

No. 880,227.

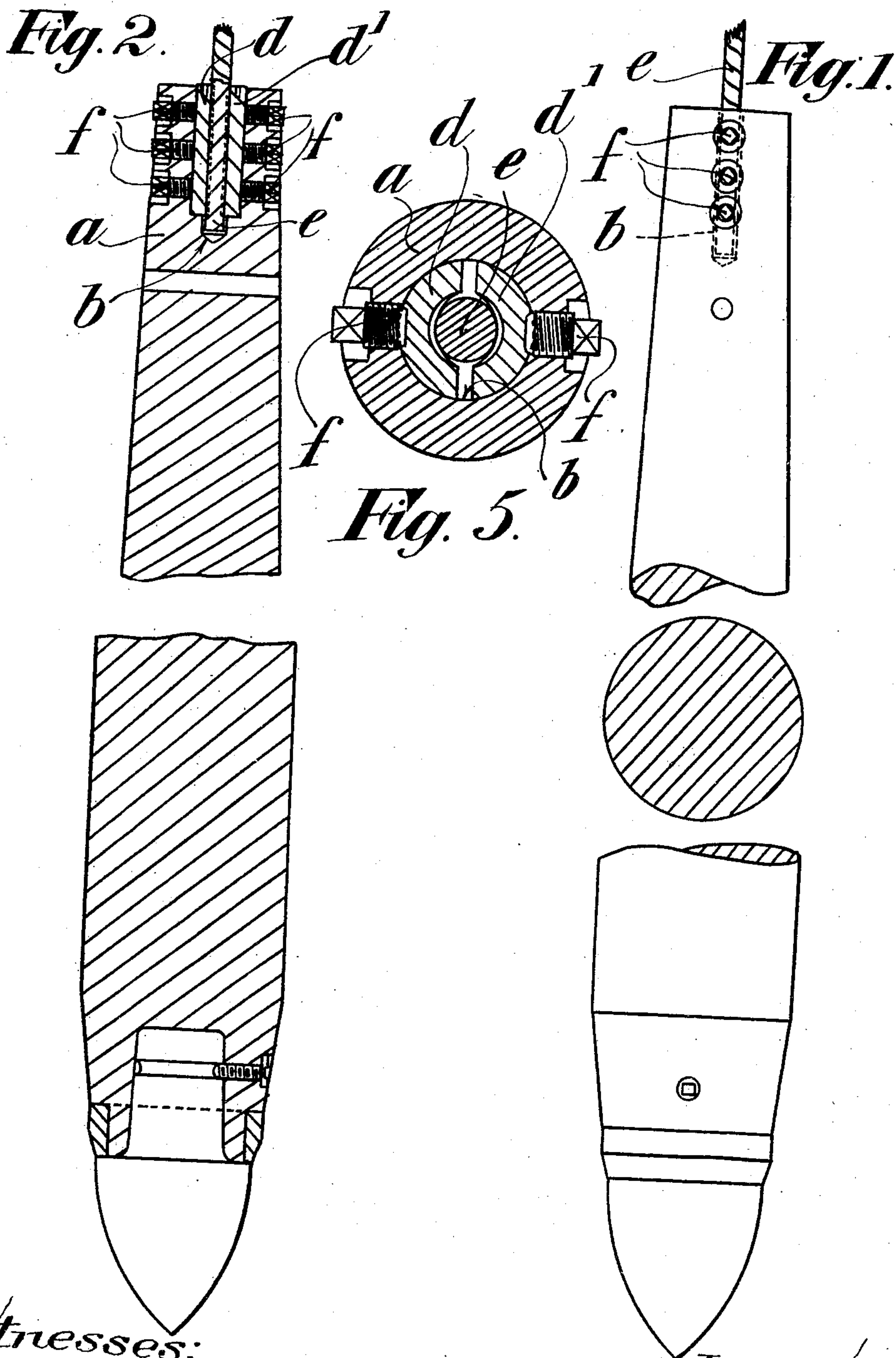
F. LOBNITZ.

PATENTED FEB. 25, 1908.

CUTTER OF ROCK CUTTING APPARATUS.

APPLICATION FILED JUNE 11, 1907.

