

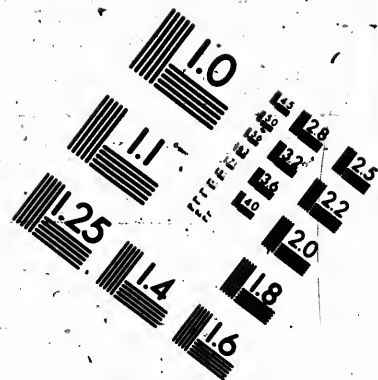
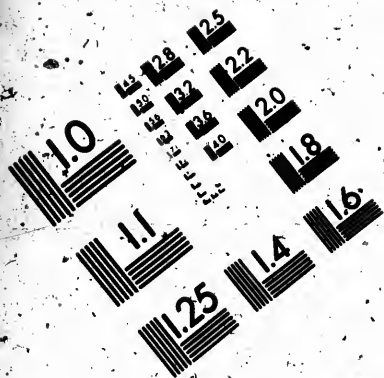
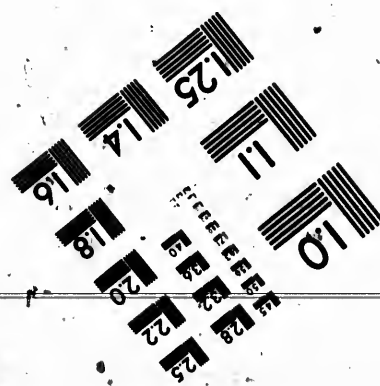
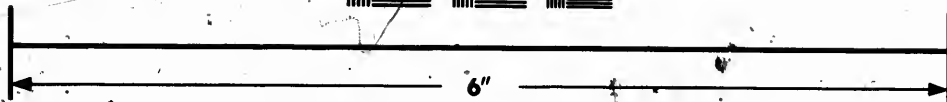
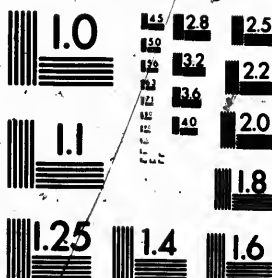


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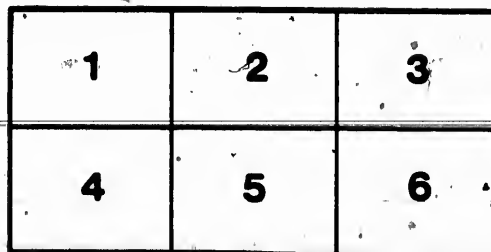
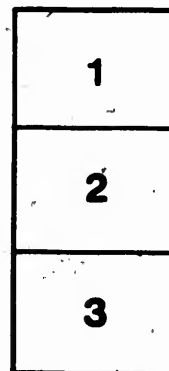
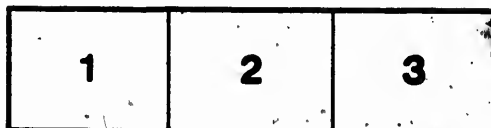
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"THE WELLS LIGHT"

WALLWORK & WELLS' PATENTS. (Registered Title.)

OVER 3000 IN USE.

No Engine!

No Boiler!

No Compressor!

No Pipes!

No Sharp Shadow!

No Fixed Plant!

No Connections!

No Danger!

No Spray!



Portable and

Self-Contained!

Simple and Strong.

Safe and Reliable.

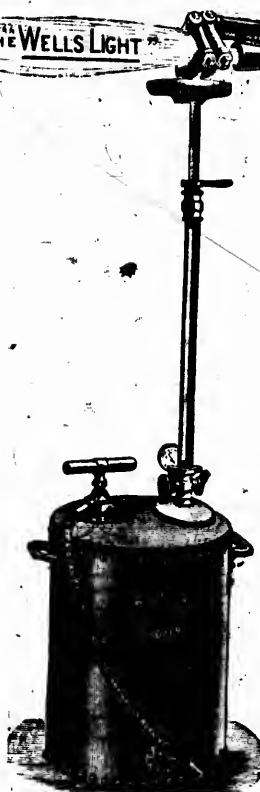
Continuous

in Action.

Unaffected

By Weather.

Cheap and Efficient.



MEDALS.

PARIS, - - - 1889.
HAMBURGH, - - - 1889.

MEDALS.

BURBANK, - - - 1889.
DETROIT, - - - 1889.

A PORTABLE LIGHT FROM OIL 800 to 2000 CANDLE POWER.

SOLE LICENSEE AND MANUFACTURER FOR THE DOMINION OF CANADA,

JAMES COOPER,

204 ST. JAMES STREET, MONTREAL, CANADA.

CANADIAN LIST
No. 1
1900

THE "WELLS LIGHT." (REGISTERED TRADE MARK) WALLWORK & WELLS' PATENTS.

