Telephone: 1964 HOP.
Telegrams: "BIOJECTOR," LONDON.

**D**

**SECTION.**

# RRB

THE BEARD BRAND.

R. R. BEARD,
10 TRAFALGAR ROAD,
OLD KENT ROAD,
LONDON, S.E.

ESTD. 1886.

## Special Inventions,

## Patents and Specifications

## a Speciality.

R. R. BEARD is prepared to undertake and make specially any Patent, and manufacture to specifications; also to assist inventors with strict confidence to work out their ideas, regardless of their intricacies, and can at any time be consulted.

* * *

## REPAIRS AND RENOVATIONS.

### Our Works are Replete with

UP-TO-DATE MACHINERY for repairs to any make of BIOSCOPES, PROJECTORS, Cameras, Printers, Perforators, Arc Lamps, Resistances, Jets, Regulators, etc., in the SHORTEST POSSIBLE TIME at REASONABLE PRICES.

* * *

SATISFACTION GUARANTEED.

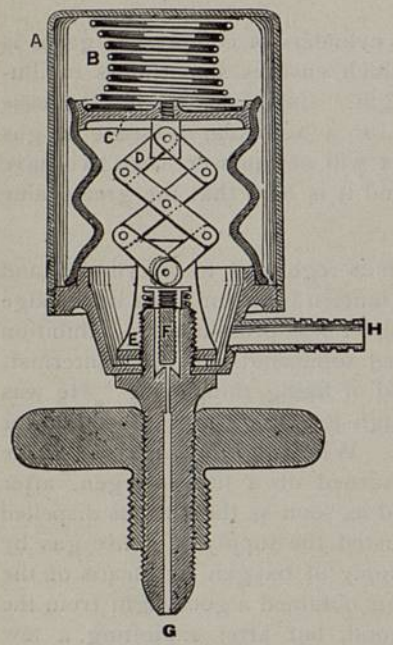
# How a Beard's Gas Regulator Works.

A Regulator for attaching to cylinders of compressed gases is a requisite piece of apparatus which ensures smoothness in illumination when employing limelight. Especially is this the case when a biunial lantern is used, for a particular pressure of gas which will serve one burner or jet will not answer when two have to be employed simultaneously and it is here that the great value of a regulator becomes evident.

It is not sufficient to attach a regulator to a cylinder and expect it to do its duty unless the lantern operator has a knowledge of its mode of use. Some time ago I was present at an exhibition of lantern slides, and being seated somewhat near the lanternist, was highly amused at his method of fixing things up. He was using a single lantern blow-through jet, and had a gas regulator attached to his oxygen cylinder. When lighting up time came he, in a most careful manner, turned on a little oxygen, after lighting up the hydrogen side, and as soon as the air was dispelled from the nozzle he carefully adjusted the supply of house gas by means of the jet tap, and the supply of oxygen by means of the cylinder key, and in a few moments obtained a good light from the incandescent lime. So far so good, but after exhibiting a few slides he noticed that his light had somewhat deteriorated, so, in order to increase it, he again had recourse to the cylinder key, and, as soon as the supply of gas was to his liking, he gave his gas regulator one or two gentle taps, evidently thinking that it was not doing its duty properly. In this manner he proceeded throughout the entire exhibition. In this case, and under these circumstances, his gas regulator was simply acting the part of a piece of tubing, and, for all the use it was to him, might have been left at home, its only use being as a connection whereby the tubing from the jet was connected to the cylinder.

Doubtless many budding lanternists know as little about the functions of a gas regulator as the operator alluded to, so it may be interesting to, as it were, have a look inside and see what goes on there, and ascertain how it is that a gas regulator regulates the supply of gas, and what are the conditions to enable it to do so.

It will be seen that at the lower end there is a screw with a cone-shaped piece G. This screw, when tightened in the neck of the gas cylinder, enables the cone-shaped piece to become firmly seated in its counterpart, which forms part of the neck of the gas cylinder, and these by reason of their close connection form a gas-tight joint. The upper part contains a species of bellows C, and when the gas is admitted into this it distends upwards and rises against the pressure of a spiral spring B. To the inside part of this bellows arrangement are attached rods D, forming a lazy-tongs, so that the greater the pressure on the bellows the more tension is put on a cam at the foot of the lazy-tongs, which presses a small valve F, tightly upon the face of the nipple or valve seat, thus stopping all further supply of gas from the cylinder into the bellows until some has been allowed to escape by means of the outlet tube H, seen at the side, and to which connection is made to the jet. The improvements in this valve F are that both ends are made similar; it is capable of being reversed so that should one end get worn, and allow the gas to pass, it can be readily unscrewed from the cap and reversed, the new end taking the place of the old one.




Such is the arrangement of the internal parts of the regulator; let us now look to its application, for when once its mode of action is understood, and it is used in a proper manner, it will be seen that it is a most important part of a lanternist's outfit.

Old-time lanternists will remember when their gas was contained in a gas bag, which was inserted between two hinged boards, and on the top of which were placed several weights, so as to press or squeeze the gas out towards the jet. Now, this gas regulator acts the same part as the old gas bag, but with this exception; the old gas bag held the entire supply of the gas to be used during the exhibition, and the requisite pressure was obtained by means of weights. In the automatic regulator the small gas



bag is immediately refilled from the gas cylinder as soon as any gas is taken from it, and the pressure is derived from a spiral spring.

