

STAR HEAD LIGHT & LANTERN CO.

ROCHESTER, N.Y.

U. S. A.



CATALOGUE N° 8

Extravagant Claims

are not the best evidence

**Study our Record
for the past 30 years**

Copyright, 1915

Star Headlight & Lantern Company, Inc.

Rochester, N. Y., U. S. A.



View of our Shops, taken from elevated
tracks of New York Central Lines

WE ARE PLACING BEFORE
THE MODERN RAILROAD
MAN THE MOST PERFECT,
SIMPLE, AND UP-TO-DATE ALL
STEEL HEADLIGHTS AND LAN-
TURNS THAT GENIUS AND EX-
PERIENCE CAN PRODUCE.

OUR DEVICES, ARISING OUT OF
THE ASHES OF THE PAST, AND
WITHOUT FEAR OF PREJUDICE,
STAND UNEXCELLED BEFORE
THE EYES OF THE RAILROAD
PUBLIC, AND THEIR VALUE AND
USEFULNESS ARE ATTESTED BY
THEIR MANY USERS.

MAIN OFFICE AND SHOPS

214-216-218-220 Commercial Street
3-5 Jones Street
ROCHESTER, N. Y., U. S. A.

BRANCH OFFICES

BOSTON CHICAGO NEW YORK
NEW ORLEANS ST. PAUL SEATTLE

Star Headlight & Lantern Co., Inc.

Rochester, N. Y., U. S. A.

Cable Address: "Starlight," Rochester
Code Used: A, B and C, and Lieber's 4th Edition

*In more lands than our flag is unfurled,
The bright beams from the "Star" are hurled.*

BE WISE! READ THIS CARE-
 FULLY AND HAVE **LIGHT**

**OUR STORY IS SHORT:
WE BELIEVE IN EXPANSION**

You May Have Had a Booklet From Us Before,
But a Good Thing Will Stand Repeating

TO OUR PATRONS:

*The illustrations in this Catalog are reproductions from photographs, and our
Headlights and Lamps are exactly as shown on the following pages.*

AGENTS IN ALL PRINCIPAL CITIES

Catalog No. 8

Star Headlight & Lantern Co., Inc.

(Incorporated 1889)

Rochester, N. Y., U. S. A.

"We Light the Way"

Manufacturers of

Headlights, Lamps, Lanterns, Switch, Signal, Water Gauge and Cab Lamps for Steam Railway Service.

Also

Electric, Acetylene Gas and Oil Headlights of every Description for Electric Railways and Automobiles.

Originators of

All Steel Wabash and Armorclad Headlights

Correspondence solicited, and estimates given on special designs and Standard blue prints, drawings or samples submitted.

ANNOUNCEMENT

To the Railway Purchasing Agents, Superintendents of Motive Power, and Master Mechanics of the United States, Canada, Mexico, South America, Russia, Japan, China, Egypt, and all other countries where our lamps, in some shape, are in service:

We beg leave to announce that this company has extended its facilities for manufacturing all kinds of Headlights, Railway Signal Lamps and Lanterns. We desire to extend our thanks for the generous patronage bestowed on us in the past, and hope in the future to merit a continuance of your favors.

ROCHESTER, N. Y., U. S. A.

Star Armorclad Oil Headlights



No. 7

23-Inch Star Standard Armorclad Headlight Heavy Type

Designed to meet the demands for an extra heavy case that will stand up and not rattle to pieces and give a powerful light as well. Recently adopted by railroads running through States that require a head lamp sufficient to distinguish an object the size of a man at a distance of 600 feet. 2500 A.B.C.P. Has two large heavy hinges and two locking door handles and catches to keep air out. Double watershed roof.

Angle iron feet turned on steel base. All one piece.

Headlight electric welded throughout.

Base and slide of 12 and 14 gauge steel.

Body 20 gauge steel.

Height, 33".

Base, 27"x19 $\frac{1}{2}$ ".

Side number glass, 12"x7". Space for four numbers.

Reflector 23"x13 $\frac{1}{4}$ "—Optional 16" deep.

Weight, crated, 135 lbs.

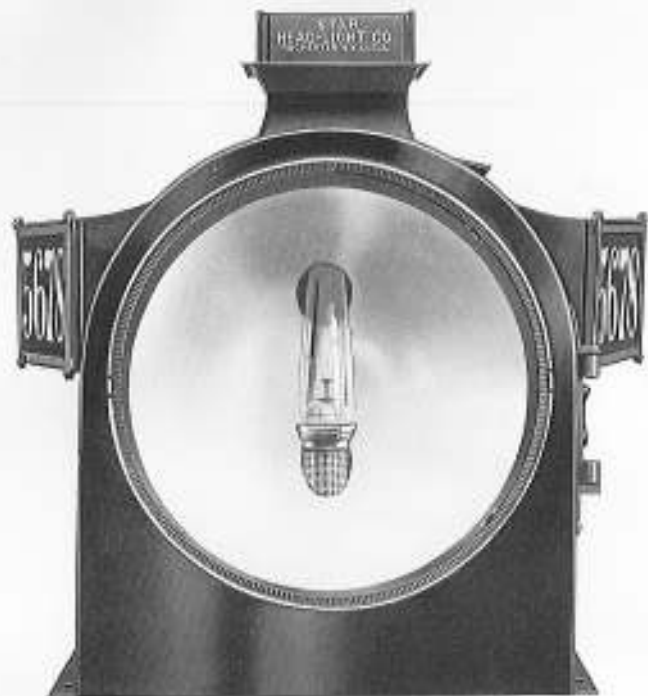
No. 7 with plain case.

No. 7A with side signal numbers.

Wilder Patent Glass Fastener.

Wilder Patent Burner.

The Star Headlight & Lantern Co.'s New All Steel Armorclad Headlight



No. 302

Perfect Ventilation **Absolute Focus**
 Superior Workmanship as to Case and Reflector

Specifications

16-Inch

Base, No. 14, Gauge Steel.
 Slide No. 12, Gauge Steel.
 Body No. 20, Gauge Steel.
 Height, 29".
 Base, 16"x22".
 Side number glass, 6 $\frac{3}{4}$ "x10 $\frac{3}{8}$ ".
 Reflector, Aluminum or Copper S.
 P. 16"x7".
 *Burner No. 2, Williams or Wilder
 Patent.
 Weight, net, 70 lbs.
 Weight, crated, 85 lbs.

Above cut shows inclined side number plates.

18-Inch

Base, No. 14, Gauge Steel.
 Slide No. 12, Gauge Steel.
 Body No. 20, Gauge Steel.
 Height, 31".
 Base, 16"x24".
 Side number glass, 6 $\frac{3}{8}$ "x10 $\frac{3}{8}$ ".
 Reflector, Aluminum or Copper S.
 P. 18"x9".
 Burner No. 2, Williams or Wilder
 Patent.
 Weight, net, 80 lbs.
 Weight, crated, 100 lbs.

*See page 117 of our catalog No. 8 for complete description and illustration of the Wilder Patent Stuffing Box and Brass Oil Pot Connection on burner.

The Star Armorclad Headlamps

Have been silently winning their way into the good graces of Railroad people by their many qualities of real genuine merit. We are quite anxious to send anyone interested a sample of this headlight free of transportation charges, and will ask you to notice if you will:

The strength and rigidity of the case of No. 20 and 22 gauge pickled cold rolled and re-annealed open hearth steel.

Base of Case of No. 14 gauge steel with sides bent at two angles; this does away with riveting on angle iron.

Oil vessel is what is known as one piece oil pot; bottom and back all one, balance double seamed throughout.

This oil pot has only two holes in it, one at the filler cap and the other where the oil enters the burner.

Malleable iron oil pot support is fastened with lock and wingnut and can be easily removed from oil pot.

The burner is the **Celebrated Star Wilder Patent Stuffing Box and Brass Oil Pot Connection**. This is the same style as the regular Williams burner with the exception of our patented arrangements.

Brass Back Stand supporting reflector can be raised or lowered at will so as to change the focus of the reflector if desired.

The side number glass is held with a very desirable device, so that the glass can be removed from the outside.

The goggle is held with our **Wilder Patent Glass Fastener** which enables the glass to be removed in a very short time, and allows expansion of the glass as it becomes heated. No plaster of paris.

Reflector is made of cold rolled and annealed lake copper triple silver plated.

Criticisms and suggestions will be received and appreciated by this company.

All Star cases are electric welded as well as reinforced with rivets wherever desirable.



No. 303

16-Inch Porter Standard Headlight

Standard with several locomotive builders as part of their standard equipment.

In designing this headlight the lines were so drawn as to get great strength and rigidity as well as pleasing lines.

Can be used on a smaller platform than either the Armorclad or Wabash type of headlight.

16-Inch

Height, 30".
Base, $14\frac{1}{4}'' \times 19\frac{3}{4}''$.
Reflector $16'' \times 7''$ deep.
Side number glass $6\frac{3}{8}'' \times 10\frac{3}{8}''$.
Weight, crated, 75 lbs.

18-Inch

Height, 32".
Base, $16\frac{1}{2}'' \times 22''$.
Reflector $18'' \times 9''$ deep.
Side number glass $6\frac{3}{8}'' \times 10\frac{3}{8}''$.
Weight, crated, 100 lbs.



No. 2250

Star Headlight Company's Special High Power Oil Headlight

Made with or without semaphore lens as illustrated. Where intensity of beam is required, the lens is used but if length of apparent beam is wanted, we recommend taking out the semaphore which can readily be done.

Equipped with Bausch & Lomb 14" magnin mirror as shown on page 14.

Extra depth of reflector 18" diameter x 11" deep.

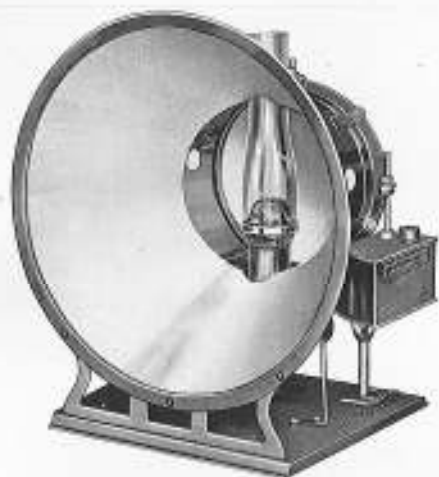
Built to conform to the laws which require a headlight sufficient to distinguish an object the size of a man at a distance of 800 feet.

Has all the improvements and attachments that are on all of Star Wabash type of headlights. Electric welded wherever practicable.

Height, 32".
Base, $19'' \times 21''$.
Side number glass, $12'' \times 6\frac{3}{8}''$.

Furnished with our patent glass holder ring as illustrated on page 118.

No angle irons are riveted on to the bases of Star Headlights. The angles are bent on to the base itself by special machinery.



No. 2250

Interior of Star 18-Inch Special Wabash Type High Power Oil Headlight with Mangin Mirror

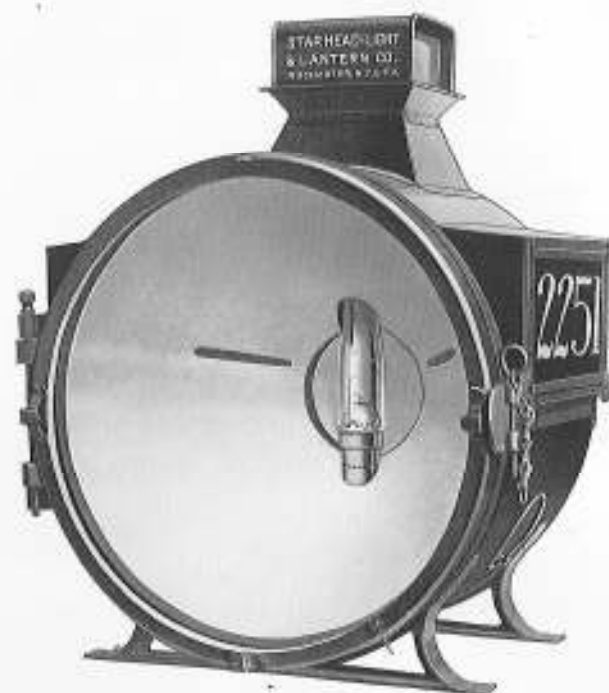
Headlight illustrated on page 13.

Reflector, 18"x11" copper silver plated.

Mangin mirror silver plated.

Adjustable focusing attachment.

Wilder patent burner with brass oil pot connection and patent stuffing box by means of which a worn or broken ratchet wheel is replaced "quick as a wink."



