(No Model.)

R. NEILL.

Packing Screw.

No. 231,925. Patented Sept. 7, 1880.

Fig. 1.

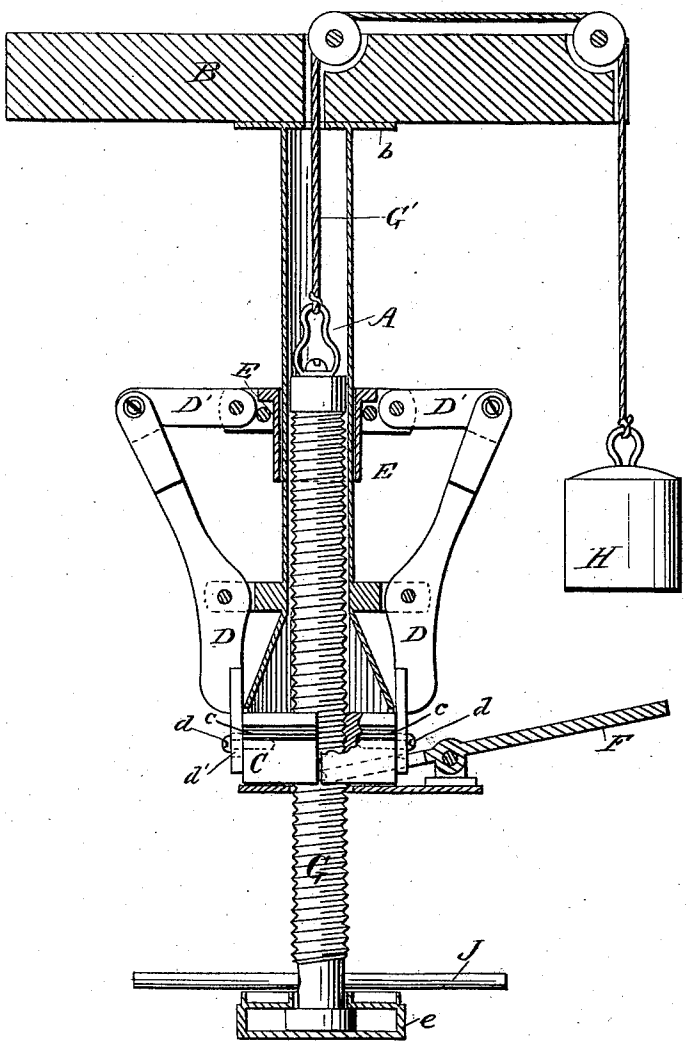
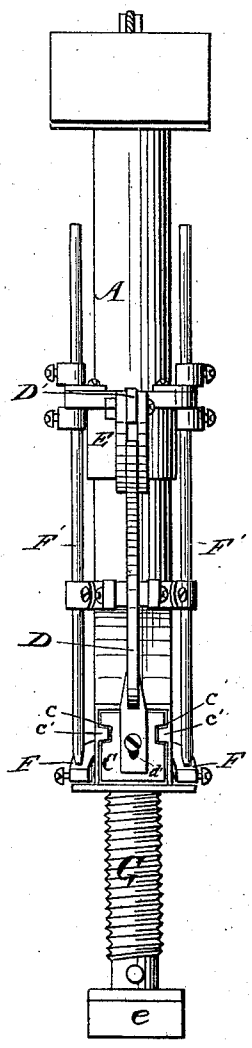


Fig. 2.



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UNITED STATES PATENT OFFICE.

ROBERT NEILL, OF CHICAGO, ILLINOIS.

PACKING-SCREW.

SPECIFICATION forming part of Letters Patent No. 231,925, dated September 7, 1880.

Application filed May 31, 1880. (No model.)

To all whom it may concern:

Be it known that I, ROBERT NEILL, of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Packing-Screws, of which the following is a specification.

My invention relates to packing-screws and machinery for operating the same, the object being to release the screw-shaft after the power used in packing has been applied, so that the screw may be quickly elevated for another application; and I attain the object by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 shows a vertical section of an upright barrel or hollow shaft, with a packing-screw and mechanism for locking and unlocking the same; and Fig. 2 is a side view, showing a plan of the same on a plane at right angles with the plane of Fig. 1.

Like letters of reference refer to like parts throughout both views.

A is an upright barrel or hollow shaft secured to a beam, B, in the ceiling of the packing-room. This barrel is enlarged at the bottom end to make room for a split nut, C, which is provided with grooves *c* in each side thereof adapted to slide upon guides *c'* attached on the inside guide of such enlarged part. Each half of the split nut is secured to a lever, D, fulcrumed, one on each side of the barrel, at a point above the split nut.

The manner of securing the levers to the halves of the split nut is by means of a screw, *d*, passing through an oblong opening, *d'*, in the bottom end of the lever and into the split nut, the oblong opening being necessary to permit a slight longitudinal movement of the screws therein in operating the levers.

The levers D are attached by hinges at their fulcrums, so as to move the halves of the split nut together by an outward movement of the upper ends of the levers and to move them apart by an inward movement of the upper ends of the levers toward the barrel. These movements of the levers are effected by means of two arms, D', which are hinged at their outer ends to the top ends of the levers, and at their inner ends to a collar, E, fitted around the upright barrel, and made to slide up and down thereon by means of a forked lever, F, which has rods F' pivoted to the lower end of each prong thereof and extending up on opposite sides of the barrel and connecting with the collar E, so that by means thereof the collar may be elevated and depressed by the down and up movements of the long end of the forked lever. The upward movement of the collar draws the upper ends of the levers D toward each other and spreads apart the halves of the split nut, and the downward movement of the collar causes an outward thrust of the arms, which spreads the upper ends of the levers D and presses the halves of the split nut together.

The screw-shaft G is hung on a cord, G', and balanced by a weight, H, which should be hung in the outside wall of the building, or otherwise disposed of, so as to be out of the way. The cord passes over anti-friction pulleys. When the halves of the split nut are thrown apart the screw-shaft is drawn up in the barrel by means of the counterbalancing-weight, and when thrown together the screw is ready to be applied and is screwed down by means of a hand-lever, J, upon the block *e*, causing it to bear down upon the article to be pressed.

A V-thread, male and female, on the shaft and in the nut works best in clasping and unclasping the nut upon the shaft; and, in order to hold the halves of the nut together, the levers D should be strong and securely fastened at the fulcrums by means of stout bolts, and the arms D' should be so arranged as to form right angles to the barrel when the halves of the split nut are pressed together, so that the thrust of said arms against the collar, when great power is applied to the screw, will have no tendency to push the collar up or down.

The barrel, with the enlarged lower end adapted to receive the split nut, and slotted fulcrums for the levers D to be attached, and top plate *b*, for securing the barrel to the beam, may be all cast solid in one piece; but the collar is best made in two parts, to be put around the barrel when so made, and held together by bolts, as the collar, if made otherwise, could not be slipped over either end of the barrel so enlarged.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

1. A packing-screw suspended in a barrel or hollow shaft, in combination with a split nut opened and closed by levers, substantially as and for the purpose specified.

2. In a packing-screw, the combination of levers D, split screw C, collar E, and arms D′, all arranged and operating substantially as specified.

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