The gas regulator having been attached to the cylinder, and connection having been made to the jet, it is imperative to the proper working that the jet tap be closed before the cylinder valve is opened. Having opened the cylinder valve the gas bellows become filled and distended, consequently bringing into play the valve, so that no more gas is admitted. We now turn on the jet tap and allow the gas to impinge on the lime (the hydrogen side having been previously lighted). What happens? The pressure spring on top of the small bellows forces the gas to the jet, and, at the same time, the very fact of the bellows being slightly emptied, closes the lazy-tongs, moves the cam and opens the valve, so that no sooner is a small quantity of gas used then more gas is admitted into the bellows from the cylinder. This arrangement goes on quite automatically throughout the exhibition, requires no attention whatever, and the pressure always remains the same; any regulation that may be required must be made by means of the tap at the jet itself.

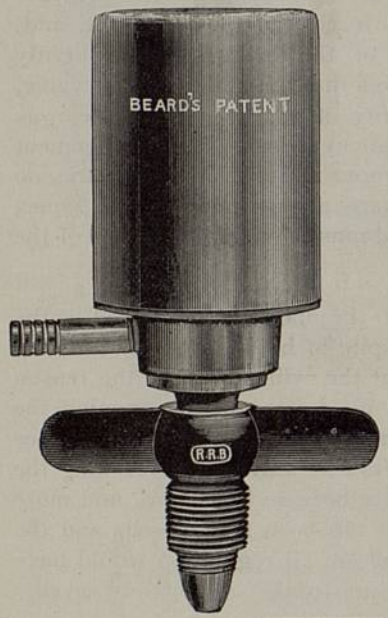
Going back for one moment to the operator mentioned in the early part of this article, who, in spite of having a regulator, had to continually adjust his pressure at the cylinder valve, the reason for this was that he did not close his jet tap before opening the cylinder valve, consequently the small bellows never had a chance of becoming filled and thus using its own valve for controlling the supply, so that, as the internal force became less, more and more had to be turned on. Had the jet tap been first closed, and the cylinder valve turned practically full on, all regulation would have been automatic, and much unnecessary trouble and anxiety saved.

Connections at Cylinder.—When about to connect regulator, etc., to cylinder, carefully wipe out the seating first, as a mere speck of dirt has been known to prevent a proper seating of the connection, and hence allow a proportion of gas to escape. Should, in spite of all precautions, there still be a small escape, it is a good plan to insert a thin lead washer, which will be found to be very effective. A few of these washers, which can be quickly made when one has the materials at hand, should always be included in a lanternist's outfit, for one never knows when such may be required.

# BEARD'S

## PATENT AUTOMATIC REGULATORS.

**The Automatic Patent Regulator has now had many years' trial and run the gauntlet of Competition. It maintains the highest reputation for efficiency and durability, while the quality and workmanship is without fault.**



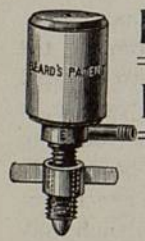

The advantages of the Regulator are:

(1) It can be absolutely relied on.

(2) That it does automatically control the compressed gas at unequal pressures. It is found the best in practice and the most suitable for triple, biunial, single lantern and cinematograph work.

**Price ... ... £1 1 0**

***All Regulators manufactured by R. R. BEARD are stamped.***


## BEARD'S Improved Patent High Pressure Regulator.

**Giving 12 to 15 lbs. per square inch pressure at outlet.**

Specially constructed for use with Injector Jets.

**Price ... ... ... ... £1 1 0**

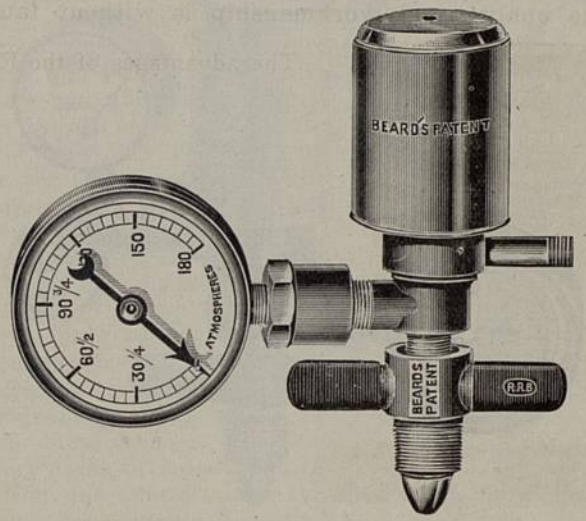
***All existing Regulators of my manufacture can be altered for use with Injector Jets.***



# Beard's Regulator

## with 3-in. Gauge attached.

**For showing the Pressure in the Cylinder while using from it.**




| | | | |
|---|---|---|---|
| Price of Regulator | ... | ... | £1 6 0 |
| „ 3in. Gauge | ... | ... | £1 10 0 |
| „ $2\frac{3}{4}$in „ | ... | ... | £1 1 0 |

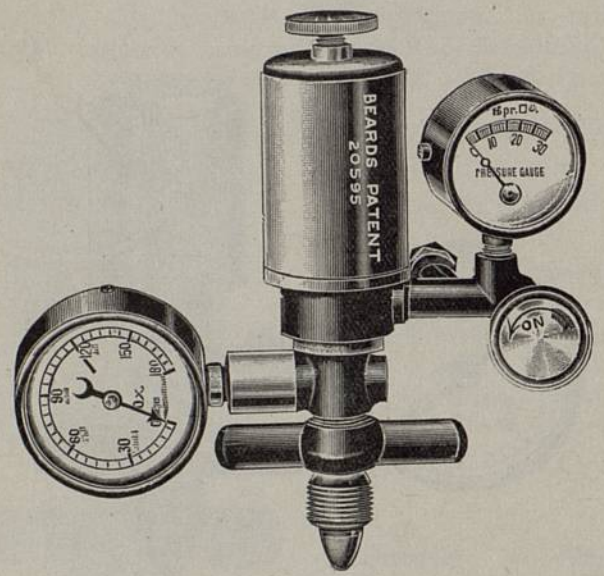
Description.—The Regulator and Gauge-branch is in one piece. The branch is screwed and fitted with a coupling for connecting the gauge (a plug is supplied for use when gauge is not required).

