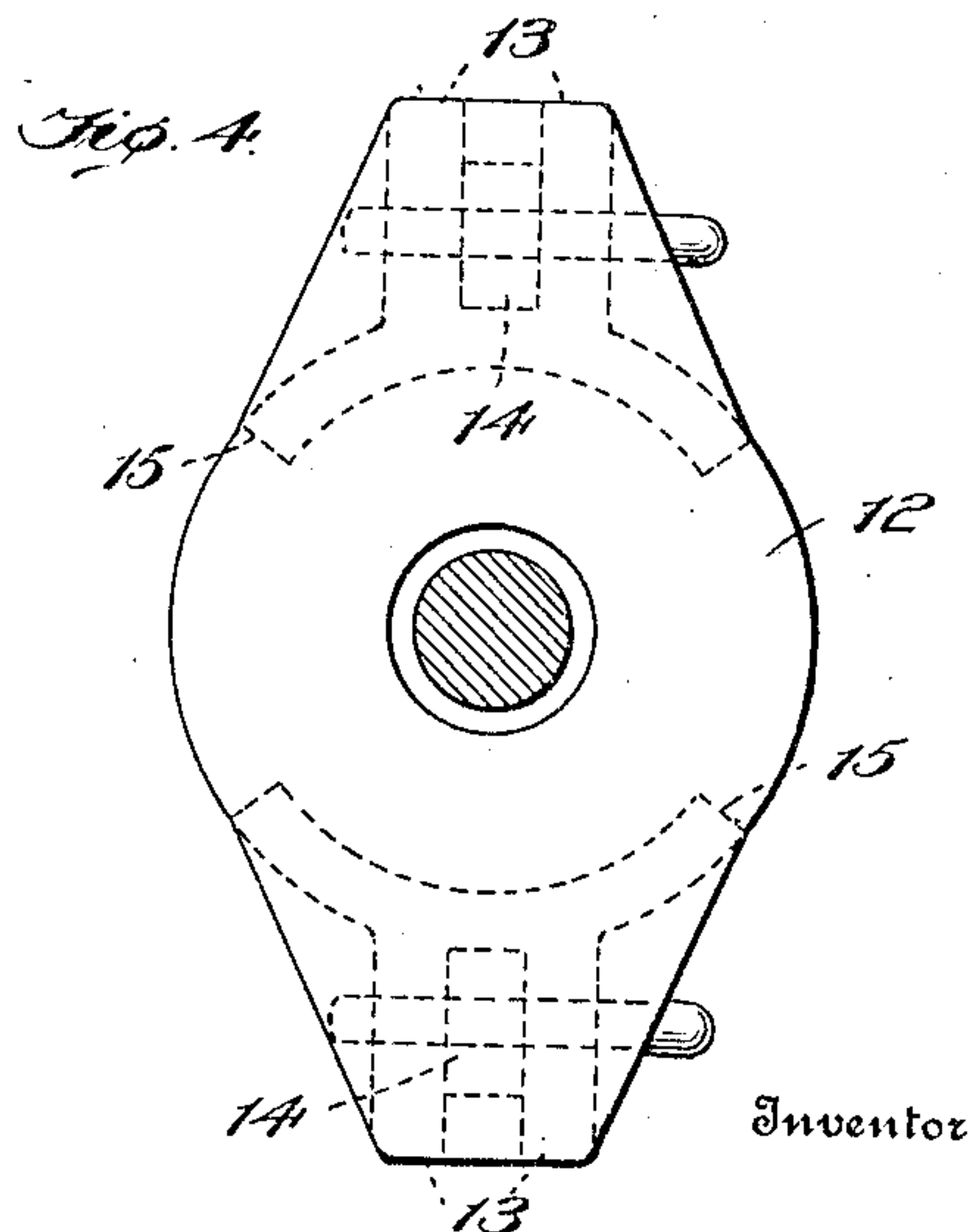