No. 2251

Star 23-Inch Round High Power Oil Headlight

This type of case for those who prefer the round style in preference to the other models.

Is very solid and compact.

Side number illumination very efficient.

Interior draws out from front. Interior arrangement similar to our other Mangin Mirror headlamps.

Made with or without Mangin Mirror.

Wilder Patent Burner part of regular equipment.

Height, over all, 33".

Depth, 20".

Weight, net, 110 lbs.; crated, 135 lbs.

Furnished with Wilder Patent Glass Fastener as shown on Page 118.

Wilder Patent Burner.



No. 26

Star All Steel Wabash Headlight—Side Door Only

Some Railroads think this style of case is stronger than where the front and side doors both are used.

This is a fact if case is not to be used for electric arc. If for the latter, then the front and side door is recommended.

Specifications exactly same as other Wabash type models, Nos. 22, 24, 25.

All Star Wabash type of headlights have a double watershed or roof over top of case. The object is obvious.

18-Inch

Height, 32".

Depth, 18".

Steel Base, 21"x15".

Furnished with our patent glass holder ring as illustrated on page 118.



No. 27

Star All Steel Wabash Plain Case Headlight

Made in 16, 18 and 23 inch Sizes

Same Dimensions as No. 22

18-inch

Height, 32"

Base, 15"x21"

Slide, 16 $\frac{3}{4}$ "x10 $\frac{3}{4}$ "

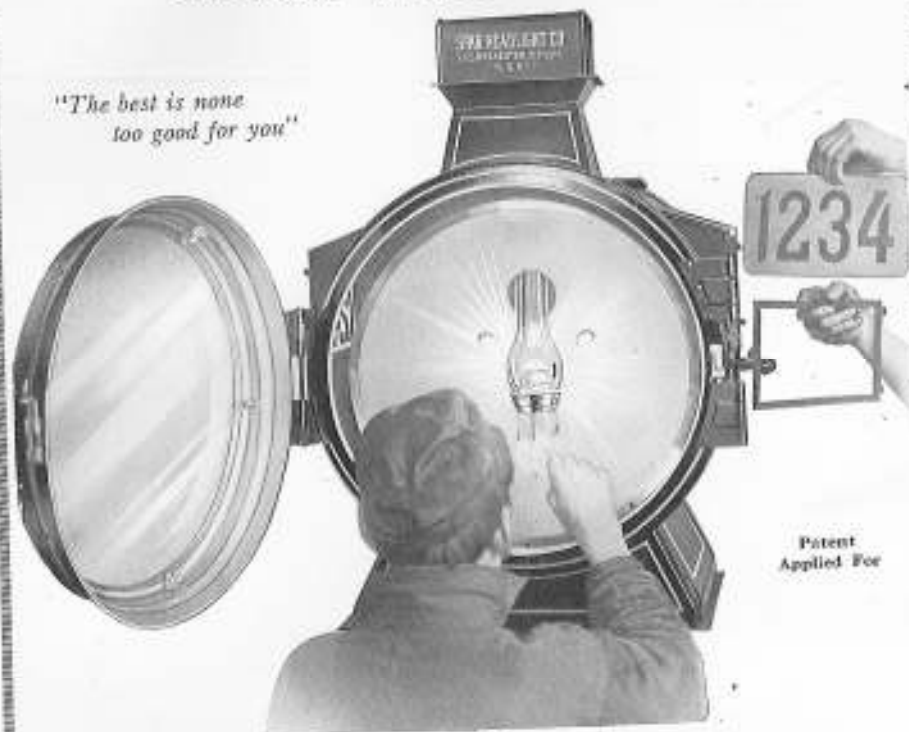
We have over 1500 different styles of headlights for Steam, Street and Interurban Service. If you do not find what you want in this Catalog, ask for it.

Total heights given are, in all cases, as the headlights are regularly made and carried in stock. This height can be reduced to meet special requirements.

STAR HEADLIGHT & LANTERN CO.,

The Star Headlight & Lantern Co.'s Celebrated All Steel "Wabash" Headlight

"The best is none
too good for you"



No. 22

16-inch

Front and Side Door

18-inch

Extreme height, 30". Bottom,
19"x13½". Side number glass,
6¾"x10¾". Weight, net 66
lbs. Weight, crated 85 lbs.

Extreme height 32". Bottom,
20"x15". Side number glass,
6¾"x10¾". Weight, net 72
lbs. Weight, crated 100 lbs.

A template, showing bolt holes and dimensions of the base of the all-steel case, will be furnished to locomotive builders on request.

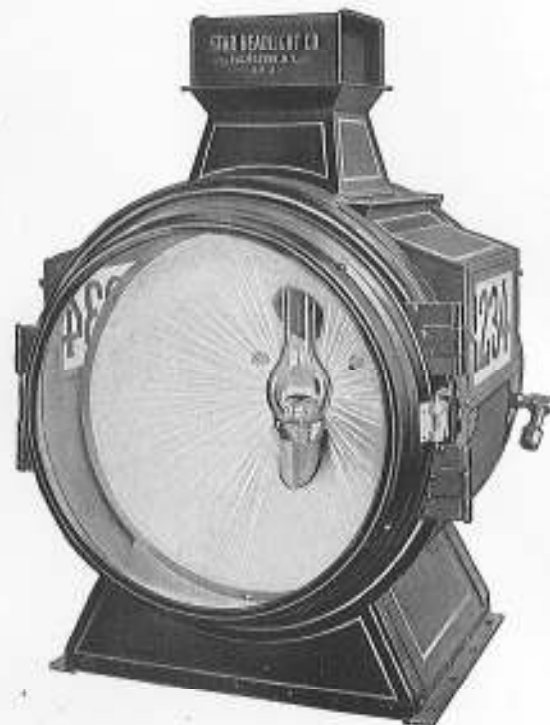
Showing Fireman Cleaning Reflector Without Withdrawing Interior From Case

Not necessary to take interior off from engine to polish the reflector. When the reflector is so accessible, it will be kept brighter, and you will get much better results from the headlight. This is not an opinion, it is an established fact. One of our objects in having this cut made was to illustrate the latest improvement in headlights, the **Star Patent Number Frame**. Glass can be removed from the number frame from the outside of the case by removing one screw. The outer part of the frame which holds the glass in place is held by one ½-inch screw and two heavy lugs, cast on the frame. (Patent pending.) This illustration also shows a good view of the **Wilder Patent Glass Fastener** in the front door. You will notice that the headlight has a front and side door.

We are originators of the Wabash Headlight. "Imitation is the sincerest flattery"

ROCHESTER, N. Y., U. S. A.

The Star Headlight & Lantern Co.'s Celebrated All Steel "Wabash" Headlight



No. 23

Same Dimensions as No. 22

These Headlights are made in 16, 18 and 23-inch sizes, with a reflector of increased depth. Equipped with Wilder Patent Glass Fastener, Star Patent Number Frame, etc.

Shows the **All Steel Wabash** Headlight with side numbers as it appears on the engine. Interior may be drawn out from side. Symmetrical, well-proportioned, modern, strong, up-to-date. Look at the hand-hole, for raising or lowering the flame, **in the door**. With the hand-hole in this position the hand-wheel of the burner is much more "get-at-able" than where the hole is cut in the back of the case.

Our Wabash Headlights are constructed with a **double roof**, extending from and including the water shed over the door to the outside edge of the opposite number frame. The steel which encloses the number frame in top of door is made of one piece, thereby doing away with the two pieces commonly used and riveted. This improved method will surely keep out the rain and sleet.

The side door in these cases can be made to swing either way, as desired.

"Twentieth Century Methods"

STAR HEADLIGHT & LANTERN CO.,

The Star Headlight & Lantern Co.'s Celebrated All Steel "Wabash" Headlight.



No. 24
Same Dimensions as No. 22

Shows fireman lighting headlight when on the engine without withdrawing the interior, by means of the front and side doors. Every motive power man will appreciate the value of this. Both of these doors have a "positive" lock and cannot spring or jar open. No springs to get soft, and consequently of no use.

This is the only headlight under the sun that has a front and side door.

The Wabash Headlights have now been on the market since January 1, 1899, and they have advertised themselves by practical results better than any magazine or show-card could ever do.

Better Than the Advertisement

There are few articles manufactured about which the above can truthfully be said.

But It is a Fact

that this splendid Headlamp burns so steadily in the wind and gives such a magnificent light that it must really be seen to be appreciated.

Entire case electric welded.

The Best is the Cheapest in the Long Run

No angle irons are riveted on to the base of Star Headlights. The angles are bent on to the base itself by special machinery.

ROCHESTER, N. Y., U. S. A.

The Star Headlight & Lantern Co.'s Celebrated All Steel "Wabash" Headlight



No. 25
Same Dimensions as No. 22

Weight, net, 72 lbs.

Weight, crated, 100 lbs.

Shows the All Steel Wabash Headlight with front and side numbers, both the same size and side door. Interior may be withdrawn from side. Notice how prominently the numbers are displayed by our system of illumination. "Kan't Be Beat." No dog house for a front number, either.

Our designs are new and original and are controlled by us solely, while the prices in many cases are no more than are asked for more common productions.

The case is circular style, and constructed of Nos. 14, 20, 21 and 22 gauge pickled and cold rolled Bessemer Steel, reinforced with heavy band and angle iron, fastened with rivets spaced one inch apart and electric welded.

Modern { Ideas
 { Designs
 { Methods

A Competition for Cheapness and a Competition for Excellence
will always be strangers

All Star Headlights are Electric Welded



No. 28

Star 18-Inch Standard Drum Headlight

Top opens for frequent cleaning.

Cast Iron legs.

May be bolted to platform or securely fastened to boiler head.

Case of heavy non-rust charcoal iron, electric welded.

Reflector copper silver plated, 18"x11" deep.

Height, 31".

Depth, 19".

Side number glass, 12"x7".



No. 29

Star Standard All Steel Interiors

This style of interior is used on **All-Steel Wabash** and **Armorclad** type of Headlights and has many features of real genuine merit.

***The Wilder Patent Burner** with Cast Brass Oil Feed and Removable stuffing box is shown.

Note the Positive Spring Catch to hold the interior in place, instead of old style pin and chain.

Oil Pot may be removed from stands by unscrewing wing and locking nuts. Pot stands are made adjustable so height of burner and pot may be adjusted. Adjustable back stand and reflector tip holder.

Oil Pots are made of 1XXXX open hearth charcoal plate, double seamed throughout. Pot consists of just two pieces and the only opening in this pot is where the oil goes in and comes out. A great improvement over the old method of piercing the oil well in two places to allow the oil pot stand pins to go through. Overcomes the vexatious leaking and constant repairing.

*See page 117 our Catalog No. 8 for complete description and illustration of the Wilder Patent Stuffing Box and Brass Oil Pot Connection on burner.

STAR HEADLIGHT & LANTERN CO.,

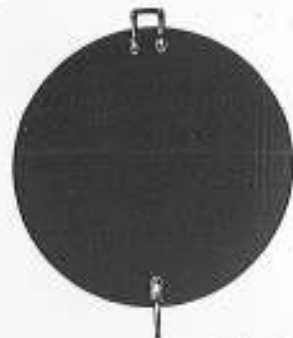
Front cover or curtain is furnished only when ordered and is extra



No. 1. Standard for Square Cases.



No. 2. Standard for Round Cases.



Steel Face Cover or Blinder.

Headlight Curtains attached to either inside or outside of case, as desired.
Inside of curtains can be operated from outside of case.
We also furnish Steel Face Covers, if preferred.



No. 30

**Interior of "Wabash" All Steel Headlight
With Star Patent Illuminating Side Number Device**

Shows the interior construction of the Headlight. It is all steel, iron, brass, and tin, no wood whatever being used in the construction of our all steel Wabash Headlights, thereby eliminating any danger from ignition of interior.

Please Consider Quality as well as Price

ROCHESTER, N. Y., U. S. A.

Signal Numbers Arranged to be read from both the front and side



No. 1419

Star 18-Inch Round Case Headlight

No. 1419 $\frac{1}{2}$ Same as above, but with Steel Bottom

18-inch

Steel Base, 15"x22".
Diameter Body, 22".
Depth, 17".
Total Height, 35".
Diameter Glass, 18 $\frac{7}{8}$ ".

Total heights given are, in all cases, as the Headlights are regularly made.
This height can be REDUCED, to meet special requirements.



No. 11

16-Inch P. R. R. Standard Headlight
Aluminum or Copper Reflector

Extreme height, 37"
 Bottom, 22 $\frac{3}{4}$ "x16 $\frac{3}{4}$ "

Weight, net, 70 lbs.
 Weight, crated, 85 lbs.

