

## PRICE LIST OF PARTS

In Ordering Specify Lamp Numbers

Part No.		Cap Lamps dx.	Hand Lamps dx.
2	Baking Wires .....	.15	.60
3	Lid of Water Tank and Hinges.....	.50	.60
4	Water tubes .....	.50	.75
5	Burner tubes .....	.25	.25
7	Burners, (all brass) .....	.15	.15
7a	" (all brass) .....	.60	.60
7b	" (brass lava insert) .....	.60	.60
	lava inserts for B burners..	.15	.15
	" .....	.45	.45
7d	Brass (D) mountings for lava burners	3.00	3.00
	Kant-Klog Burners .....	2.50	2.50
8	Sparkers, complete .....	.90	.90
	Sparkling metal .....	.25	.25
	Springs for sparkers.....	.25	.25
	Screw caps for sparkers.....	.12	.18
9	Felts .....	.30	.50
10	Strainers .....	.35	.35
11	Hooks, flat or round .....	.20	.75
12	Gaskets .....	3.00	4.20
13	Carbide Containers, N. P. ....	2.40	
13b	" " Brass .....	3.60	
13c	" " Brass with shot proof attachment .....	.10	.15
14	Strainer clips .....	2.00	2.00
15	Valves .....	1.00	1.00
16	" stems only .....	.25	
17	Cleaners, disc type.....	1.20	
61	" (Brush type) 60 wires in a protecting case.....	.60	
62	" (Brush type) no protecting case .....	.35	
65	Reamers for burners.....	3.50	
70	Bail and Hook for Hand lamps....	1.20	3.00
71	Lamp Holder for Zar.....	3.00	
72	" " for steel lamps.....	3.00	
73	" " for Pioneer lamps.....	3.00	
	Caps, miners .....	1.20	
75	Clips for holding lamp to cap or coat		

### Carbide Cans

	Doz.
300, capacity 2 lbs. ....	2.40
301, 7 oz. hinged top .....	1.50
301A 8 oz. hinged top.....	1.25
302 1 lb. screw top .....	.80
303 1 lb. slide top .....	1.50
304 1 lb. 1 1/2 screw top .....	1.80
305 1 lb. friction bottom, hinged top ...	2.40
306 2 lb. friction top with 1 1/2 inch screw opening .....	

# THE PIONEER MINER'S CARBIDE CAP LAMP

WIND PROOF—DRIP PROOF  
SHOT PROOF

Improvements the Miner  
Will Appreciate

E. D. BULLARD  
268 MARKET STREET  
SAN FRANCISCO, CAL.

## A CARBIDE LAMP THAT WILL HOLD ITS LIGHT IN STRONG AIR CURRENTS.

ASK a mining man to tell you what advantages, if any, the oil lamp has over the carbide lamp and he will more than likely say—"The carbide lamp loses its light when used where the air currents are a bit heavy, whereas the oil lamp will stay lighted, and the carbide lamp will go out when heavy shots are fired, while the oil lamp will usually hold."

We have long known the need of a carbide lamp which would hold its light in strong air currents and as well have known that the lamp should be shot-proof. Besides this, complaints received from miners have convinced us that the carbide lamp is not always entirely satisfactory when used in damp mines on account of the drip from above and sometimes moisture from the lamp itself finding its way into the burner tip and choking it up.

We have for years been trying to overcome these faults and now after several years of effort and experimenting we are able to report that we have succeeded in perfecting certain attachments, which when used on the carbide lamp will make it

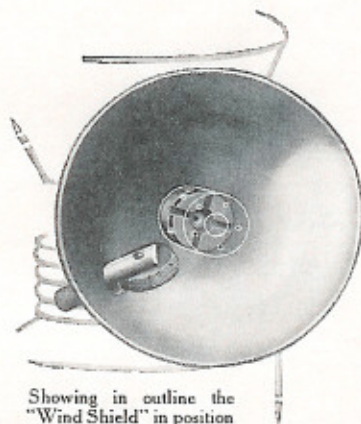
### WIND-PROOF, SHOT-PROOF AND DRIP-PROOF

These improvements were completed some time ago. We first put them in the hands of practical men, who thoroughly tested them, giving them hard usage the same as they would receive in regular use and since then we have had lamps with these improvements in practical use in most all mining fields and reports are that they do what is claimed for them.

In reporting on these lamps miners are unanimous in recommending that every miner who believes in "safety first" should use a carbide mine lamp, equipped with this windshield and shot-proof attachment.

As one old miner expressed it:

"There are times when it makes no difference if your lamp does go out, but there are other times when it means a whole lot, and me for the lamp that will not leave me in the dark after I have spit my fuse."