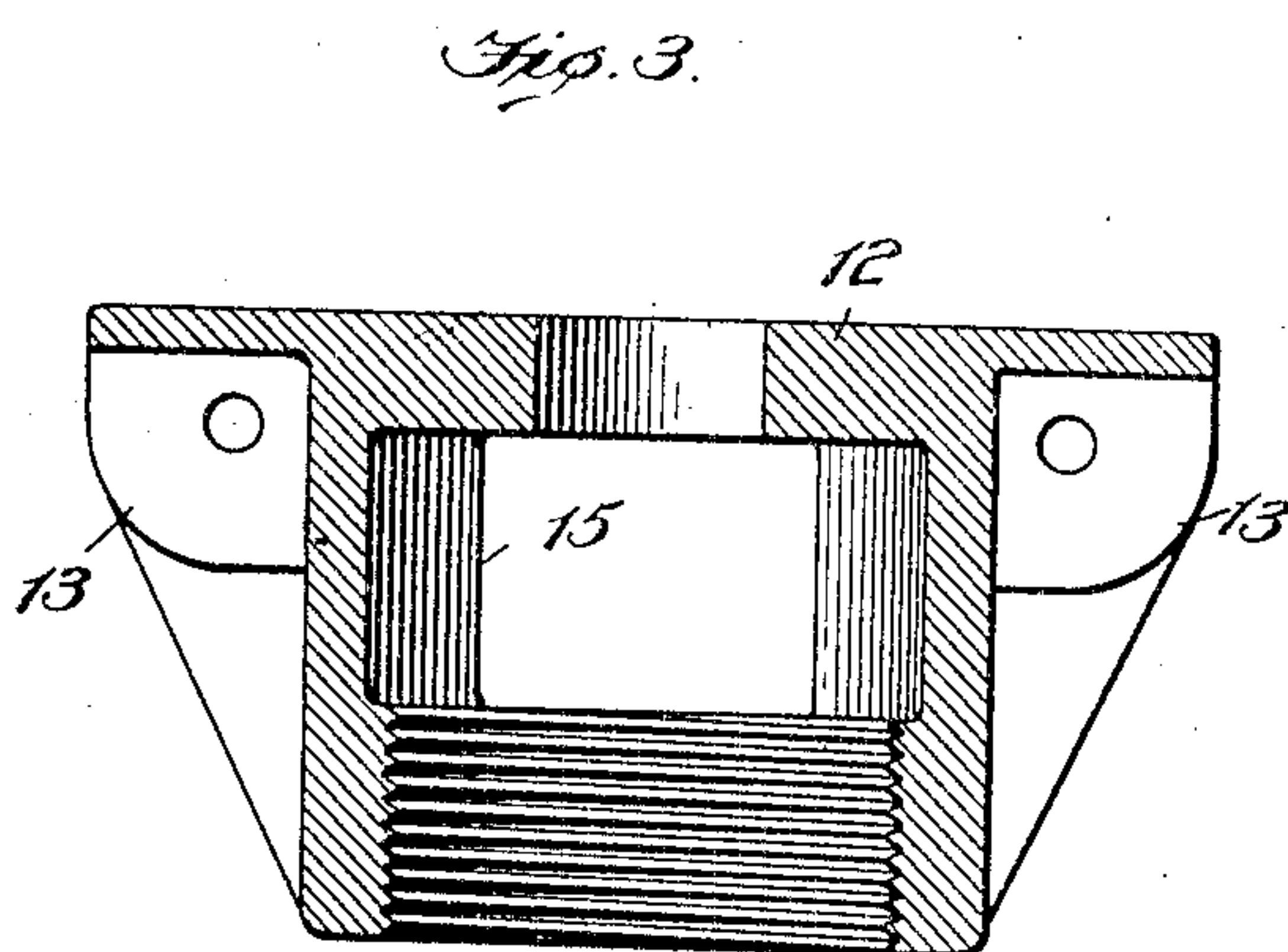
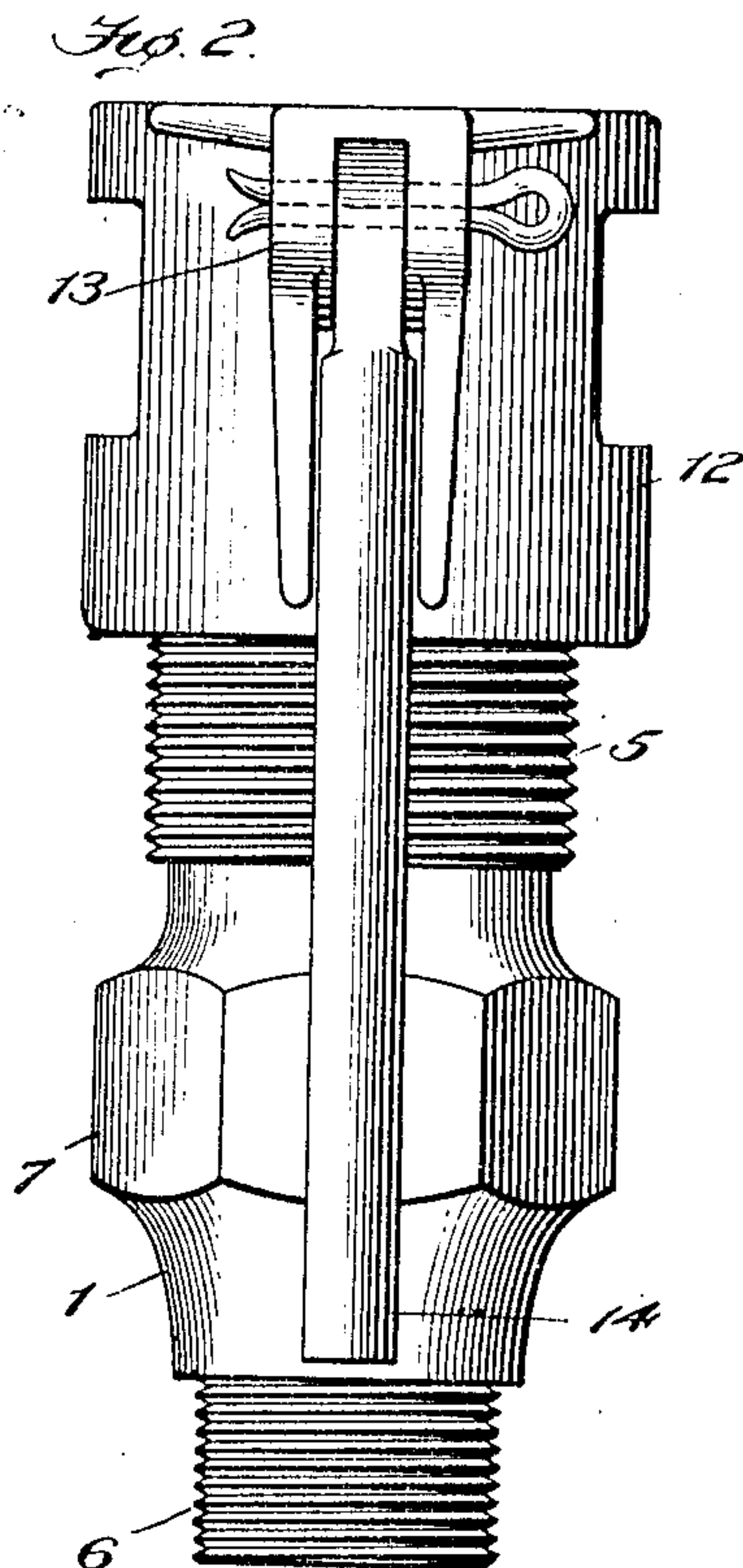