By using the regulator and gauge in the above form it saves making an extra joint (as with a tee-piece), and also takes less space in packing, etc. It is most convenient to work from, as the amount of pressure in the cylinder is always indicated.

There need be no anxiety in respect to injury by using a gauge in the above manner, as one of the tests for a gauge is to allow the pressure to remain upon it for a considerable time to ascertain if permanent set of the gauge tube takes place. The above is thoroughly tested before leaving works.

# Variable Pressure Regulator.

This Regulator is constructed on similar lines as my Patent Automatic Regulator, and is suitable for every description of Lantern Exhibition, and also for Workshop and Blow-pipe work.




The Regulator will deliver Gas at any required pressure up to the indicated pressure on Gauge, as marked. Should this be exceeded a safety valve is fitted and the excess pressure is released.

The Milled Head Screw on top of Regulator is for controlling the pressure, and the fine adjustment valve on the outlet tube is for adjusting the pressure required.

The Regulator is usually sold with the Delivery Pressure Gauge only, and the Gauge for Registering Pressure in Cylinder can be fitted if desired.

**PRICE OF REGULATOR.**

With Registering Pressure Gauge, **£2 2 0**

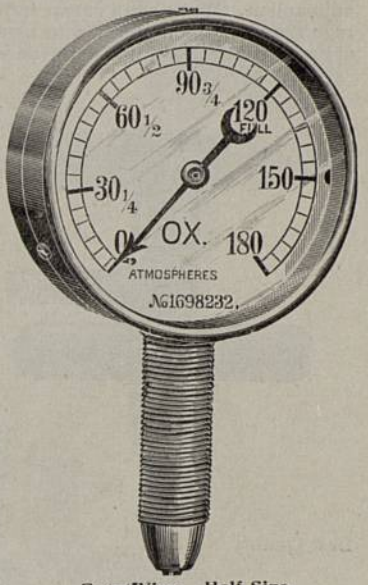
With Registering Pressure Gauge, and Gauge for Registering Pressure in Cylinder, **£3 3 0**



# High Pressure Gas Gauges.

(BEST QUALITY.)

**With Loose Back & Screw Block Check, & Removable Glass.**




Front View. Half Size.

These Gauges are specially made for use on cylinders containing Oxygen, Hydrogen or other Gas under a high pressure; the utmost care being exercised in manufacture to make them absolutely reliable and safe under all circumstances. They are graduated and tested under water pressure; and the strictest precautions are taken to prevent the access of even the slightest trace of oil to the interior of the Gauge.

The connection of each Gauge is SO FITTED TO PREVENT THE SUDDEN INRUSH OF PRESSURE to the Gauge-Tube, and the back is made in the form of a hinged flap, held down by a light spring, thus serving to instantly relieve the case from all pressure in the event of the Gauge-Tube giving way.

Before these Gauges are sent out, every trace of moisture is removed from the interior; and the checks are adjusted on an air cylinder charged to 120 atmospheres.

The check can be tightened by inserting a screw-driver into the bottom of the long connection; and it should be so tight that the pointer occupies at least TWO SECONDS in travelling from Zero to 120 atmospheres.

The Gas Indicator is constructed similar to a Bourdon Gauge, and has been made to meet the want for a cheaper instrument for the purpose of indicating the quantity of gas in cylinders. This instrument is fitted with every safeguard, and is recommended where great accuracy of reading is required.

Price, fitted with Patent Coupling, **£1 12 6**
,, without Coupling ... ... **1 10 0**

# High Pressure Gas Gauges.

(SECOND QUALITY.)

To meet the demand for a cheaper Gauge, I am now making one similar in appearance to the 3 inch best quality, but a smaller diameter. These Gauges are thoroughly reliable.

Price without Coupling, 2¾in. dia., 21/- each.

# Fine Adjustment Valves.

**For Oxygen or Hydrogen.**

They are intended for regulating the flow of gas from either oxygen or coal gas cylinders, but should only be employed when a single light is used. Even then they are not as efficient as an automatic regulator, for they require frequent adjustment. They are a cheap form of regulator and are preferable to using a cylinder connected direct with the jet.

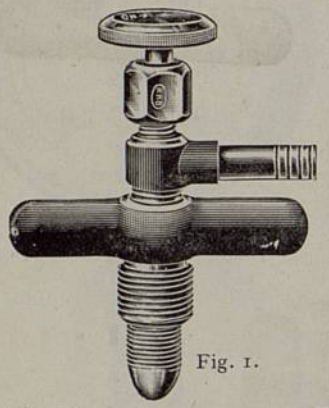


Fig. 1.

Best Quality .. .. .. **7/6**

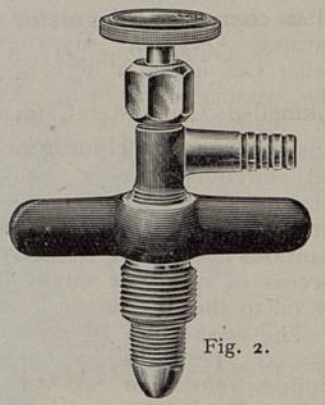


Fig. 2.