Patented May 23, June 20, July 23, 1889, and others applied for. PATENTED ABROAD.

This system of lighting which has taken years to perfect, may be described as one of the most important inventions of the present age. By its use a powerful light can be brought upon any scene in an incredibly short space of time. Two men can easily carry a complete apparatus of 3000 candle power, and one man, one of 800 candle power.

On Railroads, in large Engineering works (such as Sir Wm. Armstrong's, Sir Joseph Whitworth's, and hundreds of others in Europe,) at Docks, Ship Yards, on large Contract jobs, and in *every variety of work where a powerful light* is required, its success has been complete. **Over 1000 being sold in 4 months in Europe** last season, and with a steadily increasing sale.

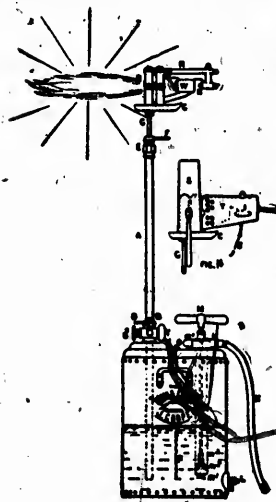
It has met with unqualified approval since its introduction here, and the manufacturers recommend them with the greatest confidence.

THIS LAMP throws no unconsumed oil spray about.

SHORT DESCRIPTION AND METHOD OF WORKING THE "WELLS LIGHT."

The light is produced by generating oil into gas by the heat of its own combustion, and burning it in a **LARGE POWERFUL FLAME** which needs no protection and *will stand any weather.*

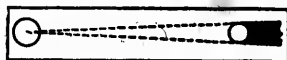
Oil (Kerosene) is forced into the Tank through the hosepipe "K," by the pump "M," until it is two-thirds full, compressing the air already in the tank to about 20 lbs. pressure. The burner is then heated by burning a little oil in the cup "C," fig. 1, the heat being concentrated on the burner by the Chimney "S."



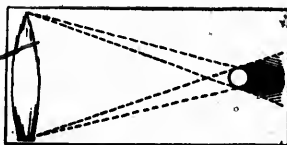
The Burner being heated, the valve "B" is opened, the oil is forced by the air pressure into the heated burner, where it is converted into Gas, which issues from the jet in a large powerful flame; the Chimney "S" is then removed, and the heat of the flame passing through the generating tubes continuously, turns the fresh ascending oil into gas. A few strokes of the pump every few hours is all that is required to renew the pressure—and oil or air can be pumped into the Tank while the light is burning.

The Tanks are made of best steel plate, and are very strong. The Pump is screwed into the tank top, and can easily be taken out for renewal of leathers, &c. A pressure gauge and sounding rod (for ascertaining the amount of oil in the tank) is fitted to each.

ILLUSTRATIONS SHOWING SOFTNESS OF "WELLS LIGHT" SHADOW AS COMPARED TO THE ARC LIGHT.



SHARP
ARC LIGHT SHADOW.



SOFT
"WELLS LIGHT" SHADOW

The "Wells Light" must not be confounded with another class of lamp driven by continuous supplies of air or steam, and which has to be fixed and connected to an expensive plant of Air Compressors or Boilers.

JAMES COOPER,

SOLE MANUFACTURER,
204 St. James Street,

MONTREAL

THE "WELLS LIGHT." (REGISTERED TITLE.)

WALLWORK & WELLS' PATENTS.

STANDARD SIZES & PRICES.



No. 1. 800 CANDLE POWER.

FLAME 15 inches LONG; OIL USED $\frac{3}{4}$ GALLONS PER HOUR.

SIZE OF TANK $10\frac{1}{2} \times 18$ in.

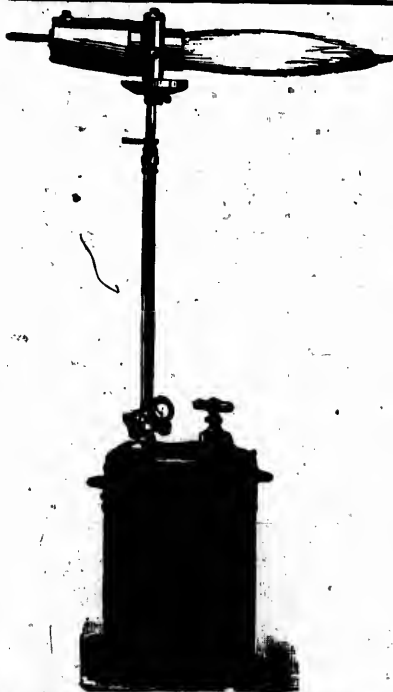
WEIGHT WHEN FULL 75 Lbs. WHEN EMPTY 45 Lbs.