2 SHEETS—SHEET 1.



Witnesses:
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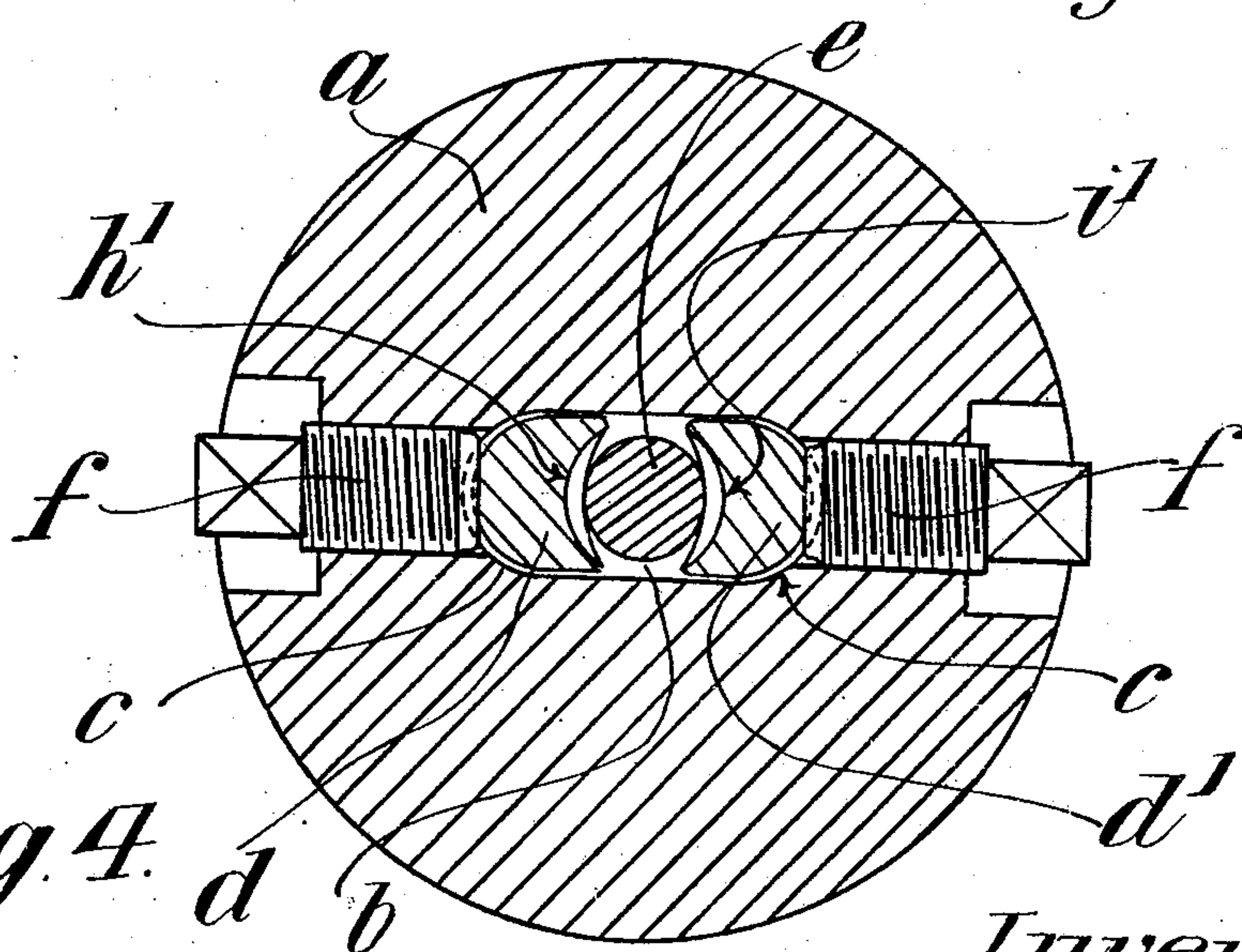
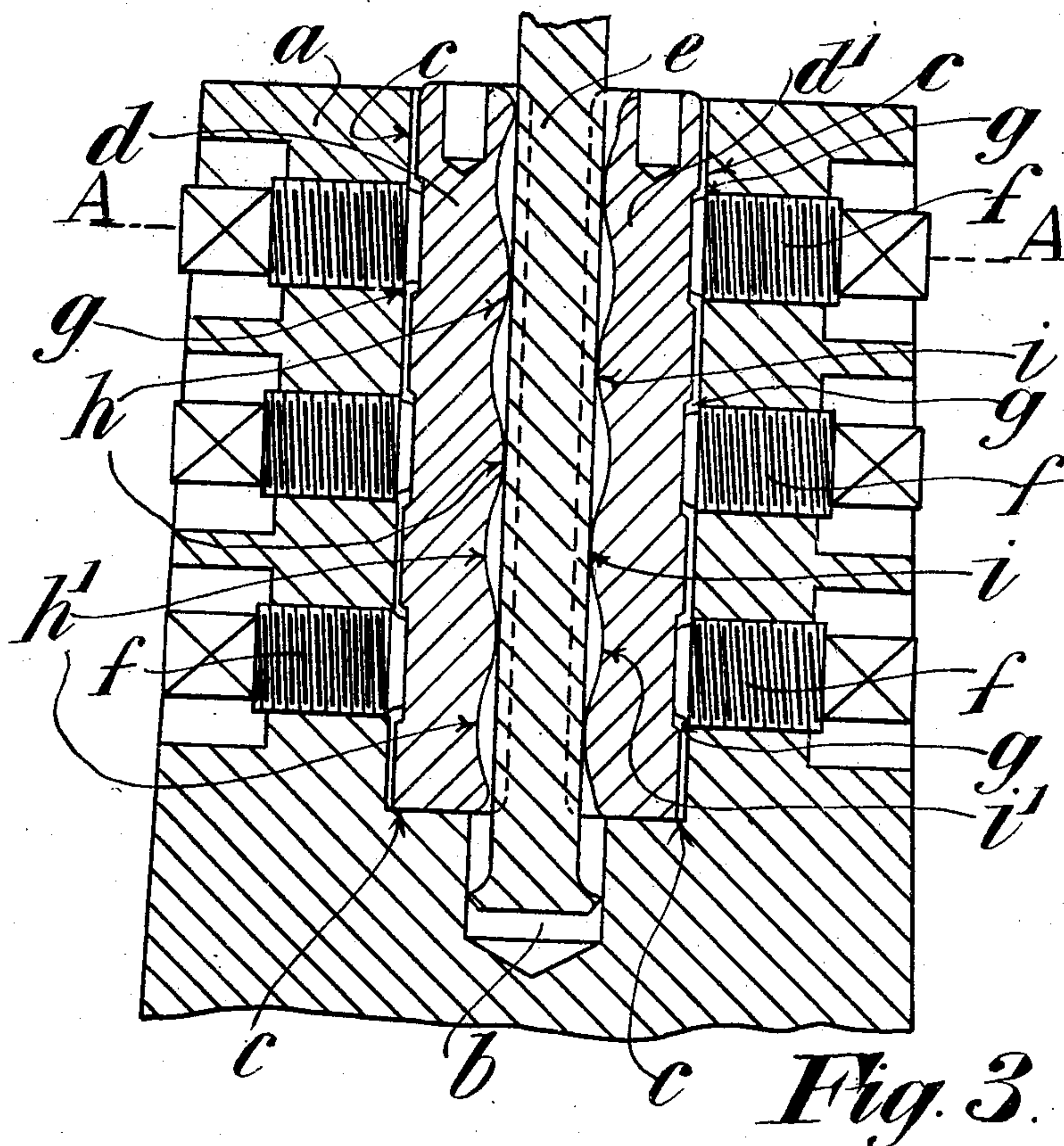