Second Quality .. .. **6/6**

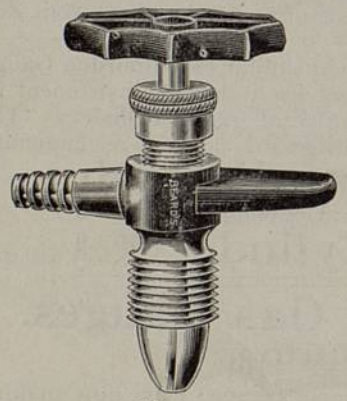
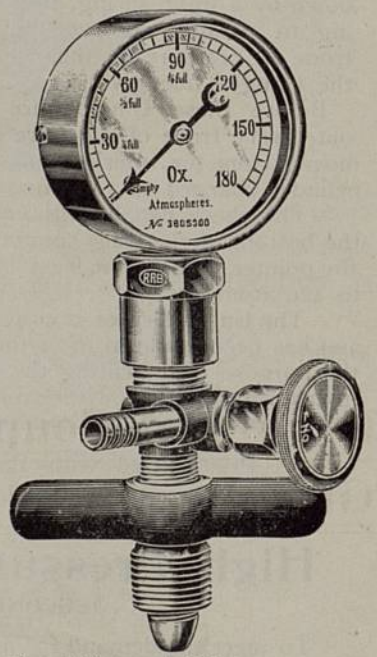


Fig. 3.

Second Heavy Quality, suitable for rough use, theatre work, etc. .. each **6s. 0d.**




Fine Adjustment Valve with fitting for gauge **£0 12 6**
3 in. diam. gauge .. **1 10 0**
2¾ in. ,, ,, .. **1 1 0**

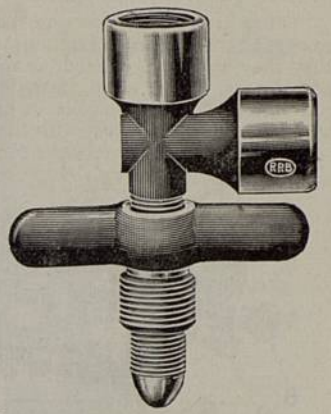


# Tee Connection.

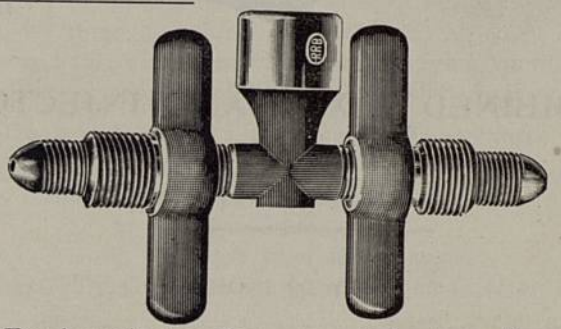
For connecting Regulator and Gauge together.

Enamelled Gun Metal, for either Oxygen or Hydrogen.

Price **6/6.**



# Double Union.



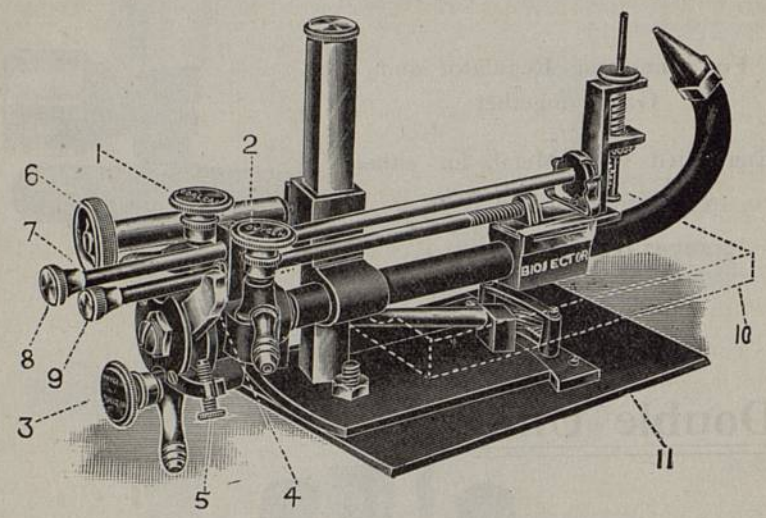
For decanting gas from one cylinder to another.

With connection for gauge as above ... ... ... **8/6**
Without ,, ,, ,, ... ... ... **6/6**

# Combined Coupling Wrench, Gland Key and Cylinder Key.

Two sizes, in Malleable Steel.
Price **2s. 6d.**

# Beard's Biojector Jet.




## COMBINED MIXED AND INJECTOR JET.

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### KEY TO INDEX.

Fig.

1. Hydrogen Valve (supply compressed Hydrogen and House Gas).
2. Oxygen Valve. Mixed.
3. Oxygen Valve. High pressure Injector.
4. Cut-off Lever.
5. Cut-off Hydrogen Bye-pass adjusting Screw.
6. Elevating Milled Head.
7. Lateral Milled Head (hidden in illustration)
8. Lime turning Milled Head.
9. Lime adjustment to and from Nipple.
10. Tray to catch broken lime.
11. Iron Base.



# Combined Mixed and Injector Jet.

## Designed for using House Gas supply or Gas stored in Cylinders.

Combining all the essentials for convenience, in utilising the most improved methods for producing the **best possible limelight** from gases, under pressure in Cylinders and from the House Gas supply.

**It saves the carrying of an extra Jet,** also the inconvenience of rearranging the Lantern when a second Jet is required.

Every possible mechanical arrangement for centring with milled heads from the back, also a lever cut-off arrangement for the gases, with adjustment screw for regulating the bye-pass.

The novelty of the Cut-off is, that when it requires lubricating or cleaning, by removing three small screws the cover can be taken away and the plug removed, not occupying more than a few seconds, the only tool required being a small turnscrew.