The height of Headlights as given in this catalog may be shortened when necessary to meet the requirements of an especially short stack.

Did you ever wonder why the Star Headlight is so often specified on New Locomotives?

There must be some good reason. You'd better investigate



No. 15

Star 10-Inch Round All Steel Traction Engine Headlight

Not made of tin but of heavy charcoal sheet iron, electric welded together instead of soldered. Also used on large boats, trucks, locomotives, etc. Large oil capacity. Long wick. Burner is patterned after our well-known Wilder Patent Locomotive headlight burner, oil feed, stuffing box, and burner holder all one piece cast brass. (See No. 31 Page 117.) With cast brass oil feed and patent stuffing box, a worn or broken wick raiser ratchet may be replaced "quick as a wink." Optional—Ham burner and chimney. Not affected by high winds and will not jar out or smoke. May be securely fastened to platform or stack. Bracket is furnished if desired. Back and front made of one piece pressed steel. Same size chimney as used on regular standard 10" square headlight and can be purchased at any small grocery store. Regular headlight chimney holder and Moebing Argand chimney seat with asbestos cushion.

Longest wick and largest oil capacity of any Traction Headlight manufactured.

Interior withdraws from front.

Door is held by the Star Headlight & Lantern Co.'s celebrated **Positive Lock Ketch**. Overcomes breakage of glass from banging doors. No nuts or threads to wear out and get loose.

Outside wick raiser.

Base is all steel same as all Star Headlights have been for past five years.

Reflector—Copper silver plated.

Height, over all, 17".
 Base, 10"x9".
 Weight, Boxed, 14 lbs.
 Weight, Net, 10 lbs.
 Dimensions, Carton, 19"x14 $\frac{1}{2}$ "x12".

PACKAGE: Each headlight is encased in a heavy corrugated carton which agrees with classification in effect on the railroads. Inside of each headlight is packed a chimney in a carton of its own. These headlights can be shipped right to your customer or put in the cab of the engine without further package or inspection.

It's Worth a Postage Stamp to Find Out
what we can do, for We would not
want You to try if We Feared the Result



No. 47

Foot piece for headlight to set
on boiler head



No. 48



No. 49

Bracket for 10 and 11
inch stack

Star 10 inch All Steel Traction Engine Headlight

Fitted with hangers for use on Motor Cars, Auto Trucks, etc., where specified. Other-
wise shipped with equipment shown as No. 49. Height over all 21 inches.

Specifications

All steel base (Original). Size 7" x 13".
Moehring, Argand or Ham Special Burner.
Reflector Spun Copper, silver plated.
Case made of 1 XX Charcoal Tinplate, reinforced with steel angles and
pressed front all in one piece.
Oil pot made of 1 XXX Open Hearth Charcoal Tinplate.
Large Oil Capacity.
Oil pot connections to Burner made of cast brass. Will not rust out like tin.

Electric Welded as Well as Riveted

PACKAGE: Each headlight is enclosed in a heavy corrugated carton, which agrees
with classification in effect on the railroads. Inside of each headlight is packed a chim-
ney in a carton of its own. These headlights can be shipped right to your customer,
or put in the cab of the engine without further package or inspection. Net 15 lbs.,
Gross 17 lbs. Size of carton, 11"x14 1/4"x21".



These illustrations show our method of packing 10, 12 and
14-inch round or square headlights in heavy corrugated cartons
with double faced pad in front of goggle glass. In packing for
export, we enclose this carton in a heavy wood case for which
there is an extra charge. This method keeps the goods air and
dust tight insuring their arrival at destination in good con-
dition. This is especially appreciated by Jobbers and Traction
Engine people who place the goods on shelves in stockroom
and can be re-shipped without re-boxing.

*NOTE—When deliveries are ordered by express, charges must
be borne by the purchaser. All goods shipped at buyer's risk.*

"The Light That Never Fails"



Cases made
with Pressed
Cold Rolled
Bessemer
Steel Panels

No. 4

**23-Inch Star Standard Square Front and Side
Number Headlight**

Reflector, 16" or 13 $\frac{3}{4}$ " deep.
Extreme Height, 42".
Steel Base, 28"x20".
Front and Side Number Glass, 7"x12".
Weight, net, 95 lbs.
Weight, crated, 125 lbs.

Our Motto: "Practical Perfection."



Cases made
with Pressed
Cold Rolled
Bessemer
Steel Panels

No. 3

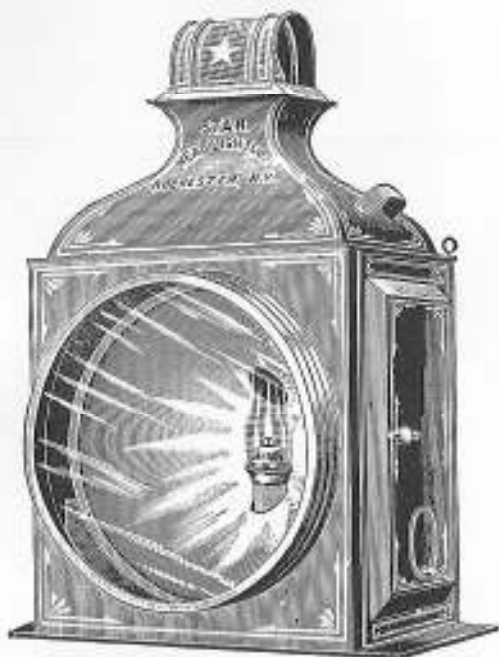
**23-Inch Star Standard Square Side Number Headlight
With Inside or Outside Curtain**

Reflector, 16" deep.
Extreme Height, 40".
Steel Base, 28"x22 $\frac{1}{4}$ ".
Side Number Glass, 7"x12".
Weight, net, 103 lbs.
Weight, crated, 130 lbs.

Equipped to burn Acetylene or Electric Arc when desired.
Standard styles can usually be furnished more promptly than others, and
we therefore advise and request our patrons to confine themselves to such
styles whenever practicable to do so.

We make a specialty of Cases for Arc Electric Headlights, equipping
them with bent or crown glass, in accordance with the latest
practice.

"We Believe in Expansion"



No. 2

23-Inch Star Standard Square Plain Case Headlight

Reflector, 13 $\frac{1}{4}$ " deep.

Extreme Height, 40".

Steel Base, 28"x20".

For Plantation use this headlight is made with Reflector 3 $\frac{1}{4}$ " deep.

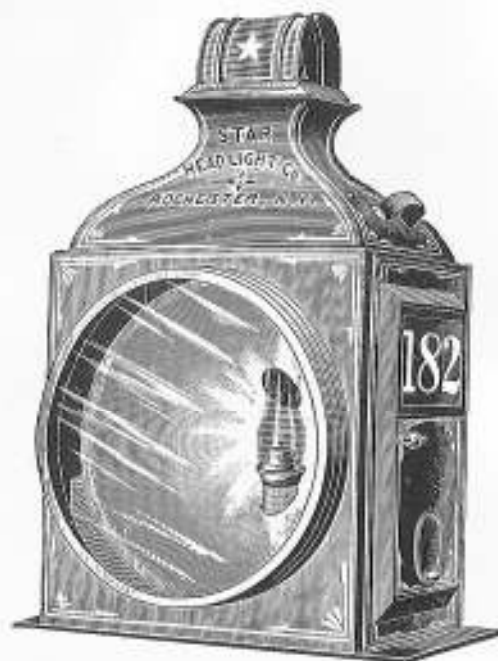
Weight, net, 85 lbs.

Weight, crated, 115 lbs.

Can be equipped to burn Acetylene Gas or Electricity when desired.

Some people say "There's a difference in Headlights."
So there is! Specify the Star—you won't be disappointed.

"Remember the Name"



No. 5

23-Inch Star Standard Square Side Number Headlight

Reflector, 13 $\frac{1}{4}$ " deep.

Extreme Height, 40".

Steel Base, 28"x20".

Side Number Glass, 7"x12".

Weight, net, 90 lbs.

Weight, crated, 120 lbs.

May be equipped to burn Acetylene Gas or Electricity.

The best material and good workmanship combined Produce Superior Goods.

We use this combination. Our patrons get the benefit.

Cases made with Pressed Cold Rolled Bessemer Steel Panels

Can Be Furnished With Illuminated Side Numbers,
if Desired



No. 8

18-Inch Star Standard Square Plain Case Headlight

Side Number Glass, 6"x11".
Extreme Height, 38".
Steel Base, 25"x17".
Slide, 13"x19".
Weight, net, 70 lbs.
Weight, crated, 90 lbs.

Can be equipped to burn Acetylene Gas or Electricity when desired.

Better Than The Advertisement

"Our Light is Right"
Our Success Depends on Pleasing Every Customer
If Anything is Wrong, Let Us Make it Right



No. 9

Can be
furnished with
illuminated
Side Numbers
if desired

16-Inch Star Standard Square Plain Case Headlight

Side Number Glass, 6"x10".
Extreme Height, 34".
Steel Base, 22"x16".
Weight, net, 60 lbs.
Weight, crated, 77 lbs.

Can be equipped to burn Acetylene Gas when desired

**We make a good Headlight cheap, but we don't make cheap
Headlights**

Can Be Furnished With Illuminated Side Numbers if
Desired, or Hangers Attached



No. 10

14-Inch Star Standard Square Plain Case Headlight

Burner and chimney same size as 23-inch light.

Side Number Glass, 6"x8".
Extreme Height, 31".
Steel Base, 19 1/4"x13".
Weight, net, 40 lbs.
Weight, crated, 50 lbs.

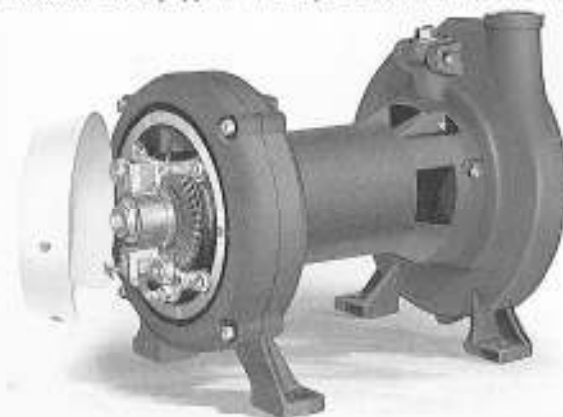
Electric Welding is not Cheaper but it is Better and when
Riveted in Addition, is Still Better



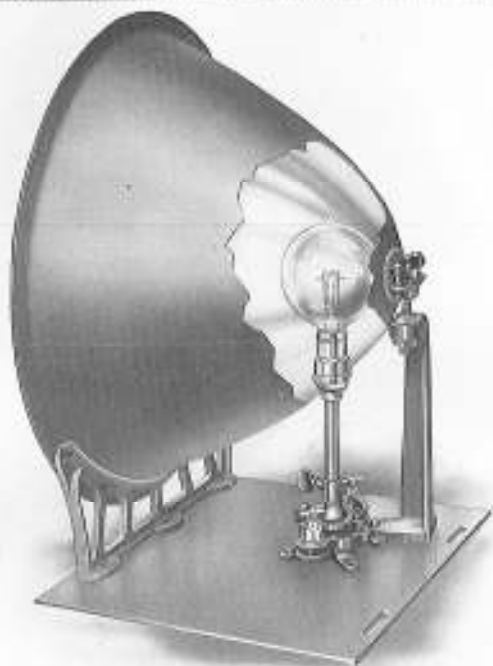
No. 38

The "Pyle-National" Electric Arc Headlighting System

Is designed especially for locomotive headlight and general illumination service and has proved itself to be most efficient and reliable. Without any adjustment it operates on steam pressures ranging from 85 lbs. to the very highest and on superheated steam as well as on saturated steam. It is of very simple construction and easily understood. The type "E" Turbo-Generator is so designed that, although running at a comparatively low speed, it is equal in efficiency to turbines running from 4,000 to 5,000 R.P.M. The type "E" Turbo-Generator has a maximum capacity of 1 1/2 K.W. Over 30,000 locomotives equipped with Pyle-National Electric Illuminating System.



Type "E" Turbo-Generator



No. 39
LAMP

The "Pyle-National" Electric Incandescent Illuminating System

Was designed especially for locomotives where a more modified light is desired than the arc system.

The Type "S" Turbo-Generator embodies the very latest ideas in design and construction for Incandescent Illumination of locomotives. Produces a most ideal light for both road and switching locomotives.