This small lamp being designed for extreme portability, has its tank made of thin galvanized plate. For many purposes the light is small, but for *Track Laying, Road Repairing and Excavating, Tunneling, Paving, Mining, etc.*, it is invaluable. It has only a single handle, and can be carried by a boy. It holds oil for 5 hours, but may be refilled while burning without putting out the light.

PRICE COMPLETE, - - \$75.00

*EXTRA BURNER, - - 9.00

*I always send an extra burner with each lamp unless specially ordered otherwise.



No. 3. 2000 CANDLE POWER.

FLAME 24 in. LONG; OIL USED $1\frac{1}{4}$ GALLONS PER HOUR.

SIZE OF TANK 18×24 in.

WEIGHT WHEN FULL 240 Lbs. WHEN EMPTY 110 Lbs.

Tank of Steel Boiler Plate; two handles; can be carried by two men. Holds oil for 9 hours, but may be refilled while burning.

For ENGINEERS, IRON, FOUNDERS, BOILER MAKERS, ROLLING MILLS,

STEEL WORK, RAILROADS, TUNNELING, BRIDGE BUILDING,

BREAKDOWNS, COLLIERIES, COAL WHARVES, MINES,

DOCKS, HARBORS, SHIP YARDS, FORGES,

TANNERIES, BLEACHING YARDS,

and all kinds of Contractors' work, where a powerful portable light is required.

It gives a pure white light, not dazzling or throwing intense shadow, like the Electric light.

PRICE COMPLETE, - \$100.00

*EXTRA BURNER, - 10.00

*I always send an extra burner with each lamp unless specially ordered otherwise.

2000 of this size were sold in Europe last season.

200 of them working on the Manchester (Eng.) Ship Canal.

ALL LAMPS SENT COMPLETE with Chimney, Wind Guard, Spanners, Cleaners, and Card of FULL INSTRUCTIONS.

JAMES COOPER,

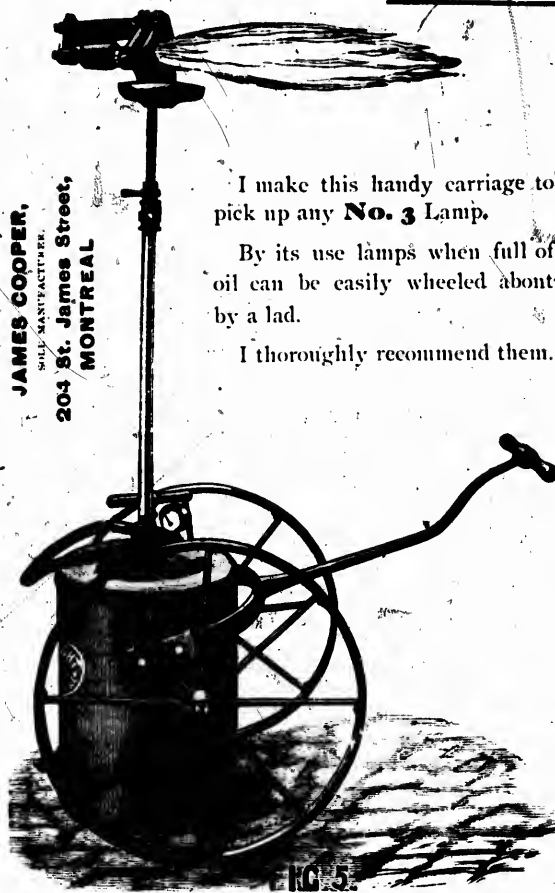
SOLE MANUFACTURER,
204 St. James Street,

MONTREAL.

THE "WELLS LIGHT."

CARRIAGE.

JAMES COOPER,
SOLE MANUFACTURER.
204 St. James Street,
MONTREAL



I make this handy carriage to pick up any **No. 3** Lamp.

By its use lamps when full of oil can be easily wheeled about by a lad.

I thoroughly recommend them.

FIG. 5.
PRICE.

CARRIAGE ONLY TO FIT ANY No. 3 LAMP, - - \$16.00

EXTRAS AND SEPARATE PARTS.