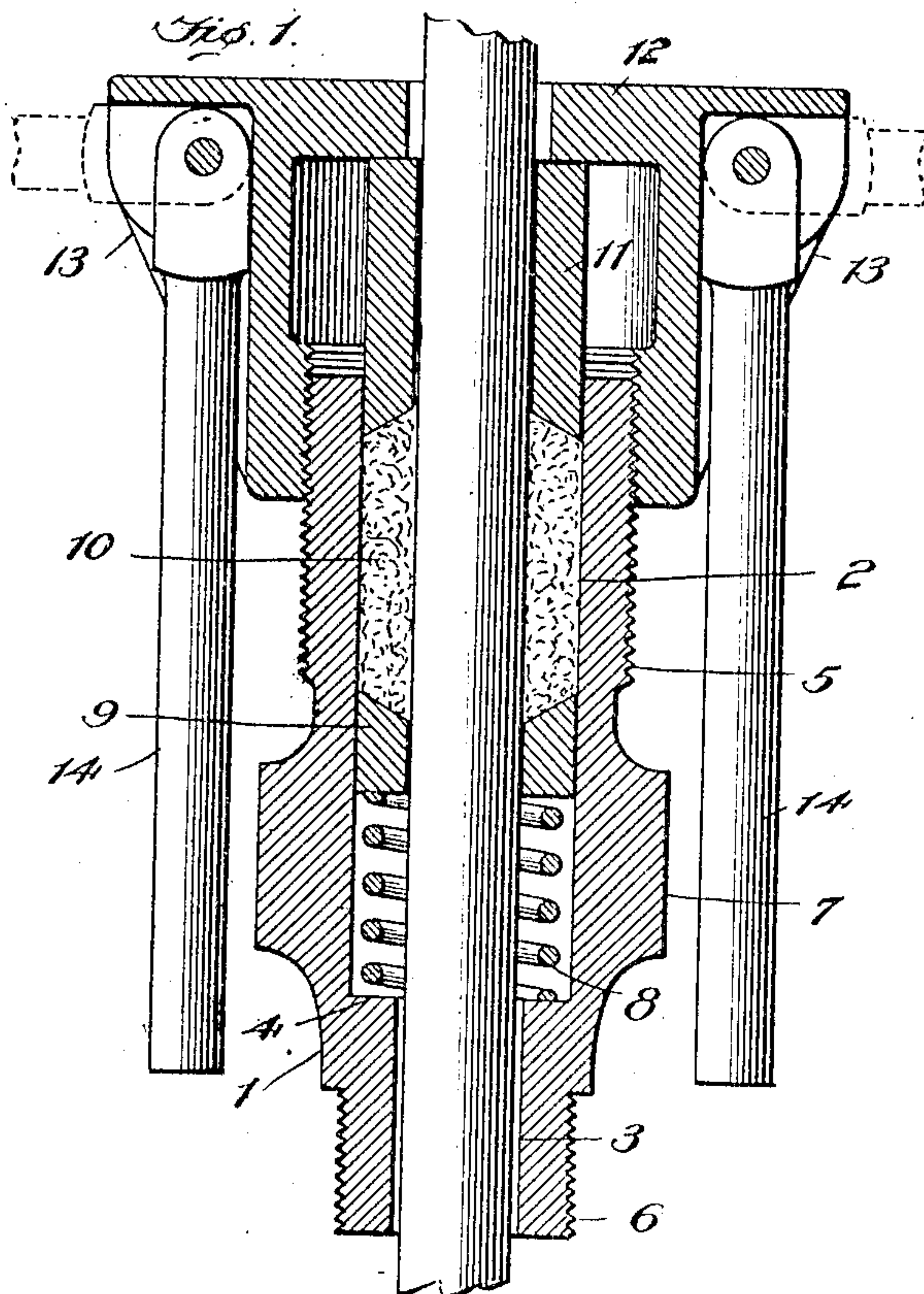