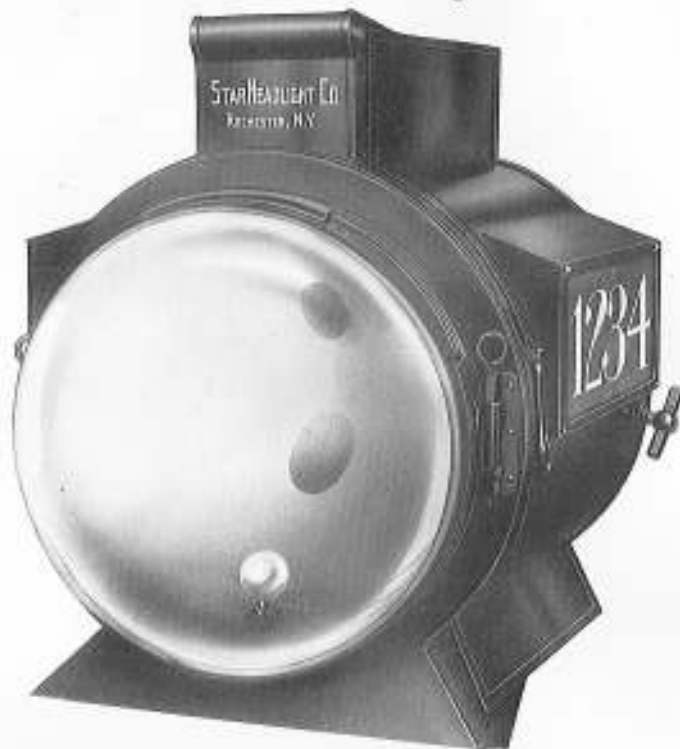
For switching service a 60 Watt Pyle-National concentrated filament Tungsten lamp is employed, which produces sufficient illumination to clearly distinguish objects at 500 feet. For through train service a 100 Watt lamp, of the same type as above is supplied which gives sufficient light to distinguish objects the size of a man at 1000 feet.

The Type "S" Turbo-Generator has a capacity of $\frac{1}{2}$ K.W.



Type "S" Turbo-Generator

Electric Headlights



No. 40

Star Headlight Company's—Pyle Special Headlight Case and Reflector for Electric Headlight

Made with high door to allow interior to be readily removed.
Case of 12, 14 and 20 gauge charcoal iron.

Reflector copper silver plated. Optional— $\left\{ \begin{array}{l} 18'' \times 11'' \\ 18'' \times 9'' \end{array} \right.$

Front and side door. **Front door removable and Ventilated.**

Regular equipment includes bent goggle glass 18" diameter and fixtures for incandescent bulb.

Height, 30".

Base, $21\frac{1}{4}'' \times 15\frac{1}{2}''$.

Side Number Glass, $11\frac{1}{4}'' \times 6\frac{3}{8}''$.

Slide, $12\frac{1}{2}'' \times 14\frac{1}{4}''$.

Weight, crated, 100 lbs.

Electric Welded and Reinforced wherever Practicable

Electric Headlights



No. 41

Star Headlight Case for Electric Headlights

Ventilating goggle and inner ring, effectually overcomes breaking of goggle glass.

Front and side door hung on extra heavy hinges.

Base, slide and top deck 12 gauge steel. Body and door 20 gauge.

Electric Welded throughout.

Fixture for incandescent bulb.

This case will accommodate the apparatus manufactured and is recommended by

- Pyle-National Electric Headlight Co.
- Remy Electric Company.
- Buda Ross Company.
- Moon Manufacturing Company.

Size	Hgt.	Base	Slide	Side No. Plates	Net Crated lbs.	lbs.
No. 41-A	16"	29"	19"x14"	14 1/2"x10"	10 3/4"x6 1/4"	70 100
No. 41	18"	30"	22"x15"	17" x11"	10 3/4"x6 1/4"	80 100
No. 41-B	23"	36"	29"x20"	24" x15 1/2"	12" x7"	100 135

Furnished with bent goggle glass or heat resisting glass when specified.

Electric Headlights



No. 42

Interior of Electric Arc Headlight

Arranged as shown for reception of Arc mechanism.

When you purchase your case and reflector only for arc electric headlight from us, we guarantee you will have no difficulty in applying the electric apparatus as match holes are all bored by us and stand furnished for any make of electric apparatus.

We refer you to any of the Electric Headlight Companies.

Electric Headlights



No. 43

Star Electric Cast Iron Headlight

16-Inch Only

For electric only.

Height, 19"
Depth, 19 3/4"
Base, 13" x 13 1/4"

Has adjustable focusing attachment.

An ever-lasting headlight at last. Made wholly of cast iron, with copper silver plated reflector.

No. 43-A. Same as illustration except has solid reflector instead of mangin mirror attachment.

With the successful lighting of cars from the Axle Light and Storage Battery came the demand for an indestructible headlight with gas filled bulb. Gives a wonderful penetrating light.

In connection with the Edison Storage Battery Company, we have designed and are ready to install complete electric headlight sets, including cab lights, storage battery switches, air-tight box for battery, etc., for Railroads who have given up the use of the Arc Headlight. With this system we use the gas filled Mazda lamp combined with a deep reflector of special design, which is scientifically correct. The result—we get a bright shaft of light down the track, which complies with the drastic law of all the States, except one.



No. 44

Interior View

Star 16-Inch Electric Cast Iron Headlight

In the No. 43 A pattern where the mangin projector mirror is dispensed with, the side number illumination is arranged for by cutting 8"x1" slots in reflector.

The strongest and most durable as well as efficient head lamp ever devised.



Edison Storage Battery used in connection with Star Electric Headlights.



No. 50

Star 18-Inch Interurban Electric Headlight

Designed for use on high speed electric roads.

Using high power Mazda gas filled lamp of sturdy construction with concentrated filament, guaranteed against breakage.

Gives sufficient light to pick up an object the size of a man at 2,000 feet.

Strongly built, simple in construction and efficient in illuminating qualities.

No. 50

Reflector, 18"x9".

Height, 24".

Depth Case, 13".

No. 50-A

Reflector, 16"x7".

Height, 21".

Depth Case, 11".

Electric Headlights



No. 52

Star Cylindrical Electric Headlight for Electric R. R. Locomotives

These headlights are used generally one mounted on roof of locomotive at each end.

Burns the Mazda gas filled lamp.

Made of 20 gauge Charcoal iron.

Reflector spun copper silver plated, 12" in diameter.

Optional—8" Mangin Mirror.

Height, Over All, 17"x19" deep.

Side Number Glass, 14½"x6¼".

Electric Headlights



No. 63

10-Inch Star Standard Electric Headlight

Designed especially, with special reflector, for the electric headlight equipment using the concentrated filament bulb.

For use on light locomotives, switch engines, traction engines, etc. May be attached to battery or turbine.

This case is strong and well made of 20 gauge sheet iron, and has several little devices on, which were suggested by the Electrical Manufacturers as well as Railroad Mechanical People.

Size	Height	Made in Size of Base	Weight Boxed	Weight Net
10"	17"	10"x 9"	14 lbs.	10 lbs.
12"	20"	12"x10"	20 lbs.	15 lbs.

We supply the entire equipment with Headlamp Edison Storage Battery to supply one or two headlights, two cab lights with steam and water gauge lamps complete, correct type of gas filled concentrated filament lamp, switch, etc.

Pipe Line Headlights



No. 69



No. 69

This little headlight was designed to be attached to a telegraph pole running along the right of way of a Pipe Line Company. Serves its purpose of illuminating the pipe very efficiently. Also used to illuminate outside of large oil storage tanks.

Rear view shows method of attaching by removable bracket.

Is weather and water proof, brass castings, all japanned black.

Reflector generally used is 10 inches in diameter and 4½ inches deep, made of brass nickel plated or steel white enameled on inside.

Burns a Tungsten lamp. We have manufactured many thousands of these for use in Pennsylvania, Texas, Oklahoma, etc.

Also used on Motor trucks, Patrol wagons, Boats, etc.

No. 69 with heavy brass nickel plated reflector.

No. 69-A with heavy steel white enameled reflector.

No. 69-B with Acetylene burner and draft hood.

Electric Headlights



No. 70

Star Standard Electric Incandescent Headlight

For use on front or rear of light locomotives, Switchers, Motor Cars and anywhere a bright penetrating light is required where electric current is available.

Made in 10 and 12-inch sizes.

Supplied with bracket as shown and can be fastened to most any place.

Cheap, but serviceable.

We supply the entire equipment with head light, Edison Storage Battery to supply one or two headlights and two cab lamps, correct type of Gas Filled Tungsten Lamp, Switch, etc.

Acetylene Headlights



No. 84

Star Headlight Company's Well-Known All Steel Wabash Type of Headlight Fitted for Acetylene

Made in 16, 18 and 23-inch only. For other sizes and styles refer to other pages. Same specifications and dimensions as shown under No. 22.

Furnished with side numbers when required.

The Star Generator furnished with these equipments is guaranteed to give perfect satisfaction in every way and may be connected up to one or two headlights, and two cab lights.

Generator is generally placed in the cab of locomotive and light regulated from there but can be enclosed in headlight where desired.

Fitted with our Patent Glass Holder Ring as shown on page 118.

Acetylene Headlights



No. 85

18-Inch Star Standard Square Plain Case All Steel Headlight for Acetylene Gas

Made in 10, 14, 16, 18 and 23-inch sizes.

Can be furnished with illuminated side numbers where desired.

Same dimensions and instantly interchangeable with oil lamps of same size and style. See Nos. 302, 303, 4, 5, 8, 9, etc.

18-Inch

Height, 37".

Base, 25"x17".

Refer to similar size Oil Headlights for dimensions.

Acetylene Headlights



No. 86

18-Inch Star Standard Round Plain Case All Steel Headlight for Acetylene Gas—999 Style

Made in 10, 12, 14, 16, 18 and 23-inch sizes.

Can be furnished with illuminated side numbers where desired.

For dimensions see corresponding sizes and styles under 999 style Oil Headlights, page 28.

Acetylene Headlights



No. 87

16-Inch Acetylene Headlight—Drum Type

This style standard on large Eastern System.

Bolted to boiler head.

Numbers can be shown on side or hung on rod across front glass.

Heavily constructed—extra heavy malleable castings. Mica chimney.

No. 87 with plain case as shown.

No. 87-A with side number frames.

Acetylene Headlights



No. 88

Star McKeen Gasoline Motor Car Headlight

Used on motor cars in all parts of the country.

Adapted to use Acetylene Gas, electric bulb or oil.

Has special projector mirror.

Top opens for convenience in adjusting burner and interior.

Height, 15½".

Depth to point of car, 9½".

Over all, 21".

Reflector, 14"x6½".

Weight, net, 35 lbs.

Weight, crated, 50 lbs.

Star Positive Lock Catch on door. No jarring open.



No. 89

Star 16-Inch Foreign Type Pintsch Gas Headlight

Used mostly on European roads.

Burns either Pintsch or Acetylene Gas.

Height, 30".

Base, 10"x5".

Reflector, 16"x7" deep.

Side Number Glass, 8"x4".

No. 89-A same as above, except has no side numbers.

**Star Headlight and Lantern Company's
Acetylene Headlights**



No. 90

This style interior for Wabash or Armorclad type of headlights as well as square—Nos. 84, 85, 302.



No. 90-A

This style interior for round case—999 style headlights, Nos. 86, 17, 18.

**Interior of Acetylene Gas Headlight—Either
Round or Square**

With this device, oil headlights can be converted to acetylene gas very readily and successfully.

Shows arrangement of parts—made in 10, 14, 16, 18 and 23-inch sizes.

- A. Stand or bridge.
- B. Hose Nipple
- C. Chimney.
- D. Burner extension.
- E. Adjusting nipple.
- F. Reflector back stand.
- G. Gas cock.
- H. Nipple plate.

Acetylene Headlights



No. 91

Star 10-Inch Acetylene Gas Traction Headlight

Same dimensions in every way and instantly interchangeable with the oil lamp. Takes same generator as the larger Acetylene headlights.

Will burn $\frac{3}{4}$ foot burner continuously for 24 hours.

Guaranteed to give satisfaction in every way.

Height, 17".

Depth, 11".

Steel Base, 9"x10".

Weight, Net, 10 lbs.

PACKAGE:—Each headlight is encased in a heavy corrugated carton which agrees with classification in effect on the railroads. These headlights can be shipped right to your customer or put in the cab of the engine without further package or inspection.

Acetylene Headlights



No. 92

Star Headlight Acetylene Generator

Made especially for headlight work. Will supply a single $\frac{3}{4}$ -foot burner continuously for 20 hours.

Absolutely safe, reliable and economical

Is generally installed in the cab but may be placed inside the headlamp case.