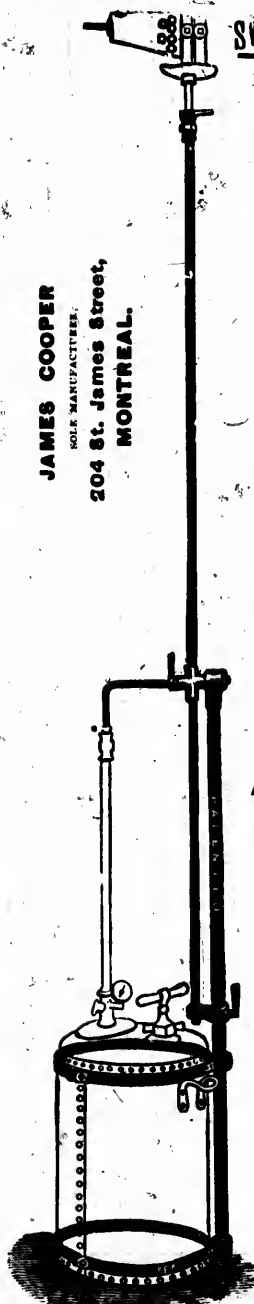
Full details of these for the "WELLS LIGHT," are given on pages 8 and 9, and are kept in stock by myself and my authorized Agents, and purchasers are cautioned to procure them from these sources only.

The Various Parts of the "WELLS LIGHT" are protected by a number of U.S. & Canadian Patents.

THE "WELLS LIGHT."

SWIVEL MAST.

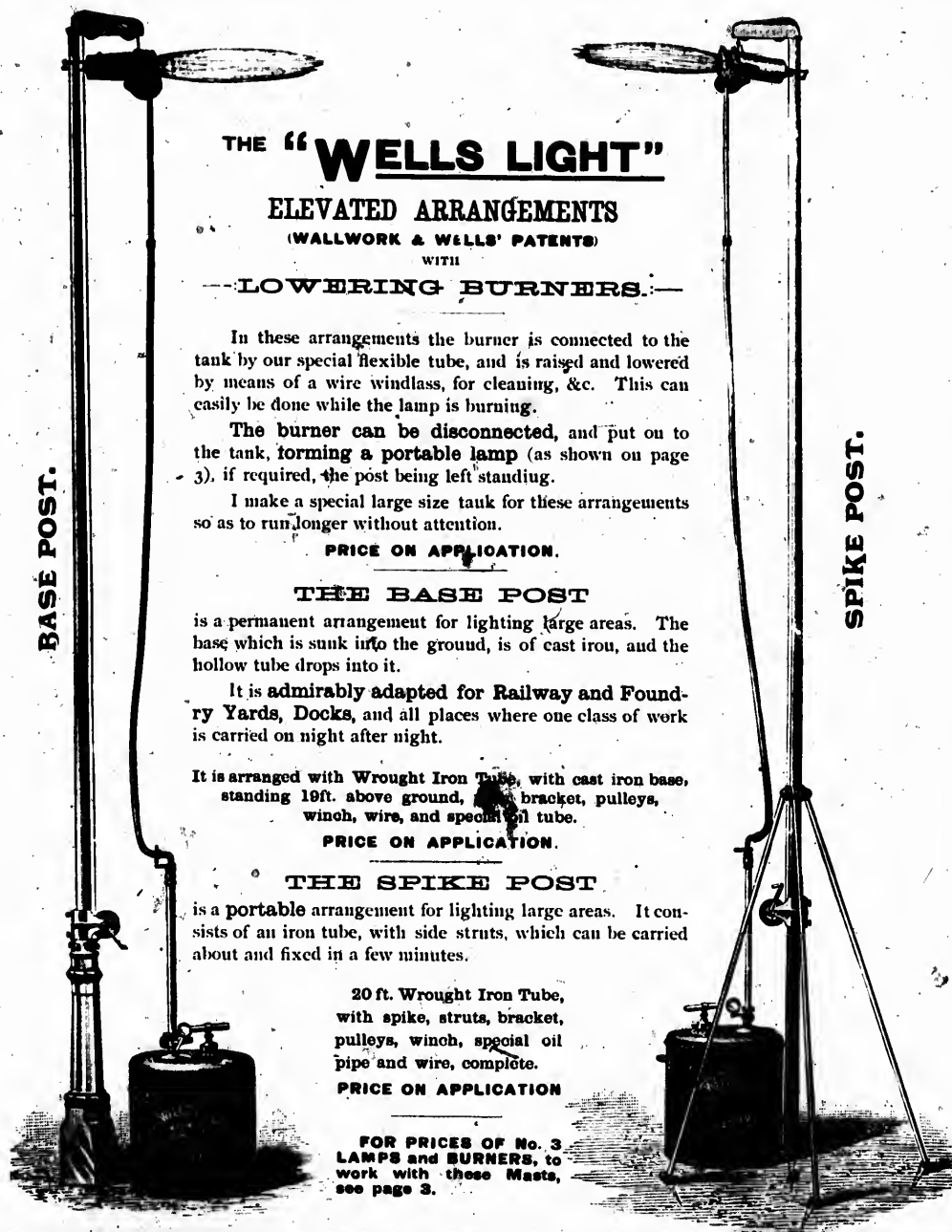
JAMES COOPER
SOLE MANUFACTURER.
204 St. James Street,
MONTREAL.