Fig. 4.
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UNITED STATES PATENT OFFICE.

FRED LOBNITZ, OF RENFREW, SCOTLAND.

CUTTER OF ROCK-CUTTING APPARATUS.

No. 880,227.

Specification of Letters Patent.

Patented Feb. 25, 1908.

Application filed June 11, 1907. Serial No. 378,338.

To all whom it may concern:

Be it known that I, FRED LOBNITZ, residing at Clarence House, Renfrew, Scotland, a subject of the King of Great Britain, have invented certain new and useful Improvements in the Cutters of Rock-Cutting Apparatus, of which the following is a specification.

This invention relates to the cutters of apparatus for breaking up or cutting rocks, boulders, hard earth, and such like whether under water or on dry land and generally known as "rock cutting apparatus." The object of the present invention is to provide simple and efficient means for connecting the hoisting rope of the apparatus to the cutter.

Under this invention the upper end of the heavy metal cutter is made with a hole in which grippers are fitted and the end of the rope is inserted in the hole and between the grippers which latter are then tightened up upon the rope by means of pinching screws engaging in recesses in the grippers. The surfaces of the grippers in contact with the rope are ridged or waved so as to bite the rope and hold it securely.

I will now proceed to particularly describe my invention with reference to the drawings annexed.

Figure 1 is an elevation showing the cutter (partly broken away) with my improvements applied thereto. Fig. 2 is a section of the cutter. Fig. 3 is an enlarged vertical section of the upper end of the cutter and showing the improved connection. Fig. 4 is a cross section on the line A, A, Fig. 3. Fig. 5 is a section showing a modification.

The upper end *a* of the cutter is bored with a central hole *b* having lateral recesses or enlargements *c, c*, of semi-circular shape. Fitted in the recesses are grippers *d, d*¹, which can be caused to grip or bite the end *e* of the usual hoisting rope by means of pinching screws *f*. As will be seen there may be six pinching screws, three acting on each gripper. Each screw, at its outer end, has a head capable of being easily turned by a key and, at its inner end, it is flattened and adapted to engage with a suitable recess *g* in the back of the gripper. The face of the gripper *d* has projecting parts or ridges *h* and depressed parts *h*¹ while the gripper *d*¹ has similar projecting parts and depressions *i, i*¹, but the projections of the one gripper are not arranged opposite those of the other but are

arranged opposite the depressions so that the rope, when it is tightly gripped, is bent in serpentine fashion, between the faces of the grippers and thereby securely held.

When it is desired to withdraw the rope end all that is necessary is to simply slacken the screws to such an extent as to release the rope. It will be seen that the grippers are so arranged that, when the screws are drawn back, they can be easily inserted in the cutter or withdrawn therefrom.

As shown at Fig. 5 the hole *b* may be a round one without enlargements *c, c*, and of course the grippers *d, d*¹ would be shaped accordingly.

Having now fully described and ascertained my said invention and the manner in which it is to be performed, I declare that what I claim is:—

1. A metal cutter having a hole in its upper end, movable grippers seated in said hole and having recesses in the back, and two sets of screws horizontally arranged in the cutter and adapted to be seated in said recesses, said screws forming the sole means of connection between the cutter and said grippers.

2. A metal cutter having a hole in its upper end, movable grippers seated in the hole and having recesses in the back thereof, laterally extending ridges on the face of said grippers, and screws engaging said cutter and seated in said recesses for causing said grippers to bite the rope.

3. A metal cutter having a hole in its upper end, movable grippers seated in said hole, laterally extending ridges on the face of said cutter arranged in staggered order with respect to each other, and screws adapted to actuate said grippers to cause the same to grip the rope.

4. A metal cutter having a hole in its upper end, movable grippers seated in said hole and having recesses in the back thereof, laterally extending ridges on the face of said grippers and arranged in staggered order with respect to each other, and two sets of horizontally arranged screws engaging with the cutter and adapted to be seated in said recesses for controlling said grippers.

5. A metal cutter having a central hole at its upper end and two enlargements one at each side of the hole, grippers corrugated on the face and recessed on the back, and two

sets of screws arranged horizontally in the cutter their outer ends being in countersunk holes or recesses in the cutter.

5 6. A metal cutter having a central hole at its upper end and two enlargements one at each side of the hole a gripper in each enlargement, raised parts and depressions on each gripper, shallow recesses in each gripper, and sets of screws arranged at each side of

the cutter and adapted to engage said re- 10 . cesses the heads of the screws projecting into recesses made in the cutter.

In testimony whereof I affix my signature in presence of two witnesses.

FRED LOBNITZ.

Witnesses:

JAMES A. WOOD,
JAMES TYRE.