For Winter use in extremely cold climates, an outside jacket is furnished packed with insulating material.

**We make a specialty of converting oil headlights to burn
Acetylene Gas**

Railroad Lanterns

Containing Many New Features of Real, Genuine Merit
Never Before Shown—For Lard,
Sperm Oil or Kerosene

NOTICE—If you will—how the side wires on the Wire Bottom Lantern are brought **WAY** around the lower guard ring and **SECURELY WELDED**.

WE ALSO CALL ATTENTION to the manner in which the first and second guard rings are fastened together where they meet. As the railroad men know from experience, the little ferrule which generally holds these rings together becomes loosened through constant use, and the wires breaking out catch on clothing and other obstacles. On all Star Lanterns these rings are butt-welded together by electricity and are guaranteed to never come apart. Same with the cross wires and base and top rings, all electric welded, making a most complete and permanent job.

LAST, BUT NOT LEAST, the **WHOLE FRAME, BOTH** of the tin and wire bottom Lantern, is submerged in a crucible of molten tin, which retins and solders the whole frame together, making the strongest and most durable lantern manufactured.

These lanterns are all we claim for them, as we use nothing but American Tin Plate Company's best open hearth 4-A 5-lb. coating tin and the best annealed and tinned steel spring wire in the manufacture of them.

We have lately improved the **WIRE BOTTOM LANTERN** by adding a **STEEL BAND** which goes around the lower ring and riveted in place, which makes it doubly strong.

You will make no mistake in sending us your orders.

It is Flattery to be Imitated, **BUT** it is Cheap to Imitate

Silver White—Electric Welded Railroad Lanterns



No. 103 1/2

Bail always in position to be grasped.
Can be dropped to bottom if desired.

Flame adjusted without removing oil fount or globe.

Burner shaft extends to outside of lantern.

No complicated mechanism.

No. 39 Wire Bottom Lantern with Outside Wick Raiser

Oil Pot Withdraws From Bottom

(Also Known as No. 11)

Tin or Wire Bottom. Single or Double Guard

Oil Fount Withdraws From Base

Fitted with Bayonet Catch. Burns Lard Oil or Railroad Signal Oil. Can be fitted with Convex Burner to burn Kerosene Oil.

New Adjustable Rigid Bail. Stand up or Lay down

Railroad Lanterns



No. 100

No. 39 Star Single Guard Lantern

Designed to meet the needs of Railroad Signal men desiring a lighter frame than the regular double guard lantern. May be equipped with any of the trimmings as supplied with the other lanterns.

Open or closed bottom.

Particular attention is called to where the guard wires cross. Instead of a little clip, we electric weld these wires, making the whole frame solid and even as if made of one continuous piece of wire.

All Star lanterns are equipped with non-collapsible flange tube burners.

New Adjustable Rigid Bail. Stand up or Lay down

Silver White—Electric Welded Railroad Lanterns

Bail always in position
to be grasped.
Can be dropped to
bottom if desired.



No. 101

Inside Wick Raiser

No. 39 Star Tin Bottom Lantern

(also known as No. 11)

Stand up Bail. Either Single or Double Guard

Our line of Railroad Lanterns includes all the standard sizes. The material and workmanship are of the best. They are made to take any style globe, and all parts will be made interchangeable with lanterns previously used. Fitted with any size or style of burner. Made with bail ear, which is formed from the upright guard wire. Fitted with our shifting or spring top. Regular make takes No. 39 globe, but can be made to fit any standard railroad globe.

Particular attention is called to where the guard wires cross. Instead of a little clip, we electric weld these wires, making the whole frame solid and even as if made of one continuous piece of wire. Same with the ends of the ring guards. Fitted with Bayonet Catch. Burns Lard Oil or Railroad Signal Oil. Can be fitted with Convex Burner to burn Kerosene Oil.

We also equip these lanterns with the Star Patent Rigid Bail. This is invaluable in cold weather and prevents slipping through the hand when signaling.

Silver White—Electric Welded
Railroad Lanterns



Perfect Combustion.

Will not go OUT when
signaling.

No. 101 1/2

Outside Wick Raiser

No. 39 Star Tin or Closed Bottom Lantern

Same trimmings apply as shown under No. 102 1/2

Railroad men themselves have been heard to say "Star" Lanterns are so strong and compact, do not seem to go to pieces so quickly as many others."

Let us prove this to your satisfaction by sending you a sample free of charge.

The handles are so arranged that when the lantern is set down the bail stands upright in position to be instantly grasped, a great convenience over the old style where bail drops to the base of lantern when set down. The bail can be thrown down on the base of the lantern if required.

Electric welded throughout.

New Adjustable Rigid Bail. Stand up or Lay Down

Silver White—Electric Welded
Railroad Lanterns

Bail always in position
to be grasped.
Can be dropped to
bottom if desired.



The only lantern made
with lower guard ring
and oil pot receptacle
drawn all in one piece.

No. 102 1/2

Outside Wick Raiser

No. 39 Star Wire or Open Bottom Lantern

(also known as No. 11)

Stand Up Bail. Either Single or Double Guard

No. 1 or No. 1 Extra Burner

Fitted with Bayonet Catch. Burns Lard Oil or Railroad Signal Oil. Can be fitted with
Convex Burner to burn Kerosene Oil.

No part of our Lantern depends entirely on solder.

We rivet wherever possible.

See page 66.

Samples furnished free of charge to Railroad people

Electric Welded Throughout

Railroad Lanterns



No. 102

Patent Pending.

No. 39 Star Railroad Lantern with Patent Semi-Rigid Bail

This bail embodies the ideas of a practical Railroad man who had it patented and has found a ready sale with us.

May be applied to any of our Railroad No. 39 Lanterns as well as the Car Inspector Lamp.

For signaling in zero weather is unequalled.

NOTE:—When deliveries are ordered by express, charges must be borne by the purchasers.

Railroad Lanterns

Bail always in position to be grasped. Can be dropped to bottom if desired.



No. 103

Inside Wick Raiser No. 39 Star Wire Bottom Lantern

(also known as No. 11)

Stand up bail. Either single or double guard.

Fitted with Bayonet Catch. Burns Lard Oil or Railroad Signal Oil. Can be fitted with Convex Burner to burn Kerosene Oil.

We have lately improved this Wire Bottom Lantern by adding a steel band which goes around the lower ring and riveted in place, which makes it doubly strong.

All parts electric welded together.

Must be seen to be Appreciated.

See pages 66 and 74.

Silver White—Electric Welded
Railroad Lanterns

**Containing Many New Features of Real, Genuine Merit,
 Never Before Shown—For Signal Oil or Kerosene**

We take commendable pride in the quality of our Lanterns, and the result is that we are now manufacturing more Lanterns than ever before, and our trade is constantly increasing.

Our Lanterns are all retinned after being put together, then buffed and cleaned nicely, and papered before shipping.

The Oil Pot of our Lantern is made quite a little different from other makes. The oil pot is drawn out of one piece of heavily coated charcoal tin, and instead of having the top of the pot drawn **closed** and the **bottom open**, and then soldered on to the base of the Lantern, we draw the pot **closed on the bottom**, and then solder on to the base of lamp, thereby making a **double bottom**. Rust has to eat its way through **two** thicknesses of tin instead of **one**, as a Lantern always leaks first around the base of the oil pot, and you cannot get at it to repair unless the Lantern is torn to pieces.

The Dome of our lamp is also drawn out of one piece of heavy tin, thereby obviating the melting and warping apart of the tops.

On the **Bayonet Catch** we use a tin steel spring, soldered and doubly fastened by a **rivet** in place of the old style brass soldered spring.

The Hinge—One of the important points about a Lantern is the hinge becoming broken after using a short time. We have improved this part of the Lantern by riveting it as well as soldering. Same on all other parts. No part of our Lantern has to depend on solder for strength.

**No Part of our Lantern Depends Entirely on Solder. We Rivet, or
 Electric Weld, Wherever Possible**

Silver White—Electric Welded
Railroad Lanterns



No. 104

**No. 90 Star Railroad Switchman's Lantern with Wood
 Bail**

Designed to meet the demand for a lantern bail on which a Railroad man may get a better grip.

May be easily removed and placed on a new lantern when old frame is worn out.

Applicable to any Star No. 39 Railroad or Car Inspector lantern.

Bail and side guard wire all one piece.

Sangster type Oil Pot removable from bottom.

Strong and serviceable, but very light.

For electric service, the wood handle acts as an insulator.

Electric welded throughout. No wire ends to become loose and catch on clothing.

All Star lanterns are equipped with non-collapsible flange tube burners.

Silver White—Electric Welded
Railroad Lanterns



No. 105

Star No. 39 Electric Traction Lantern

Fitted with insulated bail in case lantern should come in contact with third rail or high tension wires.

Tin closed or wire open bottom.

No. 1 or No. 1 Extra Lard Oil or Kerosene burner.

Inside or outside wick raiser.

Electric Welded

Silver White—Electric Welded
Railroad Lanterns



No. 106

No. 39 Star Double Guard Wire Bottom Railroad Lantern
With Bracket Arm

Used as tail or auxiliary rear end light by electric railways.

Bracket attachment can be used with any of our lanterns.

Lantern can be lifted out of socket and carried back by Conductor to signal following car.

Red globe is furnished with or without bull's-eye.

Silver White—Electric Welded
Railroad Lanterns



No. 107

Star San Antonio Railroad Switchman's Lantern

- Made of light wire.
- No. 1 signal oil burner.
- Adjustable outside wick raiser.
- Single guard.
- Large wooden bail.
- Takes regular 39 globe.
- Has wick raising device.
- Very popular with Switchmen.

Silver White—Electric Welded
Railroad Lanterns



No. 108

No. 11 Star Steel Guard Railroad Lantern

- Parts punched out of Bessemer steel and retinned after lantern is finished.
- Entire lantern electric welded. No part depends on solder.
- Inside or outside wick raiser burner. Fitted with lard oil ratchet burner to take No. 1— $\frac{3}{8}$ " wick or No. 2—1" wick.
- All Star lanterns are equipped with non-collapsible flange tube burners.

Electric Welded Throughout

Silver White—Electric Welded
Electric Railway Lanterns



No. 109

Star Steel Guard Tail Lantern

For electric railways, trucks, automobiles, gasoline railway motors, etc.

Takes standard 39 railroad globe, burner and wick.

Arm No. 5, Figure 71.

Can be instantly converted to the regular hand lantern by removing the bracket and replacing the ruby globe with a white globe.

All Star lanterns are equipped with non-collapsible flange tube burners.

Star Safety Lantern

Can Be INSTANTLY Lighted and the Wick Regulated
In a Violent Wind Storm or on Top of a Fast
Moving Train by Simply Turning the Button



No. 111



No. 110

It is so difficult in time of storm or great danger to relight the railroad lanterns now in use that it has become an old saying that "many a railroad man's life has gone out when his lantern went out."

The Star Safety Lantern gives a man five chances for his life to the one he now has.

You can light it four times in succession and do it just as quick as you can fire four shots from a revolver.

There is nothing about it to get out of order.

In the first place, it is the only lantern in the world that can be instantly lighted in any kind of weather.

One of the many good features of this lantern is you load it with the same parlor matches that are in general use all over the world. It holds four matches.

A quarter turn of the button lights it, shove the same button up and it regulates the wick. One match cannot set fire to another, neither can you light the matches by swinging the lantern in any manner.

The globes used in Star Safety Lanterns are exactly the same as those in the lanterns now in use on all the railroads.

Silver White—Electric Welded
Railroad Lanterns



No. 112



No. 113

Star No. 6 Railroad Lantern

Takes Sangster spring pot. Oil pot slides in from base.

Globe removable from top.

Fitted with No. 1— $\frac{5}{8}$ " wick or No. 2— $\frac{3}{8}$ " wick.

Use No. 6 Railroad globe either white, ruby, green or blue.

If desired for kerosene, so state.

Star lanterns are equipped with non-collapsible flange tube burners.

Conductors'
Lanterns



No. 114
No. 3 Conductors'
Lantern.

Brass or Nickel. Bayonet
Catch. Also known as
"Pullman"



No. 117
Queen, Closed Bottom
Conductors' Lantern
Brass or Nickel
Bayonet Catch



No. 116

No. 39 Conductors'
Lanterns
Open or closed bottom

Brass or nickel
Either Bayonet Catch
or inside Oil Cup
O. W. R.