This simple apparatus for raising the light 14 feet from the ground, is supplied complete as illustrated, to fix to any **No. 3** Lamp which when once put on need not be removed, as the mast can be lifted out and the lamp used in the ordinary way if required. The Burner swivels down for lighting and cleaning, and the arrangement will be found most valuable.

PRICE COMPLETE, (parts shown shaded in figure.) - - - \$14.00.

The above includes a Special Lighting Bucket, shown on sheet of instructions.



THE "WELLS LIGHT"

ELEVATED ARRANGEMENTS
(WALLWORK & WELLS' PATENTS)
WITH
— LOWERING BURNERS. —

In these arrangements the burner is connected to the tank by our special flexible tube, and is raised and lowered by means of a wire windlass, for cleaning, &c. This can easily be done while the lamp is burning.

The burner can be disconnected, and put on to the tank, forming a portable lamp (as shown on page 3), if required, the post being left standing.

I make a special large size tank for these arrangements so as to run longer without attention.

PRICE ON APPLICATION.

THE BASE POST

is a permanent arrangement for lighting large areas. The base which is sunk into the ground, is of cast iron, and the hollow tube drops into it.

It is admirably adapted for Railway and Foundry Yards, Docks, and all places where one class of work is carried on night after night.

It is arranged with Wrought Iron Tube, with cast iron base, standing 19ft. above ground, bracket, pulleys, winch, wire, and special oil tube.

PRICE ON APPLICATION.

THE SPIKE POST

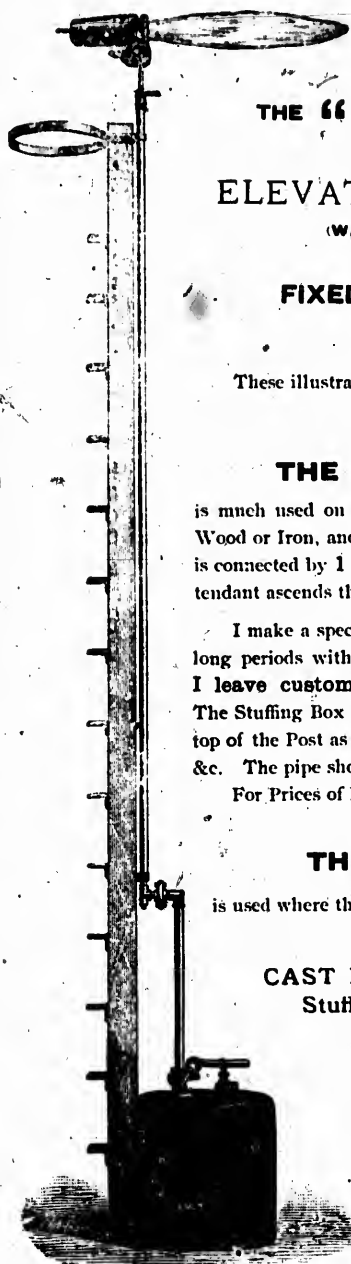
is a portable arrangement for lighting large areas. It consists of an iron tube, with side struts, which can be carried about and fixed in a few minutes.

20 ft. Wrought Iron Tube, with spike, struts, bracket, pulleys, winch, special oil pipe and wire, complete.

PRICE ON APPLICATION

FOR PRICES OF No. 3 LAMPS and BURNERS, to work with these Masts, see page 3.

JAMES COOPER, SOLE MANUFACTURER, 204 St. James Street, **MONTREAL**



THE "WELLS LIGHT."

ELEVATED ARRANGEMENTS

(WALLWORK & WELLS' PATENTS)

WITH

FIXED BURNERS AND LADDERS.

These illustrations show two methods of fixing elevated Burners to

"WELLS LIGHTS."

THE BRACKET ARRANGEMENT

is much used on **Railroads, and on Piers.** The Post may be either Wood or Iron, and must be provided with ladder or steps. The Burner is connected by 1 in. iron pipe to the tank on the ground, and the attendant ascends the ladder to start the Burner.

I make a special large size tank for these arrangements so as to run long periods without any attention. Prices furnished on application. I leave customers to supply and fix the posts and piping. The Stuffing Box must be taken off the Lamp Stand Pipe and fixed on top of the Post as shown, so that the Burner can be removed for cleaning, &c. The pipe should be arranged with plugs for cleaning as shown.