No. 888,166.

PATENTED MAY 19, 1908.

A. G. HEGGEM.
STUFFING BOX.

APPLICATION FILED FEB. 15, 1908.



Witnesses

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STUFFING-BOX.

No. 888,166.

Specification of Letters Patent.

Patented May 19, 1908.

Application filed February 15, 1908. Serial No. 416,082.

To all whom it may concern:

Be it known that I, ALFRED G. HEGGEM, a citizen of the United States, residing at Coraopolis, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Stuffing-Boxes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention, while relating generally to stuffing boxes for piston and similar rods, has been especially devised for use with pump-rods employed in connection with the operation of oil and Artesian wells, and has for its several objects the provision of means for controlling the amount of the pressure of the gland upon the packing, the prevention of any disarrangement of the alinement of the follower-gland and rod during the adjustment of the pressure, the provision of means whereby the position of the follower gland with relation to the follower-head, packing and pump-rod may be manually adjusted when required, the simplification and strengthening of the follower-head, and, finally, the provision of means whereby wrenches and like tools commonly employed for adjusting the follower-gland may be dispensed with.

It is well understood by those employing this class of devices that any lack of alinement between the pump-rod or piston-rod and the follower-gland of the stuffing box, or any excess of pressure of the follower-gland on the packing, and of the packing on the rod, will result, not only in loss of efficiency, but also in excessive wear of the packing and permanent injury to the rod. To obviate these conditions I combine with a stuffing-box for the reception of the packing and a follower-head therefor, said follower-head having hand-holes to permit the manipulation and adjustment of an independent follower-gland, and said parts being adjustably connected by concentrically disposed screw-threads, a follower-gland independent of the follower-head but controlled thereby, a packing, a ring support for the packing and a spring interposed between the ring and stuffing-box, whereby not only will the pressure of the fluid to be packed act with, and not against, the spring, but the adjustment of the gland to secure the desired pressure on

the packing, and to take up wear may be made without disturbing the alinement of the follower-gland and rod: and such a combination of elements in substantially the relation noted embodies one feature of my invention.

