

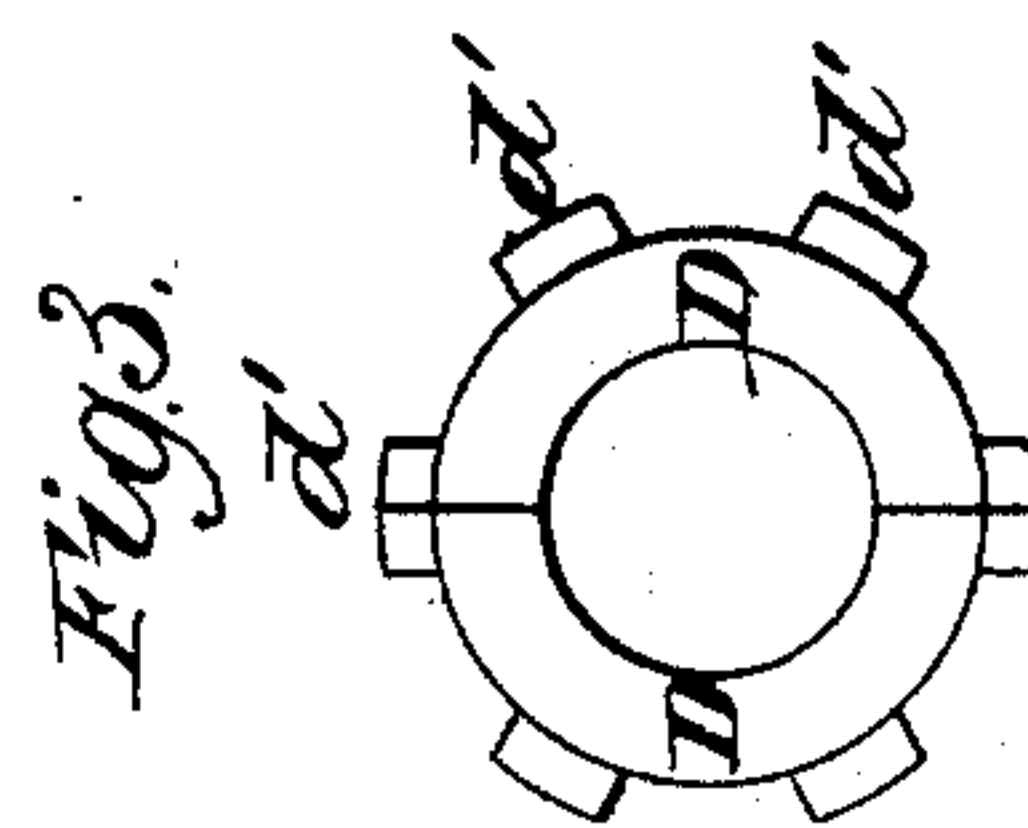
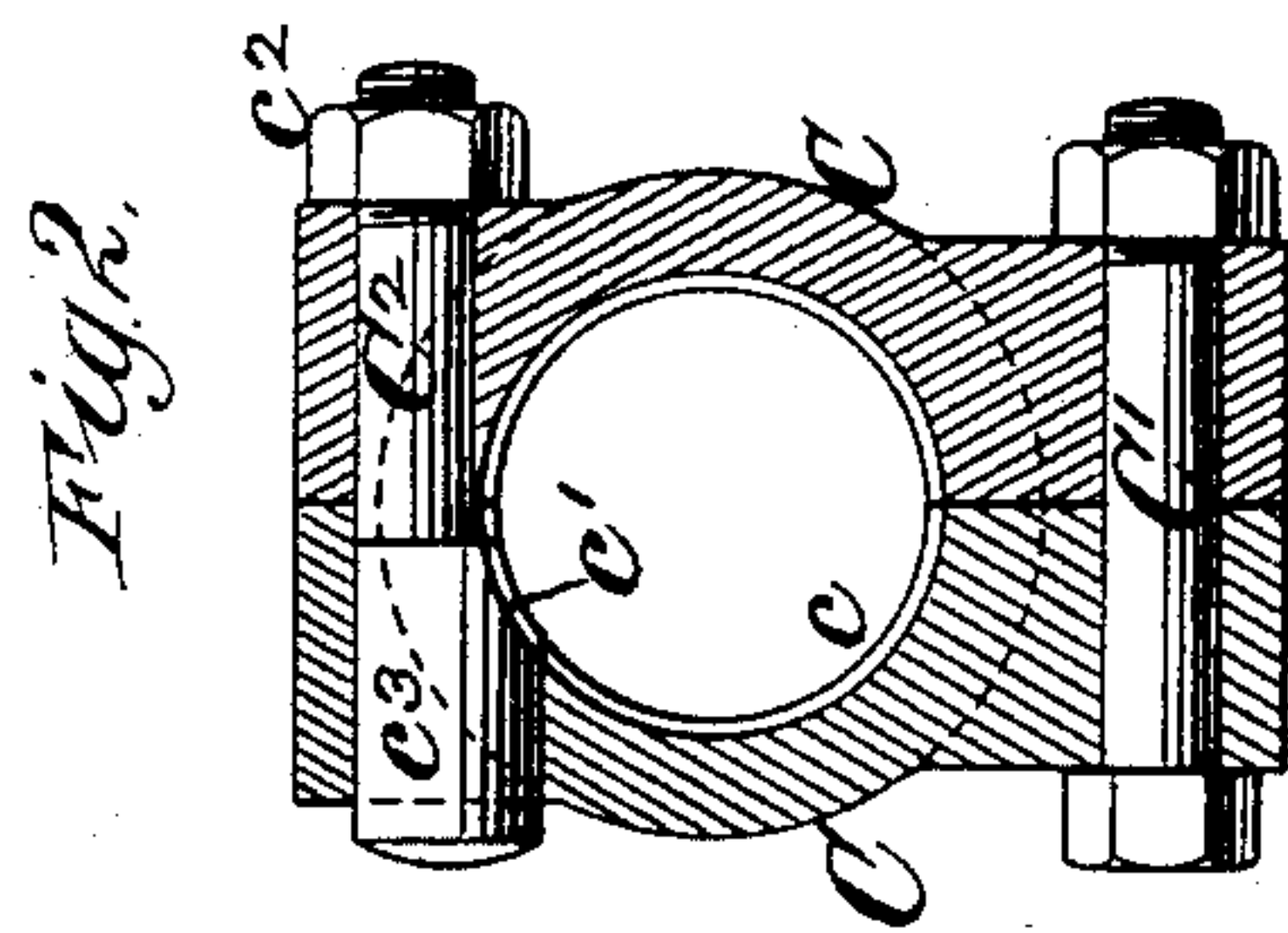
