C. HELM.

AUTOMATIC STUFFING BOX.

APPLICATION FILED DEC. 7, 1912.

1,057,150. Patented Mar. 25, 1913.

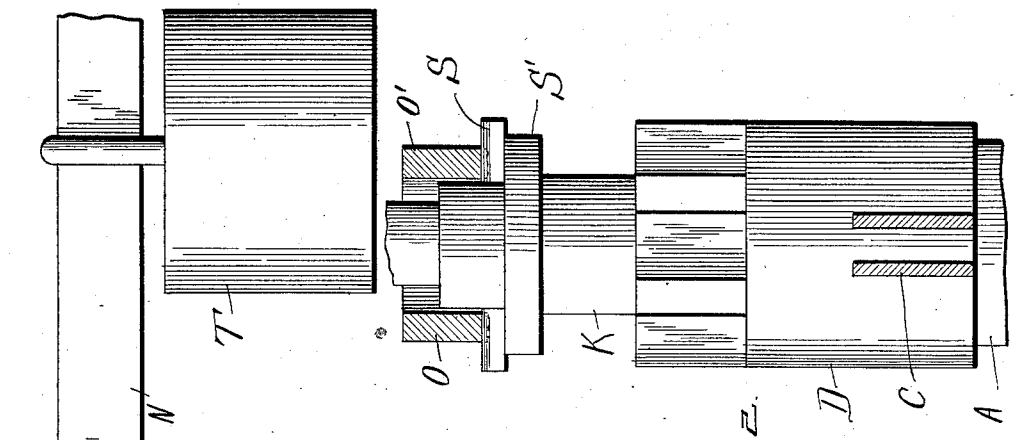

FIG. 2.

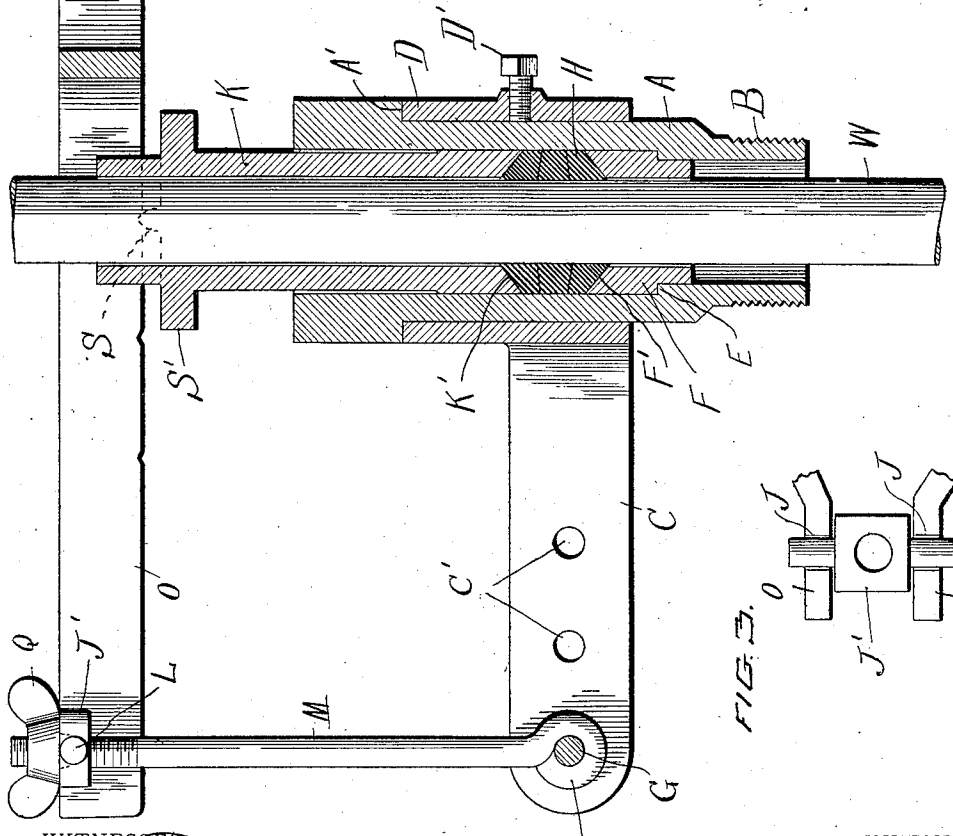

FIG. 1.