For Prices of Lamps and Burners to work in connection, See page 3.

THE POST ARRANGEMENT

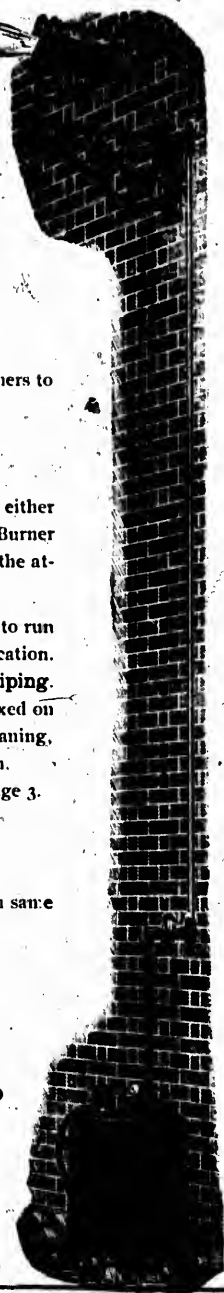
is used where the light is required on a wall, and is fitted up in same way as Post Arrangement.

**CAST IRON BRACKET, including Gland,
Stuffing Box, Wrought Iron Socket
Pipe, with Set Screw and
"T" Connection.**

PRICE, - - - \$12.00

I leave customers to find and fix their own piping, which is quite a simple matter.

For Prices of Lamps and Burners to work in connection, See page 3.



JAMES COOPER,

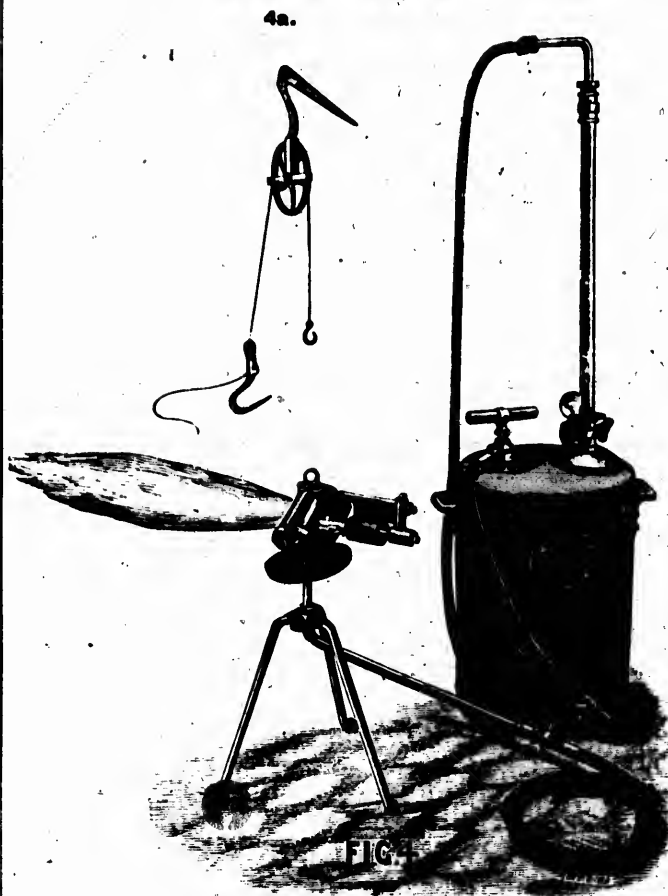
**SOLE MANUFACTURER,
204 St. James Street,**

MONTREAL

WELLS LIGHT

WALWORTH & WELLS PATENTS, 1882

Arrangement for Heating or Lighting.



This arrangement as an adjunct to our ordinary lamps will be found very useful for many purposes.

The Burner can be swung up to a wooden pole or beam, or lowered below the level of the lamp, and is thus rendered practically independent of the tank.

For use in dry docks or up and down the side of a ship during building, it is invaluable.

For heating quickly is is often very useful, and saves the lengthy and troublesome operation of lighting a fire under the work.

For Builders' use it will in many cases be found more serviceable than our iron mast arrangements, as the burner can stand anywhere on a scaffold, while the tank remains in a secure position.

PRICES.

Tripod burner, with brass gland to drop any sized burner in, telescope tail pipe, with 10 ft. of special flexible oil hose and couplings.....	\$14 00
Snatch block 4a, with hook and spike, and 20 ft. of flexible wire.....	5 00

LONGER LENGTHS of special oil piping supplied if requested.

