than any other of its kind now in use, and as the bevel gear drive furnished will eliminate the right angle bend in the shaft, this outfit should give very satisfactory service. The American Junior is not guaranteed. Each \$20.



1908

**Jones Speedometer-Odometers.**

With Maximum Hand.

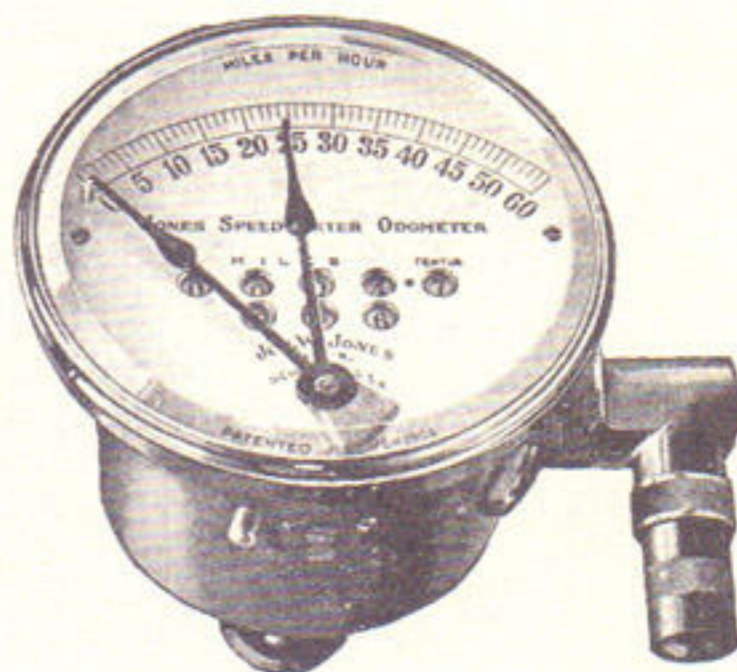


Model 14

Model 14, 3" Dial, 50 mile  
19, 3" Dial, 60 mile

The variable speed in miles per hour is indicated by means of a black hand pointing to large, readable figures on frosted silver dial. A secondary or copper Maximum speed hand is carried forward by the black hand and remains as a permanent indication of the highest speed attained, until released by a touch on the resetting stem at the base of the cup.

By giving the resetting stem a turn the two hands are made to work in unison and variable speed only is indicated, thus the Maximum hand feature may be dispensed with, if desired.



Model 15

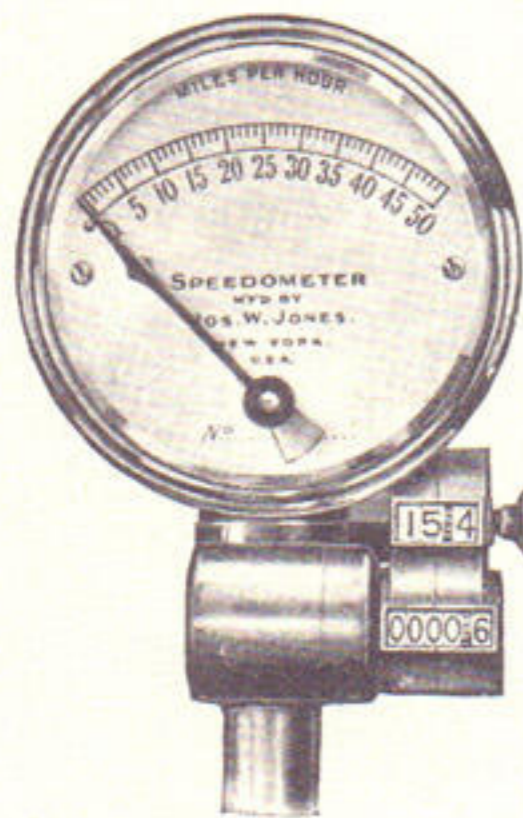
Model 15, 4" Dial, 60 mile  
16, 4" Dial, 100 mile

Each \$75.00  
Each \$90.00  
Each 100.00

The season Odometer registers to 10,000 and the trip to 100 miles, in miles and tenths. The Odometer movement has two exclusive features; mileage is cumulatively recorded whether the car is moving forward or backward, and the trip is reset instantaneously by a touch of the resetting button. These are the only instruments made which have both the Maximum Hand and the Instantaneous Trip Reset Features.

**Jones Speedometers.**

With Veeder Odometer Attachment.



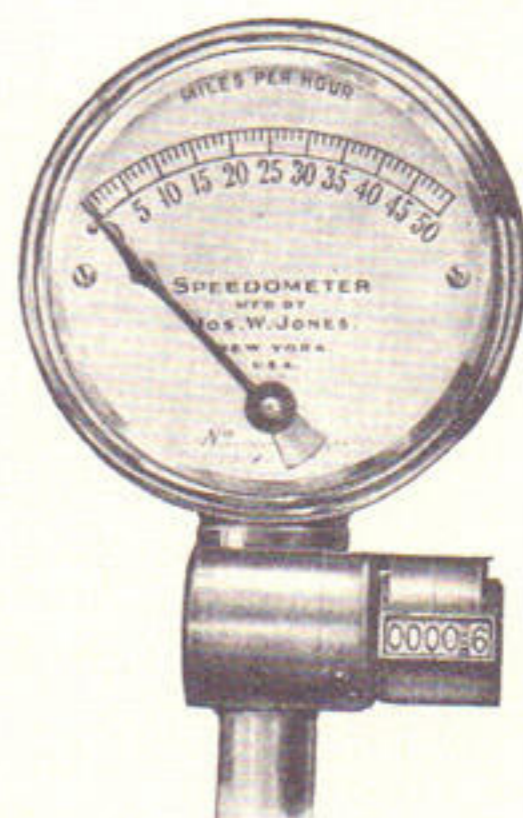
Model 20.

|                      |         |
|----------------------|---------|
| Model.               | Each.   |
| 20, 3" Dial, 50 mile | \$40.00 |
| 21, 3" Dial, 60 mile | 45.00   |
| 22, 3" Dial, 50 mile | 25.00   |

Fully guaranteed as to accuracy and durability and against imperfection of material or construction as the higher priced Maximum Hand instruments.

The Speedometer in general construction and the principle of the movement—centrifugal force—is the same as other "Jones" instruments.

Models 20 and 21 register the season to 10,000 and the trip mileage to 100—the latter being reset by turning the button provided for the purpose.

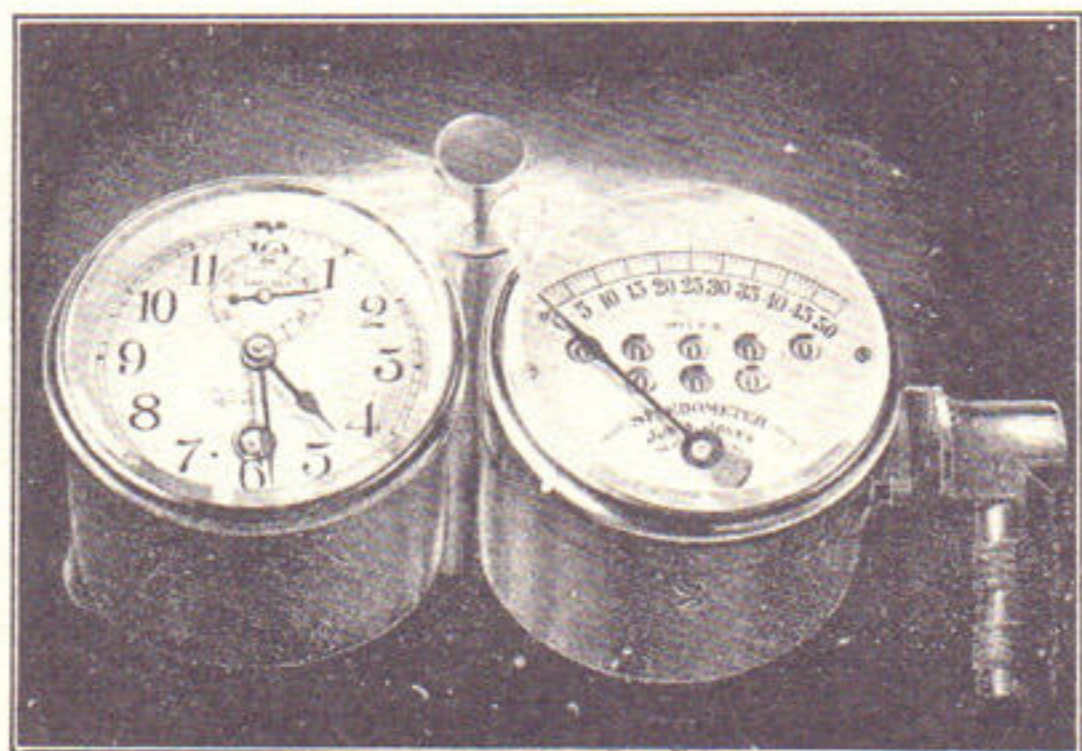


Model 22.

Model 22 records the season mileage, but has no trip register.

The bevel gear device is here also used to obviate sharp bends in the flexible shaft.

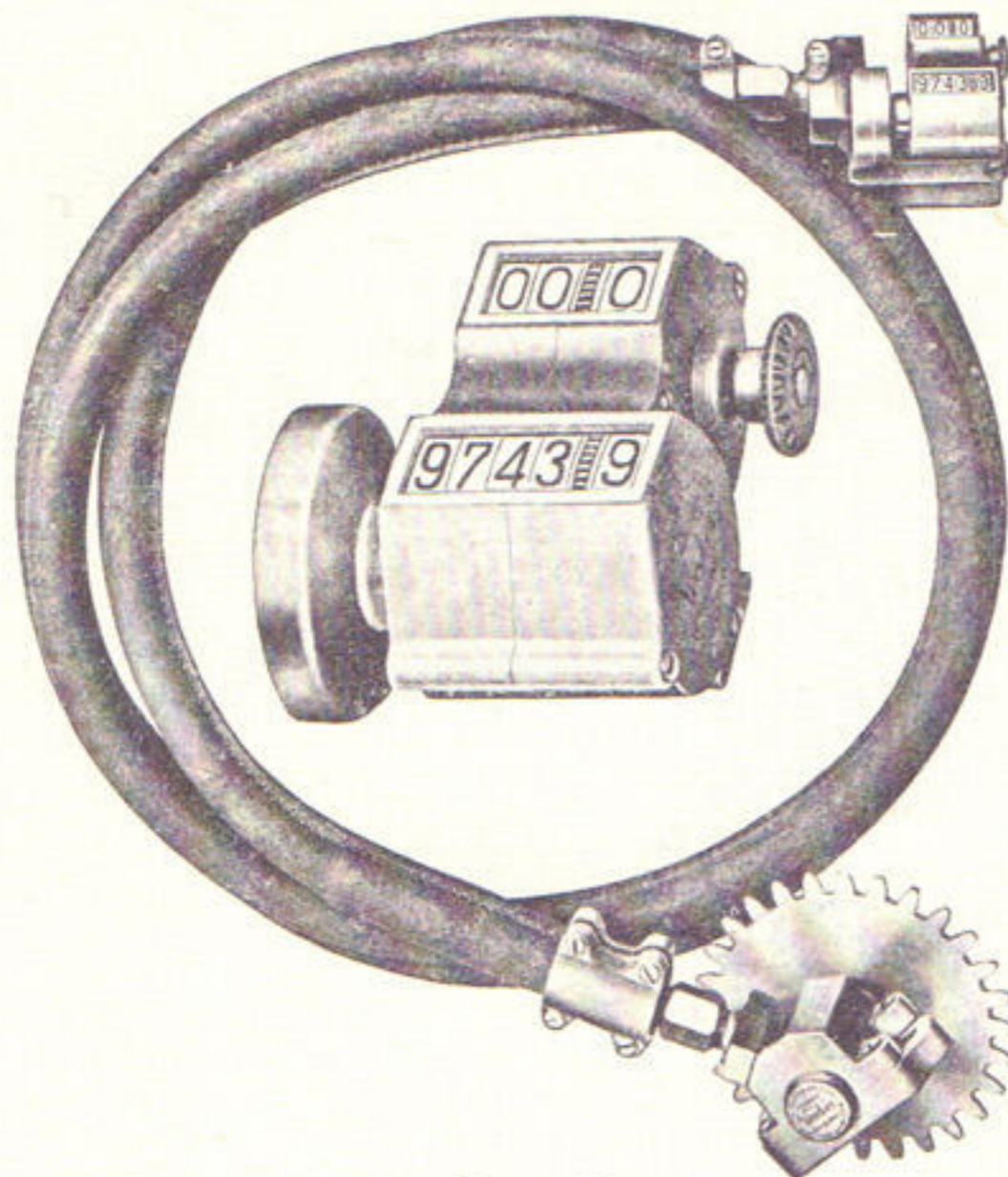
In the Jones Auto Clock the well-known "Chelsea" 8-day "Auto Movement" is encased. They may be had either separately mounted on adjustable dash brackets or mounted in twin form on single brackets with the Maximum Hand instruments.



**Note.**—In ordering Speed indicators or odometers be sure and state make and model of car and year made, diameter of wheel, and tire.

|                                   |          |
|-----------------------------------|----------|
| Model.                            | Each.    |
| 14 and 17, 3" Dials,              | \$100.00 |
| 19 and 17, 3" Dials,              | 105.00   |
| 15 and 18, 4" Dials,              | 130.00   |
| 16 and 18, 4" Dials,              | 140.00   |
| Electric Light Attachment, Extra, | 5.00     |
| 17, 3" Clock alone,               | 30.00    |
| 17, 4" Clock alone,               | 45.00    |

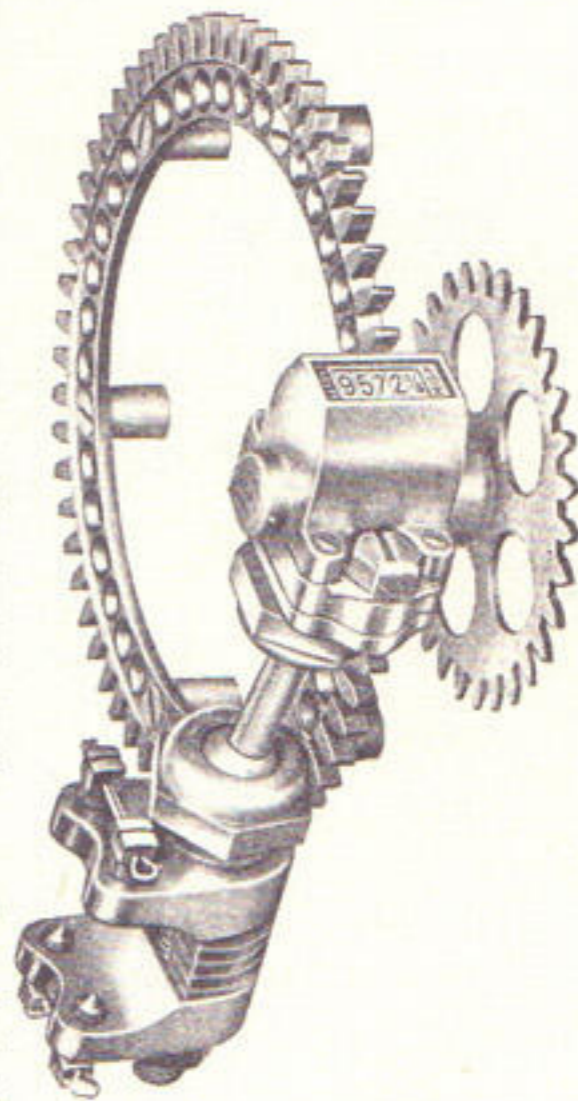
VEEDER ODOMETERS AND TACHODOMETER.



The Form B Odometer is operated by spur gears.

The driven gear is constantly in mesh with the gear wheel on the odometer.

Universal adjustable attaching brackets and gears are provided to enable one to attach to all standard makes of cars. In ordering, give the make, model and year of your car and also the correct wheel size if possible. Each complete with attaching fixtures, \$10.00.

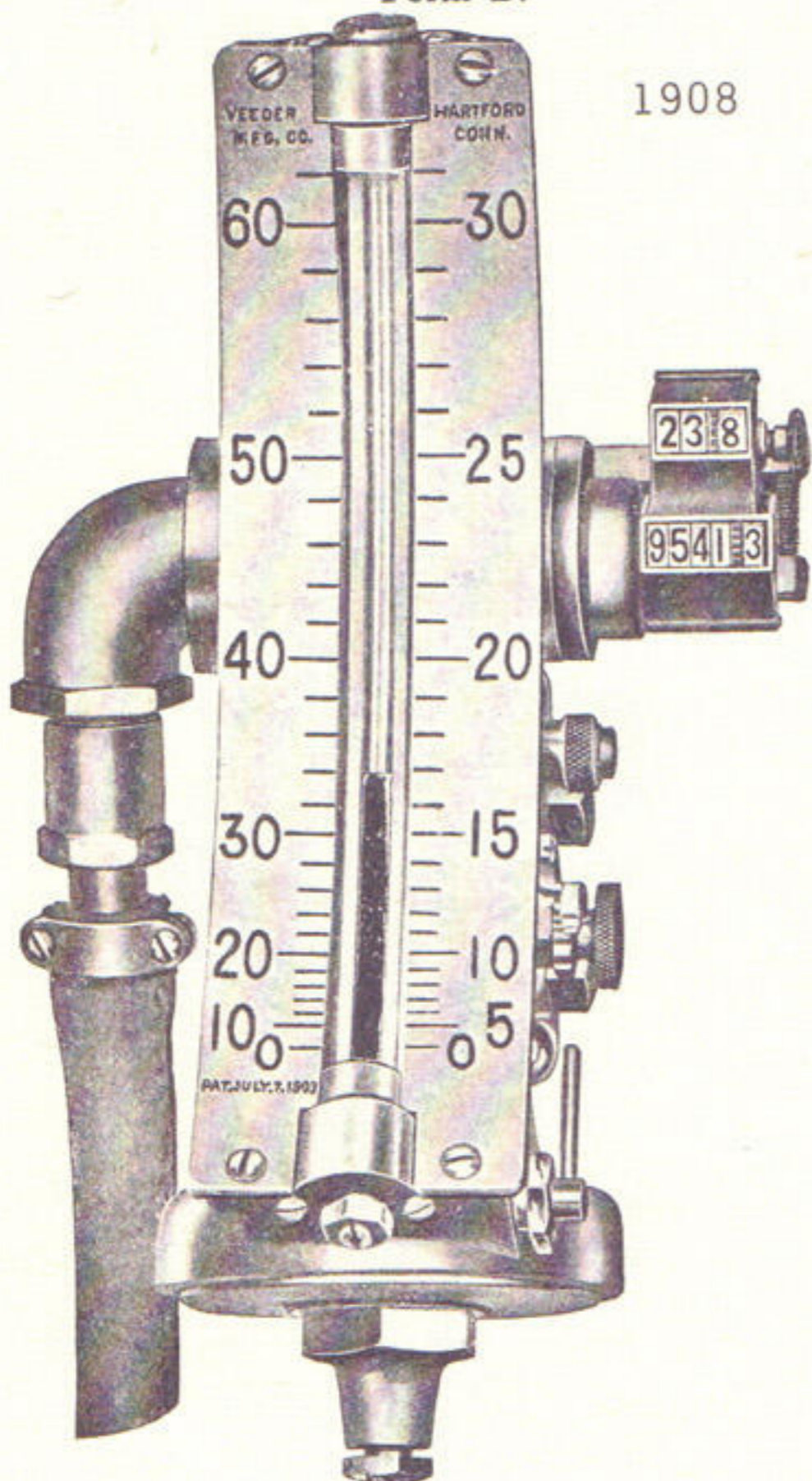


Form B.

The Veeder Form D Odometer has a trip register which may be set to zero at will, while the lower register keeps a record of the total number of miles traveled.

Both registers indicate in tenths, the right hand figure on each being in red. The figures themselves are of good readable size.

Form D.



1908

The Form D Odometer is operated by gears and flexible shaft, the latter being protected by a metallic, flexible sheathing. This sheathing is covered with porpoise hide which prevents rain or water from entering from without and keeps in the lubricants in which the shaft itself is packed.

Universal attaching fixtures are provided for attaching to any of the standard makes of cars.

Each, complete with attaching fixtures, \$25.00.

Veeder Tachodometer.

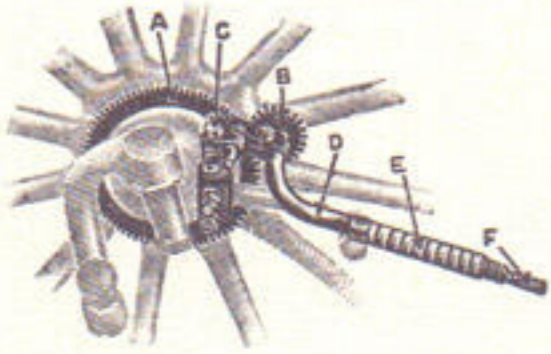
The only instrument that can be calibrated enabling one to prove whether correct or not at a glance.

This is a combined speed indicator and odometer. Operated by a flexible shaft from left front wheel of the car. It is the most accurate and durable speed indicator on the market. There is no mechanical wear in the indicating part, which comprises a small paddle wheel revolving in a liquid, and an indicator tube in which the liquid rises or goes down according to the speed. It is not affected in accuracy by temperature changes.

The points of merit in the Tachodometer are: Continued accuracy and constant calibration in use, a very distinct and perfectly steady reading, entire absence of springs and delicate moving parts, ball bearing throughout with no chance of parts binding for want of lubrication, drive above liquid level and consequently no stuffing boxes or leakage.

Each, \$75.00, complete with attaching fixtures for any of the standard makes of cars.

## Perfection Speedometers



- A—Driving Gear.....\$1.15
- B—Driving Pinion..... .57
- C—Steering Arm Con-  
nection ..... .77
- D—Bent Tube with Spring 1.15
- E—Flexible Steel Lined  
Sleeve ..... 1.92
- F—Flexible Monocoil Shaft 1.15

In ordering extra fittings it is necessary to specify the correct size, or the make and model of automobile on which they are to be used.