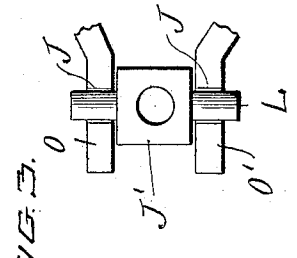

FIG. 3.

WITNESSES

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AUTOMATIC STUFFING-BOX.

1,057,150. Specification of Letters Patent. Patented Mar. 25, 1913.

Application filed December 7, 1912. Serial No. 735,503.

To all whom it may concern:

Be it known that I, CHRISS HELM, a citizen of the United States, residing at Oblong, in the county of Crawford and State of Illinois, have invented certain new and useful Improvements in Automatic 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in stuffing boxes for pumps, etc., and comprises a simple and efficient device of this nature so arranged that the packing may be held under pressure to cause the water tight joint and so arranged that the packing may be conveniently replaced when worn.

The invention comprises various details of construction and combinations and arrangements of parts which will be hereinafter fully described, shown in the accompanying drawings and then specifically defined in the appended claim.

My invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a vertical central sectional view through a packing, parts being in elevation. Fig. 2 is an enlarged detail view in elevation, partially in section, in Fig. 3 is a top plan view of a detail.

Reference now being had to the details of the drawings by letter, A designates a hollow casing having a threaded circumference B for attachment to the pipe of a well and a bracket member C has a collar D at one end adapted to surround said casing and the upper end of the collar to rest against a shoulder A′ formed in the circumference of the casing A. A set screw D′ is mounted in a threaded aperture in the collar and bears frictionally against the casing A to hold said collar in a fixed relation. An annular shoulder E is formed in the inner surface of the casing, and F designates a cylindrical, open-ended shell having a shoulder resting upon the shoulder E and its upper surface flares as at F′ and is adapted to support the packing H. A tubular shell K is adapted to telescope within the casing A and its lower end is beveled or flaring as at K′ and is adapted to serve as a plunger to bear against the upper portion of the packing.

A lever N, which is forked, having two arms O and O′, the ends of which are shown in Fig. 3 of the drawings, is fulcrumed upon a tapering edged bar S, resting upon the flange S′ of the shell K and which member S passes through registering apertures in the contracted upper end of said shell K. A weight T is supported by said lever N and the forked ends of the latter are recessed as at J for the reception of the trunnions or pinions L which project from the apertured block J′ which receives the upper threaded end of a rod M, the lower end of which has an eye M′ engaging a pin G which may be held in one or another of the apertures C′ formed in the bracket arm C. A winged nut Q is fitted to the upper threaded end of a rod M and is adapted to bear against the upper surface of the block J′.

The operation of my automatic stuffing box is as follows:—The parts are assembled as shown in Fig 1 of the drawings and the weighted lever bearing against the shell K will cause a constant pressure upon the packing intermediate the two flaring ends of the shells K and F, thus causing the same at all times to make a water tight joint between the same and the stem W of the pulp valve. When it is desired to replace the packing, it may be conveniently done by disconnecting the weighted lever, afterward removing the shells K and F. After the packing has been adjusted in place, the shells may be again placed within the casing and the parts readily replaced to assume the position shown in Fig. 1 of the drawings.

What I claim to be new is:—

An automatic hinge for closing a tight packing joint comprising a casing having a circumferential shoulder, a collar in which said casing telescopes and against the top of which said shoulder contacts, forming a support for the casing, the inner wall of the casing provided with an annular shoulder, a shell with an annular shoulder resting upon the shoulder within said casing and having a contracted end extending below the shoulder within the shell, a second shell telescoping the casing and provided with lugs, said collar being provided with an integral arm which is apertured, a

weighted lever having a forked end, the under edges of the arms of which are notched and fulcrumed upon said lugs, a pin in an aperture in said arm, a rod with an eye pivoted to said pin and its upper end threaded, an apertured block having pins projecting therefrom and seated in grooves formed in the upper edges of the forked end of said lever, and a winged nut fitted to the threaded rod, as set forth.

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

CHRISS HELM.

Witnesses:
C. W. MARKMAN,
S. F. ODEN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."