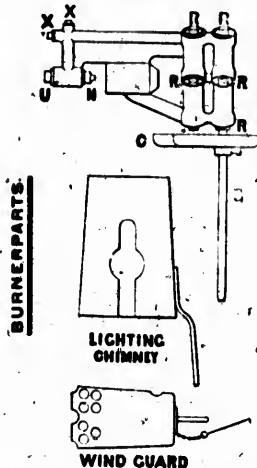
FOR PRICES OF LAMPS AND BURNERS TO WORK IN CONNECTION, SEE PAGE 3.

JAMES COOPER, SOLE MANUFACTURER, 204 St. James Street, **MONTREAL.**

THE "WELLS LIGHT"

(WALLWORK & WELLS' PATENTS.)

IN ORDERING SEPARATE PARTS TO REPLACE for Nos. 1 and 3 LAMPS, QUOTE THE NAMES and NUMBERS GIVEN ON THIS LIST.



PLUGS R for No. 1 SIZE BURNER ($\frac{1}{4}$ in. Gas Thread.)

" R " 3 " " ($\frac{3}{8}$ in. Gas Thread)

" X " 1 or 3 SIZE BURNER ($\frac{1}{4}$ in. Gas Thread)

BACK PLUG U for No. 1 SIZE BURNER ($\frac{1}{4}$ in. GAS THREAD SPECIALLY BORED)

" " " 3 " " ($\frac{1}{2}$ in. GAS THREAD SPECIALLY BORED)

VAPOR JET N for Nos. 1 or 3 SIZE BURNER

N.B.—In ordering Jets or Plugs the number of Burners which is cast on the dish C must be stated.

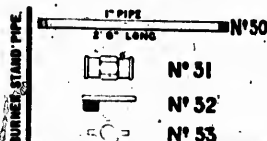
TAIL PIPE G with LOCK NUT for Nos 1 or 3 BURNER*

LIGHTING DISH C*

LIGHTING CHIMNEY*

WIND GUARD*

N.B.—In ordering any of the above the number of the Burner as cast on the dish C must be given.



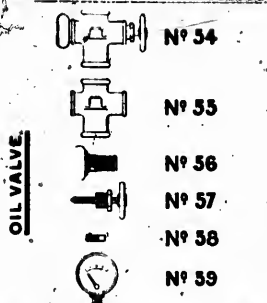
STAND PIPE for No. 3 size lamp

" " " 1 " " ($\frac{1}{2}$ in. pipe, 1 ft. 6 in. long)

STAND PIPE STUFFING BOX for No. 1 or 3 lamp

GLAND HANDLE for No. 1 or 3 lamp

STAND PIPE LOCK NUT for No. 1 or 3 lamp



OIL VALVE COMPLETE including Wheel, Spindle, Filter Plug and Gland

OIL VALVE CASTING ONLY—(machined)

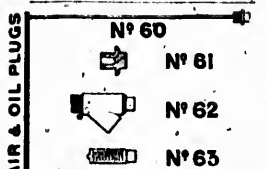
SEPARATE PARTS.

FILTER PLUG

VALVE SPINDLE, WHEEL & SCREWED GLAND (Gland serves as nut for Spindle.)

GAUGE PASSAGE PLUG SCREW

PRESSURE GAUGE



SOUNDING ROD & AIR PLUG COMPLETE

AIR PLUG WITHOUT ROD for No. 1 or 3 size lamp.

EMPTYING TAP COMPLETE for No. 3 size lamp

PLUG FOR EMPTYING TAP SEPARATE for No. 3 size lamp.

State whether the parts are for No. 1 or 3 Size Lamp.

JAMES COOPER, SOLE MANUFACTURER, 204 St. James Street, MONTREAL.

AL

Always state whether the parts are for No. 1 or 3 size lamp

JAMES COOPER, SOLE MANUFACTURER, 204 St. James Street, MONTREAL

A Few of the most important uses to which the "Wells Light" are specially adapted.

THE "WELLS LIGHT" ON THE MANCHESTER SHIP CANAL.

WALLWORK & WELLS' PATENTS. A.C. WELLS & CO LONDON & MANCHESTER



Unaffected by Wind or Rain. Wants Little Attention.