In order to make provision for the ready adjustment of both the follower-head and follower-gland, when required, the follower-head is provided at opposite points with ears or lugs whereon are pivoted levers or arms which normally hang close to the stuffing-box, said lugs or ears being extended downwardly to strengthen the follower-head and to thereby permit the formation of hand holes in the walls of the head for the inspection and manipulation of the follower-gland: and such matters embody further features of my invention.

In the drawing accompanying this specification and illustrative of one form of device embodying my invention, Figure 1 is a longitudinal central section of the device; Fig. 2 is a side elevation thereof; Fig. 3 is a longitudinal central section of the follower-head; and Fig. 4 is a top plan view of the follower-head.

Like symbols refer to like parts wherever they occur.

I will now proceed to describe my invention more fully so that others skilled in the art to which it appertains may apply the same.

In the drawings, 1 indicates the stuffing-box having two concentric chambers, the upper, 2, being for the reception of the packing and the lower, 3, being designed for the passage of the piston rod or pump rod R. The chamber 3 of such diameter as will preclude any contact between the box and rod, but is of sufficiently less diameter than chamber 2 to afford a shoulder or seat 4 for the reception of a spring, or of a ring support for the packing when the spring is omitted.

Both ends of the box 1 are threaded, the upper end, as at 5, for the reception of a follower-head adjustable thereon, and the lower end, as at 6, for attaching the stuffing-box to the well-tubing, or its equivalent. Immediately above the threaded portion 6, the box may be provided with a polygonal wrench-surface 7.

Within the chamber 2 of the box 1, and supported on the shoulder or seat 4 thereof, is preferably located a coiled spring 8, or other equivalent spring, such as rubber or

other resilient material; but, under some conditions, the spring 8 may be entirely omitted if desired. Immediately above the spring 8, when the same is used, is a ring 9 which is preferably concave on its upper surface to more effectively support and act upon the usual, or any suitable, packing material 10. Projecting into the upper end of the chamber 2 and bearing directly on the packing 10 is the annular follower-gland 11 which is independent of, or separate from, the follower-head, and which is preferably concave at its lower end where it presses upon the packing.

12 indicates the follower-head. It is formed as a separate member, and is provided with a suitable opening for the passage of the rod R. This follower-head 12 and the stuffing-box 1 are adjustably connected by means of the screw threads 5 and similar threads formed upon the interior of said head, said threads being concentric with the pump rod openings of the head and stuffing box.

13 indicates lugs or ears arranged on opposite sides of the follower-head 12. Pivoted on these lugs are levers or arms 14, which normally hang close to the sides of the stuffing-box 1, but which may be raised to the horizontal position and used in lieu of a wrench for rotating the head on the box to apply the desired pressure through the follower-gland 11 to the packing 10. When in use the arms 14 are prevented from rising above the horizontal position by ledges cast on the head. The lugs or ears 13 are preferably extended downward on the follower-head to the lower end thereof so as to transfer all stresses from the arms or levers 14 directly to the threaded portion of the follower-head. This extension of the lugs 13 also serves to reinforce the follower-head so

that large hand-holes 15 may be formed therein at opposite points intermediate of the levers or arms, such construction not only permitting the follower-gland to be inspected, but also permitting it to be manipulated to insure the proper relation of follower-head, packing and pump-rod, to the end that no cramping of the latter can occur.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. The combination with a stuffing-box having screw-threads, of a follower-head provided with hand holes and having screw-threads which are adapted to engage the threads upon the stuffing-box to thereby adjustably connect said members, an independent follower-gland acted on by the follower-head, and a yieldingly supported packing acted on by the follower-gland.

2. The combination with a stuffing-box and its follower-gland and packing, of a follower-head provided with pivoted arms, said stuffing-box and follower-head being adjustably connected by screw-threads formed on each.

3. The combination with a stuffing-box having a longitudinal opening therethrough, of a follower-gland independent of the follower-head, a packing, and a follower-head having a pivoted lever and a hand-hole, said follower-head and stuffing-box being adjustably connected by screw-threads formed concentric with the opening through the stuffing-box.

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

ALFRED G. HEGGEM.

Witnesses:

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