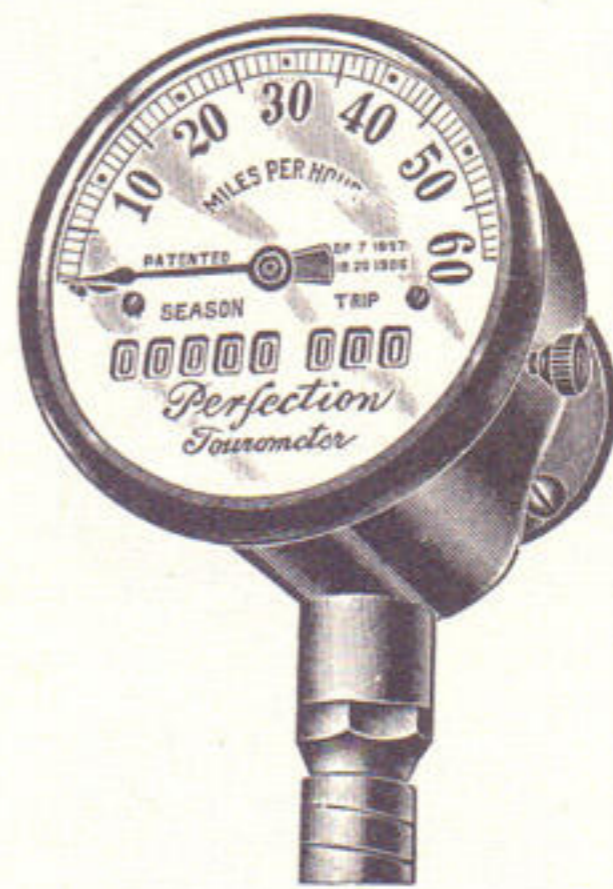
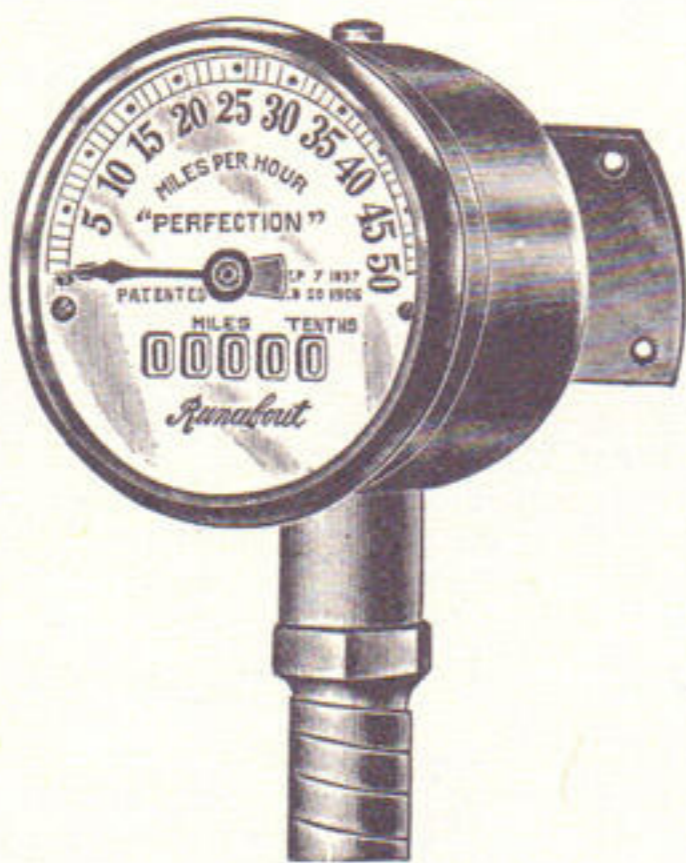
Perfection Speedometers represent the highest achievement in speedometer construction. They are especially made for us by one of the largest and best known speedometer manufacturers whose name stands for excellence in this product. Operated by centrifugal force, which is more simple, more accurate and more durable than any other system of construction. They are neither affected by climatic conditions nor subject to oversensitiveness. All materials used are very carefully selected and no expense is spared to make Perfection Speedometers absolutely the best in the world. The construction is such that the hand is equally steady at any speed from 1 mile up. Improvements made on the 1910 Perfection Speedometers operate to make the latest instruments even more satisfactory than they were before. We can guarantee them to be as accurate as any standard register on the market today. The low prices we quote on the various models are not commensurate with the high quality of this device. Careful assembling, hand calibrating, and testing by a 2,000-mile test on a special scientific machine at a speed ranging from 1 to 60 miles an hour, before they leave the factory, all aid in the excellence of Perfection Speedometers. The trip speedometer has a quick reset of entirely new and original design. The season speed-

ometer registers 10,000 miles and automatically resets to zero. The shaft construction is of the latest, casting, shaft and tubes being especially designed and made of the highest grade materials. An important feature in connection with Perfection Speedometers is the low price of renewals or extra parts. In changing speedometers from one car to another it is often necessary to change fittings. These are the only instruments whose fittings can be purchased economically. The illustration above shows the manner of attachment to the machine and the connecting parts. Every instrument is beautifully finished in highly polished brass, carefully lacquered, and their appearance denotes the intelligent thought and care bestowed upon the construction in every detail. French bevel plate glass covers every instrument and lends a corresponding refinement. The best of tool steel used in every adjustment assures smoothness of working parts.

**The Runabout.**

1910

**The Tourometer.**



The Runabout Model is very neat in appearance and absolutely accurate. Has 2 5/8-inch dial; 50-mile speed scale; 10,000-mile season speedometer. The autoist desiring to record merely his speed and his season mileage will find this an ideal instrument at an extremely popular price. Shipping weight, 11 pounds.

No. 19C6800 Runabout Speedometer.  
Price .....\$11.55

The Tourometer Model is furnished with or without maximum hand. Very graceful in its proportions. A better speedometer at the price is impossible. Has 3-inch dial; 60-mile speed scale; 100-mile trip; 10,000 mile season speedometer; quick trip reset. Shipping weight, 11 pounds.

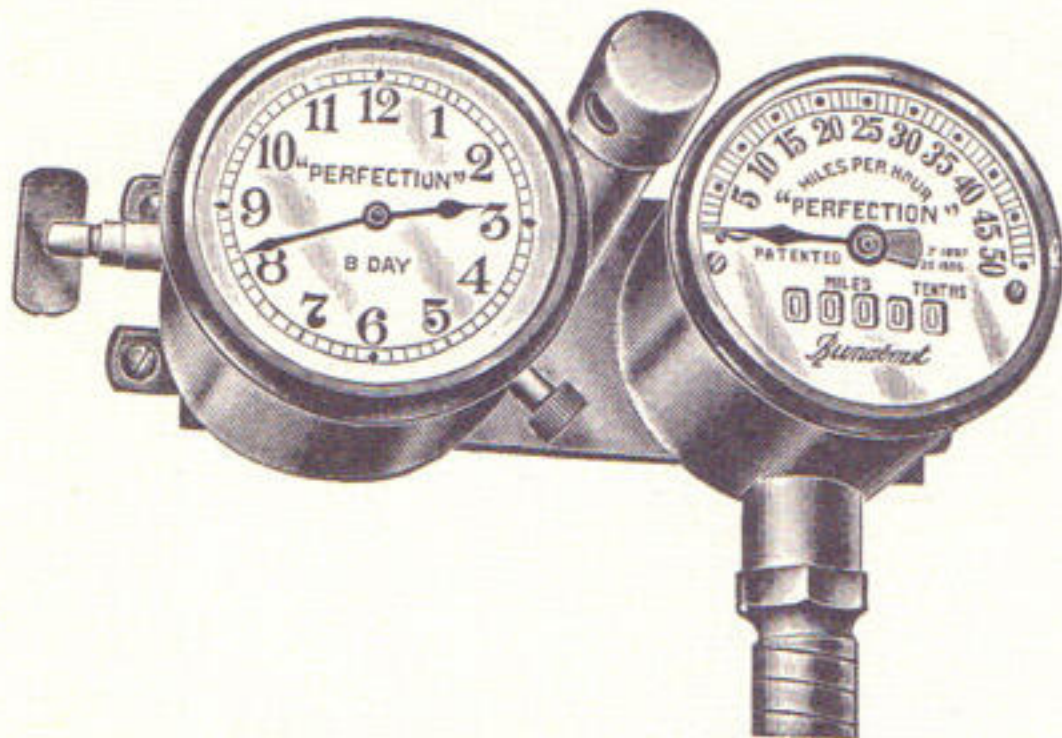
No. 19C6810 Tourometer Speedometer.  
Price .....\$19.25

NOTE—In ordering speedometers be sure to specify make, year and model of car.

## Perfection Speedometers

1910

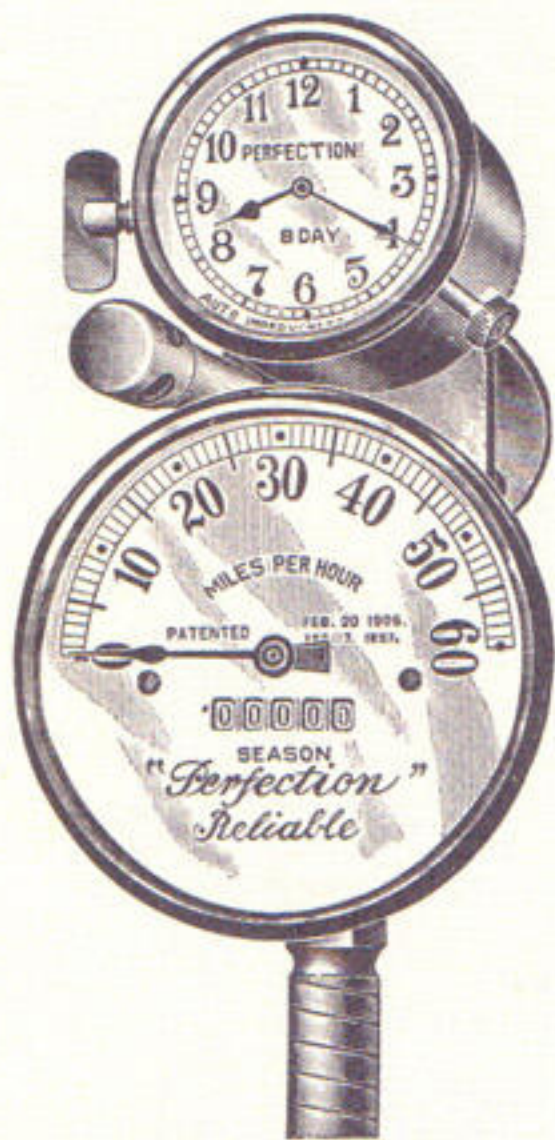
**The Runabout Twin.**



The Runabout Twin instrument combines the Perfection Runabout Speedometer, eight-day clock and electric light attachment. The clock is wound, set and regulated from the outside. Shipping weight, 12 pounds.

No. 19C6820 Runabout Twin Speedometer.  
Price .....\$23.05

**The Reliable Twin.**

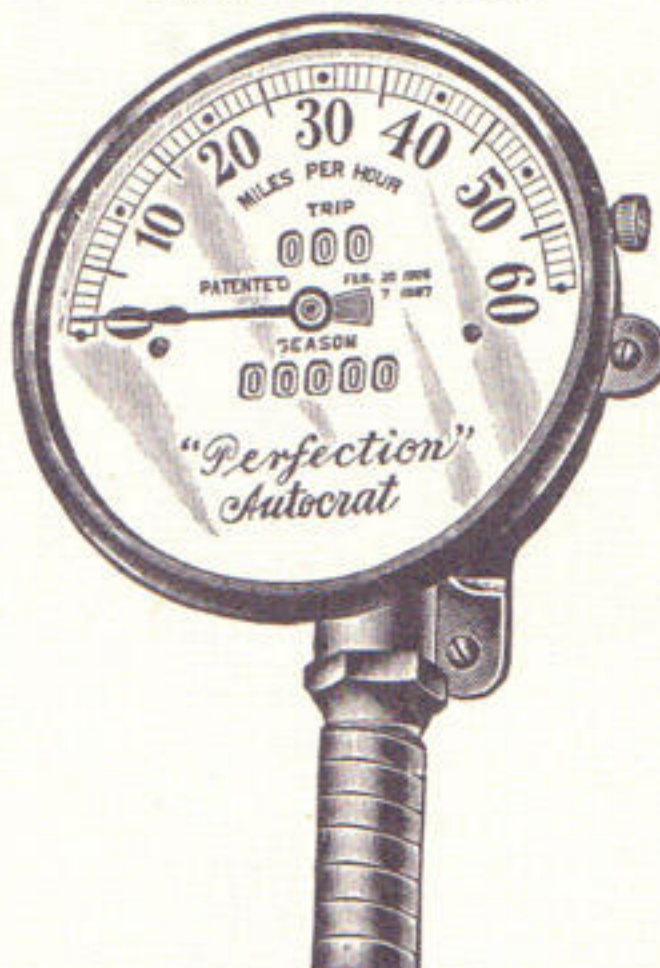


The Reliable Twin instrument combines the Perfection Speedometer, eight-day clock and electric light attachment. The clock is placed above the speedometer on an adjustable dashboard bracket. Speedometer dial is 4 inches and clock dial  $2\frac{5}{8}$  inches in diameter. Has 60-mile speed scale; 10,000 mile season speedometer. Shipping weight, 12 pounds.

No. 19C6830 Reliable Twin Speedometer.  
Price .....\$23.10

NOTE: In ordering speedometers be sure to specify make, year and model of car.

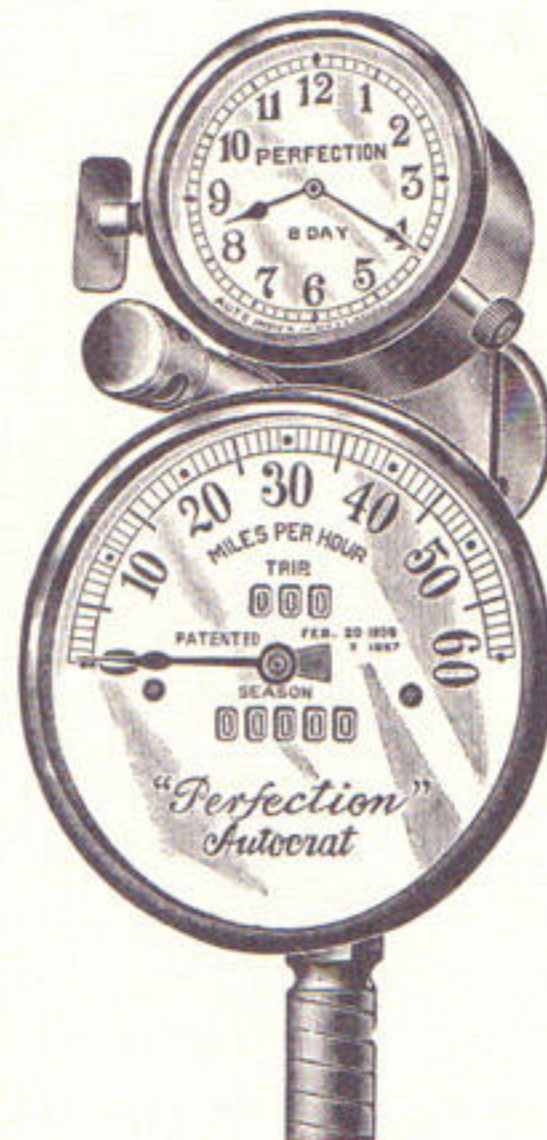
**The Autocrat.**



The Autocrat instrument in quality, appearance and price is one of the most reliable speedometers ever produced. All figures are large and easily read at a great distance. Has 60-mile speed scale; 4-inch dial; 100-mile trip; 10,000-mile season speedometer. Trip speedometer has quick reset. Shipping weight, 11 pounds.

No. 19C6840 Autocrat Speedometer.  
Price .....\$15.40

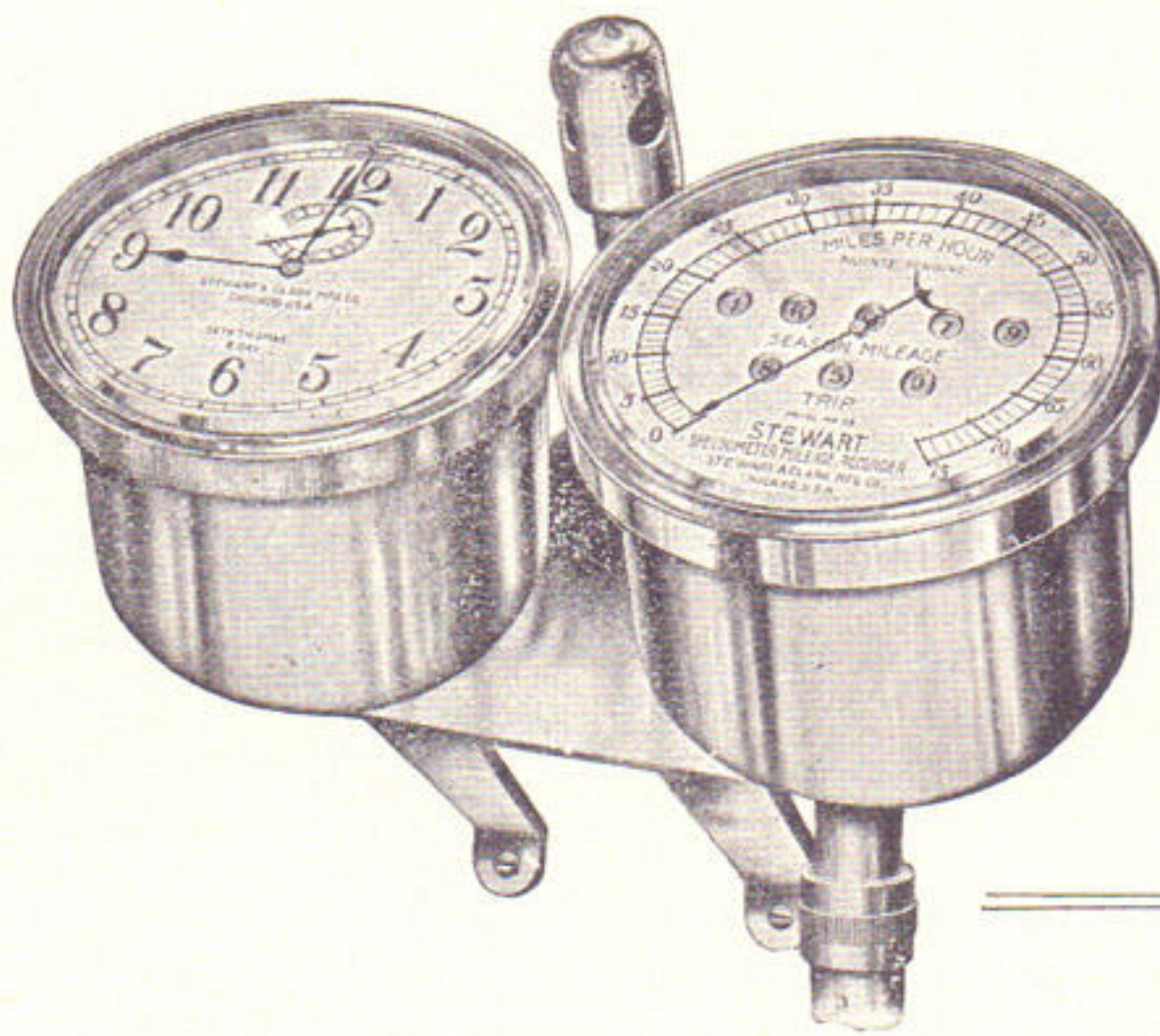
**The Autocrat Twin.**



The Autocrat Twin Model combines the Autocrat Perfection Speedometer, eight-day clock and electric light attachment, allowing the combinations to be placed at a desirable angle. Speedometer dial is 4 inches and clock dial  $2\frac{5}{8}$  inches in diameter. Shipping weight, 13 pounds.

No. 19C6850 Autocrat Twin Speedometer.  
Price .....\$26.95

THE AUTOMOBILE EQUIPMENT CO., DETROIT, MICH.



Model 35. Combination of Model 11, 60-mile, four-inch dial, enclosed 10,000-mile season odometer and automatic resetting trip register and eight-day, seven-jewel Stewart clock, stem wind and set, mounted on brass base, equipped with electric light. Price ..... **\$50**

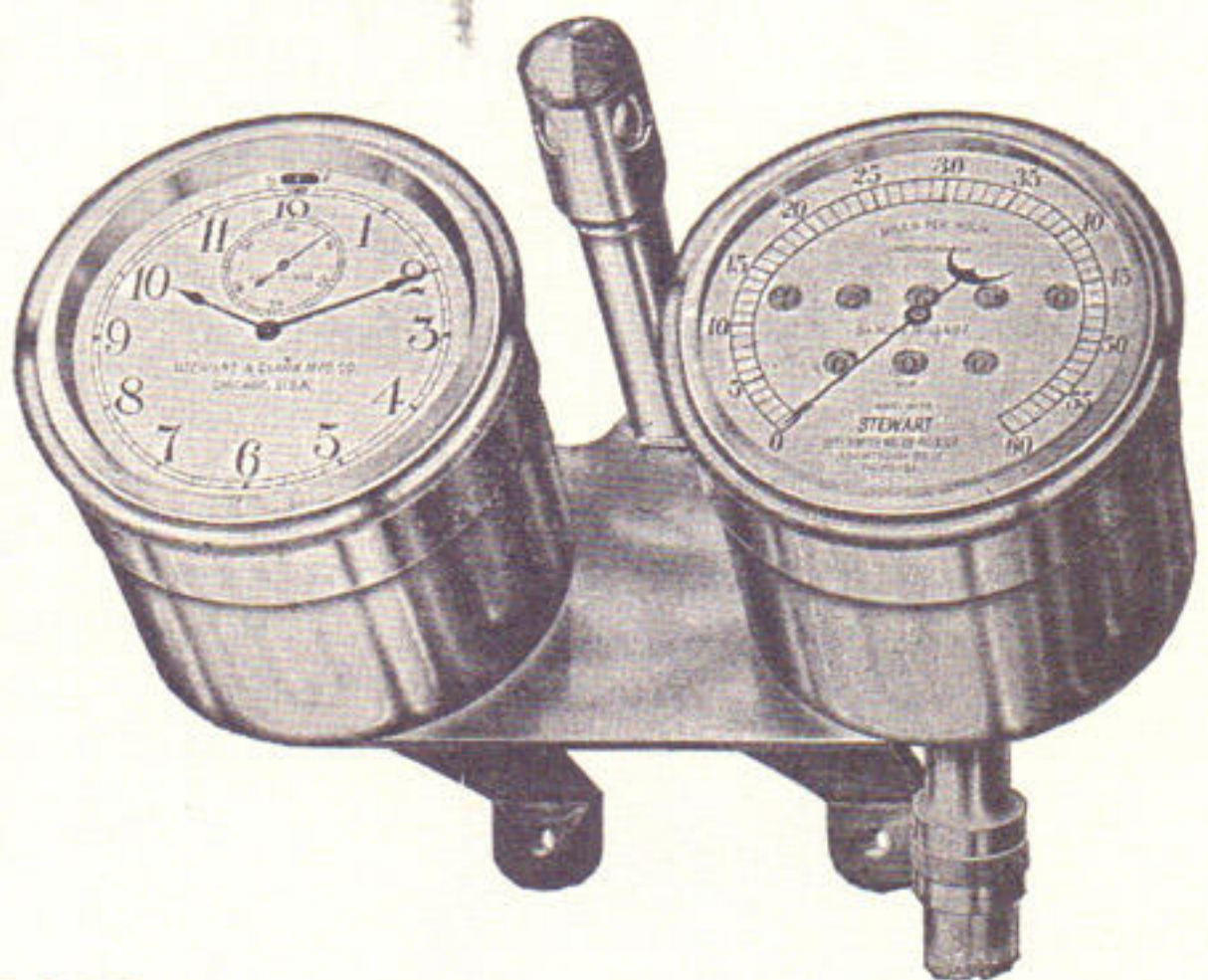
Model 10. Four-inch, 60-mile speedometer, Model 11, combined with a four-inch Seth Thomas eight-day keyless clock, mounted on handsome bracket, with electric light. Price **\$60**

Model 29. Four-inch, Model 27, 75-mile speedometer, enclosed 100,000-mile season odometer and automatic resetting trip register combined with an eight-day Seth Thomas keyless clock and electric light. Price..... **\$75**

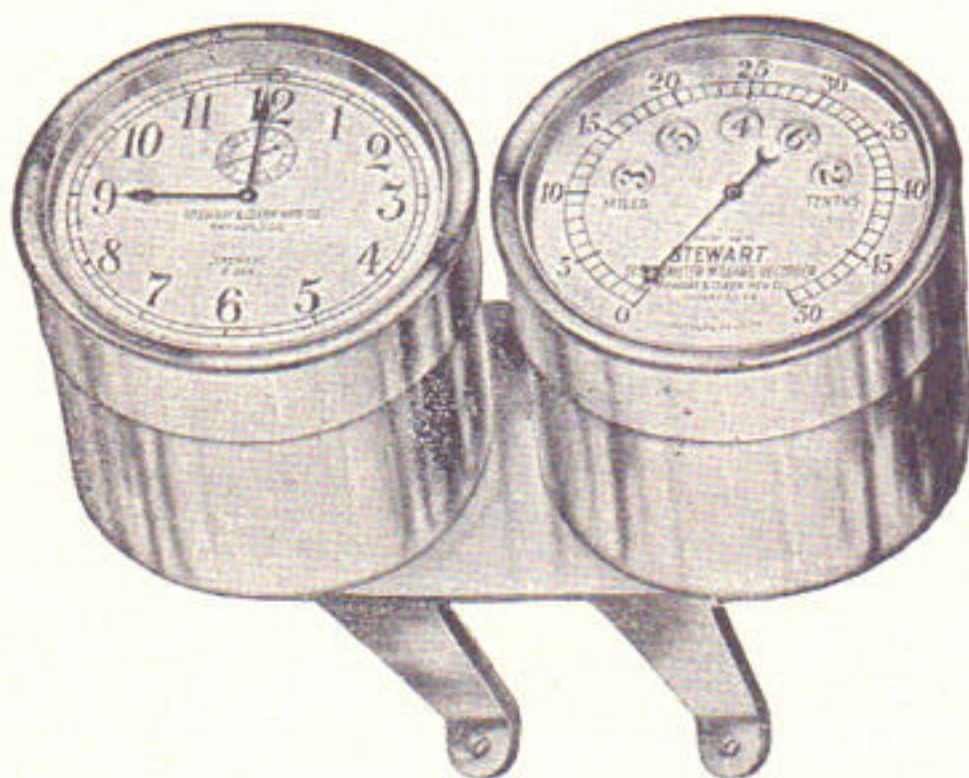
Model 18. Four-inch dial, 90-mile speedometer, 100,000-mile season odometer, automatic resetting trip register eight-day Seth Thomas clock (keyless), electric light. Price **\$110**