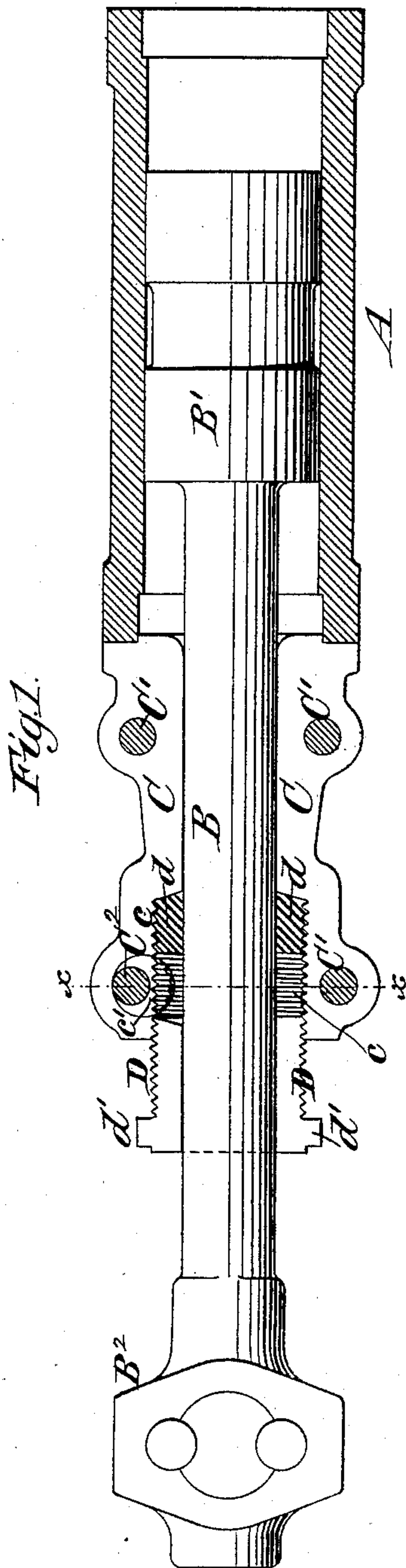
(No Model.)