Showing in outline the  
"Wind Shield" in position

As the burner tip is completely housed-in by the wind shield, overhead drip or leakage from the top of the lamp cannot get into the small gas-way and stop it up. This lamp will not only burn in a windstorm but burn in a rainstorm as well.



## HOW WELL WILL THIS LAMP STAND SHOT FIRING?

WE can best answer this by submitting extracts from letters received from drivers and shot-firers who have used our new shot-proof attachment.

"I am running a drilling machine and we fire very heavy shots—I can say that the new lamp at a distance of about 100 feet when firing a heavy shot charged with 18 sticks of giant powder, remained lighted."

"I have tested the lamp on special occasions with the following results: First trial was made in the presence of the fire bosses. We extended chamber lines about 60 feet from shot inside of the place where firing was done. When shot was fired, the fire bosses' lamps were extinguished—mine remained lighted."

"Another trial was made in the presence of five men, three of these used other makes of carbide lamps, the other two used common oil lamps. At a distance of 100 feet when shot was fired, the other carbide lamps were extinguished; mine remained lighted. Another shot was fired in the same place ten minutes afterwards and at the same distance with four other makes of carbide lamps present—all of these were extinguished—mine held the light."

We have hundreds of other letters on file which are just as emphatic in their recommendation of these attachments.

## CAN BE USED AS AN OUTSIDE LAMP IN STORMY WEATHER

ON a windy rainy night the carbide mine lamp might be used to good advantage by the miner, lighting his way home from the mine. Heretofore, however, the carbide lamp could not be used for this purpose, as the wind would blow

it out and if not that, the rain would get into the burner, choke it up and put out the flame, so the miner was forced to go home in the dark or use some other kind of a lamp.



Wind Shield and Burner Mounting

The new wind-shield as you will see completely houses-in the burner tip so you can readily understand why this would prevent moisture getting into the burner and stopping it up and as the shield makes the burner immune to the strongest air current, a lamp equipped with this wind-shield will work as well on a stormy night, as it will when the weather is clear and calm.

## HOW MUCH AIR WILL THE LAMP STAND?

THE best answer to the above question is "More air than will ever be met with inside a mine."

On the next page we print extracts from some of the many letters recently received from miners and let us add if there is the slightest doubt in your mind as to the authenticity of these, simply write us and we will send you copies of the original letters; these will give you the names of the writers, their addresses and the names of the mines where these men are employed.

"I used one of the new lamps while riding on the front of a locomotive going fifteen miles an hour, running into 90,000 cubic feet of air. On the locomotive there were others carrying lamps—every other lamp lost its light—mine was the only one which remained lighted during the entire trip."

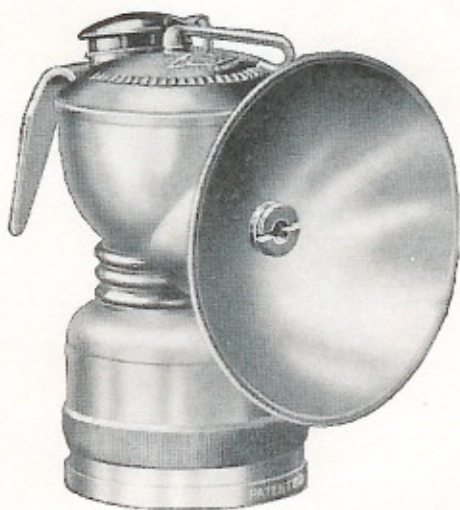
"I took the lamp inside the main air-intake directly back of the fan, the air at this point was calculated to be 81,000 cubic feet per minute—in this current no oil or other carbide lamps could hold their flame and even safety lamps were extinguished unless held under the coat—the lamp showed 100 per cent. efficiency—it was taken in and out twice as the severest test came when opening and closing the air doors, which test it stood perfectly."

### SPECIAL FEATURES FOUND IN PIONEER LAMPS

Larger water tank give greater capacity without increasing weight - Notches on top of lamp hold valve lever in position - Knurled band on container which strengthens it and enables the miner to get a firm grip when unscrewing container from water tank - Water cap non-leakable, water will not run down on miner's neck - Burner tube and hook that cannot be twisted loose - Felt holder, easy to put on and take off - Reflector brace made fast to lamp body, can be used as reflector if desired.

All parts are readily accessible for cleaning.

### NO. 124 WITH BOTTOM VALVE FEED



Lava Burner—Rigid Removable Reflector  
Weight, 5½ oz. Height, 4 inches  
Burns 3 hours on one charge

Notches on top of lamp hold valve lever in position. When lamp is operated according to directions packed with each lamp, it will burn with a steady flame and require very little regulation.