Model 34. Combination of Model 26 speedometer, three-inch dial, enclosed 10,000-mile odometer and automatic resetting trip register, eight-day, seven-jewel Stewart clock, stem wind and set, mounted on brass base, equipped with electric light. Price..... **\$40**

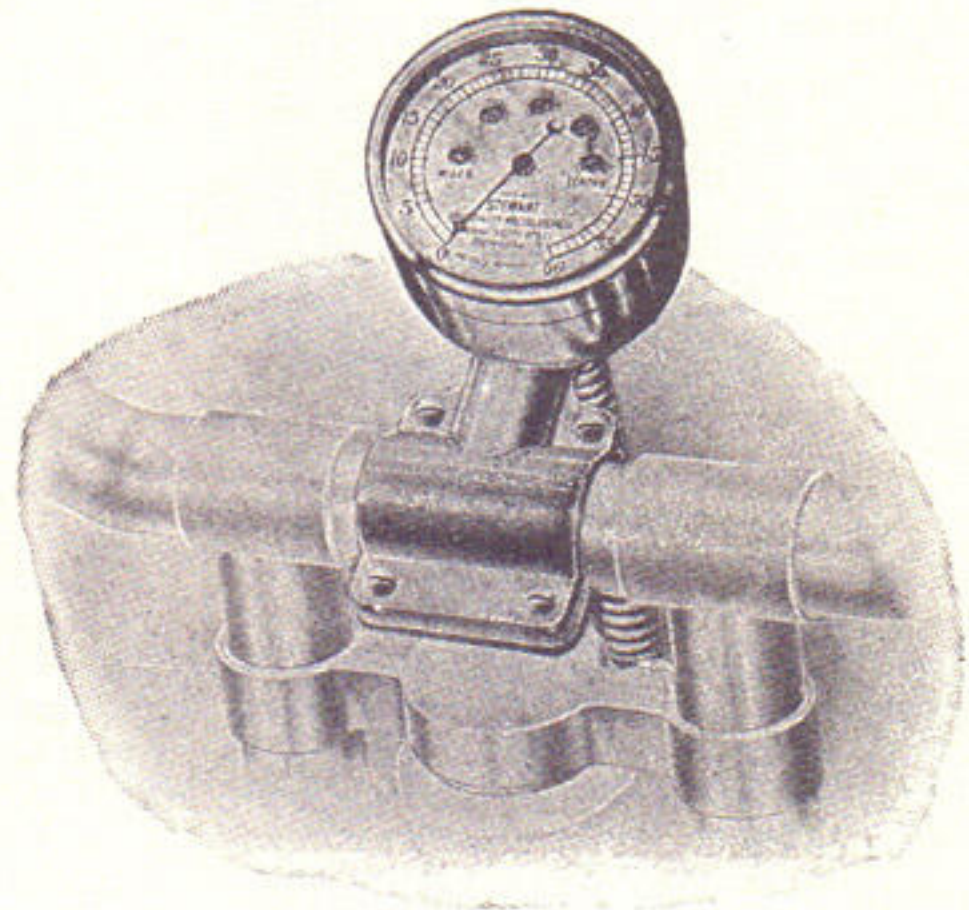
Model 28. Three-inch, 60-mile speedometer, Model 26, enclosed 10,000-season odometer and automatic resetting trip register, combined with a three-inch Seth Thomas eight-day keyless clock, mounted on handsome bracket, equipped with electric light. Price **\$55**



1910



Model 33. Combination of speedometer, 50-mile, two and one-half-inch dial, enclosed 10,000-mile season odometer and eight-day Stewart clock, stem wind and set, mounted on brass base. Price ..... **\$25**



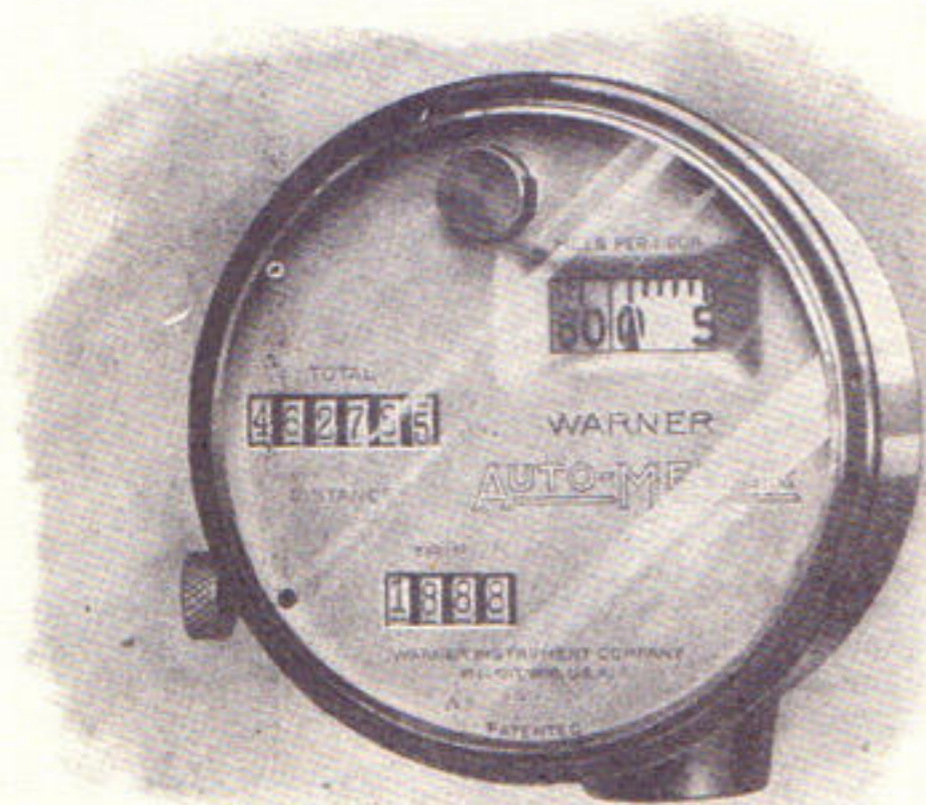
Model 21. Motor cycle speedometer, two and one-half-inch dial, 60-mile, 10,000-mile season odometer. Price.. **\$12**

Model 22. Same as above, with 90-mile dial. Price..... **\$15**



# WARNER AUTO-METERS

1910



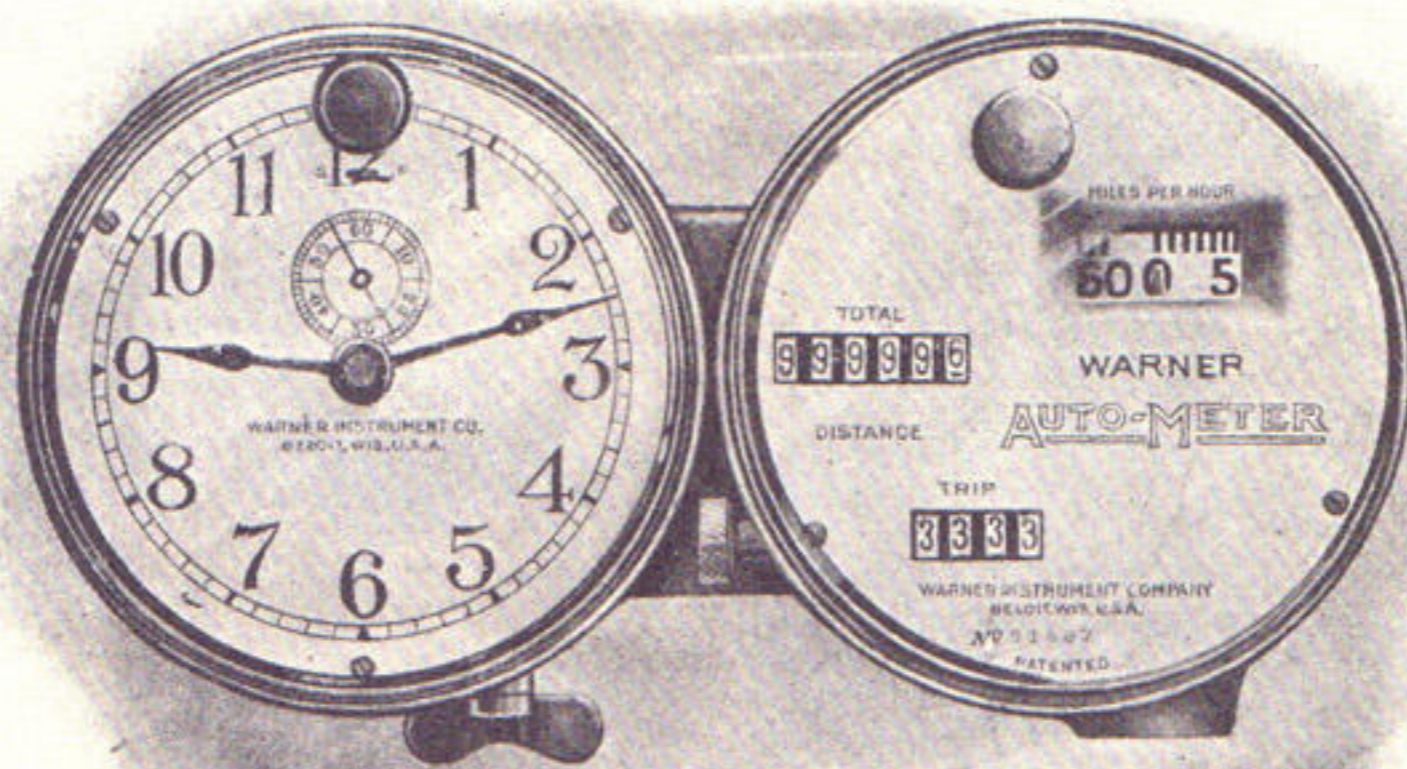
**MODEL K. PRICE \$75.00**  
Sixty-Mile Speed Dial, 100,000 miles on season odometer, 1,000 miles on trip. Electric light beneath bezel. Face 4 1-2 inches.

**MODEL L. PRICE \$85.00**  
Same as Model K, but with 100-mile speed dial.



**MODEL M. PRICE \$125.00**  
Same as Model K, with 3 1-8 inch Chelsea Clock, provided with separate hooded electric light.

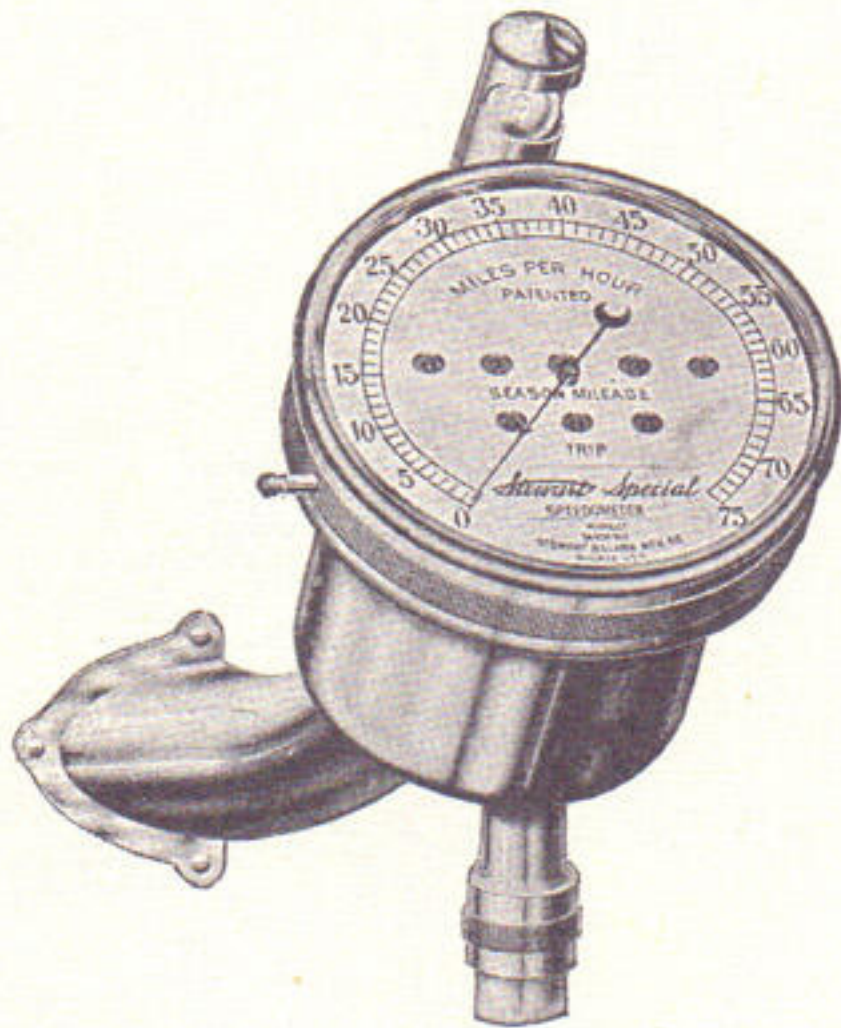
**MODEL N. PRICE \$125.00**  
Same as Model M, but with 100-mile speed dial.



**MODEL O. Sixty-Mile Speed Dial, PRICE \$145.00** Chelsea Clock, 4 1-2 inches, special winding device, Two lights.

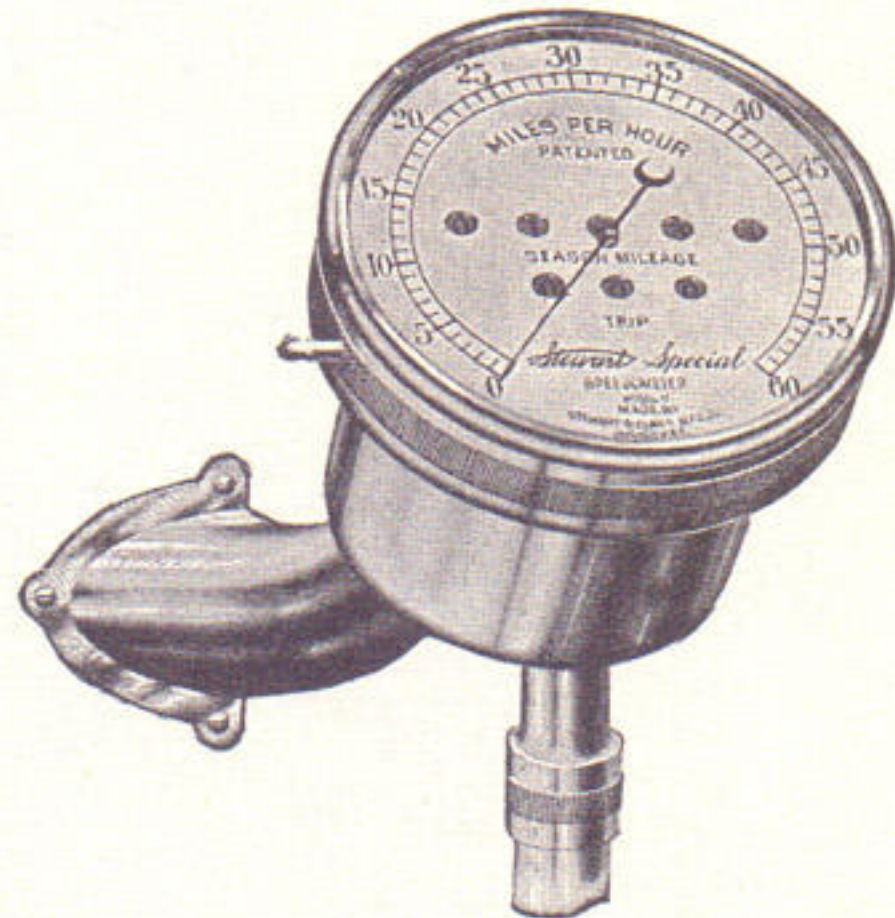
**MODEL P. Hundred-Mile Speed Dial, PRICE \$145.00**

# 1911 Stewart Magnetic Speedometers



Model 27. Four-inch dial, 75-mile speedometer, 100,000-mile season odometer, automatic resetting trip register and electric light.  
Price, each .....\$30.00

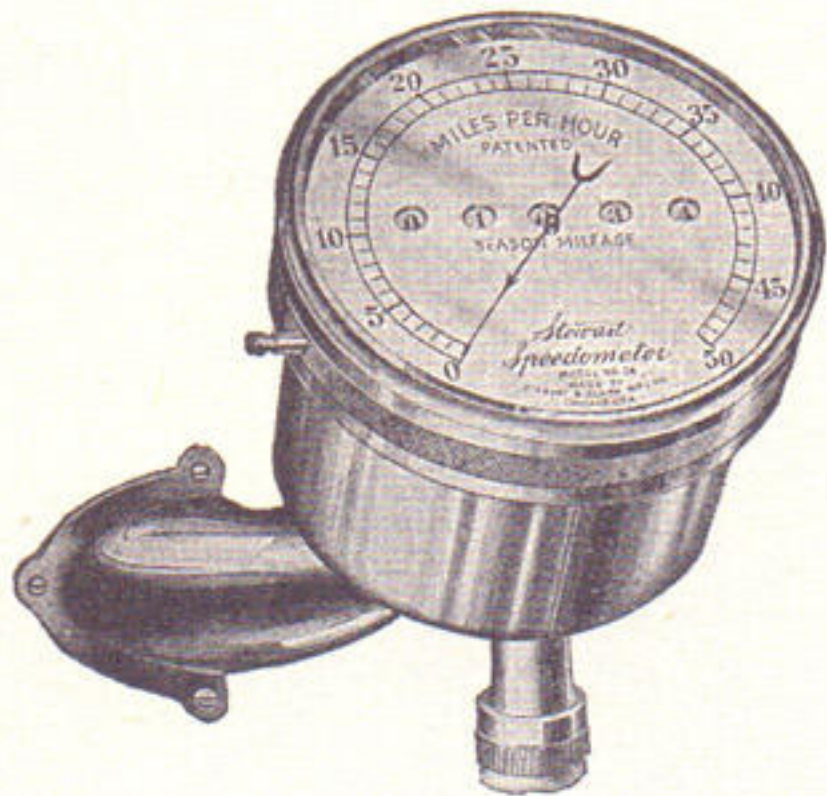
Model 129. Four-inch, Model 127, 75-mile speedometer, enclosed 100,000-mile season odometer, automatic resetting trip register, combined with 8-day Seth Thomas rim wind clock and electric light.  
Price, each.....\$70.00



Model 11. Four-inch dial, 60-mile speedometer, 10,000-mile season odometer and automatic resetting trip register.  
Price, each .....\$25.00

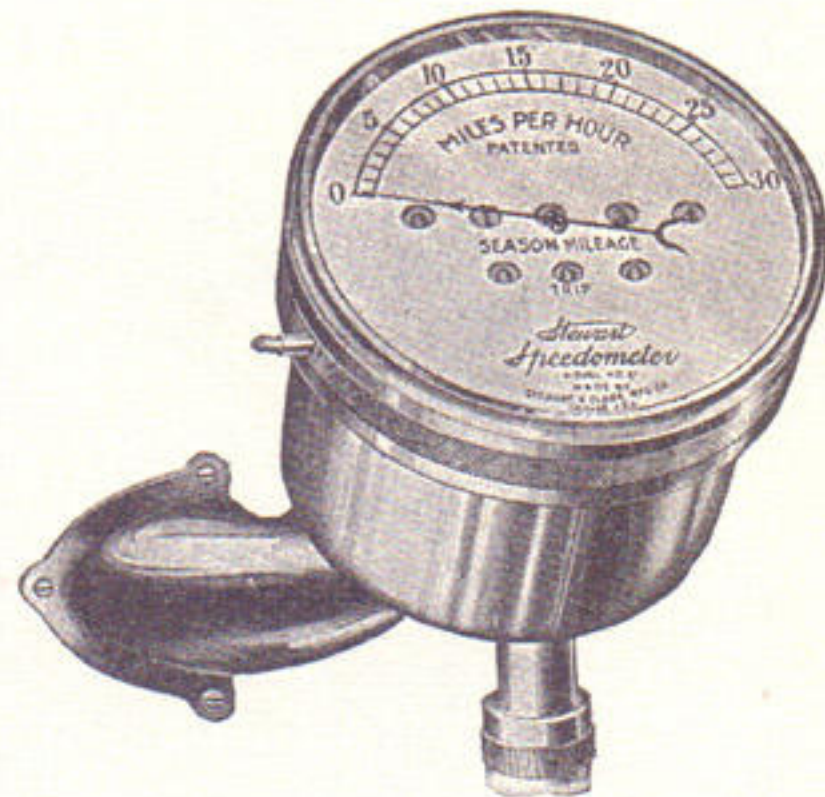
Model 10. Four-inch dial, 60-mile speedometer, Model 11, combined with a Seth Thomas 8-day rim wind clock, mounted on bracket, equipped with electric light.  
Price, each.....\$65.00

Model 35. Four-inch dial, combination of Model 11, 60-mile speedometer, enclosed 10,000-mile season odometer, automatic resetting trip register, 8-day Stewart rim wind clock, mounted on brass base, equipped with electric light.  
Price, each.....\$50.00



Model 26. Three-inch dial, 60-mile speedometer, 10,000-mile season odometer and automatic resetting trip register.  
Price, each .....\$20.00

Model 28. Three-inch dial, 60-mile speedometer, Model 26, enclosed 10,000-mile season odometer and automatic resetting trip register, combined with a Seth Thomas 8-day rim wind clock, mounted on a handsome bracket, equipped with electric light.  
Price, each.....\$60.00



Model 41. Three-inch dial, 30-mile speedometer, 10,000-mile season odometer, automatic resetting trip register. For electric automobiles and motor trucks.  
Price, each.....\$20.00

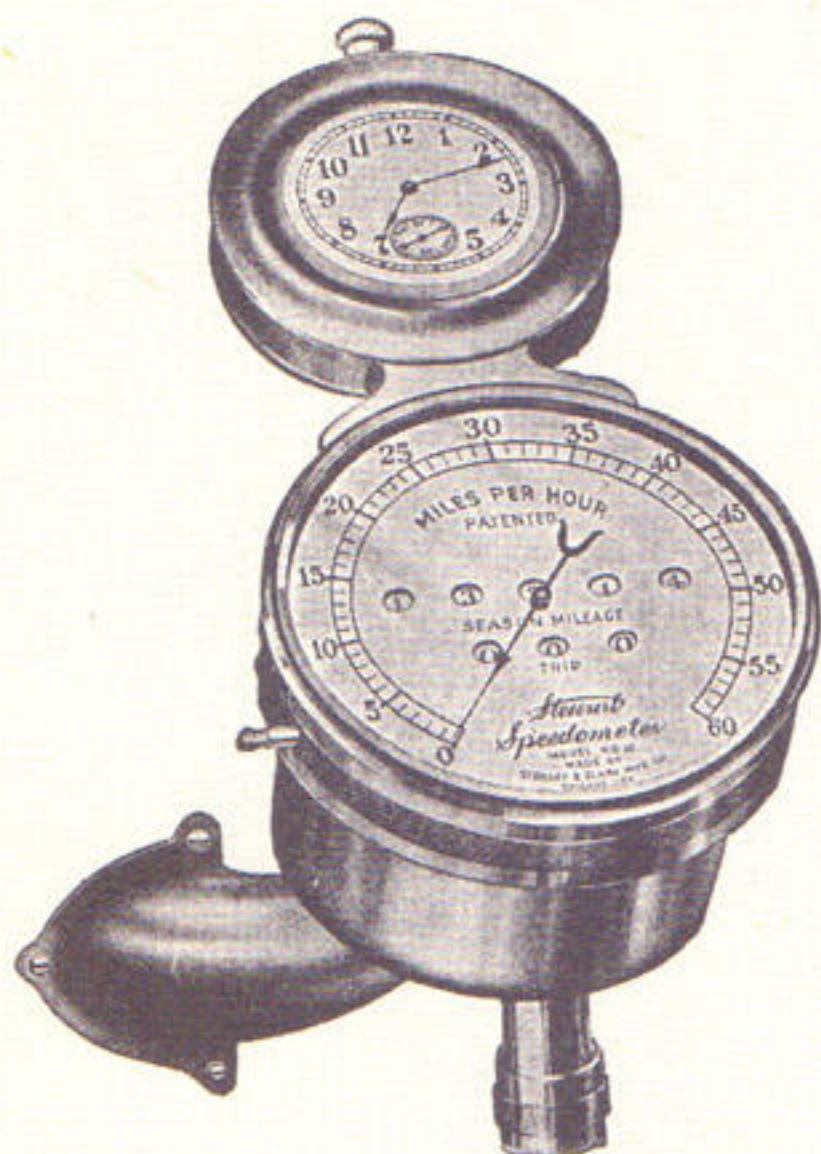
## Stewart Motorcycle Speedometer

Motorcycle Model 40 is 2½ inches in diameter, and is popular-priced—\$15. The instrument indicates speed from 0 to 60 miles, and is equipped with 10,000-mile season odometer. During this past season we have made exhaustive tests to insure furnishing an equipment that will guarantee to the motorcycle owner absolute satisfaction on the part of the speedometer. We use a short length of flexible shafting from the instrument to a point about half way down the fork, to which it is clamped, and connected there with a right angle drive. The drive is by means of pulleys and wire belt, which we have found to be the most satisfactory drive for motorcycle use. This wire belt takes up jar and motion of fork, assisted by the telescope connection on flexible shaft. Drive is therefore positive at all times over the roughest road, insuring absolute accuracy in indicating speed and without fluctuation of pointer.