As will be seen from the illustration, there are three Adjustment Valves or supply taps fitted to the Jet, viz.,

Fig. 1. Hydrogen Inlet,
2. Oxygen Inlet,
3. Oxygen Inlet for Injector,

stamped respectively, Coal Gas, Oxygen, Oxygen Injector.

**When using as a Mixed Jet,** connections are made to the Valves, Figs. 1 and 2, the Injector Valve (Fig. 3 closed).

By using Cylinders, with Automatic Regulators giving a pressure from 2 to 5 lbs. per square inch, probably the best result will be obtained.

**The Injector** is used where House Gas is available, and is connected with valve, Fig. 1, and Oxygen supply to valve, Fig. 3 (Fig. 2 closed).

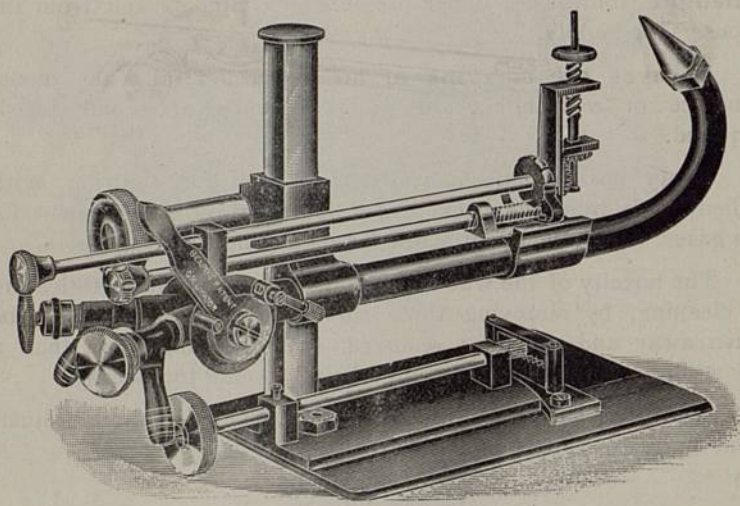
To obtain the best light an Automatic Regulator should be used, giving a pressure of from 10 to 15 lbs. per square inch, or the Variable Pressure Regulator, as on page 28 of Catalogue.

**The consumption of Oxygen** is about 10 feet per hour, with a pressure of 10 lbs. when using Injector.

Price, **£4 4s. 0d.**

# Beard's "Collimator" Jet.

IMPROVED No. 2 PATTERN.



The great improvement in this Jet is the perfect mixing of the two gases, causing them to burn with intensity and quietness.

The gases have no sharp corners to turn nor percolate through discs, as these are entirely dispensed with.

The gases are laminated or sliced up by an ingenious and simple contrivance, and brought together again and again, and finally pass through a precinct of gauzes, and thence to the nipple.

The adjusting of the gases is by fine adjustment valves, which are fitted to cut-off arrangement, and reduces the gases in succession leaving only a small Bye-pass flame of Hydrogen.

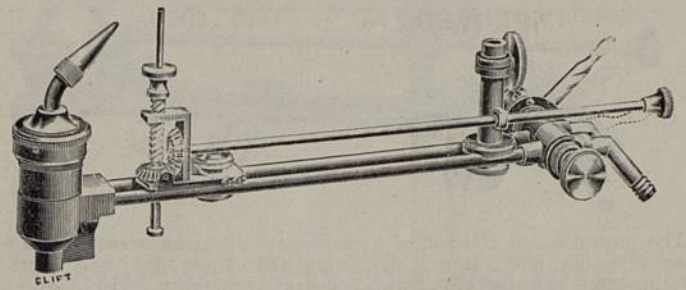
Price on Mechanical Tray, as illustration, **£3 5 6**

,, Ordinary Iron Tray ... **£2 10 0**



# DOUBLE VALVE CUT-OFF JET

## FOR CINEMATOGRAPH.



The improvement consists of a perfect cut-off arrangement, also a perfect mixing chamber, combining the latest and best method of regulating the gases, ensuring the most perfect light with a minimum quantity of gas.

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### DESCRIPTION.

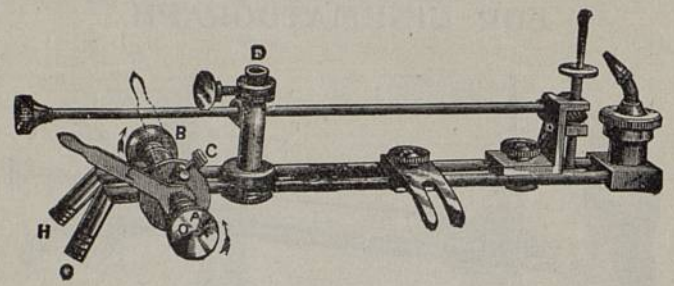
Only one tap is used, which is shown, having the Oxygen and Hydrogen tubes projecting. The lever of the plug moves in the direction of dotted line. Inserted in each end of plug are milled head valves, by which the quantity of gases are adjusted. To light the jet the lever is turned down in a line with the jet tubes (the valves being screwed home). The hydrogen valve is opened to allow the gas to pass and lighted in the usual way, then open the oxygen valve, and regulate the two to the best result. When this is obtained move the lever up slowly until it leaves a small bye-pass of hydrogen flame. Screw the adjusting screw down until the point comes in contact with lever.

The cut-off regulated, it only requires the lever turned down to the horizontal to start the light, the gases being already adjusted. No further adjustment is necessary only to keep the lime turned.