Nothing Succeeds,
like Success



No. 115
No. 3 Open Bottom
Conductors' Lantern
Brass or nickel. Pullman
Globe. Bayonet Catch



No. 118
Queen, Open Bottom
Conductors' Lantern
Brass or nickel
Bayonet Catch



No. 119

No. 0 Tubular Hood Star Improved Car Inspector Lamp

By this name this perfect lamp is known where ever car inspection by torch has been discontinued.

Gives 20 c.p. Burns 25 hours.

Has new square handle which overcomes breaking and smoking of globes as throws light directly ahead.

Thumb guard to prevent burning of hand, also extra blinder to keep light out eyes of Inspector.

Regular No. 0 Tubular Globe. Either standard No. 1 high or low cone burner. $\frac{3}{8}$ " "A" wick.

Optional 5" silvered glass reflector or 5" brass nickered reflector.

*NOTE:—Illustration of the No. 10 wire which runs all around the outside of lantern and thoroughly soldered, firmly securing oil pot, side tubes, dome, etc., all together.

Guaranteed Not to Blow out in High Winds



No. 120

No. 0 Tubular Hood Star Improved Car Inspector's Lamp With Globe Guard

Same as our other lantern except has the Jones wire guard across front to protect globe.

This guard is hinged and opens and shuts like a gate.

Recommended where lamps are given very rough usage.

Same burner, globe, reflector and wick.

Absolutely the most up-to-date inspector lamp made.



No. 121

No. 0 Tubular Hood Star Improved Track Walker's Lamp

With four inch Ruby Semaphore in rear.

An improvement over old models. Has reflector and new style of wind break so will not go out in high winds.

Also used as vehicle lamp on wagons, carriages, etc.

Large powerful light.

Brass burner. Extra large brass filler cap.

For further description, see No. 119.



No. 122

**Star No. 7 "Government" Pattern Lake and River
Lantern—Hinge Top**

Guards are electrically welded.

Burns signal oil or kerosene.

Strongly made and well guarded.

In ordering be sure to specify style of burner wanted.

Used principally on Lake and River steamers and vessels.



No. 123

Star Red Guard Tubular Lantern

This lantern is enameled ruby to prevent theft.

Has solid color ruby globe, regular No. 0 tubular size.

Steel burner, large brass oil filler, inside lift and guard.

Used by Street, Interurban and Steam Roads for night use where streets are excavated, etc., etc. In fact, any place a danger signal is required.



No. 124

Star New Style Cold Blast Lantern. Tubular Short Globe

No. 2 Cold Blast Coneless steel burner.

One inch B wick.

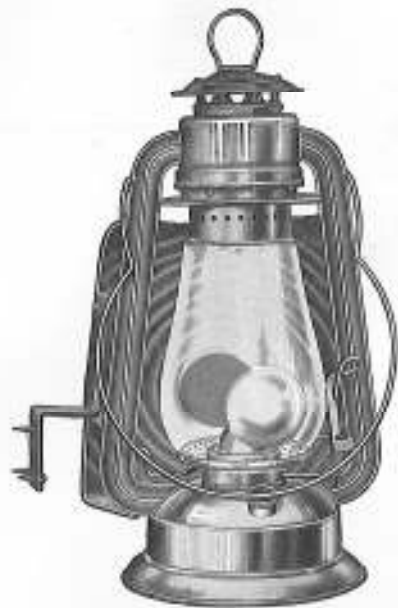
Four capacity 24 hours.

Globe, outside dimensions, Height, $4\frac{3}{8}$ " ; Top 4" . Bottom $3\frac{3}{8}$ " .

One dozen in a case, 48 lbs. gross; 31 lbs. net.

Measurement of case, 4 cubic feet.

Height, bail down, 13 inches.



No. 125

Star Side Lamp—(Cold Blast)

A simple, ingenious and effective lamp designed especially for business vehicles. Substantially constructed and handsomely finished in black enamel. Fitted with a No. 1 burner, $\frac{3}{8}$ " wick.

Each lamp is equipped with a highly polished, corrugated reflector, with a 2" Ruby lens. It produces a light of more than 10 candle power, which in turn is magnified to an extreme degree by the powerful bull's-eye lens of the globe.

A strong light is projected ahead, and the Red Warning, from the Ruby Lens in the reflector, is distinctly seen several hundred feet away, in the rear.

A strong metal bracket for attachment to the vehicle is furnished with each lamp.

These lamps are designed to meet the demand for a vehicle lamp that will fulfill the legal requirements of the States generally, pertaining to the carrying of lights on vehicles at night.



No. 128

Star No. 17 Cold Blast Dash Lamp

No. 2 Cold Blast Burner.

1-inch "B" Wick.

No. 0 Cold Blast Globe.

Net weight, 18 lbs.

Gross weight, 32 lbs.

Measurements, 3 1-5 cubic feet.

Packed in cases of $\frac{1}{2}$ dozen each.

No. 128 Plain Tin and Plain Globe.

No. 128-A Plain Tin and Bull's Eye Globe.

No. 128-B Japanned and Plain Globe.

No. 128-C Japanned and Bull's Eye Globe.



No. 129

No. 0 Hood "Hot Blast" Tubular Dash Lamp

A fine driving lamp for wagons. The light is concentrated and projected ahead by a deep tin hood, in the back of which is a 5" Silvered Metal Reflector. It gives a strong light and is very desirable for night driving.

No. 1 High Cone Burner.

$\frac{5}{8}$ -inch "A" Wick.

No. 0 Tubular Globe.

5-inch Silvered Metal Reflector.

Fount holds sufficient oil to burn 22 to 25 hours.

No. 129-A

Same lantern as above, except furnished with attachment to fasten to left side of carriage top and showing 3" Ruby semaphore to rear.



No. 130

**Star "Cold Blast" Globe Street Lamp
Made on Genuine "Cold Blast" Principle**

A street lamp that will burn unflinchingly and with a brilliant light through gales and storms. It is very desirable for suburbs, small towns and villages, summer resorts, railroads, piers, docks, driveways, etc. By means of our Automatic Extinguisher with which it is fitted, it may be set by the caretaker to burn 4, 8, 12, 16, 20 or 24 hours and then go out of its own accord. On a windy night the match can be lighted on sandpaper inside of the globe through a small opening provided for the purpose.

No. 9 Cold Blast Burner.

$1\frac{1}{2}$ -inch "D" Wick.

No. 9 Globe.

Height of Lamp, 25".

Fount holds sufficient oil to burn 25 hours.

Packed in cases of one each.

Net weight, 8 lbs.

Gross weight, 26 lbs.

Measurements, 3 2-5 cubic feet.



No. 131

Star "Cold Blast" Tubular Hanging Lamp

The description of the Street Lamp on Page 95 applies exactly to this Hanging Lamp, except this lamp is made without the socket for post but with a bail to hang. An elegant lamp for open pavilions, porches, or any place where a large light is required and where a lamp would be subject to sudden draughts or heavy winds. It is absolutely wind proof and is fitted with our Automatic Extinguisher the same as on the Street Lamps.

- No. 9 Cold Blast Burner.
- 1½-inch "D" Wick.
- No. 9 or No. 3 Globe.
- Height of Lamp, 21".
- Fount holds sufficient oil to burn 25 hours.
- Packed in cases of one each.
- Net weight, 8 lbs.
- Gross weight, 24 lbs.
- Measurements, 3 cubic feet.

Railroad Standard Cab and Water Gauge Lamps



No. 80

Used as Cab and Water Gauge Lamp. L. & N. R. R.



No. 81

Cab Lamp. Takes 39 Lantern Globe. Malleable Iron Base. N. & W. R. R.



No. 82

Water Gauge Lamp. Malleable Iron Base made of Russian Iron. C. M. & St. P. Ry.

ALL OF THESE LAMPS ARE FURNISHED BY US EQUIPPED FOR ELECTRIC OR ACETYLENE GAS AS DESIRED



No. 83

Cab and Steam Gauge Lamp. Loose Globe Style. Globe Painted Red. Star Standard.



No. 84

Water Gauge Lamp. Wires set in holes of Glass Holder and prevent injury from flying glass.



No. 85

Cab Lamp. Takes 39 Lanterns Globe. Erie R. R.

Signal Lamp Fixtures—Malleable Iron



No. 67
Flat Socket



No. 68
Combination Lamp and
Flag Socket



Standard Switch Lamp
Fork



No. 71
Arm No. 5

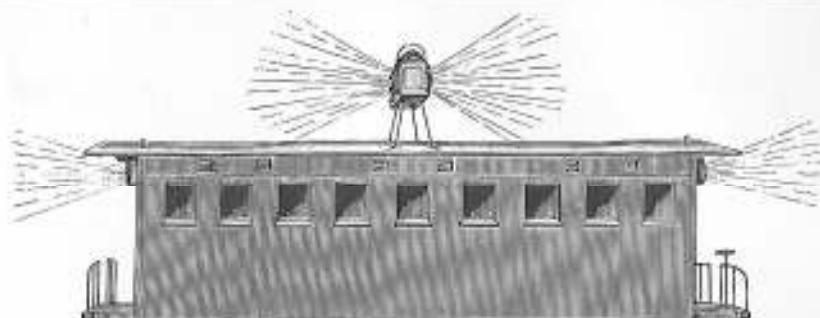


No. 72
Small Bracket for
Electric Ry. Rear
and Side Signal
Lamp



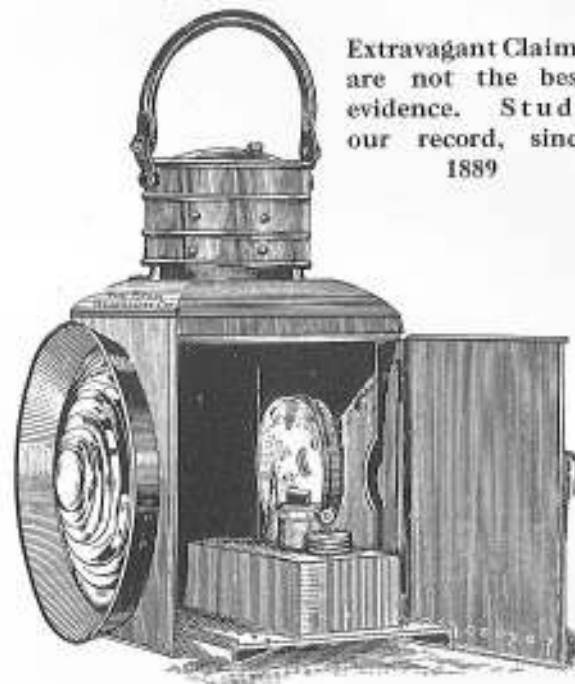
No. 73
Adjustable Hinged
Tail Lamp Bracket

If you do not find what you want illustrated or described in this catalog, write to us for information concerning other styles



No. 61
Caboose Signal Lamps

All descriptions and designs made to conform to any standard.



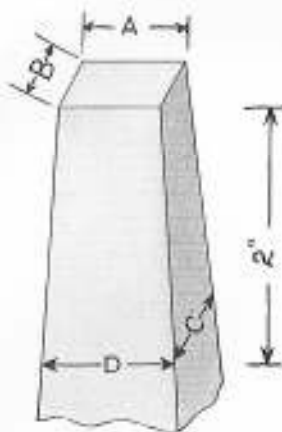
Extravagant Claims
are not the best
evidence. Study
our record, since
1889

No. 62
Headlight and Signal Lamp for Foreign Locomotives—
English Type

Large quantities of these lamps have been exported by us within the last few years for the Japanese and Chinese trade. Made with any size or any color of Semaphore, Bull's-eye lens, or bent glass with or without colored slides. Also used as rear end platform tail lamp with ruby semaphore, no glass slides.

Switch and Target Lamps

When ordering Switch or Target lamps it is advisable to give the size of lenses and whether one day or long time burners wanted. Also give dimensions of lamp plug on stand that fits into base of lamp as shown below. Also location of red lens.



