

E. L. OLDHAM AND J. L. BARRA,
 APPARATUS FOR BLOWING BORES OF ROCK DRILL STEELS.
 APPLICATION FILED JULY 14, 1919.

1,395,202.

Patented Oct. 25, 1921.

2 SHEETS—SHEET 1.

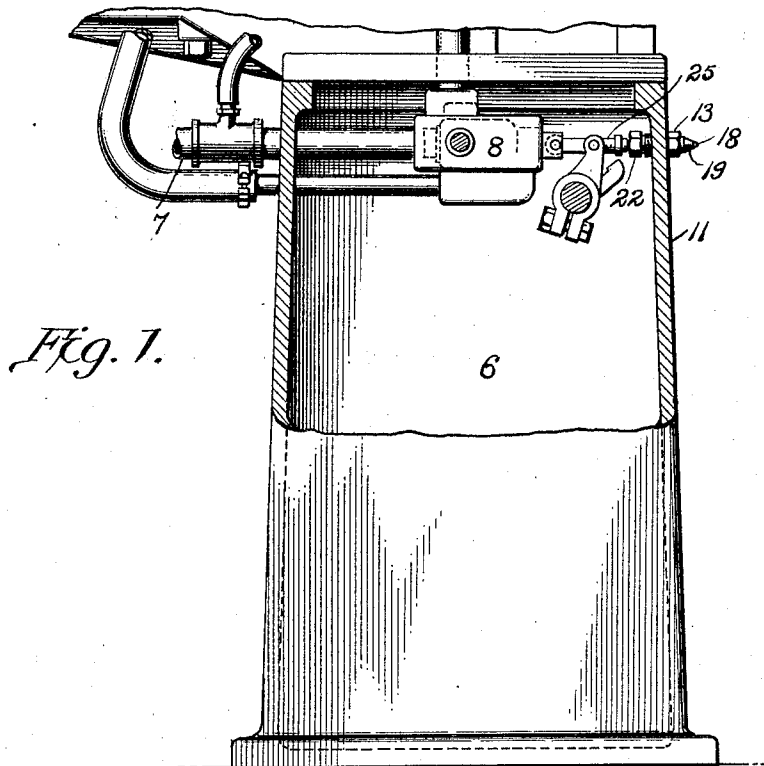


Fig. 1.

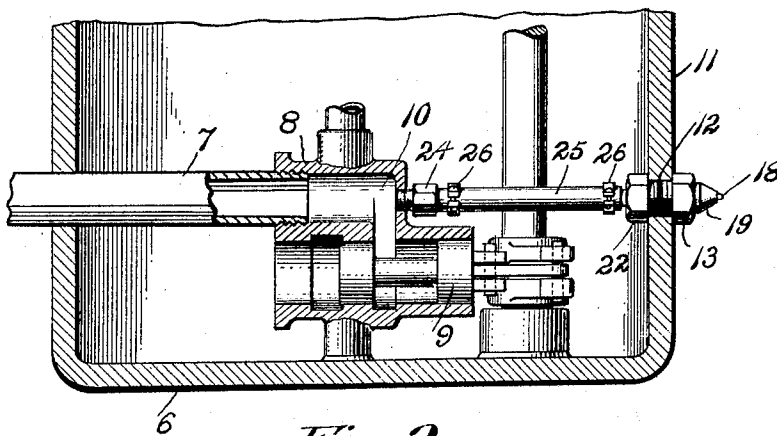


Fig. 2.

Inventors

Edward L. Oldham
 John L. Barra

By

R. K. Koster

Attorney

E. L. OLDHAM AND J. L. BARRA.
 APPARATUS FOR BLOWING BORES OF ROCK DRILL STEELS.
 APPLICATION FILED JULY 14, 1919.

1,395,202.

Patented Oct. 25, 1921.
 2 SHEETS—SHEET 2.