Price of Jet as described, **£2 5 0**

# Double Valve Cut=off Jet.

**For Optical Lanterns.**



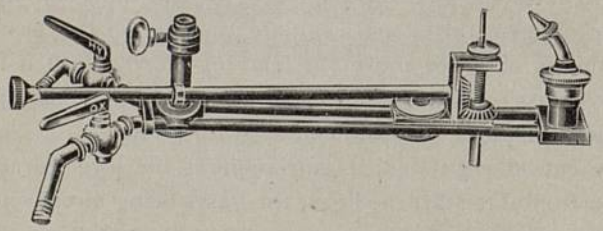

The improvement consists of a perfect cut-off arrangement, also a perfect mixing chamber and nipple, combining the latest and best method of regulating and adjusting the gases, ensuring the most perfect light with a minimum quantity of gas.

**£2 0 0**

# Mixed Gas Jets.

Packing Mixing Chamber with double Regulating Taps.

**£1 [15 0**

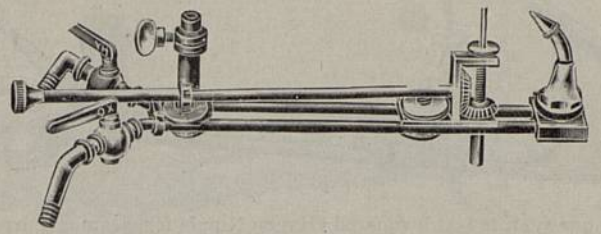


**MIXED JET,** with Lever Cocks and Improved Mixing Chamber.

**£1 10 0**



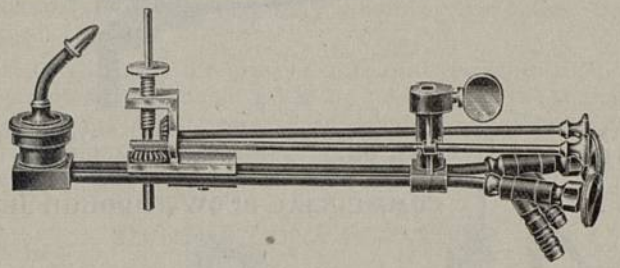
# Mixed Gas Jets.



Open Mixing Chamber, high-class finish.

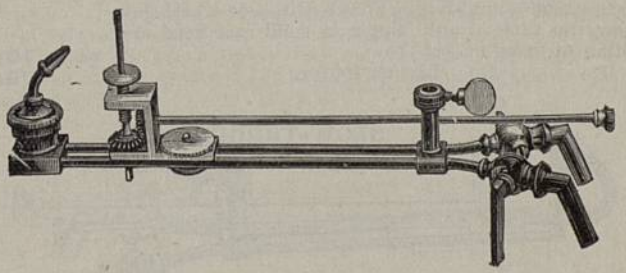
**27/-**

# Commercial Mixed Gas Jets.



Mixed Jet, fitted with extra movement for altering the position of the Lime from the back of the Lantern.

**15/-** each.

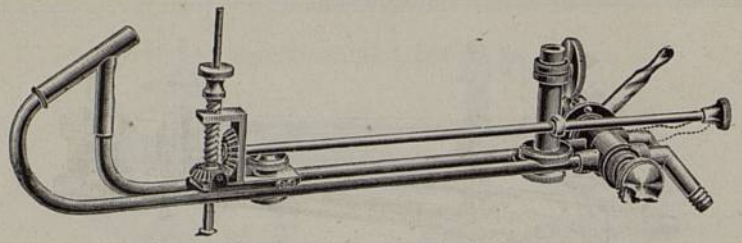


Fitted with Cog-wheel adjustment for turning, raising, or lowering the Lime.

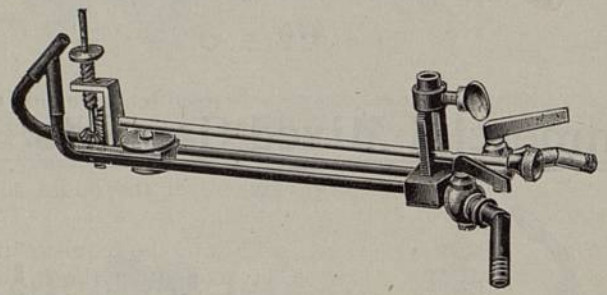
**13/-** each.

**Any of the above Jets can be fitted with Screw-down Valves in place of ordinary lever taps.**

## BLOW-THROUGH JETS.

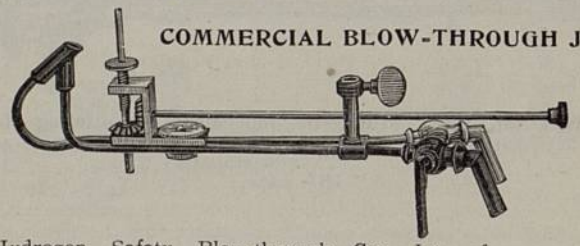


Best quality, fitted with squared Oxygen Nipple for cleaning purposes, and with Cut-off arrangement. Price, **35s. 0d.**



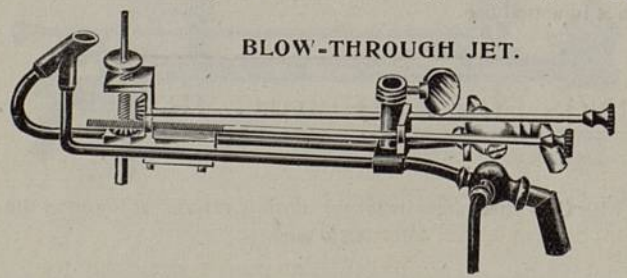
1st Quality, as per illustration, fitted with squared Oxygen Nipple for cleaning purposes. Price, **21s. 0d.**

### COMMERCIAL BLOW-THROUGH JET.



Oxy-Hydrogen Safety Blow-through Gas Jet, of Reliable finish and durability. Fitted with Cog-wheel gear for turning the Lime, Sunk Nipple in solid cast head and screw pillar for fixing on Jet Tray .. .. .. .. each **10s. 6d.**
Do. Do., Lighter Pattern .. .. .. ,, **9s. 0d.**