THE "WELLS LIGHT" ON RAILWAYS

WALLWORK & WELLS' PATENTS LONDON & MANCHESTER

AS USED ON

L. & N. W. RY

MIDLAND RY

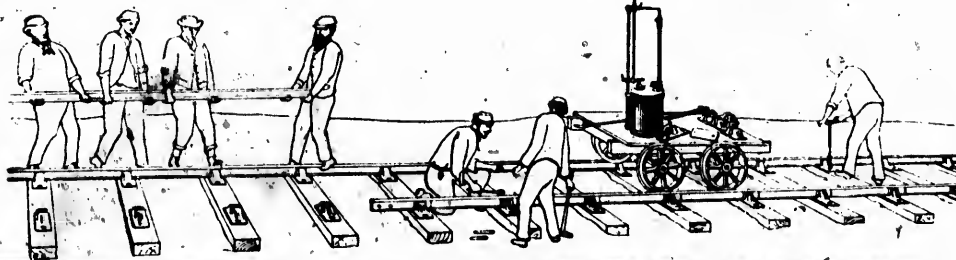
N.E. RY

M.S.J.A.A.RY

&c &c

HORIZONTAL FLAME
UNAFFECTED BY WIND

FOR
PLATELAYING
LIFTING
BREAKDOWNS
REPAIRS
ACCIDENTS
& CONSTRUCTION



LARGELY USED ALSO AS A PERMANENT LIGHT IN YARDS &c

JAMES COOPER, SOLE MANUFACTURER, 204 St. James Street, **MONTREAL.**

THE "WELLS LIGHT" FOR ENGINEERS

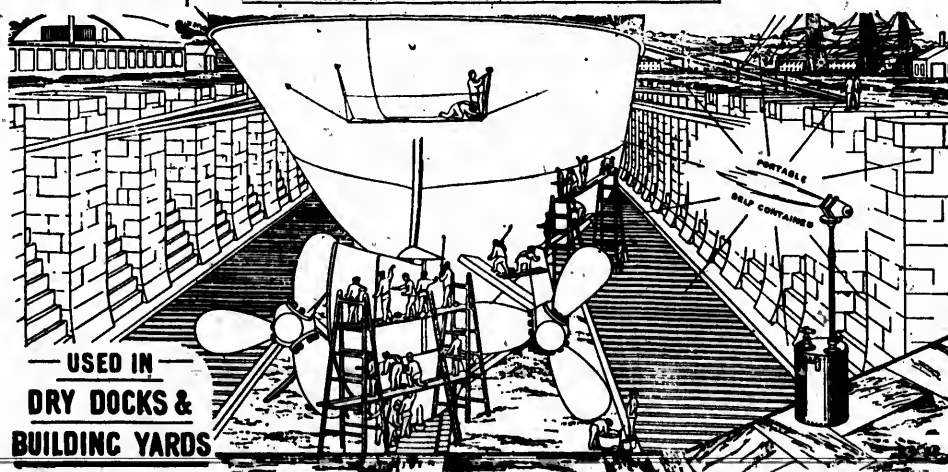
WALLWORK & WELLS' PATENTS. A.C. WELLS & CO. LONDON & MANCHESTER



May be Moved to Suit the Work. Gives a Diffused Light.

THE "WELLS LIGHT" FOR SHIPYARDS

WALLWORK & WELLS' PATENTS A.C. WELLS & CO. LONDON & MANCHESTER



USED IN
DRY DOCKS &
BUILDING YARDS

JAMES COOPER, SOLE MANUFACTURER,
204 St. James Street, **MONTREAL.**

"THE WELLS LIGHT"

WALLWORK & WELLS' PATENTS. (Registered Title.)

INVALUABLE FOR

RAILROADS, Track Laying,
Repairing, Bridge Building,
Tunneling at Wrecks,

It is Indispensable.

"THE WELLS LIGHT"

being Portable and Self-
Contained, giving a

POWERFUL LIGHT

with little attention.

EVERY TOOL CAR SHOULD CARRY ONE.

It can be Started in a Few Minutes.

THE HARD SHADOW
of the Arc Lamp which is unpleasant
and even dangerous to work by
IS OBTAINED
by the large area of flame.

MINES, COLLIERIES,
DREDGERS, DRY DOCKS,
SHIP YARDS, PIERS,
COAL STATIONS,

STREET REPAIRING
and for all purposes where a

POWERFUL
PORTABLE LIGHT
IS REQUIRED.



ENGINEERS, it is Very Useful,
either as a Substitute for,
or an Adjunct to the

Gas or Electric Light,
and where the work in hand is large
requiring **CONCENTRATED** Light
at special positions, and for special
night work or repairs, either in the
shop or outside.

THE "WELLS LIGHT"

gives a clear

WHITE FLAME
free from

HARD SHADOWS.

IRONFOUNDERS.—For clearing up
molding shop, partial overtime, etc.,
as it can be used to move around or
be placed upon brackets, so as to give
the light just where it is required.

BOILER WORKS,
BRIDGE & GIRDER SHOPS,
ROLLING MILLS,
ZINC & COPPER WORKS.

STEEL AND PIPE WORKS
It has proved a

COMPLETE
SUCCESS
IN ALL COUNTRIES.

SOLE LICENSEE AND MANUFACTURER FOR THE DOMINION OF CANADA,

JAMES COOPER,

204 ST. JAMES STREET, MONTREAL.