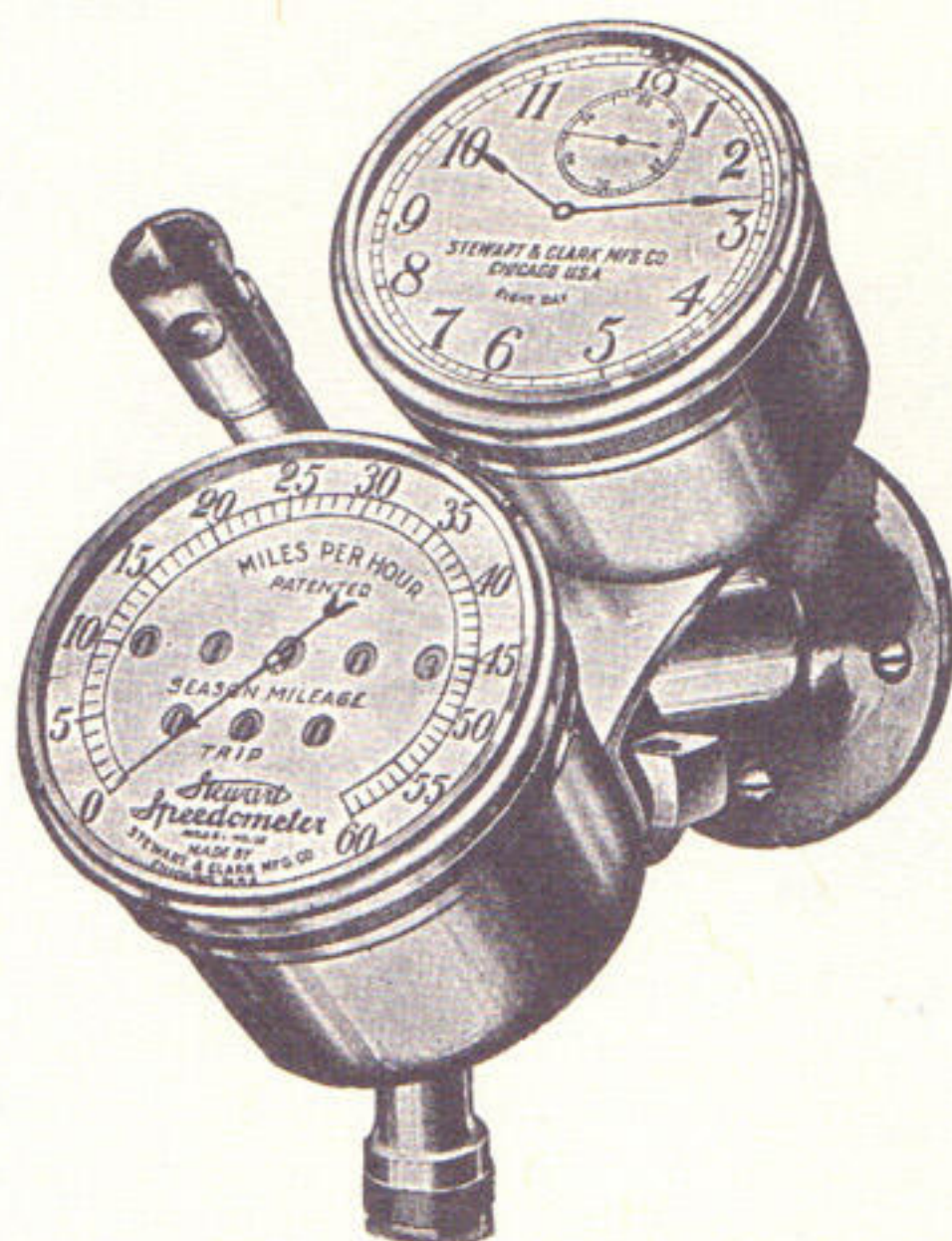
James L. Gibney & Bro., Philadelphia, Pa.

# 1911 Stewart Magnetic Speedometer

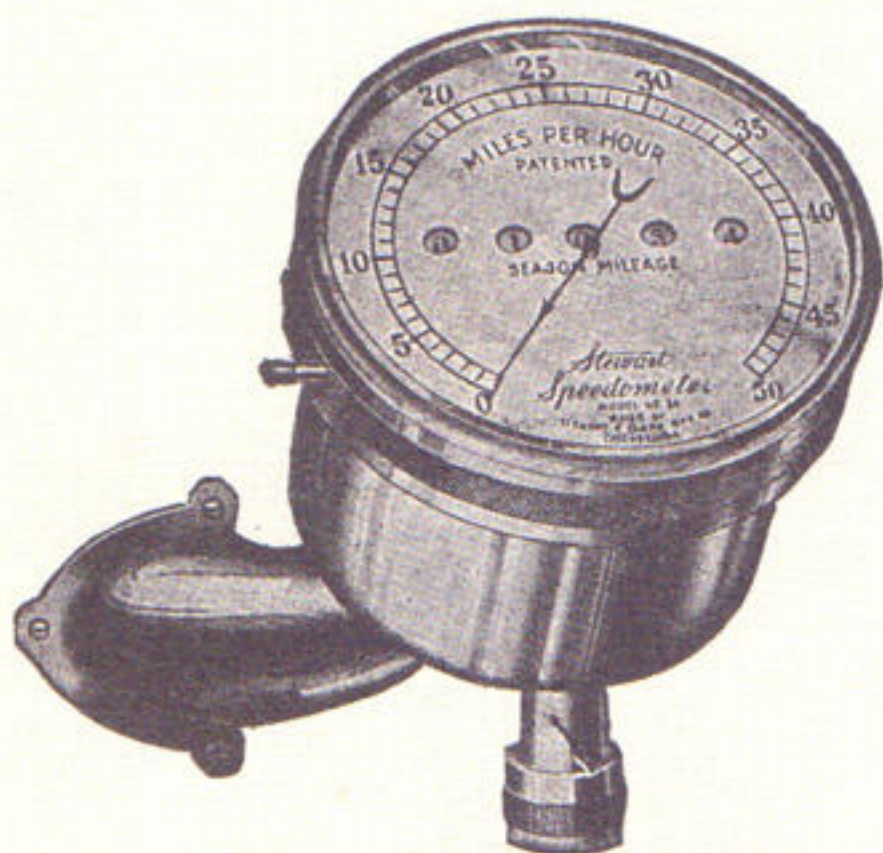
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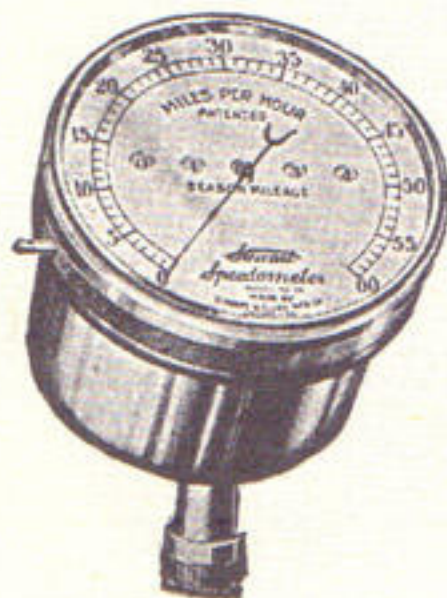
Model 32. Three-inch dial, 60-mile speedometer, 10,000-mile season odometer, automatic resetting trip register and a guaranteed watch.  
Price, each .....\$25.00



Model 34. Combination of Model 26 speedometer, three-inch dial, 60-mile speedometer, enclosed 10,000-mile season odometer, automatic resetting trip register, 8-day Stewart rim wind clock, mounted on brass base, and equipped with electric light.  
Price, each .....\$45.00

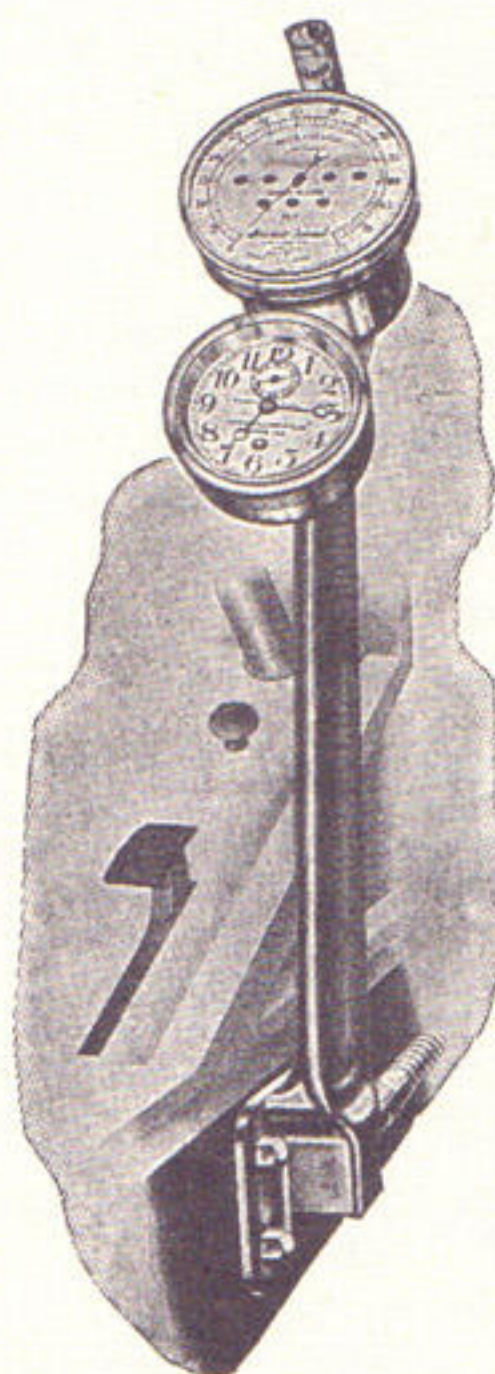


Model 24. Three-inch dial, 50-mile speedometer, not compensated, enclosed 10,000-mile season odometer, no trip register.  
Price, each .....\$15.00



Model 43. Three-inch dial, 60-mile speedometer, enclosed 10,000-mile season odometer, no trip register.  
Price, each .....\$15.00

Model 42. Three-inch dial, 60-mile speedometer, 10,000-mile season odometer and automatic resetting trip register.  
Price, each .....\$20.00



Model 36. Four-inch dial, 75-mile speedometer, 100,000-mile season odometer, automatic resetting trip register, 8-day Seth Thomas rim wind clock, equipped with electric light, mounted on brass standard, flexible shaft encased in leather.  
Price, each .....\$100.00

Model 37. Four-inch dial, 60-mile speedometer, 10,000-mile season odometer, automatic resetting trip register, 8-day Stewart rim wind clock, mounted on brass base, flexible shaft encased in leather.  
Price, each .....\$75.00

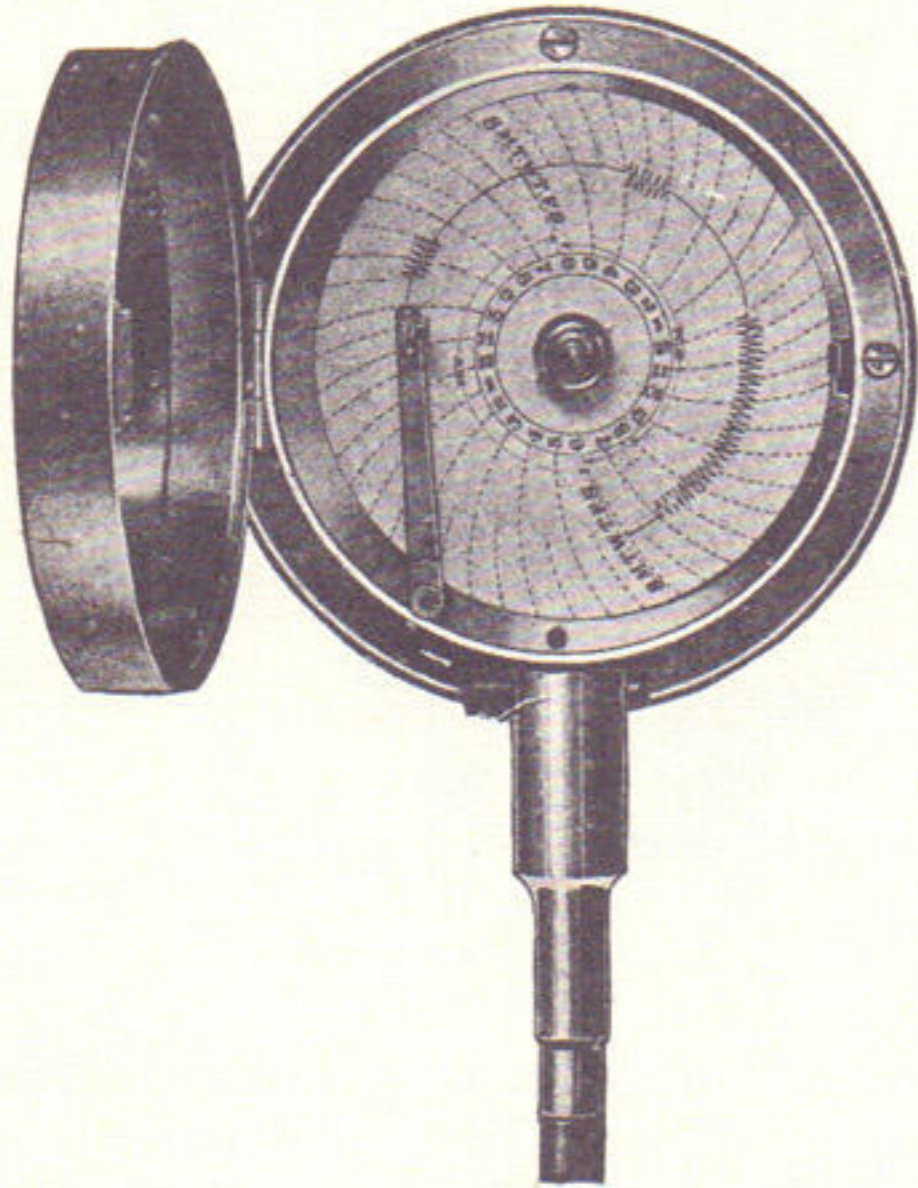
## Five-Year Guarantee

We guarantee each Stewart Speedometer against everything but misuse for a period of five years from date of purchase. This guarantee and warrant covers materials, mechanical construction and accurate operation of the instrument, flexible shaft and all connections. Each instrument is calibrated, tested and sealed before leaving the factory. Any instrument returned to us, transportation charges prepaid, with seal unbroken, that has failed to give proper service, or failed to register accurately, or which has otherwise proved defective in material or construction, within the above mentioned term, will be repaired or replaced free of charge.

STEWART & CLARK MFG. Co., Chicago, U. S. A.

Manufacturers and Importers

## RECORDERS, ODOMETERS AND EVER READY STARTERS



1912

**The Jones Recorder**

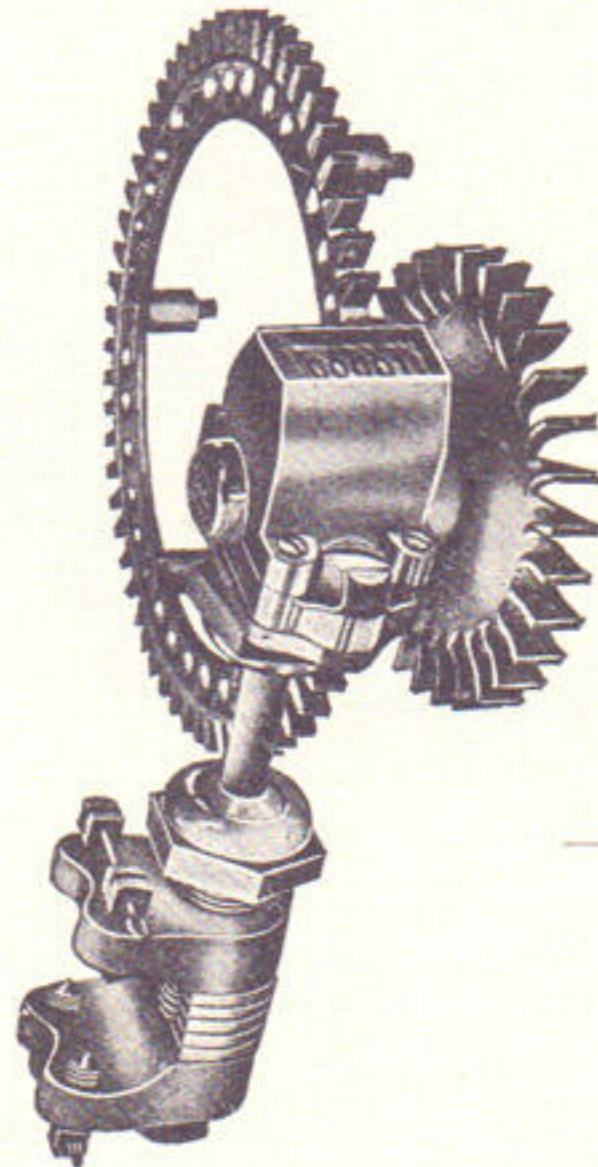
Is attached to car in the same manner as a speedometer. Has revolving record which shows what time the car leaves the garage, the number of stops it makes during the day, the duration of each stop, the mileage covered between each stop, the speed the car was driven, and at what time it returned to garage.

Invaluable to truck owners.

**Price List**

|                             |         |
|-----------------------------|---------|
| Model 37—Weekly record..... | \$50.00 |
| Model 37D—Daily record..... | 50.00   |

Note.—We recommend Model 37D.



**Form B Veeder Odometer**

Has adjustable bracket for attaching to steering knuckle and will fit any car. Registers up to 10,000 miles and also indicates the tenths of miles.

The Form B Veeder Odometer is extensively used on commercial cars and electrics, where the mileage only is desired.

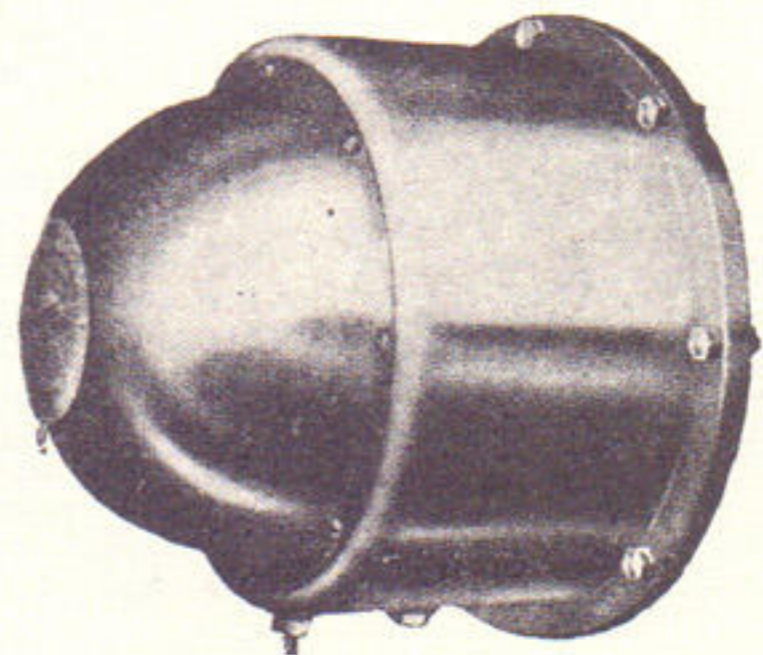
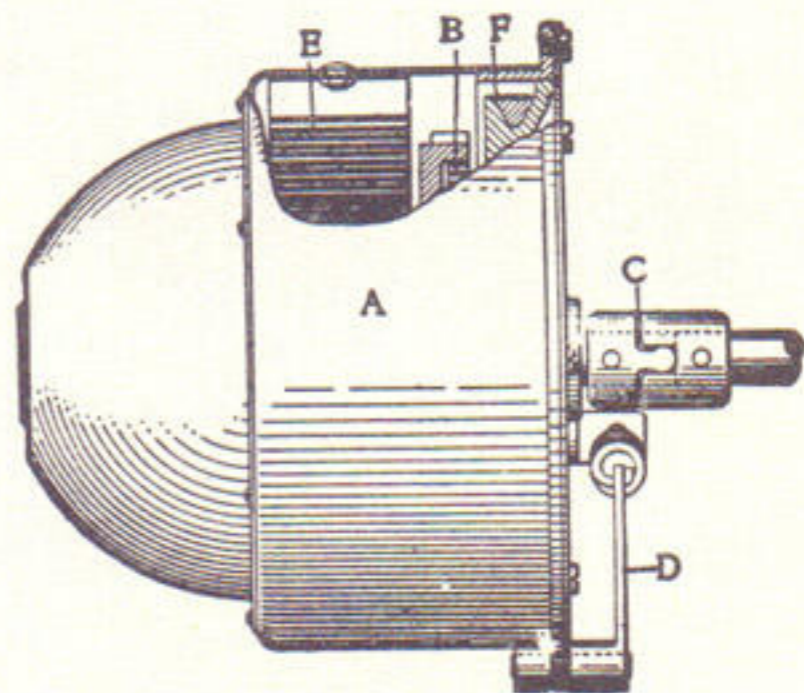
Price each..... \$10.00

**EVER-READY STARTER**

The Ever-ready is a mechanical device. It is placed on the front of the car. Two powerful springs (E) are employed. These springs are wound automatically and then held by a brakeband (F) which, in conjunction with a release lever (D), is connected by a trip cable to a pedal on the footboard of the car. Press the pedal with the foot, the brakeband is released, the springs unwind, the motor starts. The latter is connected to the starter by an intermediate shaft with universal couplings (C). It will positively start on the magneto any motor that can be started by hand cranking on batteries.