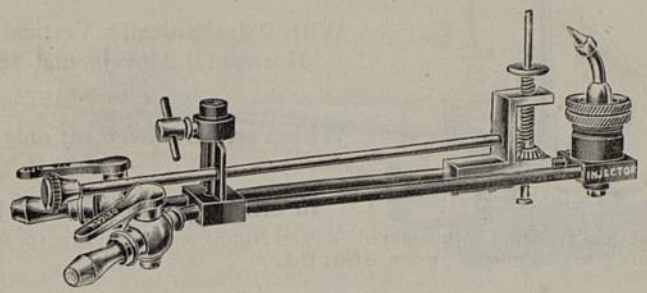
### BLOW-THROUGH JET.



Blow-through Gas Jet, fitted with extra movements for altering position of Lime from the back of Lantern .. each **11s. 6d.**



# BEARD'S INJECTOR JET.




Price, **£1 5 0**

This Jet will give a light equal to a mixed Jet, with only Oxygen taken from a cylinder under pressure, the Coal Gas being used from the house supply.

This effects a **great economy** wherever the house supply is available.

In order to obtain the Oxygen supply at the requisite pressure from the cylinders, it must either be taken from the cylinder by means of a Fine Adjustment Valve, but for preference from a **Beard's Automatic Regulator**, set to deliver at from 12 to 15 lbs. pressure per square inch.

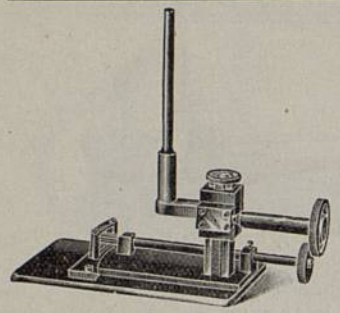
### INSTRUCTIONS FOR USE.

Connect the Oxygen and Coal-gas supplies just as if working with a "blow-through" jet, using strong India-rubber tubing for the Oxygen supply, as this will have to stand considerably more pressure than is ordinarily required for a lime-light jet. Turn on the Coal-gas supply and light the burner. It will be found that with the Coal-gas tap fully open, more gas than is required will be supplied when the Oxygen is turned on. Regulate the gas supply and obtain the maximum lime-light in the ordinary way. After this the Coal-gas tap will not require to be re-adjusted. To turn down the light simply turn off the Oxygen supply. It will then be found that a small Coal-gas flame is left still burning, which is sufficient to keep the lime warm. To produce the light again simply turn on the Oxygen supply; the Coal-gas supply will again be taken automatically from the mains. The simplicity of this adjustment is a great convenience in actual use.

## FITTINGS FOR LIMELIGHT JETS.

| | | | |
|---|---|---|---|
| Nipple for Mixed and Injector Jets... ... ... | each | 1 | 6 |
| Nipple for Collimator or Biojector Jets ... ... | ,, | 2 | 0 |
| Lime Pin, Screw, and Table of Mixed Jets ... ... | | 2 | 0 |
| ,, ,, ,, Collimator or Biojector Jet | | 2 | 6 |
| Lime Pin and Table only ... ... ... ... ... | | 1 | 0 |

## MECHANICAL TRAY for Limelight Jet.



With Mechanical, Vertical and Horizontal Movements, **18/-**

With Vertical Movement only, **12/-**

In ordering state make of Jet.

## BEARD'S IMPROVED TRAY for Jets.

Also made with Centre Pillar for Collimator and other Jets.

To meet the requirements of the various County Council and Fire Insurance Companies, this tray has a depth of an inch all round, sufficient to catch any lime that may break and fall when Cinematograph is in use.

Tray is made in one piece (no joins) and entirely of iron with steel pillar, suitable for lanterns requiring jets up to 9-in. centre. Price **2/-** each.

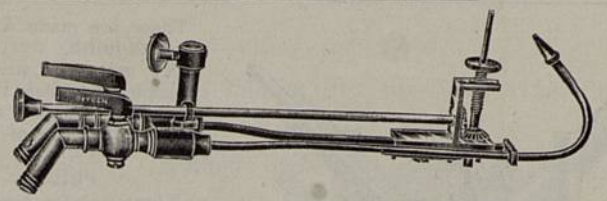
Japanned Tin Sliding Tray, with iron upright ... ... **1 6**
Ditto, cheaper quality ... **1 0**

## SEAMLESS STEEL CYLINDERS for Compressed Oxygen and Coal Gas.

| Cubic Contents in feet at Atmospheric Pressure. | Approximate external diameter in inches. | Approximate length overall in inches, including valve. | Approximate weight in lbs. (empty). | Price of Cylinders with valve. | Extra for Rope Cover. | Rent per week after first 14 days. |
|---|---|---|---|---|---|---|
| 6 | 4 | 14 | 10 | 26/6 | 3/6 | |
| 10 | 4 | 19 | 13 | 28/– | 4/– | |
| 12 | 4 | 23 | 15 | 29/6 | 4/6 | **1/3** |
| 15 | 4 | 27 | 18 | 31/– | 5/– | |
| 20 | 4 | 35 | 23 | 33/– | 5/6 | |
| 40 | 5½ | 36 | 45 | 49/6 | 7/6 | |
| 60 | 5½ | 50 | 66 | 59/6 | 9/6 | **1/6** |
| 60 | 7 | 32 | 66 | 68/– | 9/6 | |
| 80 | 7 | 41 | 85 | 79/– | 13/– | **2/-** |
| 100 | 7 | 49 | 103 | 93/– | 16/– | **2/6** |



## ACETYLENE JET (Injector Pattern).



The Oxygen is supplied at a pressure of from 5 to 15 lbs.; the higher the pressure the greater the light. The Acetylene must be taken from a generator which has a floating holder. The action of the high-pressure Oxygen is to suck the Acetylene from the holder.