No. 63

Switch Lamp Plug or Tip

When ordering lamp give:

- | | |
|-------------|-------------|
| Width at A. | Width at B. |
| Width at C. | Width at D. |
| Color at A. | Color at B. |

Switch Lamps



No. 57-B

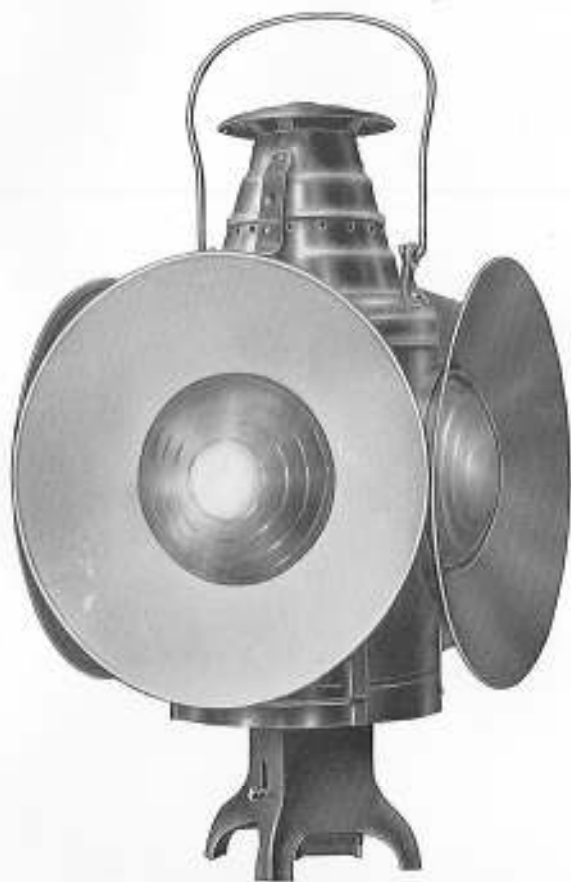
Four-Way Lamp

For front or rear of Traction Engines, Automobiles, Trucks, Mine Locomotives, etc. Generally made with two white and two ruby 5" semaphore lenses. Orders should state whether lard oil or kerosene burners are required.

The former gives about the best satisfaction.

A perfect lamp for use as a danger signal, while road engines are standing in road at night.

Spring socket base to prevent jarring out.



No. 200

P. R. R. Standard

Pressed Steel Switch Lamp

Equipped with day signals.

Made for fork tubes or spring socket.

Shields or discs enameled steel conforming to color of lens.

Either one day or long time burner and fount.



No. 157

Semaphore Lamp

The "Standard" Adopted by "RAILWAY SIGNAL ASSOCIATION."

Made of No. 18 Gauge Steel and Tinned

Ventilator

Balanced Draught or "No-Sweat" Principle.

Lens

5" Diameter or 5 $\frac{3}{8}$ " as specified.

Hood

Separate, One Piece Drawn Steel, Slanting,—door sliding.

Fount and Burner

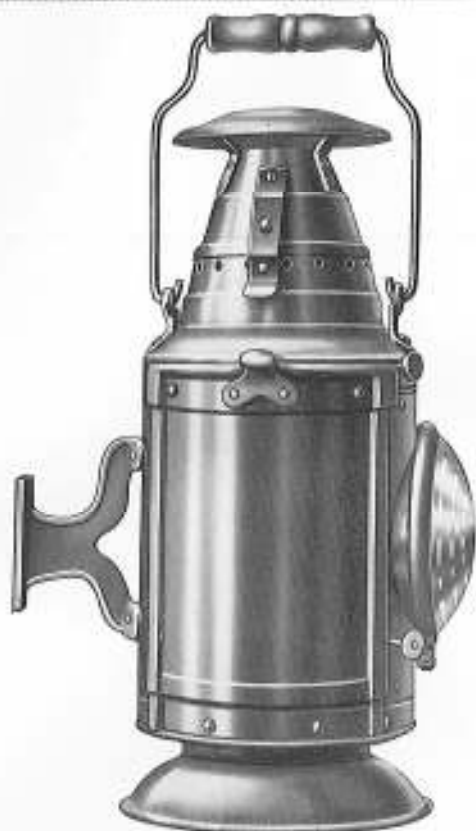
Either one day or long time.

Reflector

Prismatic Glass, if specified.

Socket

Steel R S A pattern.



No. 182

Engine Classification Lamp

Made of Heavy Steel and Tinned

Ventilator

Balanced Draught or "No-Sweat" Principle.

Dome

Hinged to Open for Color Changes. Closes with Spring Catch.

Lenses

Two; 5" or 5 $\frac{3}{8}$ " in diameter.

Color Changes

Two Each, Red and Green, Interior Glass Circles 3 $\frac{1}{2}$ " in diameter.

Fount and Burner

No. 8 Drawn Steel and Tinned, One Day, Fount and No. 1 no Chimney Burner. Either long or short shaft.

Bracket

Malleable Iron, Side.

Made as a right and as a left hand lamp.

No. 183 Engine Classification Lamp

Same lamp as the one shown and described above, except that it is fitted with No. 614, Malleable Iron, Two-Way, Base Bracket permitting use of lamp on either side of engine.



No. 166

Tail Marker Lamp

Made of Heavy Steel and Tinned

Ventilator

Balanced Draught or "No-Sweat" Principle.

Lenses

Either Three or Four as desired; all of One Diameter.

Fount and Burner

No. 8 Drawn Steel and Tinned Fount and No. 1 no Chimney, Long or Short Shaft Burner.

Bracket

Malleable Iron, with Notched Ring and Spring Device to hold the lamp in any position required.

Base

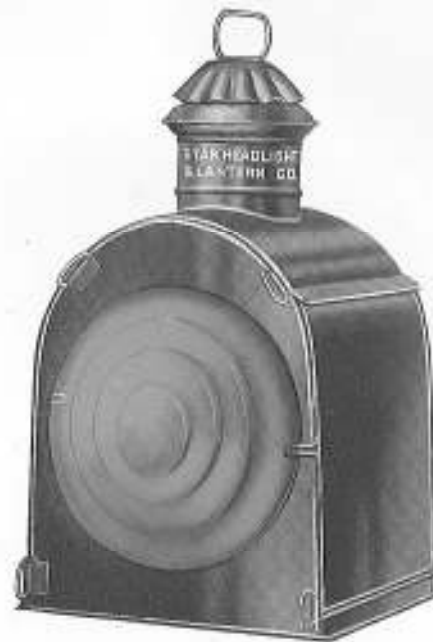
Detachable.



No. 167

Rear End Fresnel Lamp

Adapted for Platform or Rear End Lamp for Steam as well as Electric Interurban Roads. Also used as caboose lamp. Has a wide range of protection for trains on a curve.



No. 66

Platform Tail Lamp

With 6" or 8" Ruby Semaphore Lens.

Fitted with high candle power kerosene or lard oil burner.

For Rear End of Passenger Trains.

The Strongest and Best Lamp for Railroad Use

We Guarantee
Perfect
Satisfaction.

Shows Twice as much
Light as the Best
Tubular Globe Post
Lamp now made.



No. 57

Belgian Globe Post Lamp

Fitted With

Steel Fount

No. 1 Belgian Slip Burner—43 Candle Power.

Steel Dome

Heavy Tin Ventilator—Cast Base.

No. 32 Macbeth Chimney or No. 1 "L & B" Belgian.

No. 57 No. 3 Standard Globe.

Suitable for
Station Lighting and
Town Lighting.

Outlasts Three of
any make of Tubular
Globe Post Lamps
on the market.



No. 20 Flat Flame Burner.

With spring gallery chimney
holder.

Short Shaft, 1 1/2".

Regular Shaft, 3 "

Long Shaft, 4 3/4".

Other lengths of shaft if desired.



No. 25

High Spring Long-time Burner.

Similar to Old Style, but fitted
with high springs.

Suitable for use with No. 255
Chimney.



No. 255 Chimney.

Designed for use with
No. 25 high spring burn-
er, but will interchange
with other styles of long-
time burners by revers-
ing the position on burn-
er.



Acetylene
Burners.

All Sizes.



"Style A."

25 ounce capacity.

One piece drawn steel and
tinned.

Specialties



No. 171

In connection with Bausch & Lomb Optical Co., of Rochester, who furnish the ground glass optical lens, we have designed a Head light interior, using the silvered glass reflector, which increases the efficiency of a head lamp 50%. This interior as illustrated above, is made in 10", 12", 14", 16" and 18" sizes, and may be fitted in any of the cases or housings illustrated in this catalog.

This reflector should not be confused with the Mangin Mirror. It is much more efficient and of different type. Correspondence invited.



No. 172

We make several different sizes and styles of Electric Lanterns as shown above. We also make a lantern to burn acetylene gas successfully.

No. 2 Wilder Patent Burner

Powerful
Substantial
Economical



No. 2
Williams Burner
with our Patent
Appliances Attached.

No. 31

(Patented)

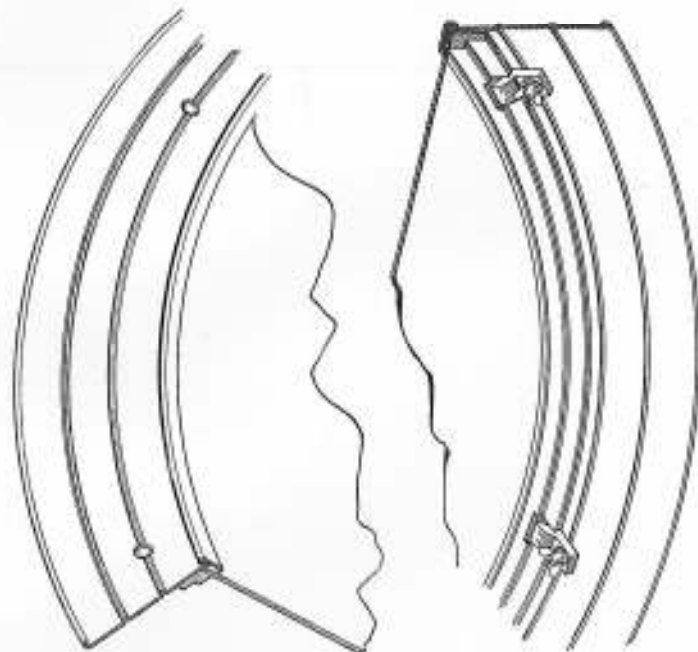
We wish to call your special attention to this Burner, and when once used will always take the preference over any other Headlight Burner, and you will find it to be the most economical one. It is fitted with our **Wilder Patent Stuffing Box and Brass Oil Pot Connection**, and does away with the Tin Tube Connections, which are used on the regular No. 2 Williams, and continually in the repair shops to be soldered, on account of leaking and rusting out. These burners are well brazed in all the parts where they are usually soldered. The connections are all cast brass.

The slide at the bottom admits of opening to clean the soot, charred wick, and other obstacles which might impede the draft. The Stuffing Box can be disconnected to put in new Ratchet Wheel or Shaft when required, without disturbing the packing, and no connections to rust out. Will be pleased to send you a sample for trial test, and feel confident will merit your business.

Use this Burner and it will bring down the Cost of Repairs to a Minimum of Expense

Wilder Patent Glass Fastener

Automatic. For Holding Front Goggle Glass. Adjustable.



(Patented June 27, 1893)

Outside Sectional View.

Inside Sectional View.

No. 32

This simple and effective device, as applied to the **Star Headlights**, enables engine crews to replace broken glass at any supply point on the road. Do not have to look up a screwdriver, wrench, or anything else, by unscrewing the wing nut. No Plaster Paris to dig out.

Once Tried, Always Used

No Putty or Plaster Paris to Bother with

A Twist of the Wrist "Does the Trick"

A Preventative of Profanity



No. 33.

No. 2 Star Special
High Power Oil
Burner.



No. 37.

No. 2, with Wilder Patent Stuffing Box Attachment. For all headlights. By means of which the Stuffing Box can be disconnected from the burner to put in new ratchet wheel or shaft without disturbing the packing.

Also fitted with Brass Oil Pot connection, so that burner can be easily cleaned without being detached from oil fount.

Powerful, Substantial, Economical.

This Burner has a Reputation of Its Own.



No. 34.

No. 2 Williams Burner.
For all sizes of headlamps.



No. 38.

No. 2 Hall Burner



No. 41.

No. 2 Burner (small)
for 14" Headlamp.



No. 39.
No. 4 Hall Headlight.



No. 35.
No. 35 Large Headlight.



No. 103A

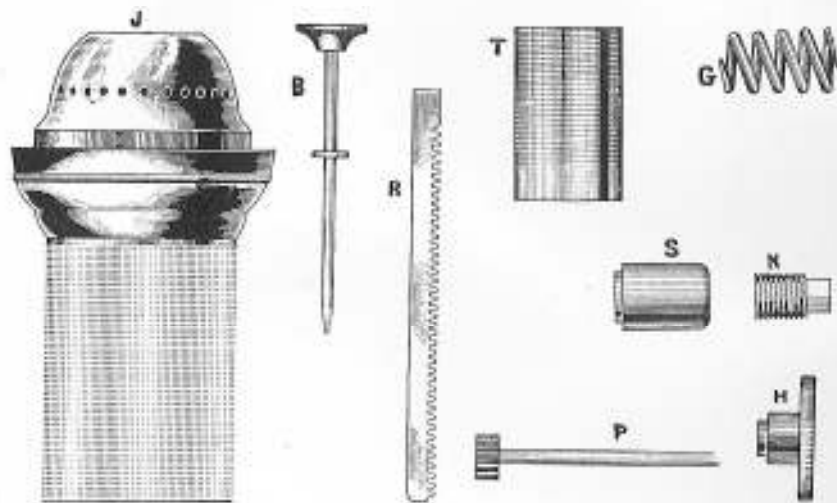


No. 36.
Argand Burner for 10" Motor Headlight and Traction engine headlamp



No. 40.
Ham Special for Traction Engine Headlight.