The following prices are for Starters finished in polished brass attached complete to car or boat:

|  |          |
|--|----------|
| No. 1—8½ in. diameter by 8½ in. long. Suitable for motors that actually develop less than 15 H. P.....                                       | \$135.00 |
| No. 2—8½ in. diameter by 10 in. long. Suitable for 4-cylinder motors, 4⅜-in. bore or less.....   | 150.00   |
| No. 3—8½ in. diameter by 11 in. long. Suitable for 4-cylinder motors, 4½-in. bore or over and for 6-cylinder motors 3¾-in. bore or over..... | 175.00   |



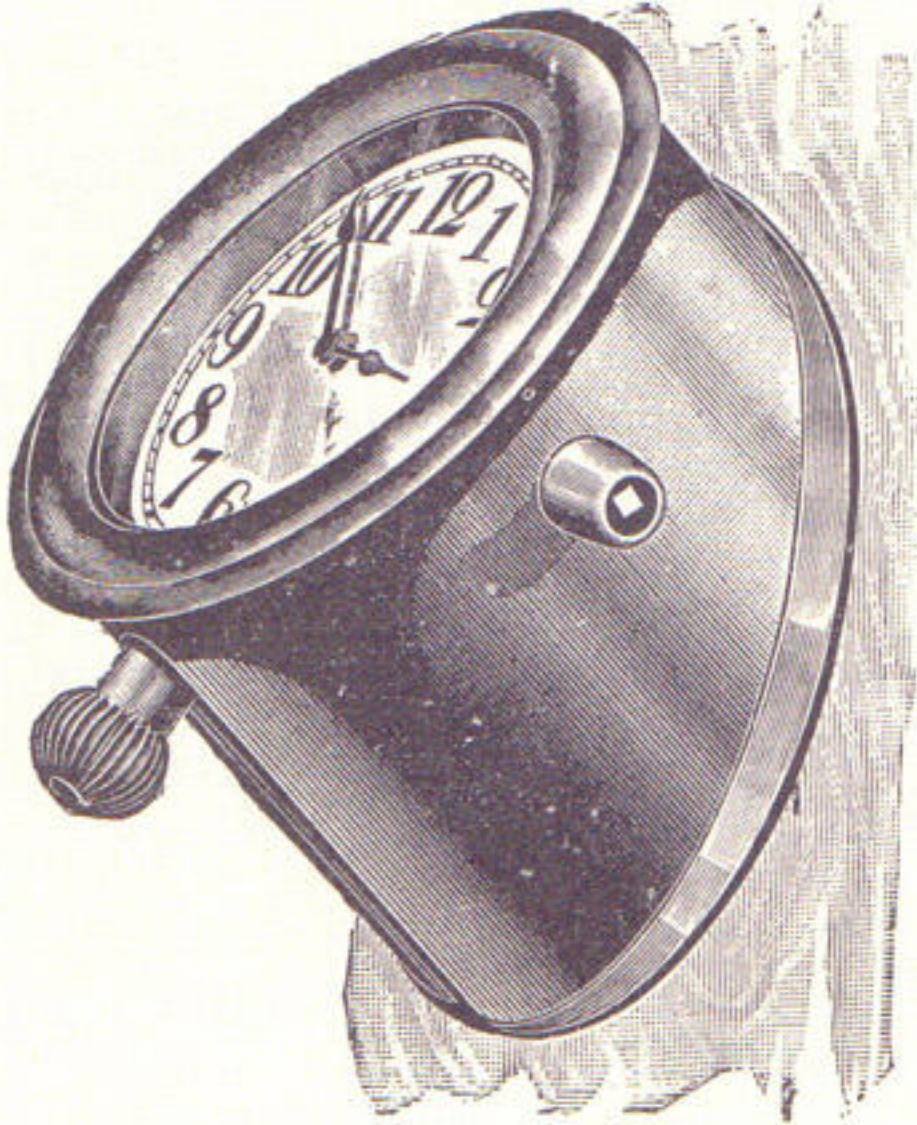
AUTO CLOCKS.

1907

SWISS AUTO CLOCK.

Diameter of Dial, 2½ inches.

| List No. |                               | Price   |
|----------|-------------------------------|---------|
| 0506     | One Day Clock , Each.....     | \$ 4.25 |
| 0507     | Eight Day Jewelled, Each..... | 11.25   |



LARGE SIZE AUTO CLOCK.

Diameter of Dial, 3¼ inches.

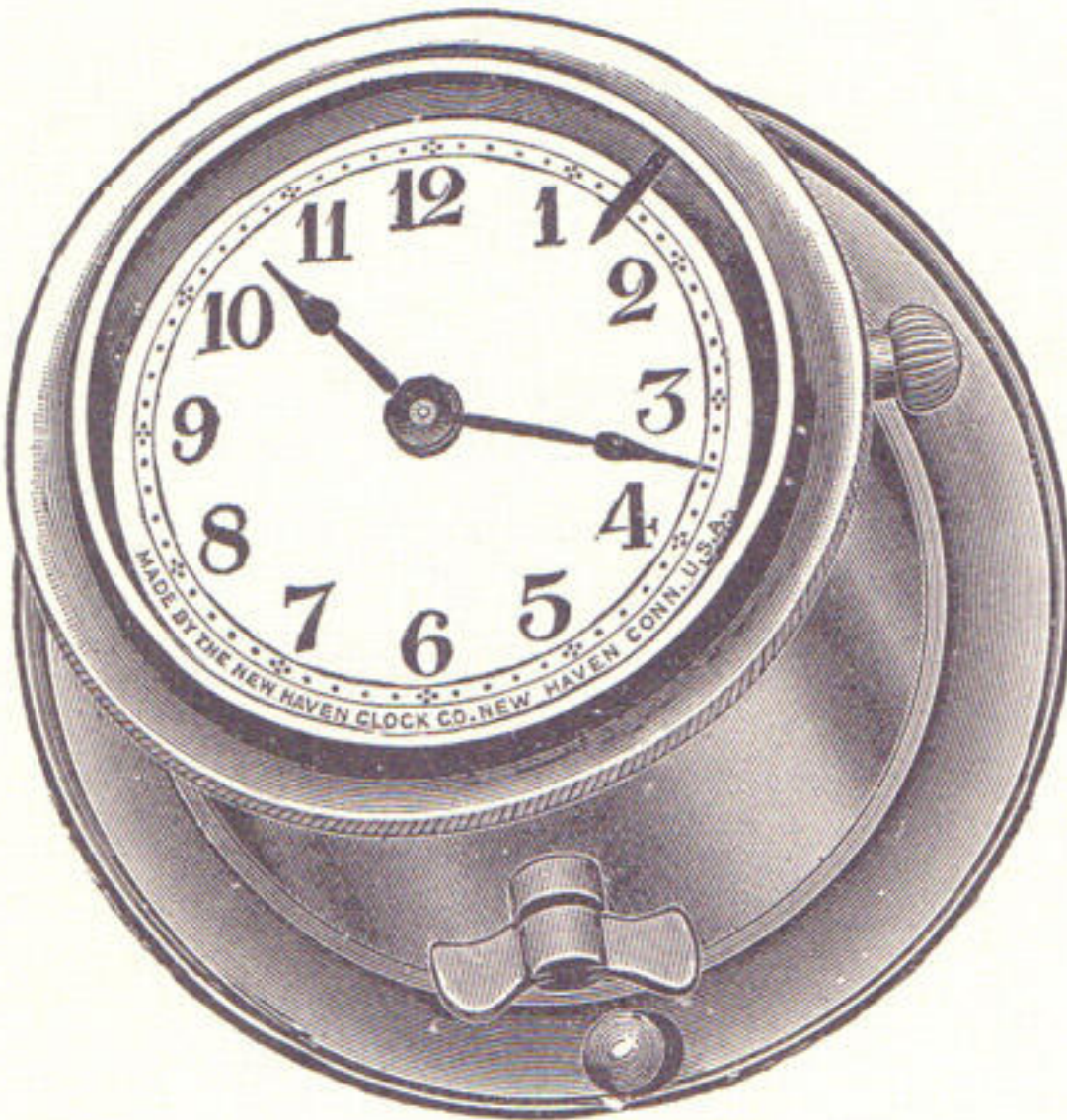
| List No. |                               | Price   |
|----------|-------------------------------|---------|
| 0508     | One Day Jewelled, Each.....   | \$ 8.00 |
| 0509     | Eight Day Jewelled, Each..... | 14.25   |

These clocks screw into the dash board and are then locked with a key, without which they cannot be removed.

Screws are invisible after clock is attached.

All movements guaranteed.

Cases highly polished heavy brass.



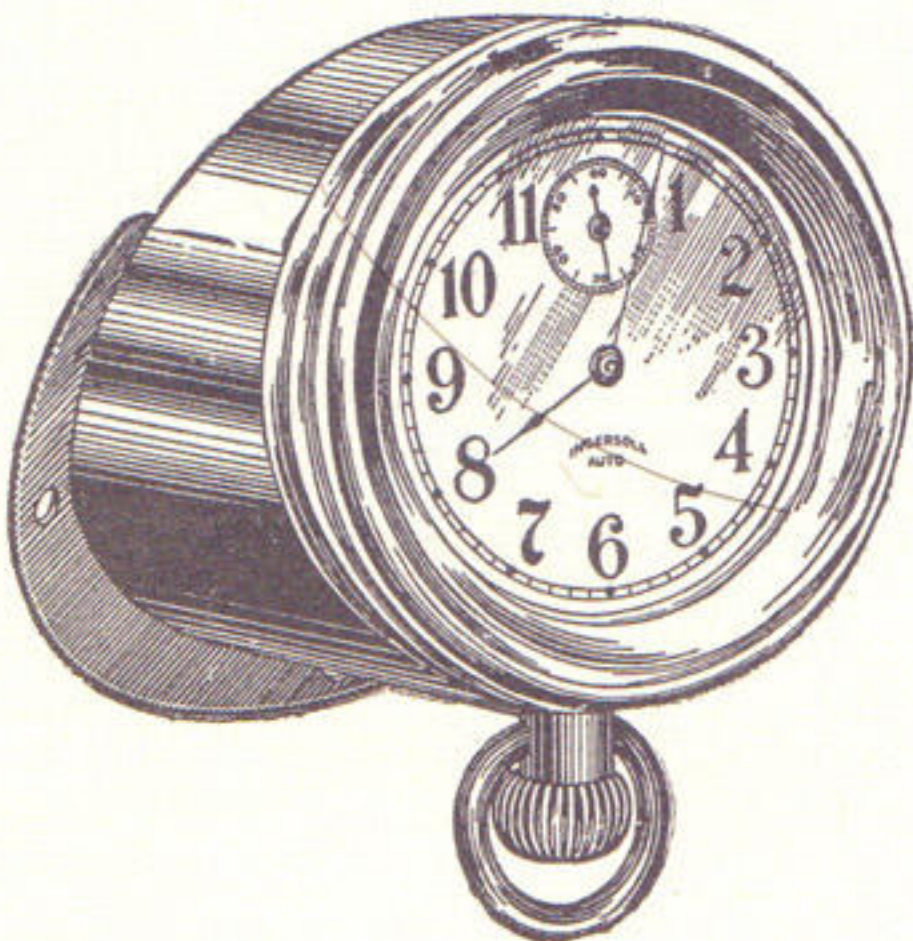
THE INDICATOR AUTO CLOCK.

A special feature of this clock is a pointer indicating time of starting on a trip.

It is an Eight Day Clock securely fastened to the dash and positively cannot be removed without an unlocking key.

Thoroughly waterproof.

| List No. |                            | Price  |
|----------|----------------------------|--------|
| 0510     | Eight Day Clock, Each..... | \$6.00 |



INGERSOL AUTO WATCH.

The Auto Watch is a small compact time piece consisting of a watch and holder.

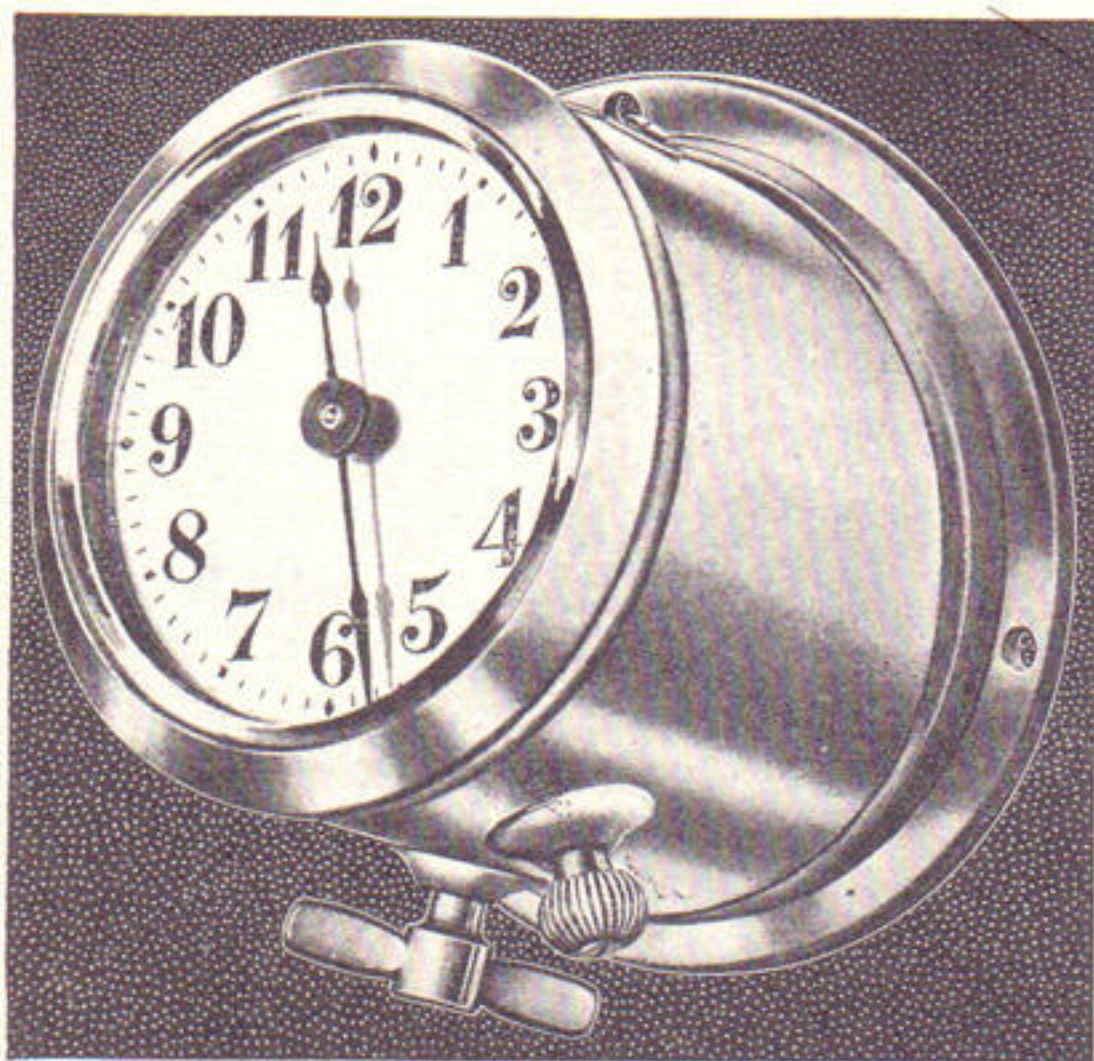
This holder is attached to the dash board; when in use the watch is placed in it.

2¼ in. diameter. Weight 5 ounces.

Stem wind and stem set.

| List No. |                        | Price  |
|----------|------------------------|--------|
| 0511     | 1 Day Clock, Each..... | \$2.00 |

1908



**1908 Venus Motor Clock.**

For Night and Day.

8 Day. The Clock with the Luminous Dial.

At night! A glance at the Venus clock, and you know the time. It does not shine—it glows. It does not obtrude on the sight when driver's eyes are looking ahead in the darkness, but it is always there, figures and hands plainly visible whenever you choose to look at it. Furthermore, the time it indicates is correct, if the clock has been wound within eight days.

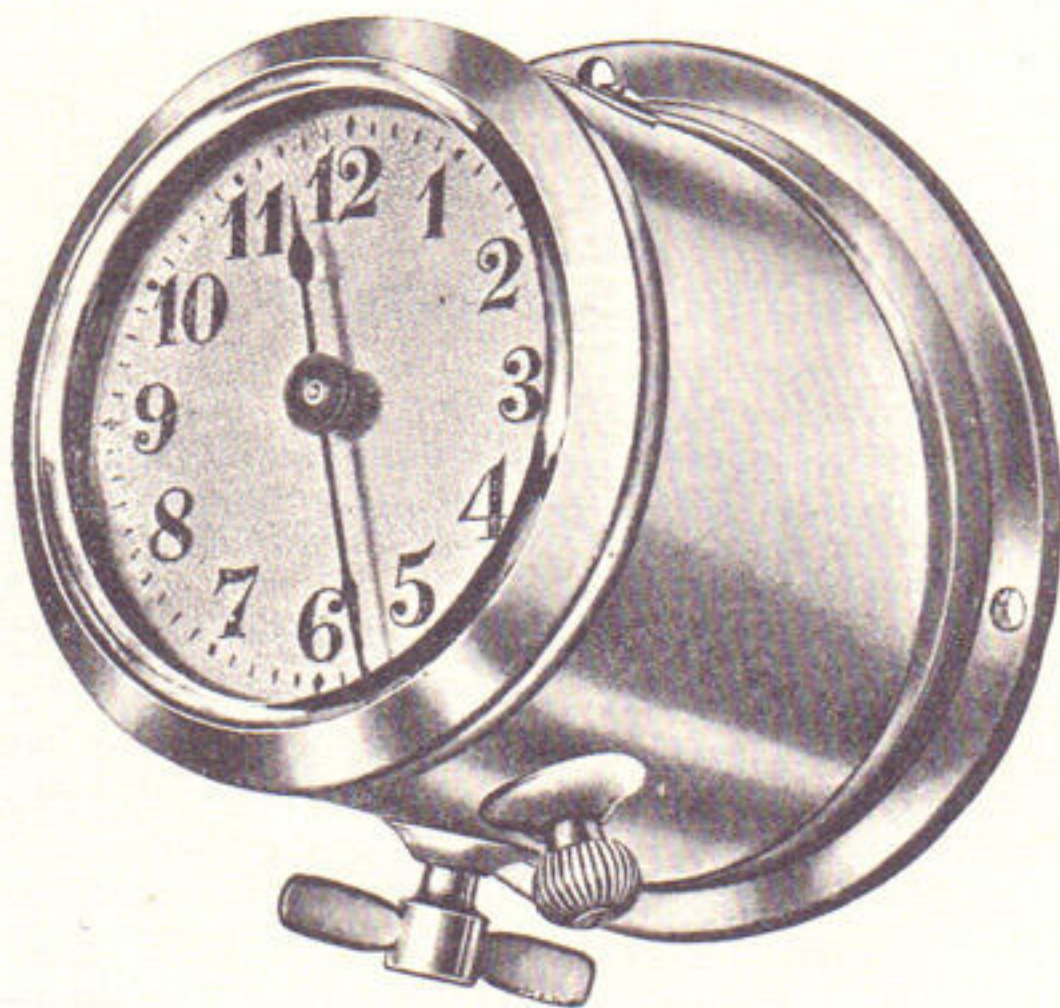
In the daylight it is a beautifully finished brass clock, with clean black figures. It has a waterproof case, with winding and setting stem underneath. The regulator is concealed beneath a flush brass slide on the top. Altogether it makes a handsome and impressive car fixture.

There are no electric bulbs, wires or batteries in connection with it for night use. So far as the luminous dial is concerned it takes care of itself.

The mechanism is designed for motor use and runs over eight days on one winding. A satisfactory timepiece.

|                           |         |
|---------------------------|---------|
| Diameter of front flange, | 3 1/8". |
| Depth of case at top,     | 2 3/8". |
| Diameter of back flange,  | 3 3/4". |
| Depth of case at bottom,  | 3 3/8". |

Each, \$7.00.



**1908 Mars Motor Clock.**

8 Day. Silver Dial.

This clock is practically the same as our Venus clock, excepting the dial which is silvered finish. Sometimes called marine dial. The black figures may be easily seen from the seat.

Dimensions of this clock same as Venus.

Each, \$7.00.



**Regal Offset Motor Clock (1 Day).**

With Magnifying Bulls-eye Lens.

The case is made of polished brass and is handsome and compact in design. It is permanently secured to the dash by means of concealed screws, and is in consequence thief-proof. The clock is stem setting and stem winding.

This clock is guaranteed to keep accurate time. It will be noted that the stem projects from bottom of the case, thus making the case both dust and waterproof, and the stem inconspicuous. Finish: Polished brass. Each, \$3.50.

1908



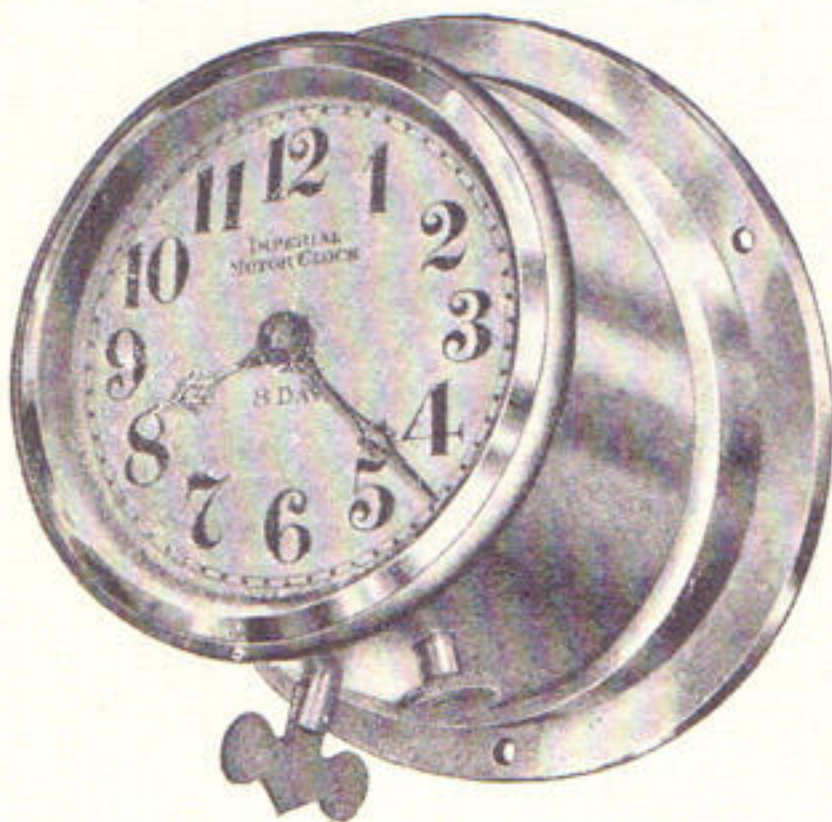
**Luna Motor Clock.**

8 day. Luminous Dial.

This clock has a luminous dial with heavy figures which readily show the time at night.

The case is made of extra heavy gauge brass with a bright yellow finish. Case is both dust and waterproof, winding and setting stems are at bottom of case, hence they are inconspicuous. Dial is  $3\frac{1}{2}$  in. in diameter.

Each, \$6.50.



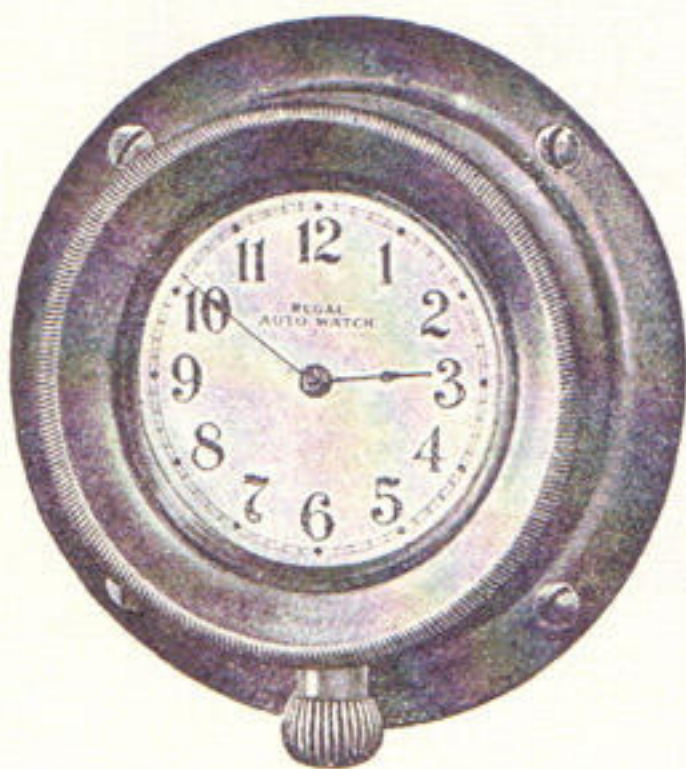
**Imperial Motor Clock (8 Day).**

This clock is an accurate timepiece. The dial is  $3\frac{1}{2}$  inches in diameter and has large Arabic figures which can be seen from the seat. The case is of the offset pattern. Made of solid brass highly polished. This is set into a heavy brass cast ring, through which the bolts are passed into the dash. This makes a permanent attachment, hence the clock cannot be stolen.