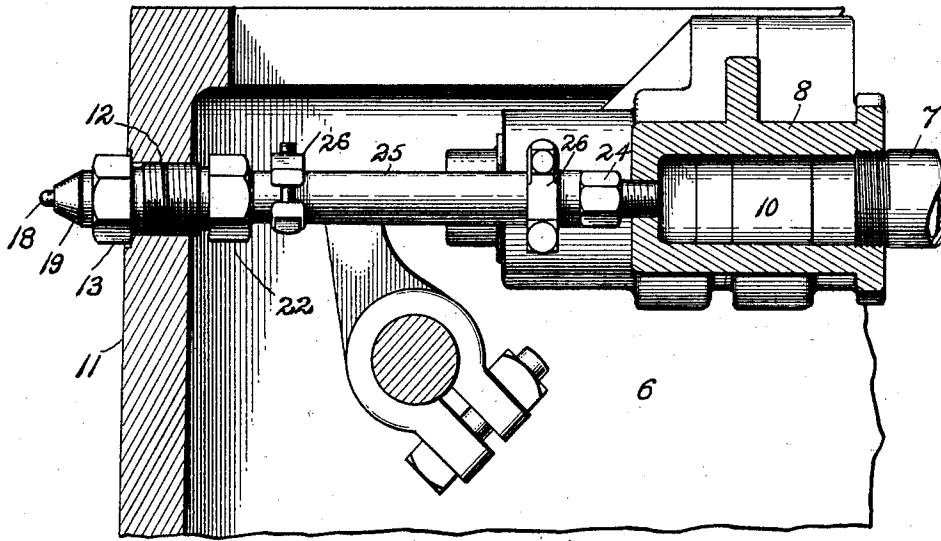
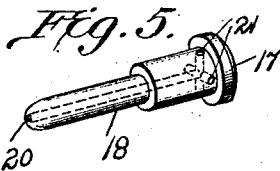
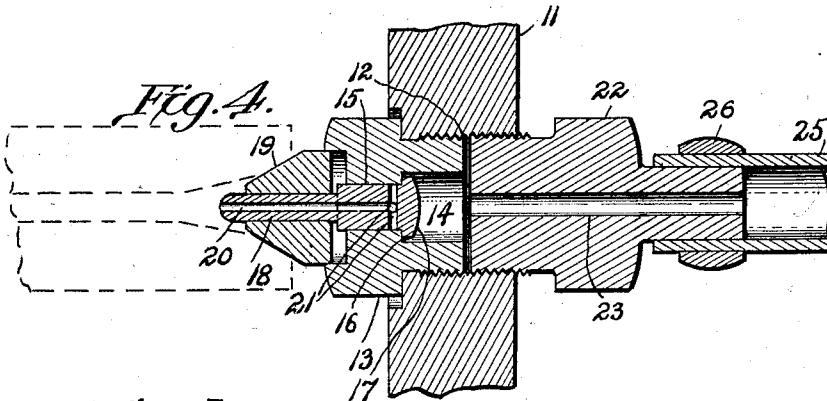


Fig. 3.



Inventors,
 Edward L. Oldham
 John L. Barra
 By *[Signature]*
 Attorney

UNITED STATES PATENT OFFICE.

EDWARD L. OLDHAM AND JOHN L. BARRA, OF DENVER, COLORADO, ASSIGNORS TO
THE DENVER ROCK DRILL MANUFACTURING COMPANY, OF DENVER, COLORADO,
A CORPORATION OF DELAWARE.

APPARATUS FOR BLOWING BORES OF ROCK-DRILL STEELS.

1,395,202.

Specification of Letters Patent.

Patented Oct. 25, 1921.

Application filed July 14, 1919. Serial No. 310,708.

To all whom it may concern:

Be it known that we, EDWARD L. OLDHAM and JOHN L. BARRA, citizens of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Apparatus for Blowing Bores of Rock-Drill Steels, of which the following is a specification.

10 The present invention relates to means for directing a blast of air or other fluid through the bore of a drill steel to eject the scale therefrom, and determine whether or not the bore is properly opened.

15 The object is to provide a device that may constitute a part of a drill sharpening apparatus, so that it is readily accessible, and will operate effectively for the purpose.

In the accompanying drawings:—

20 Figure 1 is a view partly in elevation and partly in section of the base of a drill sharpener of the type disclosed in the patent to Smith, No. 1,253,291, Jan. 15, 1919, and showing an embodiment of the invention in place thereon.