J. TARN & G. A. SCHURY.

ROCK DRILL STUFFING BOX.

No. 370,990.

Patented Oct. 4, 1887.



Witnesses

O. Sunagren
Emil Herter,

Inventors:
John Tarn
Gustavus A. Schury
by their attys
Brown & Hall

UNITED STATES PATENT OFFICE.

JOHN TARN AND GUSTAVUS A. SCHURY, OF TARRYTOWN, ASSIGNORS TO
GEORGE R. CULLINGWORTH, OF NEW YORK, N. Y.

ROCK-DRILL STUFFING-BOX.

SPECIFICATION forming part of Letters Patent No. 370,990, dated October 4, 1887.

Application filed May 18, 1887. Serial No. 238,591. (No model.)

To all whom it may concern:

Be it known that we, JOHN TARN and GUSTAVUS A. SCHURY, both of Tarrytown, in the county of Westchester and State of New York, have invented a new and useful Improvement in Devices for Locking the Glands of Rock-Drill Stuffing-Boxes, of which the following is a specification.

In rock-drills the piston-rod works through a stuffing-box in the lower head, and the lower head and lower gland which are fitted to the stuffing-box are frequently divided axially or made in sections, so as to be applied laterally to a piston-rod having formed integral with it at one end the piston and at the other end the chuck to receive the drill or bit. Owing to the rough usage and great shock which these machines receive in use, the stuffing-box gland constantly works loose; and the object of our invention is to provide a simple and effective means of locking or clamping the gland in place after it has been adjusted to proper position to confine the packing.

Our invention consists in the combination, with the piston-rod and the lower head of a rock-drill constructed with a stuffing-box, and a gland screwed into the box, both the head and the gland being divided axially, of bolts for securing together the sections of the head, and one of which is constructed with a shoulder forming a part of the bore, and in which the screw-thread of the box is continued, and which bears with a clamping action on the periphery of the gland.

In the accompanying drawings, Figure 1 is a longitudinal section of such parts of a rock-drill as are necessary to illustrate our invention. Fig. 2 is a transverse section on about the plane of the dotted line *xx*, Fig. 1; and Fig. 3 is an end view of the divided gland.

Similar letters of reference designate corresponding parts in the several figures.

A designates the cylinder, and B the piston-rod, at one end of which it has formed integral with it the piston B', and at the other end of which is an integral enlargement, B², constituting the chuck in which the drill or bit is secured. The lower head of the cylin-

der A is axially divided, or is composed of two semicircular sections, C C, secured together by transverse bolts C' C². In the end of the lower head is formed a stuffing-box, *c*, screw-threaded to receive a gland, D, and in which packing *d* is pressed by the gland. The gland D is also axially divided, as shown in Fig. 3, and may have radial projections or spurs *d'*, with which a wrench may be engaged for turning it into the stuffing-box *c*.

The bolt C², which constitutes one of the bolts for securing together the sections of the head C is formed with a shoulder, *c'*, as best shown in Fig. 2, and the hole through which this bolt is inserted is so near the bore of the stuffing-box that a portion of the bolt is cut away to form the shoulder, as represented best in Fig. 2, and in reality forms a part of the bore or circular wall of the stuffing-box. The thread, which is cut within the stuffing-box *c*, is continued in the shoulder *c'* of the bolt, and the screw-thread of the gland D engages the thread of the bolt as well as the thread of the stuffing-box. After the gland has been turned up to the required position into the stuffing-box *c*, the nut *c'* upon the bolt C² is tightened, and the shoulder *c'* is thereby caused to exert a clamping action on the exterior of the gland, which prevents the gland from being turned by the jar and shock to which the machine is subjected in use. As here represented, the portion *c'* of the bolt C², which is above the shoulder *c'*, is of larger diameter than the portion below the shoulder and is eccentric to the latter portion; hence there is no tendency of the bolt to turn in its hole when a wrench is applied to the nut *c'*, and the shoulder *c'* is obtained where it is desired, and there is no shoulder on the opposite side of the bolt C².

By our invention we provide a very simple device for preventing the turning or unscrewing of the gland, and the clamping-bolt C² may also perform service in holding together the sections C of which the lower head is composed.

What we claim as our invention, and desire to secure by Letters Patent, is—

The combination, with the piston-rod and the lower head of a rock-drill, and a gland screwed into the box, both the head and gland being divided axially, of bolts for securing
5 together the sections of the head, and one of which, C², is constructed with a shoulder forming a part of the bore, and in which the screw-thread of the box is continued, and which bears

with a clamping action on the periphery of the gland, substantially as herein described.

JOHN TARN.

GUSTAVUS A. SCHURY.

Witnesses:

WARREN C. BROWN,

JNO. F. HOCTOR.