The clock may be wound, set and regulated without removing it from the case.

Case is dust and waterproof.

Each, \$6.00.



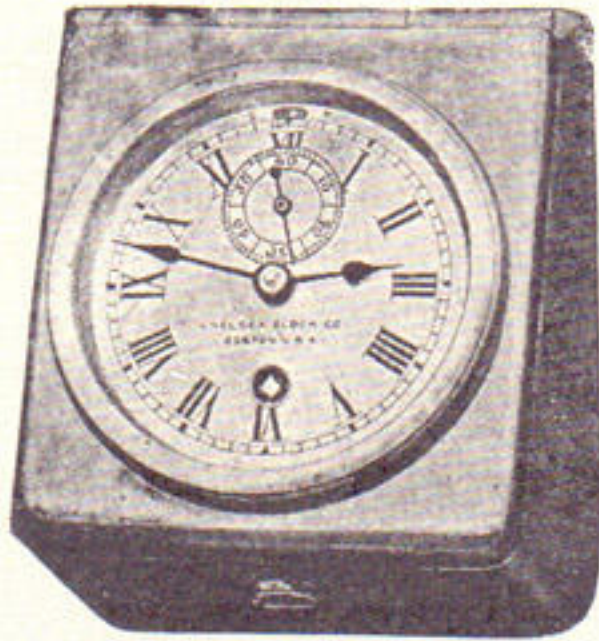
**Regal Motor Clock (1 Day).**

A good, guaranteed clock. Stem winding and setting. Has heavy figures in the dial and large hands. Case is made of heavy brass, highly polished. Both dust and waterproof.

Brass Finish, each, \$2.50.

1908

"Special" Case.

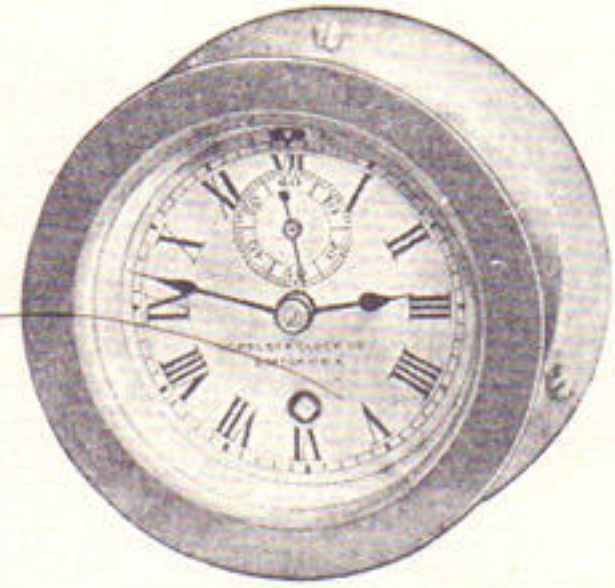


The Celebrated "Chelsea" 8-Day High-Grade Auto Clock.

The sizes are the approximate diameter of the dials. All are in Duplex Polished Cast Brass Cases, the most thoroughly waterproof case on the market.

The "Specials" show dial on angle; its clock when removed from outer (Locked) Case is excellent for use on mantels, bureaus, etc. Outer case secured to dashboard by hidden screws. The 3½ inch motor clock is a strong, reliable clock, but the auto clocks have somewhat finer train movements.

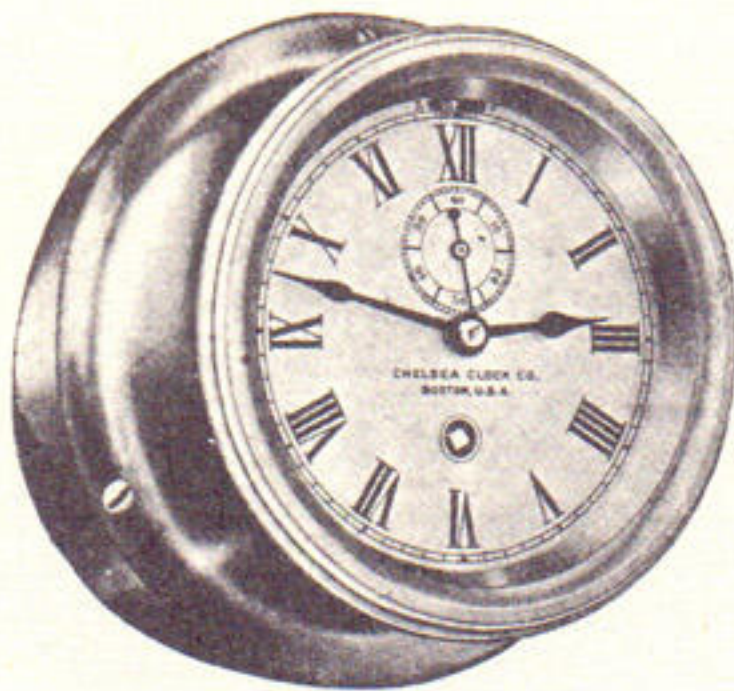
"Round" Case.



|                           |         |
|---------------------------|---------|
| 2¾" "Special" Auto Clock  | \$36.00 |
| 3½" "Special" Auto Clock  | 45.00   |
| 3½" "Special" Motor Clock | 41.00   |

|                 |         |
|-----------------|---------|
| 2¾" Auto Clock  | \$26.00 |
| 3½" Auto Clock  | 28.00   |
| 3½" Motor Clock | 24.00   |

Offset Case.



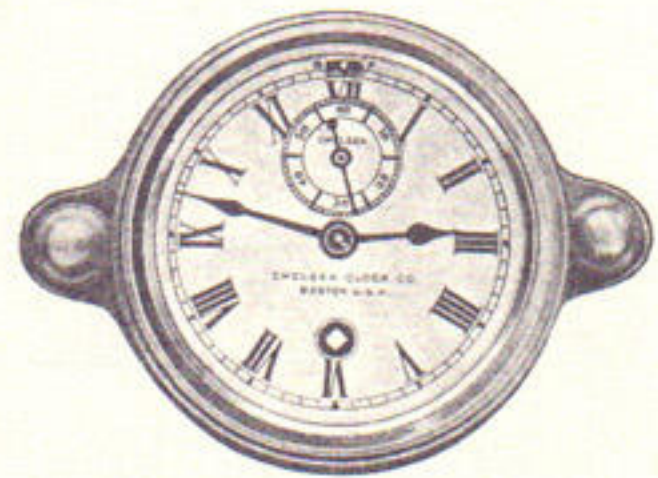
Chelsea Offset Clocks.

Made to meet the demand for a high-grade offset clock at a somewhat lower price than the "Specials." Polished brass finish.

Limousine Clocks.

Intended for use inside large cars with limousine bodies, or may be used on dash. Furnished in Brass, Nickel, Copper, Bronze, black or oxide finish.

Limousine Case.



|                    |         |
|--------------------|---------|
| 2¾" "Offset" Auto  | \$28.00 |
| 3½" "Offset" Auto  | 30.00   |
| 3½" "Offset" Motor | 26.00   |

2¾" "Limousine" Each, \$28.50

Manasseh Levy Motor Car Clocks.

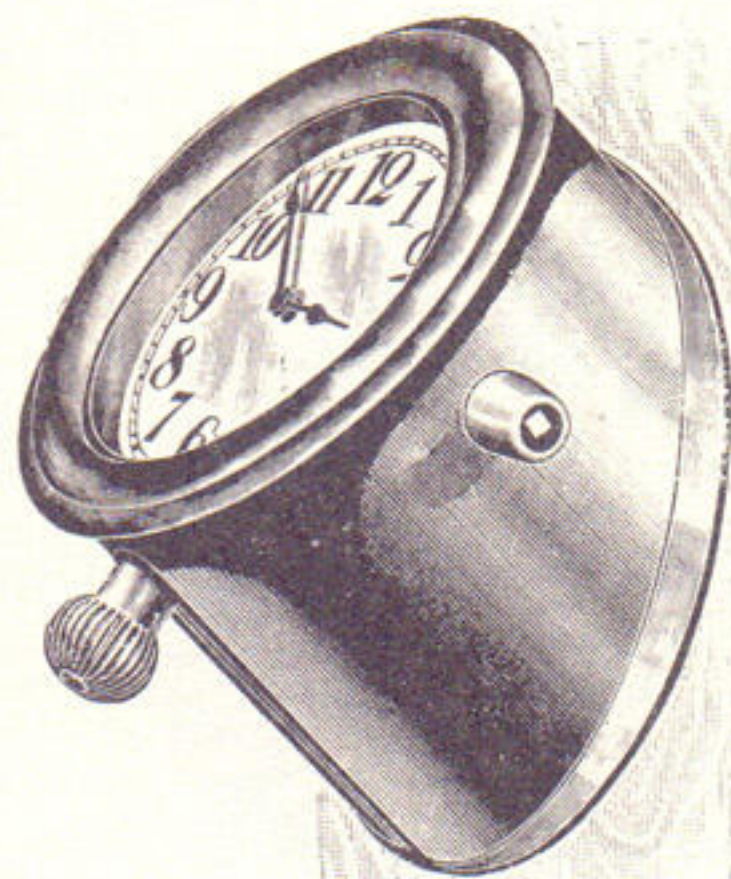
The movements of these clocks are imported Swiss movements with jewels, and we offer to our customers for their trade desiring a superior article for which they are willing to pay.

"Offset Junior."

|   |        |
|---|--------|
| No. 275. 11-Good timepiece. One day         | \$6.50 |
| No. 275. 16-Jeweled, A-1 lever. One day     | 9.00   |
| No. 275. 162-Jeweled, A-1 lever. Eight days | 15.00  |
| Diameter of Dial, 2½ inches.                |        |
| Illustration about three-quarter size.      |        |

"Offset Senior."

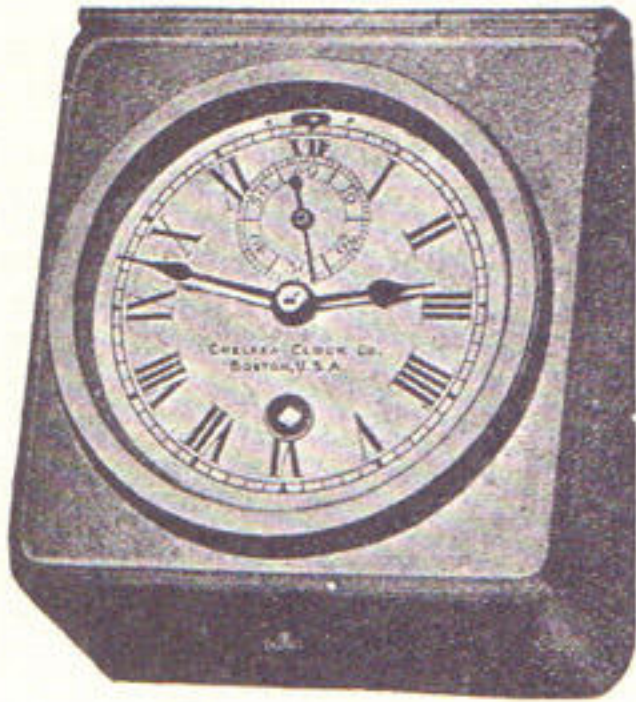
|   |         |
|---|---------|
|   | Each.   |
| No. 3001. 200-Jeweled, A-1 lever. One day | \$12.00 |
| No. 3301. 166 same. Eight days, 3¼" dia.  | \$20.00 |



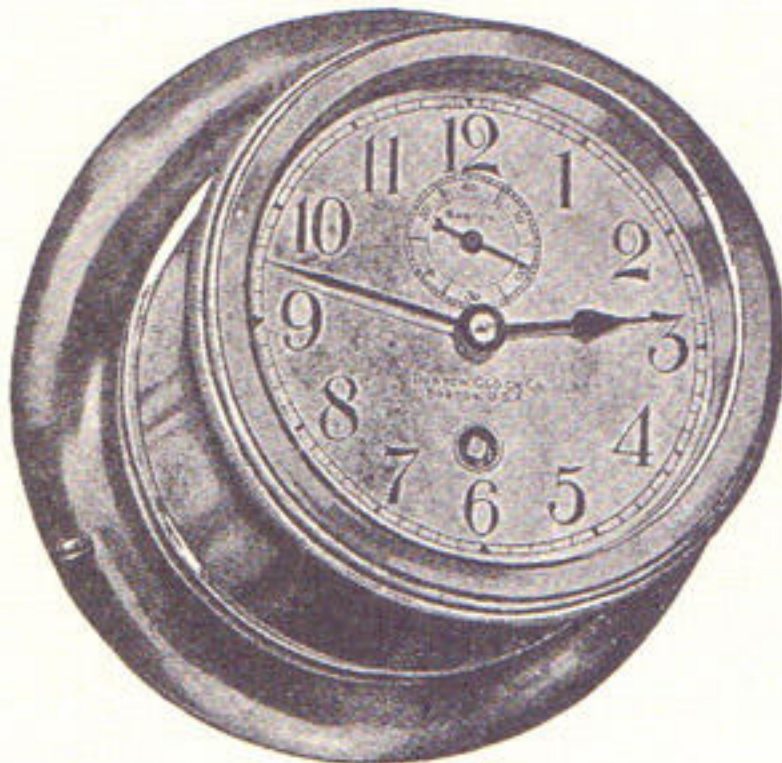


# EA FEATHERSTONE

## "CHELSEA" AUTOMOBILE CLOCKS



"Special"



"Offset"

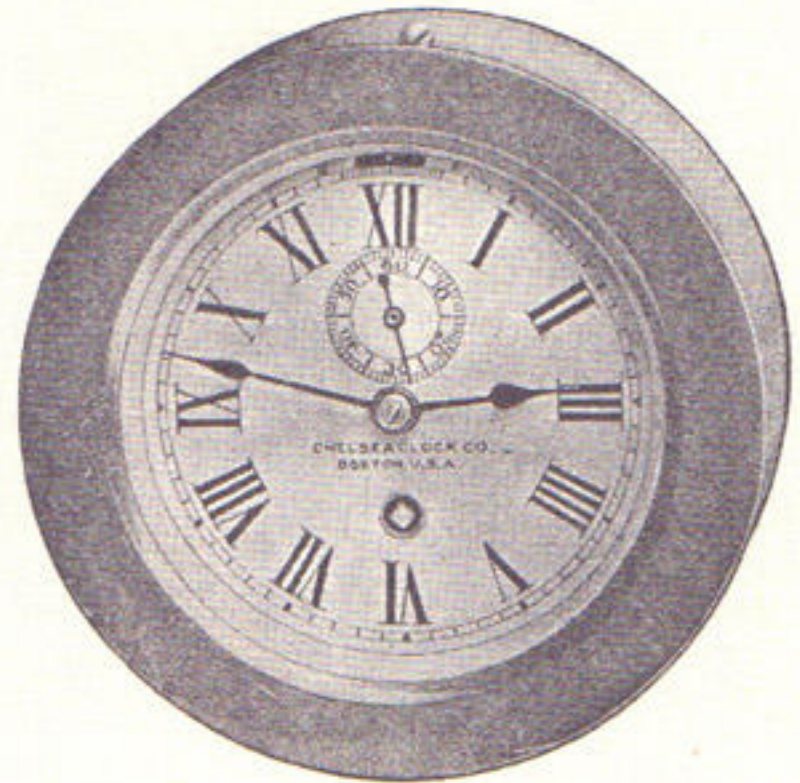
Clocks built with a view to stand the jars and jolts and rough riding of Automobiles. Reputation the highest. Used by parties demanding the BEST.

ALL SIZES STATED ARE THE APPROXIMATE DIAMETERS OF THE DIALS.

All are 8-day High Grade. All are in DUPLEX (patent applied for) polished brass cases, the most thoroughly water-proof case on the market. The "SPECIAL" clocks show dial on an angle; its inner cased clock when removed from outer (locked) case, is excellent for use on mantels, bureaus, etc.; when touring its outer case is screwed to dashboard by hidden screws. The "SPECIAL" clocks are in large demand from dealers for owners of finest cars.

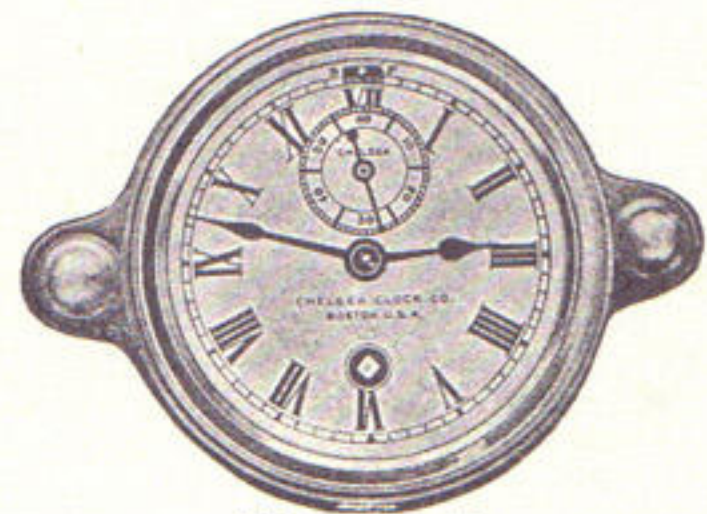
The MOTOR CLOCK has the same clock movement which for years we have supplied for the hard use on Locomotives, Steam Fire Engines, etc.; its dial is of same appearance as the Auto Clock dial, but the Auto Clock movement has a somewhat finer train.

The 3½ MOTOR "OFFSET" is likely to prove a quick, ready seller. Very attractive.



"Round"

1912

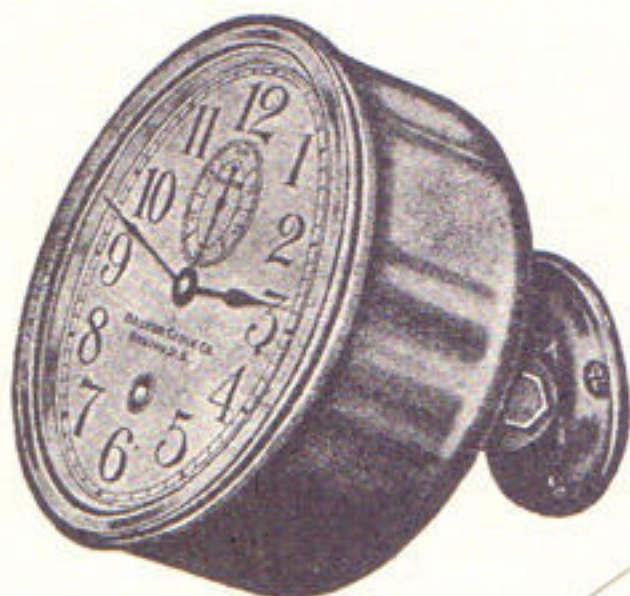


"Limousine"

### Price List

| "Chelsea" | SIZE                 | ROUND   |         | OFFSET  |         | SPECIAL |         | LIMOUSINE                    |         |
|-----------|----------------------|---------|---------|---------|---------|---------|---------|------------------------------|---------|
|           |                      | Cat.No. | Price   | Cat.No. | Price   | Cat.No. | Price   | Cat.No.                      | Price   |
|           | 2¾ inch auto clock.. | 192     | \$26.00 | 181     | \$28.00 | 196     | \$36.00 | 193                          | \$28.50 |
|           | 3½ inch auto clock.. | 194     | 28.00   | 183     | 30.00   | 197     | 45.00   | Only made in the 2¾ in. size |         |
|           | 3½ inch motor clock  | 190     | 24.00   | 186     | 26.00   | 198     | 41.00   |                              |         |

## BOSTON AUTOMOBILE CLOCKS



Model C—8-Day

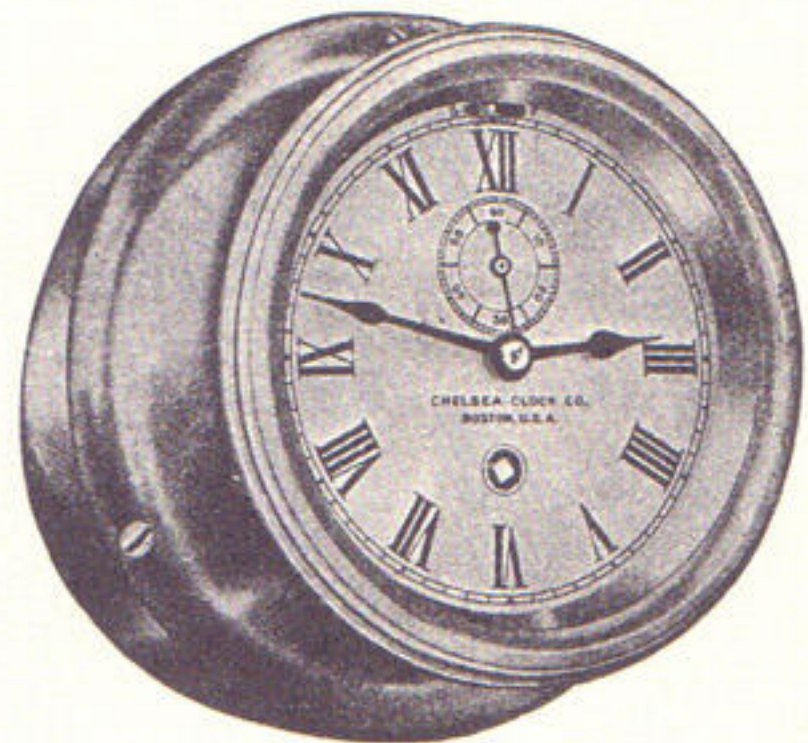
Adjustable to various angles by ratchet and nut at back. In general appearance it closely matches many makes of speedometers. In 3 sizes—

3 inch..... Price each \$18.00  
 3½ inch..... Price each 20.00  
 4 inch..... Price each 22.00

### BOSTON CLOCKS

Are all 8-DAY, HIGH GRADE, and have Breguet Hairsprings, Compensation Balances with Timing and Banking Screws, 7-Jeweled Escapements, etc. The movements are very rigidly built of exclusively high-grade stock and are secured through back of case with screws completely hidden when back of clock case is fastened to dashboard. The cases are of the well-known water-proof type—the Screw Bezel case—and finely made of Polished Brass.