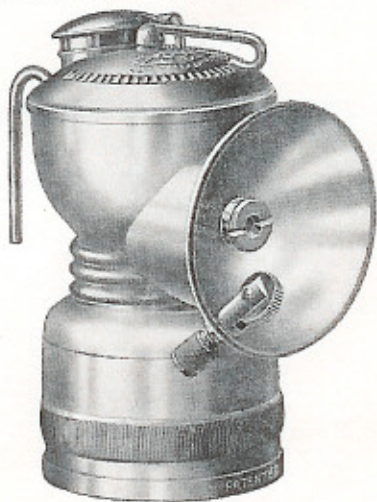
Lamp equipped with a flat hook. No. 5 Brass reflector 3 3-16 inches in diameter, and one extra container.

Price Complete . . . . . \$1.25

For Other Equipment, see Page 11.



**NO. 125  
WITH BOTTOM VALVE FEED**



Lava Burner—Rigid Removable Reflector  
 Weight, 5½ ounces      Height, 4 inches  
 Burns 3 hours on one charge.

Notches on top of lamp hold valve lever in position.

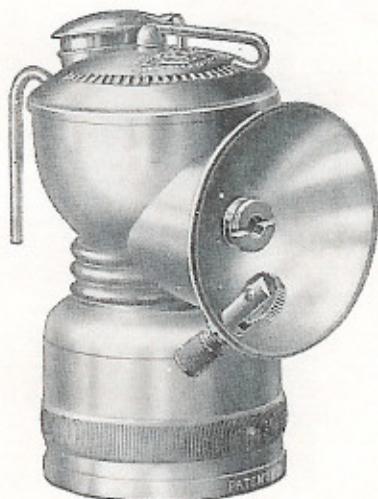
When lamp is operated according to directions packed with each lamp it will burn with a steady flame and require very little regulation.

Lamp equipped with spark lighter, and one extra container.

Price Complete .....\$1.25

For Other Equipment, see Page 11.

**NO. 129-130  
WITH AUTOMATIC WATER FEED**



Lava Burner—Rigid Removable Reflector  
 Weight, 5½ ounces      Height, 4 inches  
 Burns 3 hours on one charge.

No. 130 operates similar to the No. 132, but is equipped with a water shut-off. This valve construction is proof against change of regulation and loss of light due to the swing of the miner's head, a common fault with most valve controlled lamps.

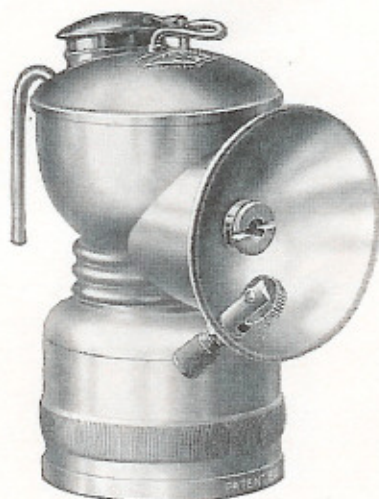
Lamp equipped with spark lighter and one extra container.

No. 129 is the same as No. 130 except it is equipped with a flat hook and No. 5 polished brass reflector. 3 3/16 in. in diameter. No sparker; one extra container.

Price Complete .....each \$1.25

For Other Equipment, see Page 11.

**NO. 131-132  
WITH AUTOMATIC WATER FEED**



Lava Burner—Rigid Removable Reflector  
Weight, 5 ounces                      Height, 4 inches  
Burns 3 hours on one charge

The No. 132 is fitted with the patented Automatic Water Feed. The automatic regulation of the water makes hand regulation unnecessary.

No. 132, as illustrated, equipped with spark lighter and one extra container.

No. 131 is the same as No. 132, with the exception of being made with a flat hook and equipped with a No. 5 polished brass reflector. 3 3/16 in. in diameter. No sparker; one extra container.

Price Complete . . . . . each \$1.25

For Other Equipment, see Page 11.

**VARYING EQUIPMENT**

**W**E can furnish any of our lamps either with or without the wind shield and shot proof features and with various equipment such as hooks, reflectors, etc.

**HOOKS**—Lamps are usually furnished with round wire hooks. If flat hooks are desired they will be furnished without extra charge.

**REFLECTORS**—All lamps except where otherwise specified are equipped with No. 9 reflectors. These are 2 1/2 in. in diameter and 3/4 in. in depth. We can, upon order, furnish other reflectors—see page 19.

Lamp with extra container . . . . . \$1.25 ea.

Wind caps . . . . . .05 ea.