Fig. 2 is a horizontal sectional view,

Fig. 3 is a detail view on an enlarged scale of the apparatus,

Fig. 4 is a detail sectional view through the air delivery means, and

Fig. 5 is a perspective view of the valve.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

35 In the embodiment illustrated, a hollow base 6 is employed, on which is mounted the drill sharpening mechanism, not shown. This mechanism is supplied with an actuating medium by means of a conduit 7 connected to a supply member 8 having one of the controlling valves 9, the conduit 7 opening into a chamber 10 formed in said member 8. The details of this mechanism are fully disclosed in the aforesaid Patent No. 45 1,253,291, so that it is believed unnecessary to further describe the same.

The present invention relates to means associated with the member 8 for blowing out the bore of a drill steel. As shown in the 50 accompanying drawings, one wall 11 of the base 6 is provided with an opening 12, and screwed into the outer end of the same, is a valve casing 13 having an inner bore 14 and an outer counterbore 15 communicating

with said inner bore and providing an internal shoulder 16 constituting a valve seat. 55 A reciprocatory valve 17 coöperates with said seat, and has an outstanding stem 18 projecting beyond the casing 13 and carrying an outwardly tapered plug 19 suitably 60 fixed to the stem. Said stem has an outlet passage 20 opening through its outer end, the inner end of the passage communicating with transverse ports 21 that are brought into communication with the bore 14 if the 65 valve is moved inwardly, as will be evident.

Threaded into the inner end of the opening 12 is a coupling nipple 22 having a bore 23 communicating with the bore 14. This nipple is alined with a nipple 24 threaded 70 into the member 8 and communicating with the chamber 10. A section 25 of flexible hose connects the nipples 22 and 24, being suitably held thereon by clamps 26.

It will be evident that when fluid under 75 pressure, as air, is in the chamber 10 of the member 8, a portion thereof will find its way through the nipple 24, the hose 25 and the nipple 22 into the bore 14, and the pressure against the valve 17 will hold said valve 80 closed. In order to blow the bore of a drill steel it is only necessary to place the end of said steel against the plug or nozzle 19, with the end of the stem 18 in the bore of said steel, as indicated in Fig. 4 and press 85 the steel toward the valve casing 13. This will move the valve inwardly, or to open position, allowing a jet of air or fluid under pressure to pass through the port 20, and into the bore of the steel. 90

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention. 100

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In apparatus of the character set forth, the combination with a hollow base, of fluid 105 supply means located within the base, means mounted on one wall of the base for delivering fluid into the bore of a drill steel and

adapted to be moved by a drill steel placed against said means, and means for conveying fluid from the supply means to the delivery means.

5 2. In apparatus of the character set forth, the combination with a hollow base, of fluid supply means located within the base, means mounted on one wall of the base for delivering fluid into the bore of a drill steel and
10 adapted to be moved by a drill steel placed against said means, and a flexible conduit connecting the supply means and the delivery means.

15 3. In apparatus of the character set forth, the combination with a hollow base, of a valve casing fixed in the wall of the base, a valve in the casing having a stem provided with an exposed portion adapted to be engaged and moved by a drill steel placed
20 thereagainst, said stem having a bore controlled by the valve in its movement, and said bore being adapted to direct fluid into

the bore of a drill steel engaging the stem, and means within the base for supplying fluid to the valve casing.

25 4. In apparatus of the character set forth, the combination with a hollow base having an opening in one wall, of a valve casing fixed in said opening, a valve in said casing having a projecting stem provided with a
30 delivery bore controlled by the position of the valve, said stem having a tapered nozzle adapted to enter the bore of a drill steel, a coupling nipple engaged in the opening of the wall, motive fluid supply means within
35 the base, and a flexible hose connection between the supply means and the coupling.

In testimony whereof we affix our signatures in the presence of two witnesses.

EDWARD L. OLDHAM.
JOHN L. BARRA.

Witnesses:

STANLEY V. JOHNSON,
B. R. SHEETS.