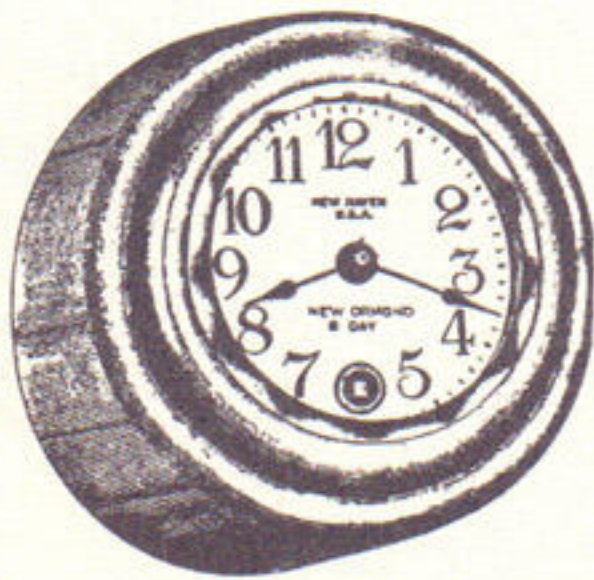
Built to Stand the Jolts



Model B—8-Day  
In Three Sizes

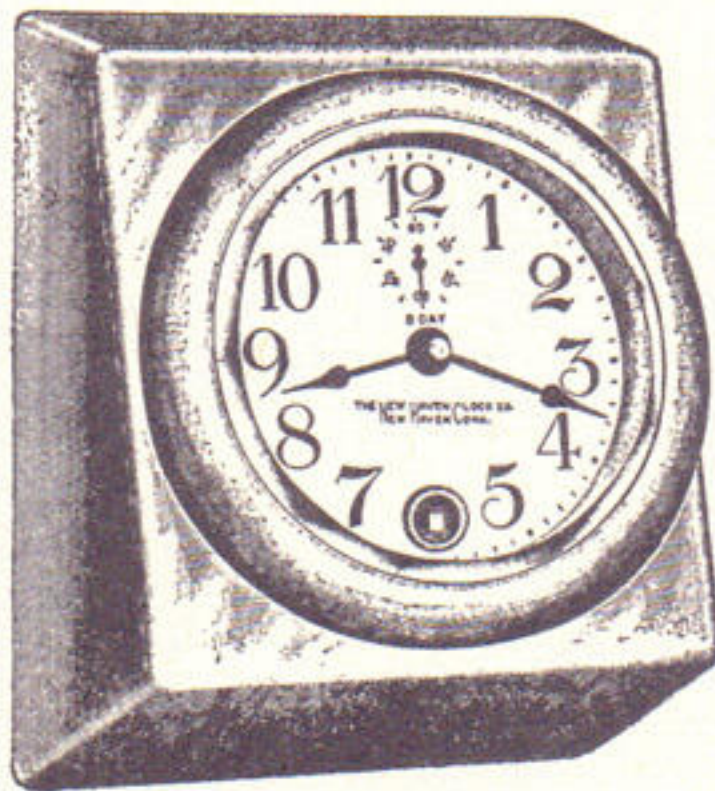
3 inch..... Price each \$18.00  
 3½ inch..... Price each 20.00  
 4 inch..... Price each 22.00

## AUTOMOBILE CLOCKS



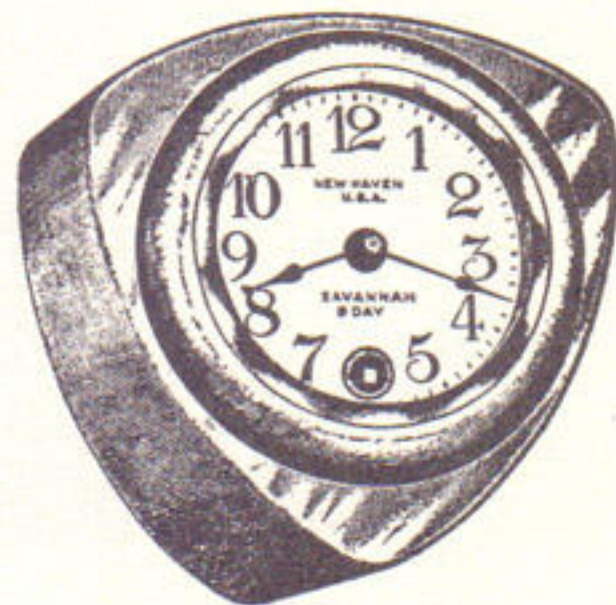
**New Ormond  
8-Day Clock**

Has fine, quick beat movement with second hand; patent fastener for locking on dash. Finished in brass, nickel or black enamel. Any finish . . . . . Price each \$6.00



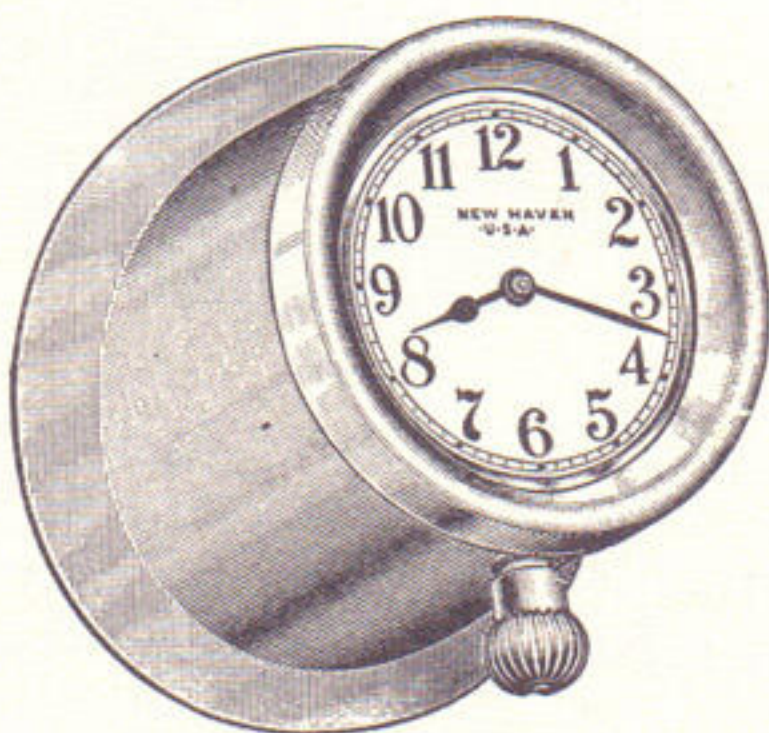
**Mineola  
8-Day Clock**

The best medium priced clock on the market. Has second hand and is fine timekeeper. Finished in brass, nickel or black enamel. Any finish . . . . . Price each \$7.00



**Savannah  
8-Day Clock**

First class in every respect; patent fastener for locking on dash. Finished in brass, nickel or black enamel. Any finish . . . . . Price each \$6.00



**Duane**

**DUANE**

**1-Day Clock**

A good, reliable timekeeper. Heavy brass case with flange to screw to dash.

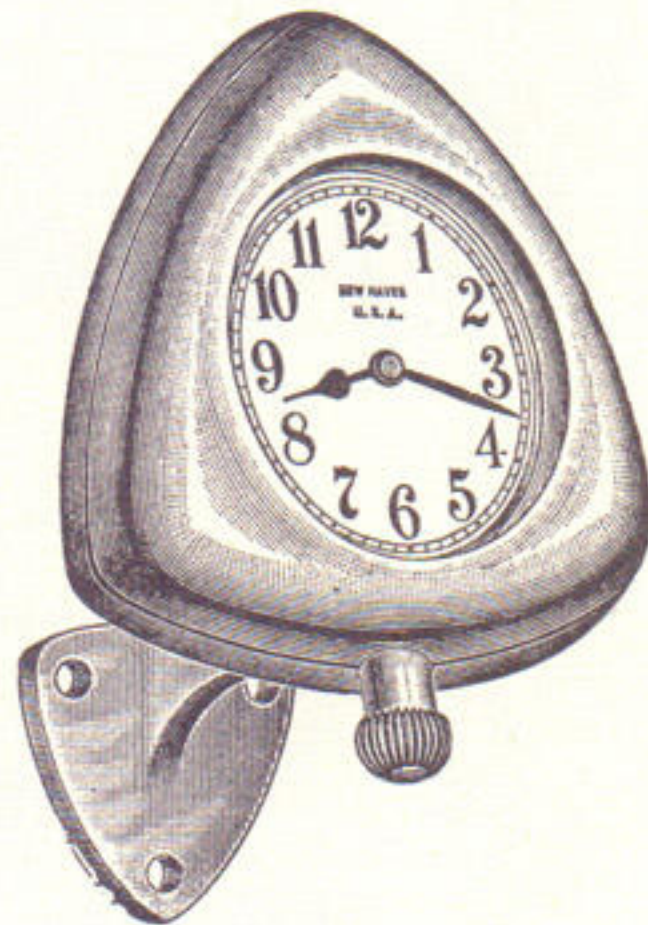
Price each . . . . . \$2.00  
Extra watches . . . . . Price each 1.50

**DEVERE**

**1-Day Clock**

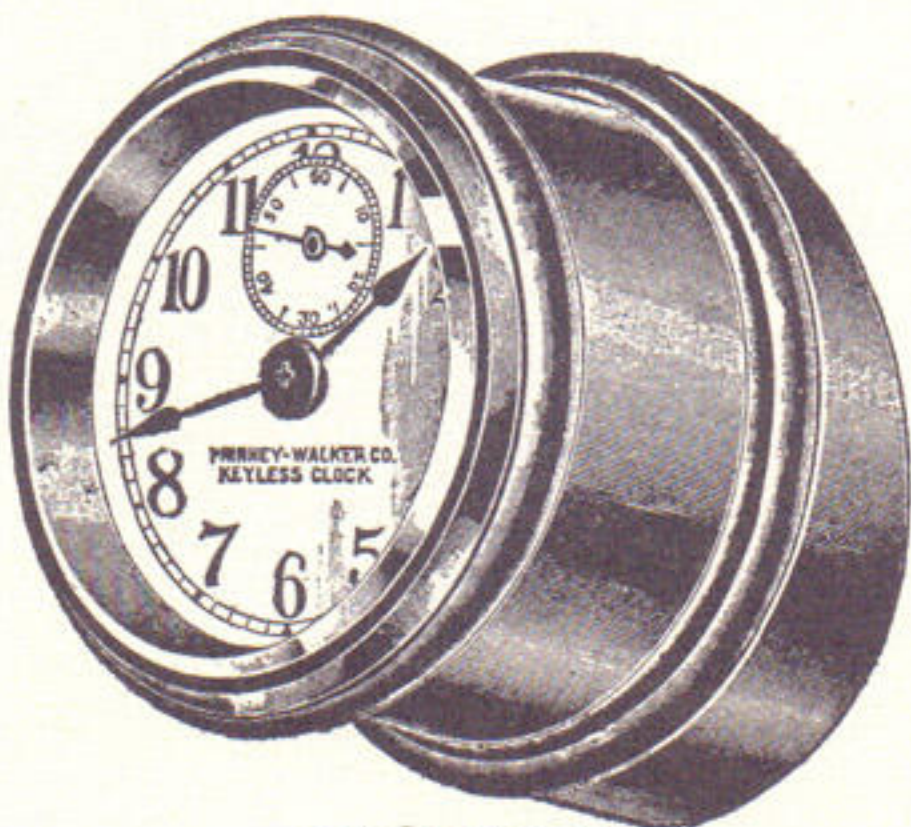
The best 1-Day Clock on the market. Has heavy cast brass case, stem wind and stem set.

Price each . . . . . \$2.50  
Extra watches . . . . . Price each 1.50



**Devere**

1912



**Models F and M**

**PHINNEY-WALKER KEYLESS CLOCKS**

These well known rim wind clocks are fast taking the lead throughout the country. They are beautifully finished and are built to stand the rough use on an automobile.

Models F and M (see illustration) are of the round type and Models A and S are square.

Finished in all brass, all nickel, black enamel with brass rim or black enamel with nickel rim. No additional charge for special finish.

**Price List**

|  |         |
|--|---------|
| Model M—Phinney-Walker movement. . . . . | \$10.50 |
| Model S—Phinney-Walker movement. . . . . | 12.00   |
| Model F—Seth-Thomas movement. . . . .    | 20.00   |
| Model A—Seth-Thomas movement. . . . .    | 22.00   |

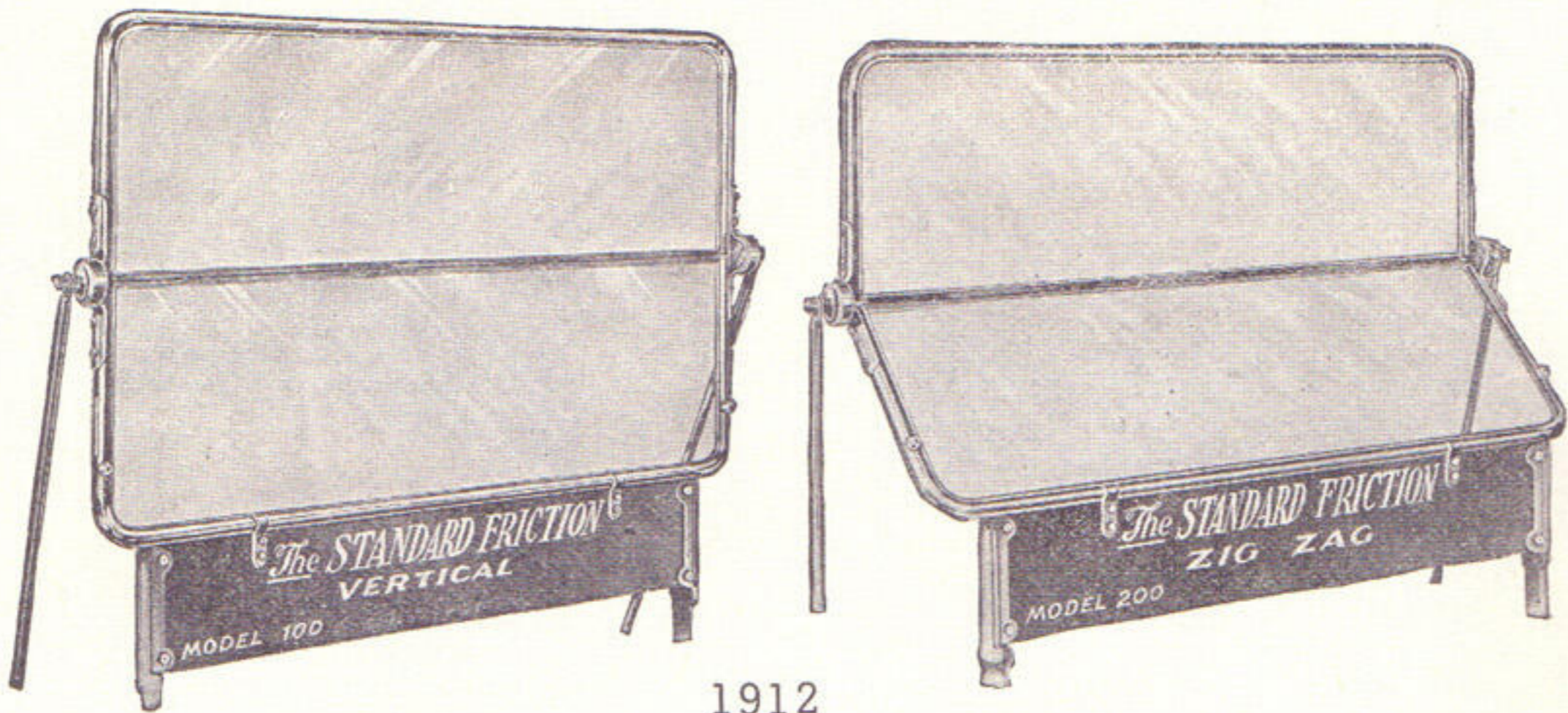
## Standard Friction Wind Shields

The frame is made of heavy brass tubing, pleasing in appearance, strong and durable.

The brass frame of the Clear Vision type is reinforced with a heavy steel lining which makes the shield practically as strong and unyielding as if cross channels were used. This construction gives a stiff and reliable Clear Vision shield without resorting to the use of braces or other devices necessary to secure the same result.

The design of the Rain Vision models permits the upper section to be used as a ventilating as well as a Rain Vision shield. This is a very desirable feature with the present, popular fore door or enclosed body car.

**"STANDARD FRICTION" and "X-L" Wind Shields are guaranteed against defective material and workmanship (except glass) during the life of the car.**



1912

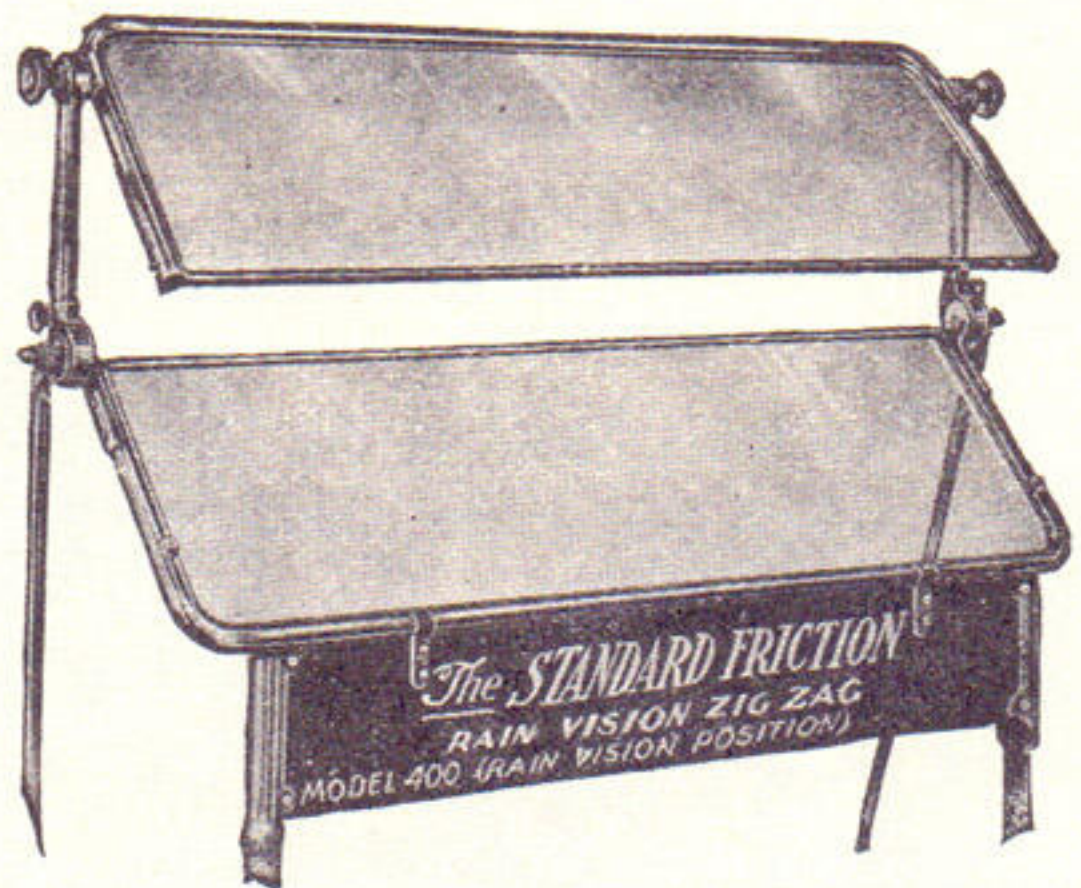
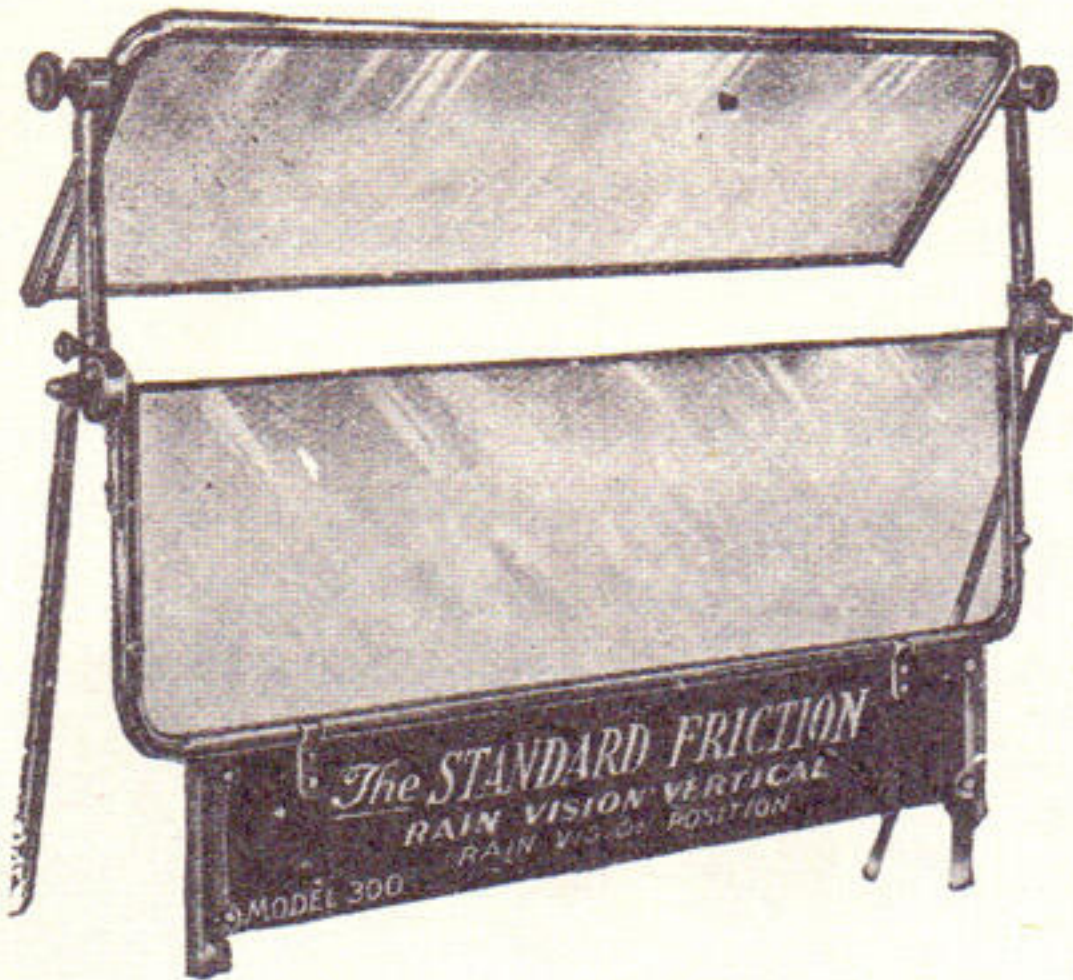
|                  |   |         |         |         |
|------------------|---|---------|---------|---------|
| No. 100—Vertical | } | 36 in.  | 41 in.  | 44 in.  |
| No. 200—Zig-zag  |   | \$27.50 | \$30.00 | \$32.50 |

### Specifications Over all, Nos. 100, 101:

|            |        |        |        |        |         |         |         |        |         |         |         |         |
|------------|--------|--------|--------|--------|---------|---------|---------|--------|---------|---------|---------|---------|
| Width      | 36 in. | 36 in. | 41 in. | 41 in. | 41 in.  | 41 in.  | 41 in.  | 41 in. | 44 in.  | 44 in.  | 44 in.  | 44 in.  |
| Height     | 22 in. | 26 in. | 22 in. | 26 in. | 27½ in. | 27½ in. | 29½ in. | 26 in. | 27½ in. | 27½ in. | 29½ in. | 29½ in. |
| Upper Sec. | 11 in. | 13 in. | 11 in. | 13 in. | 12¾ in. | 10¾ in. | 14¾ in. | 13 in. | 12¾ in. | 10¾ in. | 14¾ in. | 14¾ in. |
| Lower Sec. | 11 in. | 13 in. | 11 in. | 13 in. | 14¾ in. | 16¾ in. | 14¾ in. | 13 in. | 14¾ in. | 16¾ in. | 14¾ in. | 14¾ in. |

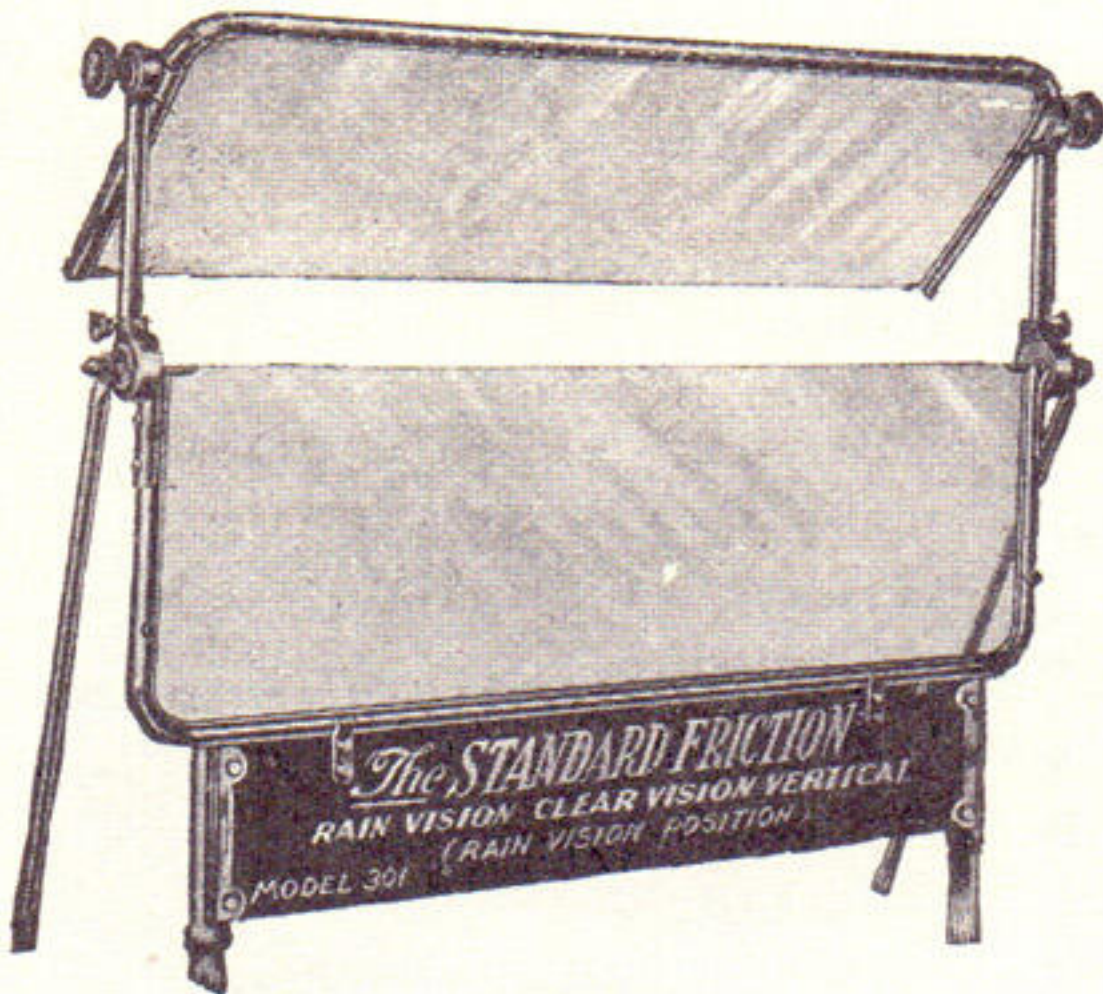
All shields listed are finished regular in brass.