Extra Parts
for Star Headlight Burners



- J—Represents Jacket.
- B— " Button or Flame Spreader.
- T— " Thimble.
- R— " Rack.
- G— " Spring.
- S— " Stuffing Box.
- N— " Nut.
- P— " Pinion and Shaft.
- H— " Hand Wheel.

In ordering Burner Parts, please designate by letter as above.

If parts are required for Hall Burners, please specify.

We can Furnish the Extra Parts for any Style Headlight Burners

Star Railway Lantern Burners

We are in position to furnish any Burner for any purpose used on a Railroad



Star No. 1 Lard Oil Ratchet Burner

Short Shaft, over all $1\frac{3}{4}$ "
Fits No. 1 Solid Lantern Hoop
Takes $\frac{5}{8}$ " Wick



Star No. 1 Extra Lard Oil Ratchet Burner

Short Shaft, over all 2"
Fits Solid Lantern Hoop No. 1 Extra,
or No. 2 L. O. R. Burner with $2\frac{1}{4}$ " Shaft
Both Size Burners take 1" Wick.



Star No. 1 Lard Oil Ratchet Burner

Long Shaft, over all $2\frac{3}{4}$ " for O. W. R.
Fits No. 1 Solid Lantern Hoop
Takes $\frac{5}{8}$ " Wick



Star No. 1 Extra Lard Oil Ratchet Burner

Long Shaft, over all 3" for O. W. R.
Fits Solid Lantern Hoop No. 1 Extra,
or 2 L. O. R. Burner, Single High Tube
with $3\frac{1}{4}$ " Shaft
Both Size Burners take 1" Wick



Star Beacon Burner

Fits No. 1 $\frac{5}{8}$ " Collar
Uses Lard Oil. $\frac{3}{8}$ " Wick.



Star No. 1 or No. 2 Convex Kerosene Burner

Two Sizes of Wick, $\frac{5}{8}$ " and $\frac{3}{8}$ "

When ordering, give length of shaft desired.
All Star Lard Oil Lantern Burners have the non-collapsible **flange tube** which increases the life of the burner 100%.

These Globes are made of the best Lead Glass and are first-class in every respect. They are finished very smooth at top and bottom, with the inside edges beveled, going away with the saw-tooth edges that are on most Railroad Globes.

Railroads Find our Globes Economical

We can also Furnish the No. 39 and all the Conductor Globes in Half Colors



No. 300

Cab Globe (Plastered Style) Also No. 191

Outside Measurements
Diam. top $3\frac{1}{4}$ " Bottom, 1"
Bulge, $4\frac{1}{2}$ " Height, $5\frac{1}{4}$ "



No. 213

No. 3 "Pullman" Half Colored Conductor Globe

Outside Measurements
Diam. top, $2\frac{5}{8}$ " Bottom, $2\frac{1}{2}$ "
Bulge, $3\frac{1}{2}$ " Height, $4\frac{1}{2}$ "



No. 318

Cab Globe (Loose Style)

Outside Measurements
Diam. top, $3\frac{1}{2}$ " Bottom, $3\frac{1}{2}$ "
Bulge, $4\frac{1}{2}$ " Height, $5\frac{1}{4}$ "



No. 213

No. 3 Conductor Globe

Outside Measurements
Diam. top $2\frac{3}{8}$ " Bottom $2\frac{1}{8}$ "
Bulge, $3\frac{1}{2}$ " Height, 5"



No. 208

No. 1 "Queen" Conductor Globe

Outside Measurements
Diam. top, $2\frac{1}{2}$ " Bottom, $2\frac{1}{8}$ "
Bulge, $4\frac{1}{8}$ " Height, $5\frac{1}{8}$ "



No. 39

No. 39 R. R. Globe

Outside Measurements
Diam. top $3\frac{1}{2}$ " Bottom $3\frac{1}{2}$ "
Bulge $4\frac{1}{2}$ " Height, $5\frac{1}{4}$ "



No. 249

No. 0 Cold Blast Globe

Outside Measurements
Diam. top, $2\frac{3}{4}$ " Bottom, $1\frac{1}{2}$ "
Bulge, $4\frac{1}{2}$ " Height, $6\frac{1}{2}$ "



No. 244

No. 0 Tubular Globe

Outside Measurements
Diam. top, $2\frac{1}{2}$ " Bottom, $3\frac{1}{4}$ "
Bulge, $4\frac{1}{2}$ " Height, $6\frac{1}{4}$ "



No. 776

Tubular New Style Globe

Outside Measurements
Diam. top, 4" Bottom, $3\frac{1}{4}$ "
Bulge, 5" Height, $4\frac{1}{2}$ "

(Made with special high base for Star Car Inspector Lanterns.)

Outside Dimensions are Given for all Measurements

NOTE:—When deliveries are ordered by express, charges must be borne by the purchaser. All goods shipped at buyer's risk. No allowance for breakage.

Chimneys



Dual

No. 1 Bottom diameter, $1\frac{3}{8}$ "
No. 2 Bottom diameter, $2\frac{3}{8}$ "
Length 6, 7, 8 or 9"



No. 3 Dual
H. & S.
Bottom diameter
 $2\frac{3}{8}$ "



Hall Headlight

No. 1 Bottom diameter, $2\frac{3}{8}$ "
No. 2 Bottom diameter, $2\frac{3}{8}$ "



No. 87 Ham Headlight Chimney

Outside Measurements
Diam. Top $1\frac{3}{8}$ ", Bottom $1\frac{3}{8}$ ", Height 10"



Williams Headlight

No. 1 Bottom diameter $2\frac{3}{8}$ "
No. 2 Bottom diameter $2\frac{3}{8}$ "



Standard Headlight

No. 1 Bottom Diameter $2\frac{3}{8}$ "
No. 2 Bottom Diameter $2\frac{3}{8}$ "

No charge for Box in Original Packages—6 or 12 dozen Lots.

Lamp Collars



Kerosene Lamp Collar

No. 1 (A)—Bottom diameter, $1\frac{3}{8}$ "
No. 2 (B), light—Bottom diameter, $1\frac{3}{4}$ "
No. 3 (D), heavy—Bottom diameter, $2\frac{3}{4}$ "



Dudley Collar

Use Dudley Special
Wick



Hoops for Lantern Burners

No. 1 Solid Lantern Hoop—Diameter, $\frac{7}{8}$ "
No. 1 Extra Solid Lantern Hoop—Diameter, $1\frac{1}{8}$ "
No. 2 Solid Lantern Hoop—Diameter, $1\frac{1}{4}$ "



Expanding Collar

A to B or 1 to 2 Expanders
Diameter of threads, $\frac{3}{8}$ " to $1\frac{1}{8}$ "
B to D or 2 to 3 Expanders
Diameter of threads, $1\frac{3}{8}$ " to $1\frac{1}{2}$ "



Reducing Collar

B to A or 2 to 1 Reducers
Diameter of threads, $1\frac{1}{8}$ " to $\frac{7}{8}$ "
D to B or 3 to 2 Reducers
Diameter of threads, $1\frac{3}{4}$ " to $1\frac{1}{4}$ "

Replating and Repairing

We make a specialty of Repairing, Respinning, and Replating old Headlight Reflectors and Burners. We use nothing but pure silver in plating, and every Reflector is carefully burnished to give it the highest possible degree of reflecting surface and power. Old Reflectors that are sent to us for replating are put through identically the same process as a new reflector.

First the old silver is burned off and the copper annealed. Then they are spun to a true parabola on the chuck they were originally made over. Following this, any necessary repairs are made, such as cracks, dents, etc., taken out and then the Reflector is scoured, and stoned, both by machine and hand; pumice stoned, silver plated, burnished and color buffed. The result is a beautiful high polish; a durable lasting coat of silver and satisfaction guaranteed.

In making you a price for replating, it will include the repairing and you will not have this charge added when you get the bill for the work.

Reflectors

Our Reflectors are made of cold rolled and annealed Lake Copper, heavily plated with pure silver, and burnished.

We have an assortment of chucks on which to make Reflectors, up to 23-inches in diameter, varying in depth up to 16 inches, and suitable for all styles of Headlights. Old Reflectors respun, repaired and replated without delay.

We are prepared to furnish repair parts and repair Headlights of any Manufacture.

Aluminum Reflectors

This Company is the original and ONLY successful Manufacturers of Aluminum Headlight Reflectors.

The Latest Thing in Headlight Reflectors Star Gold Metal

Made only by Star Headlight and Lantern Company.
Will not tarnish and is as hard as steel.—No replating.

Largest Stock and Greatest Variety of Headlights in America

We make a Specialty of shipping Headlights out of
Stock on Telegraph Orders

WICKS

Price List

	Per Gross
No. 0 or E 8" long, 3/8" wide60
No. 1 or A, 8" long, 3/8" wide75
No. 2 or B, 8" long, 1" wide	1.10
No. 3, or D 8" long, 1 1/2" wide	1.75
No. 3 Moehring Flat, 2 1/4" wide	4.00
No. 3 Dual, 10" long	3.00
Duplex, 10" long	3.00
Acme Circular, 6" long	6.00
Moehring Circular, 6 1/2" long	4.50
Moehring Circular, 8" long	6.00
Dudley, 8" long	1.25
No. 2 Rochester, 6 1/2" long	5.25
Star Felt Headlight,	2.75
Star Long-Time Burner Wick, 8" long	2.60
Candle, per pound21

Pullman Unit Sash Balances

Absolutely Noiseless

In use Successfully for over 28 Years



Side Pattern No. 173

Take the place of cords and weights in Stations, Office Buildings, Freight Houses, Signal Towers, etc. At a saving in cost. Guaranteed for ten years.

Side pattern balances are always furnished unless top pattern specially ordered. Both patterns same price.



Top Pattern No. 174

Pullman UNIT Sash Balances have round end face plates of standardized size so that mortises may be cut at the mill before frames are put together. Box frames are dispensed with, merely plain plank frames being required.

Pullman UNIT Sash Balances are made of pressed steel throughout and are unbreakable. All moving parts are enclosed. The spring is of the well known clock spring type and is rust proof as the case containing it is filled with oil. The steel tape has a tensile strength several hundred per cent above the load to be carried.

In ordering give weight of each sash.
Packed in sets of four (enough for two sash) in a box.

Unit K—6 to 32 Lb. Sash

Face-Plate, 6" x 1"; Depth 3 3/4". Finished in Dull Black Lacquer

Number	6K	1K	2K	3K	4K	5K	6K	7K	8K	9K	10K	11K	12K
Wt. of Sash, lbs.	4 to 5	6 to 7	8 to 9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25	27-29	30-32
Length of Tape, ins.	30	30	30	46	46	46	46	46	46	46	46	46	46

Unit L—10 to 48 Lb. Sash

Face Plate 7 3/4" x 1 3/4"; Depth 4 3/8". Finished in Dull Black Lacquer.

Number	3L	4L	5L	6L	7L	8L	9L	
Weight of Sash, Pounds	10 to 11	12 to 13	14 to 15	16 to 17	18 to 19	20 to 21	22 to 23	
Length of Tape, inches	46	46	46	46	46	46	46	
Number	10L	11L	12L	13L	14L	15L	16L	17L
Wt. of Sash, Lbs.	24 to 25	27 to 29	30 to 32	33 to 35	36 to 38	39 to 41	42 to 44	45 to 48
Length of Tape, ins.	54	54	54	54	54	54	54	54

Unit N—24 to 106 Lb. Sash. Specifications Upon Application. Note:—Solid Brass or Bronze Face-Plates furnished when required.

Supplied to the Railroad Trade by Star Headlight & Lantern Co.
Rochester, N. Y., U. S. A.

We stand back of our products, and if any dissatisfaction is expressed by the ultimate consumer, this company will make it good. The Star Headlight & Lantern Company is the originator and most successful manufacturer of all steel lighting devices. Their well known Wabash all steel and later their Armorclad all steel headlights are synonymous with everything in the line of modern practice and advance in headlight construction.

*You can rely on us for
the best Lamps
The Closest Prices
Square Business Treatment*

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