Shot proof attachment on lamp . . . . .10 ea.

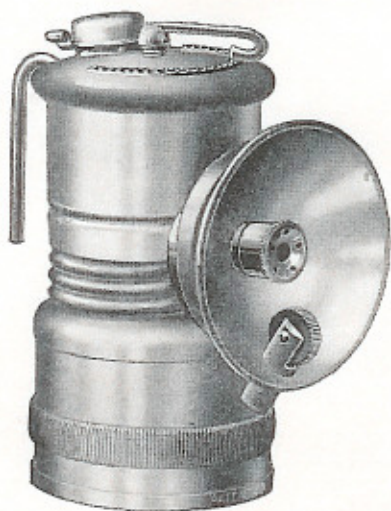
Extra plain containers . . . . .20 ea.

Extra shot proof containers . . . . .30 ea.

When desired we can furnish a 1/2-lb. carbide can at same price as extra container.



## HOLD-A-LITE BOTTOM VALVE FEED



Lava Burner—Rigid Removable Reflector

Weight,  $5\frac{7}{8}$  oz.

Height,  $3\frac{3}{4}$  inches

Burns  $2\frac{1}{2}$  hours on one charge.

Notches on top of lamp hold valve lever in position.

Hook cannot be wrenched loose. Reflector strongly braced by rigid shell attached to lamp body.

This lamp equipped with spark lighter, wind shield and two shot proof carbide containers.

Price Complete .....\$1.25

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## THE BOTTOM OF THE CARBIDE CONTAINER IS REINFORCED AND STRENGTHENED

THE carbide container, by this we mean, the bottom half of the lamp, wears out more quickly than the water-tank (upper half of the lamp) as the carbide containers are battered and dented so badly, they are frequently unfit for further use.

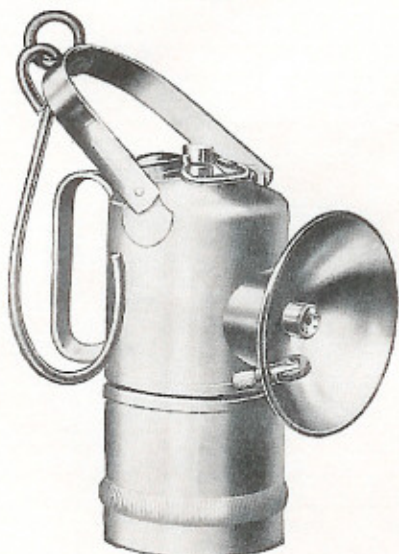
The bottoms of the containers used on our shot-proof lamp are reinforced by an extra thickness of sheet brass. The edges of the container are just double the thickness of other containers. They will stand the battering and pounding the miner gives them when dumping out the used carbide. The knurled band around the containers adds to their strength and is also an aid in gripping to unscrew the container from the water tank. The extra strength of the container will add many days of usefulness to the lamp, and the user, instead of being compelled to throw away a still serviceable water-tank because the containers are worn out, will find that the containers will outlast the water-tank.

## CLEAN YOUR LAMP

It will mean several months more service from your lamp if you empty the used carbide from it after using. Slacked carbide eats into the brass and weakens it, if left standing in the lamp. So, clean your lamp every day after work; also clean the burner before using, it will give you a better flame as particles of dirt may distort the flame.

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FLOAT **TP** FEED  
ITS TANK IS PROOF



**NO. 150**

Lava Burner—Rigid Removable Reflector  
Weight, 12 oz. Height to top of bail, 7 in.

Burns six hours on one charge

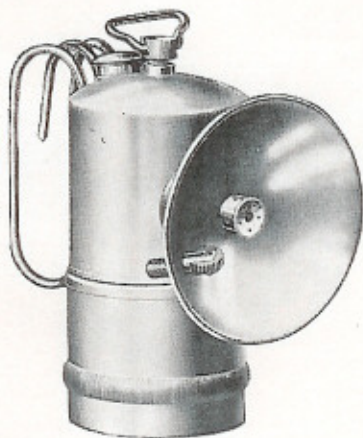
Made of brass, heavily nickel plated.

No lamp equals this for steady, even, burning—requires no attention—never has to be raked or regulated.

Equipped with wind shield and one extra container.

Price Complete .....\$2.50

FLOAT **TP** FEED  
ITS TANK IS PROOF



**NO. 160**

Lava Burner—Rigid Removable Reflector  
Weight, 11 oz. Height, 5¼ inches  
Burns six hours on one charge

Same feed as No. 150—will be found the best superintendent's and inspector's lamp on the market. Requires no attention—never has to be raked or regulated.