This Jet can also be used with the ordinary House Gas and Oxygen from a cylinder. Price £1 5 0.

The Imperial Automatic Acetylene Generator is most suitable for use with above Jet.

## THE IMPERIAL AUTOMATIC ACETYLENE GAS GENERATOR.

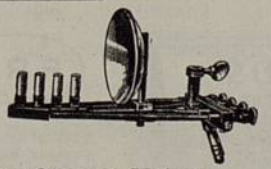

***Cold Generation of Gas.***

This Generator has been designed to meet the demand for a cheaper form of apparatus whereby the Gas is generated and purified by a cold automatic process, and is extremely safe, simple to use, highly efficient and very portable.

| | Each. £ | s. | d. | Extra Carbide Holder. s. | d. |
|---|---|---|---|---|---|
| No. 1 for 2 Lights 5 hours, | 1 | 5 | 0 | 8 | 6 |
| ,, 1½ ,, 3 ,, 5 ,, | 1 | 15 | 0 | 9 | 3 |
| ,, 2 ,, 4 ,, 5 ,, | 2 | 0 | 0 | 10 | 0 |

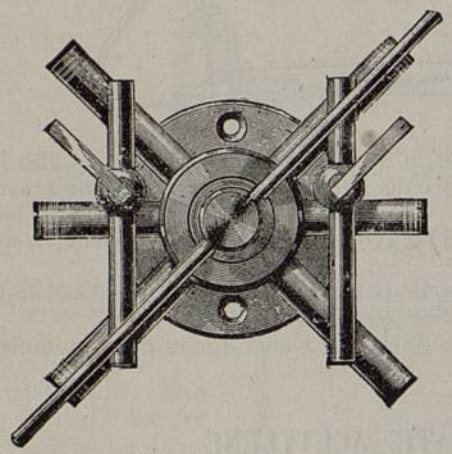
One Patent Carbide Holder is included with each Generator.

## ACETYLENE BURNERS.



| | s. | d. |
|---|---|---|
| 2-burner, with separate Control Valves ... ... ... | 8 | 6 |
| 3-burner, with separate Control Valves ... ... ... | 10 | 6 |
| With 4 burners, each with separate Control Valve ... ... | 12 | 6 |

# DISSOLVERS.



These are made with a very superior finish.

The gas ways are specially constructed to meet the demand of the high pressure now available from the use of condensed gas.

**PRICES.**

1. Three-way for Acetylene Gas for use with a pair of lanterns or a bi-unial .. **10/-**

2. The Star four-way, with double bye-pass. Three of these ar` required for dissolving a tri-unial lantern **13/6**

2A. Ditto, ditto, first quality tested .. .. .. **21/-**

3. The Star six-way dissolving tap, with double bye-pass (one for each jet), for use with a pair of lanterns or a bi-unial .. **13/6**

3A. Ditto. ditto, first quality tested .. .. .. **21/-**

# LIMES.


RRB **Special.**

One dozen Limes in each Tin, size 1½ in. × 1 in. diam., **2/-** per tin.

RRB **Special Cinematograph.**

Specially suited for Biojector and Collimator and other high power. Jet Size 1½ in. × 1¼ in. dia. Six limes in a tin, **2/-** per tin.

**Limes made any size or shape for any special requirements.**


Limeſin glass tube.

RRB **Single Limes in hermetically sealed glass tubes.**

Special attention is drawn to this method of packing limes. They are most convenient and handy to use, keep any length of time, and one is always sure of a perfect lime.

**Price, Special Hard, 1½×1 in., 6 in a box 2/-**



# Rubber Tubing.

Best Red India Rubber Tubing, per ft. **4½d.**

Extra Stout Rubber Tubing, for use with High-Pressure Oxygen (all rubber), **1/2** per ft.

Special Tubing (Rubber and Canvas), suitable for 15 lb. pressure, **9d.** per ft.

# Metallic Tubing.

Fitted with rubber push-ons, for use in L.C C. halls.

| | |
|---|---|
| 3 ft. long ... ... ... ... | **1/6** |
| 4 ft. „ ... ... ... ... | **2/-** |
| 5 ft. „ ... ... ... ... | **2/6** |

# Brass Rubber Tube Connections.

| | |
|---|---|
| 3/8in. Connectors, Straight ... ... ... ... | **0s. 4d.** |
| 3/8in. Y-shape Junction ... ... ... ... | **1s. 0d.** |
| 1/2in. Y-shape Junction ... ... ... ... | **1s. 6d.** |

# Lime Tongs.

PRICE **9d.**

This little instrument saves a good deal of annoyance and time. Limes are not always reliable, and, especially when working a single lantern, a little hitch caused through the breaking of a lime, and without ready means to replace it, has often been the cause of a good show being condemned.

# Separate Sections of Catalogue.

SECTION.

**A** Lanterns, Carriers, Lenses, Elevators, Sheets, etc.

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**B** Bioscopes, Maltese Cross Projectors, Home Cinematographs, Spool Boxes, Iron Stands, Bioscope Lenses, Spools.

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**C** Arc Lamps, Resistances, Carbons, Ampmeters, Voltmeters, Switchboards.

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**D** Compressed Gas Regulators, Gauges, Biojector Jets, Collimator Jets, Mixed and Blow-Through Jets, Injector Jets, Limes, Fine Adjustment Valves.

*FREE ON APPLICATION.*