Special finish, all nickel, black enamel with nickel trimmings, black enamel with brass trimmings, and black enamel, extra \$5.00.



No. 300 Rain Vision Vertical  
No. 400 Rain Vision Zig-zag

|         |         |         |
|---------|---------|---------|
| 36"     | 41"     | 44"     |
| \$35.00 | \$37.50 | \$40.00 |



No. 301 Rain Vision Clear Vision Vertical  
No. 401 Rain Vision Clear Vision Zig-zag

|         |         |         |
|---------|---------|---------|
| 36"     | 41"     | 44"     |
| \$40.00 | \$42.50 | \$45.00 |

**Specifications Over all**

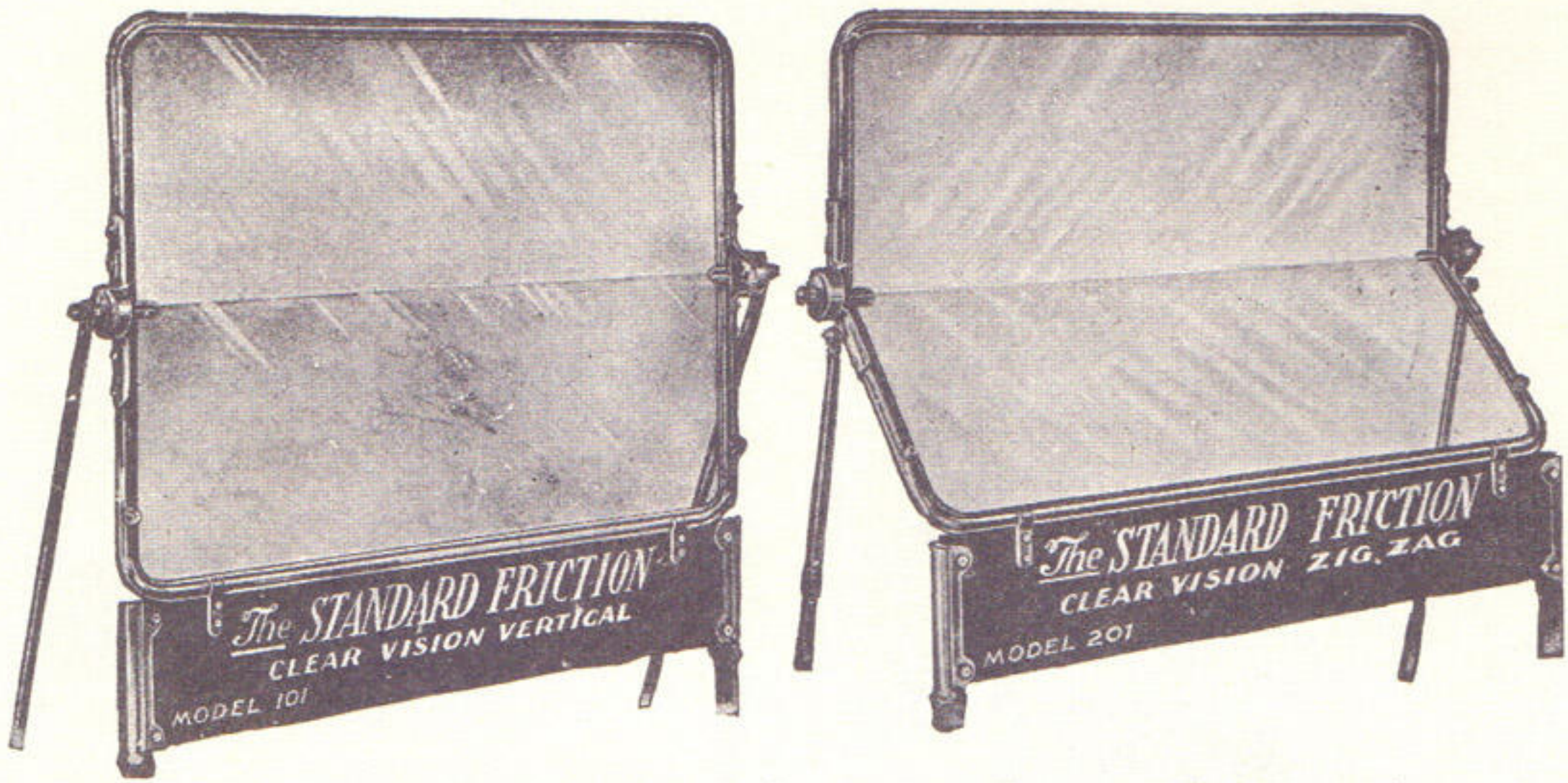
| Nos.       | 300 | 301 |      | 400  |     | 401  |      |
|------------|-----|-----|------|------|-----|------|------|
| Width      | 36" | 41" | 41 " | 41 " | 44" | 44 " | 44 " |
| Height     | 26" | 26" | 27½" | 29½" | 26" | 27½" | 29½" |
| Upper Sec. | 13" | 13" | 12¾" | 14¾" | 13" | 12¾" | 14¾" |
| Lower Sec. | 13" | 13" | 14¾" | 14¾" | 13" | 14¾" | 14¾" |

Filler Boards—6", 9" or 12" African Mahogany or Circassian Walnut with plain or brass bound ends, furnished with all shields.

Rubber filler strip is furnished in place of filler board when it is desired to attach shield direct to car.

Complete stay rods and fittings are furnished with every shield.

MANUFACTURERS' SUPPLIES CO.

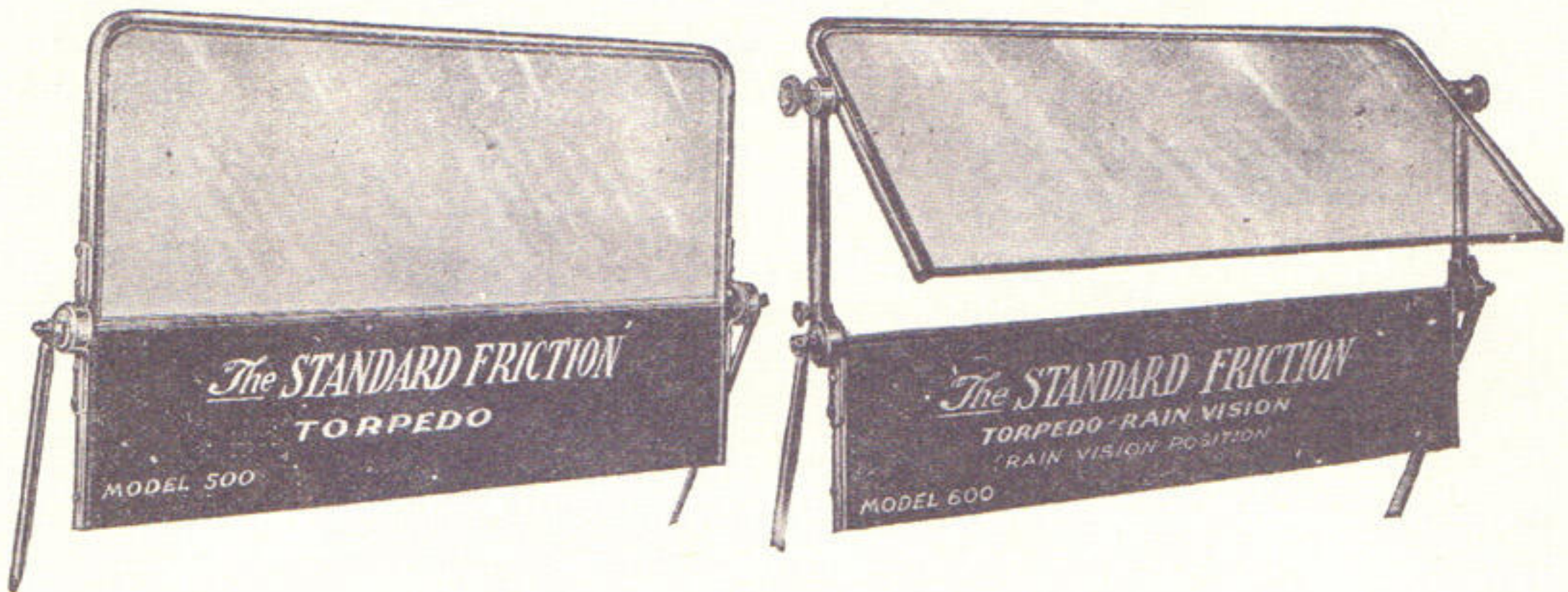


|                               |   |         |         |         |
|-------------------------------|---|---------|---------|---------|
| No. 101 Clear Vision Vertical | } | 36"     | 41"     | 44"     |
| No. 201 Clear Vision Zig-zag  |   | \$32.50 | \$35.00 | \$37.50 |

Specifications Over all

Nos. 200 and 201.

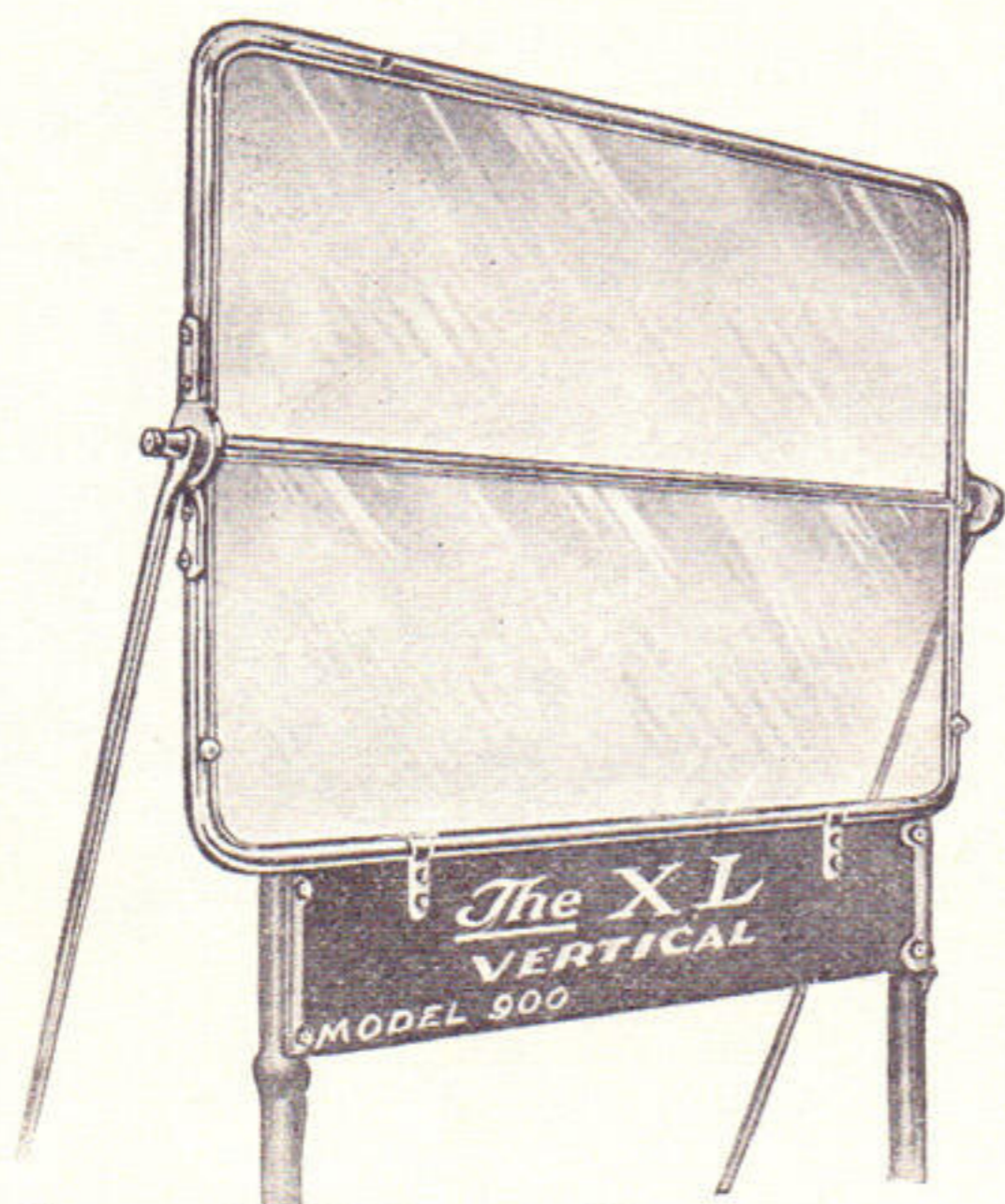
|                |          |     |      |      |      |     |      |      |      |
|----------------|----------|-----|------|------|------|-----|------|------|------|
| Width          | .....36" | 41" | 41 " | 41 " | 41 " | 44" | 44 " | 44 " | 44 " |
| Height         | .....26" | 26" | 27½" | 27½" | 29½" | 26" | 27½" | 27½" | 29½" |
| Upper Sec..13' |          | 13" | 12¾" | 10¾" | 14¾" | 13" | 12¾" | 10¾" | 14¾" |
| Lower Sec..13" |          | 13" | 14¾" | 16¾" | 14¾" | 13" | 14¾" | 16¾" | 14¾" |



|                      |         |         |         |            |                      |         |         |            |         |
|----------------------|---------|---------|---------|------------|----------------------|---------|---------|------------|---------|
| No. 500 Torpedo type |         | 36"     | 41"     | 44"        | No. 600 Torpedo type |         | 36"     | 41"        | 44"     |
| Height 14¾           | \$22.50 | \$23.75 | \$25.00 | Height 14¾ | \$30.00              | \$31.25 | \$32.50 | Height 14¾ | \$30.00 |
| Height 16¾           | \$22.50 | \$23.75 | \$25.00 | Height 16¾ | \$30.00              | \$31.25 | \$32.50 | Height 16¾ | \$30.00 |
| Height 18¾           | \$25.00 | \$26.25 | \$27.50 | Height 18¾ | \$32.50              | \$33.75 | \$35.00 | Height 18¾ | \$32.50 |

Specifications Nos. 500 and 600

|       |        |       |        |       |        |
|-------|--------|-------|--------|-------|--------|
| Width | Height | Width | Height | Width | Height |
| 36"   | 14¾"   | 41"   | 14¾"   | 44"   | 14¾"   |
| 36"   | 16¾"   | 41"   | 16¾"   | 44"   | 16¾"   |
| 36"   | 18¾"   | 41"   | 18¾"   | 44"   | 18¾"   |



No. 900 Vertical



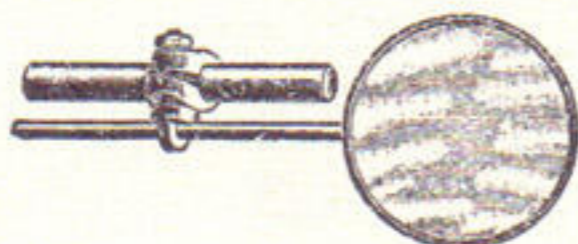
No. 1000 Zig-zag

|  |         |         |         |
|--|---------|---------|---------|
|  | 36"     | 41"     | 44"     |
|  | \$22.50 | \$22.50 | \$25.00 |

**Specifications Over all Nos. 900—1000**

|            |     |     |         |         |         |         |         |         |
|------------|-----|-----|---------|---------|---------|---------|---------|---------|
| Width      | 36" | 41" | 41"     | 41"     | 41"     | 44"     | 44"     | 44"     |
| Height     | 26" | 26" | 27 1/2" | 27 1/2" | 29 1/2" | 27 1/2" | 27 1/2" | 29 1/2" |
| Upper Sec. | 13" | 13" | 12 3/4" | 10 3/4" | 14 3/4" | 12 3/4" | 10 3/4" | 14 3/4" |
| Lower Sec. | 13" | 13" | 14 3/4" | 16 3/4" | 14 3/4" | 14 3/4" | 16 3/4" | 14 3/4" |

**Long Distance Mirror**



Has convex glass and shows everything for about two blocks.

Price, each, Convex Glass .....\$3.50  
 Price, each, Plain Glass ..... 3.00

**Wind Shield Cleaner**

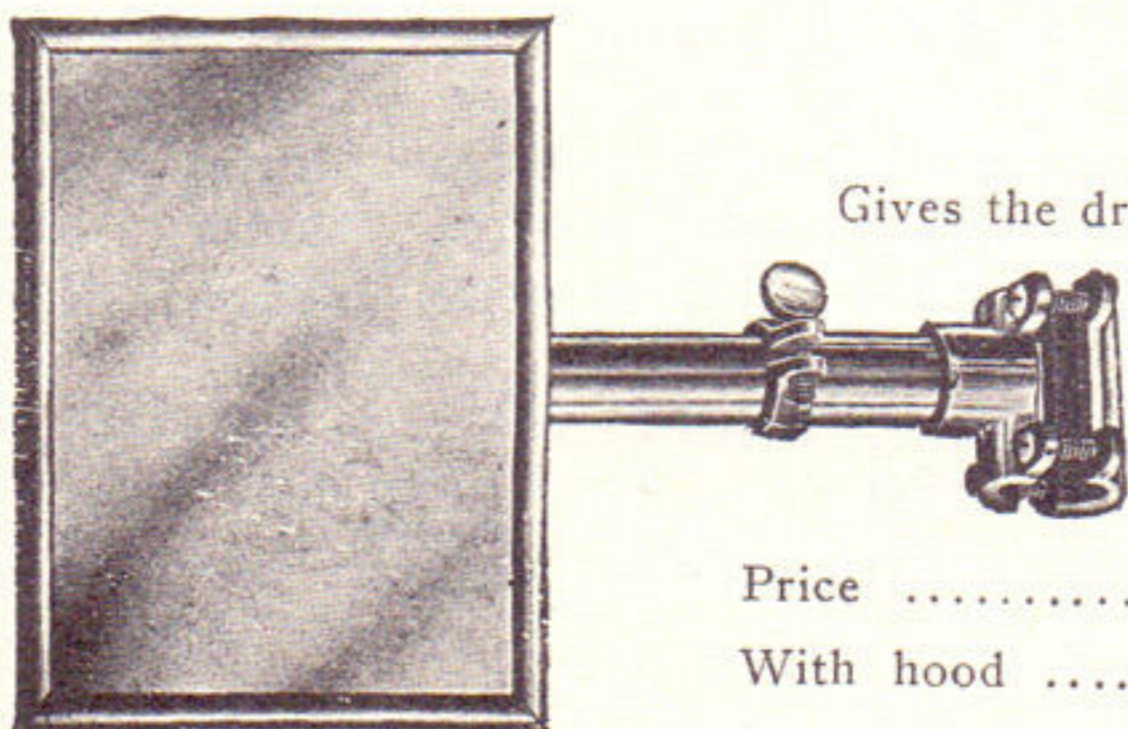


Simply draw the cleaner across the glass once or twice and your shield is free from every particle of dust, rain or snow.

Price, ea...\$1.50

**Mirrorscope**

Gives the driver a complete view of everything in the rear of car without turning the head; measures 6x8 in. Beveled glass, all brass universal knuckle joint sliding bracket.



Price ..... \$5.00  
 With hood ..... 6.00

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## The Vintage Craft Series

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Each volume, written and illustrated in graphic detail by recognized contemporary authorities of that golden era before the Wars, revives one of the motor body hand crafts in full, comprehensive dimension—out of the limbo where it was buried under the avalanche of automatic machines that swept body building practice generally after World War I.



VALUABLE REFERENCE FOR EVERY OLD CAR ENTHUSIAST—AND AS HELPFUL AS BLUEPRINTS FOR THE SERIOUS RESTORER!

### **METAL WORK/**Authentic sheet metal layout for steel and aluminum

The geometric procedure for developing patterns required for every body panel unfold with the support of 150 line illustrations, including many scale demonstration layouts with various optional treatments for hoods, cowls, seats, doors, fenders, aprons, complete bodies, etc.

### **WOOD WORK/**Authentic framing and paneling practice

Every facet from selection and measurement of material and body drafting for structure and rigidity, through shaping, joints used, finishing, paneling work, iron fittings, door hanging, etc. detailed with 180 supporting line illustrations, including demonstration layouts with various options for a number of open and closed body styles.

### **LEATHER WORK/**Authentic leather trimming practice

Thorough coverage in exacting detail, from selection of material to layout of diamond tufting, determining fullness, pleating, buttoning, paneling and finishing, as well as procedures with fabrics and lace for closed body types, is backed up with a profusion of line drawings and diagrams, including typical layouts for various body types.

### **TOP WORK/**Authentic touring car top construction practice

Complete procedure for determining proper dimensions and placement of top bows from given body measurements, designing, layout and fabrication of the cape type (multi-bowed collapsible) top with details for straps, pads, storm fronts, side curtains, back curtains, etc., supported lavishly with illustrations.

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PB-02298  
5-01



**Antique Auto Body BRASS WORK for the Restorer** guides today's enthusiast with authority and depth in the evaluation of that shining spectrum of motor lamps, horns, speedometers, clocks and other brass fittings that bedazzled the gaslight generation.

All that glittered was not gold when memory lane was lighted by burning carbide and kerosene. But the sparkling appearance of bright brass objects — as each automobilist specified accessory "gems" by Atwood, Gray & Davis, Solar, et al to his individual standards — literally bejeweled the motor cars of that bygone day.

As tradition, novelty, durability, size, cheapness, elegance, utility, all were attractions finding buyers, a variety of equipment appeared on any given model automobile. Many pieces were proper options; some were not — a condition clouding and complicating the restorer's accessories research in this remote day.

This handbook has been compiled to illuminate the motor brass age by the light of its own beam. A chronological reference selection from vintage accessory catalogs — supported by 500 authentic photographs and line drawings — depicts popular domestic and imported brass accessories from American supply houses of the 1906-1912 period. Lamps from the Parabolens to the Rushmore, horns from the Gabriel to the Testophone and speed indicators from the Autometer to the Tachodometer are shown, described and priced, exactly as they were offered originally.



Today's restorer may also rediscover the other lost hand trades plied in early automobile body building and finishing through others in this **Vintage Craft Series**.

Each volume, written and illustrated in graphic detail by recognized contemporary authorities of that golden era before the Wars, revives one of the motor body hand crafts in comprehensive full dimension. Supplementary volumes, through reproduction of pertinent catalog segments, offer fountainhead reference for authenticating lamps, horns and accessory equipment.

#### **The Vintage Craft Series**

Uniform binding/\$4 each/postpaid from the publisher

- Antique Auto Body METAL WORK for the Restorer**
- Antique Auto Body WOOD WORK for the Restorer**
- Antique Auto Body LEATHER WORK for the Restorer**
- Antique Auto Body TOP WORK for the Restorer**
- Antique Auto Body DECORATION for the Restorer**
- Antique Auto Body BRASS WORK for the Restorer**
- Antique Auto Body ACCESSORIES for the Restorer**