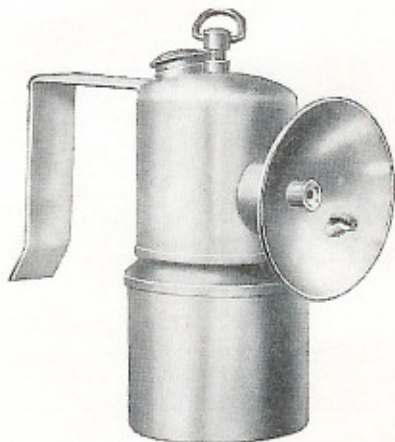
Equipped with wind shield and one extra container.

Price Complete .....\$2.50



FLOAT **TP** FEED  
1875 BUREAU STREET

**TRIP LAMP**



**NO. 204**

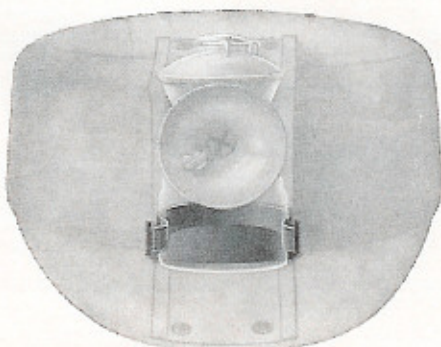
Lava Burner—Rigid Removable Reflector  
Weight, 20 oz.                      Height, 6½ inches  
Burns 10 hours on one charge

Handle just fits over rear of car and holds lamp rigid.

Equipped with wind shield so flame cannot be blown out. Serves as warning to track walkers. Requires no attention while burning—never has to be raked or regulated. One container only.

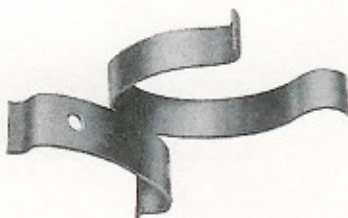
Price, Complete .....\$3.75

**DETACHABLE LAMP CLIPS**



This clip takes the place of the spreader wires on the lamp. When used on the regulation miner's cap, the clip snaps on to the tin shield of the cap. If it is to be used on a hat the snaps can be cut off and clip fastened to hat by means of rivets or staples and in this same manner the clip can be fastened to the lapel of the coat if lamp is to be used suspended from the button-hole in the lapel.

The clip will hold the lamp securely and the lamp can be snapped into place or removed with the greatest ease.



**No. 75**

**Clip Only—List Price, Each - 10 cts.**

### Brush Burner Cleaners

THESE cleaners are far more convenient and durable than the ordinary disc cleaner. Wires can be used as a brush to remove surface dirt, or a single wire used separately to clean the gas outlet.



No. 61 consists of 60 wires, solidly set in a brass case with sliding base. This case protects the pocket when cleaner is not in use. The knob allows the cleaner to be locked into position.

Price, each ..... 10c.



No. 62 consists of 40 wires set in a rigid holder. Has no protecting case.

Price, each ..... 5c.



No. 73

### A Strong, Sturdy Lampholder

Made of one solid piece of steel—snaps on to the lamp easily and holds securely. Hold lamp firmly in one hand and force it into the opening on holder which can be put on right or left so that light can be thrown in any direction. Can be easily jammed into the earth or timbers. Holds securely—you will find it practical and simple.

Price, each ..... 25c.

### CARBIDE CAN



NO. 307

Curved to fit the hip pocket—holds one-half pound—has snap top, one-half inch opening for charging your lamp. Entire top is removable for filling.

Price, each ..... 15c

### REFLECTORS

When ordering specify by number lamps for which reflectors are wanted.

#### Without Sparkers

No.		Cap Lamps dz.	Hand Lamps dz.
3	Deep 3" dia. N.P., 1 1/4" deep.....	\$3.00	\$3.00
4	Deep 2 1/2" " N.P., 1" " .....	1.50	1.50
5	Brass flat 3 3/16" dia. 1" deep.....	3.00	3.00
5	N.P. " " " 1" " .....	3.00	3.00
6	Tin " 2" " 1" " .....	.25	.35
6	Brass " " " 1" " .....	.35	.60
6	N.P. " " " 1" " .....	.50	.75
8	Brass " 2 1/2" " 1/2" " .....	1.75	
9	Tin deep 2 1/2" " 1" " .....	.25	
9	Tin with burner mounting, .....	.40	
	Lloyd Surveyor's 2x7 1/2.....	1.20	
	Reinforcing shell for Reflectors .....	.35	.50
	" " " No. 3 Reflectors only .....		.50

If sparkers are wanted add \$2.50 dz. to prices as given above.