

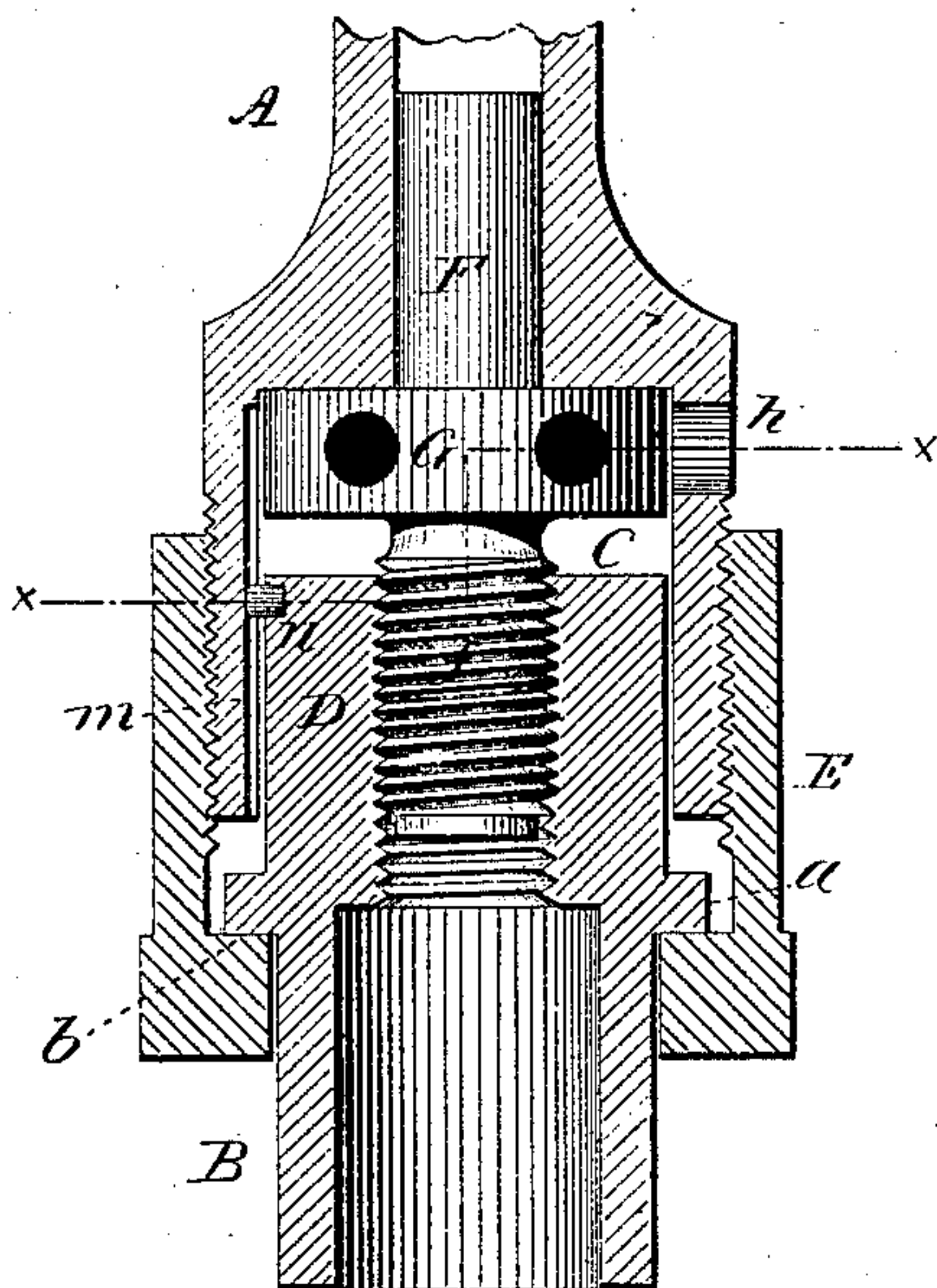
(No Model.)

W. E. HAWKINS.  
ADJUSTABLE PITMAN.

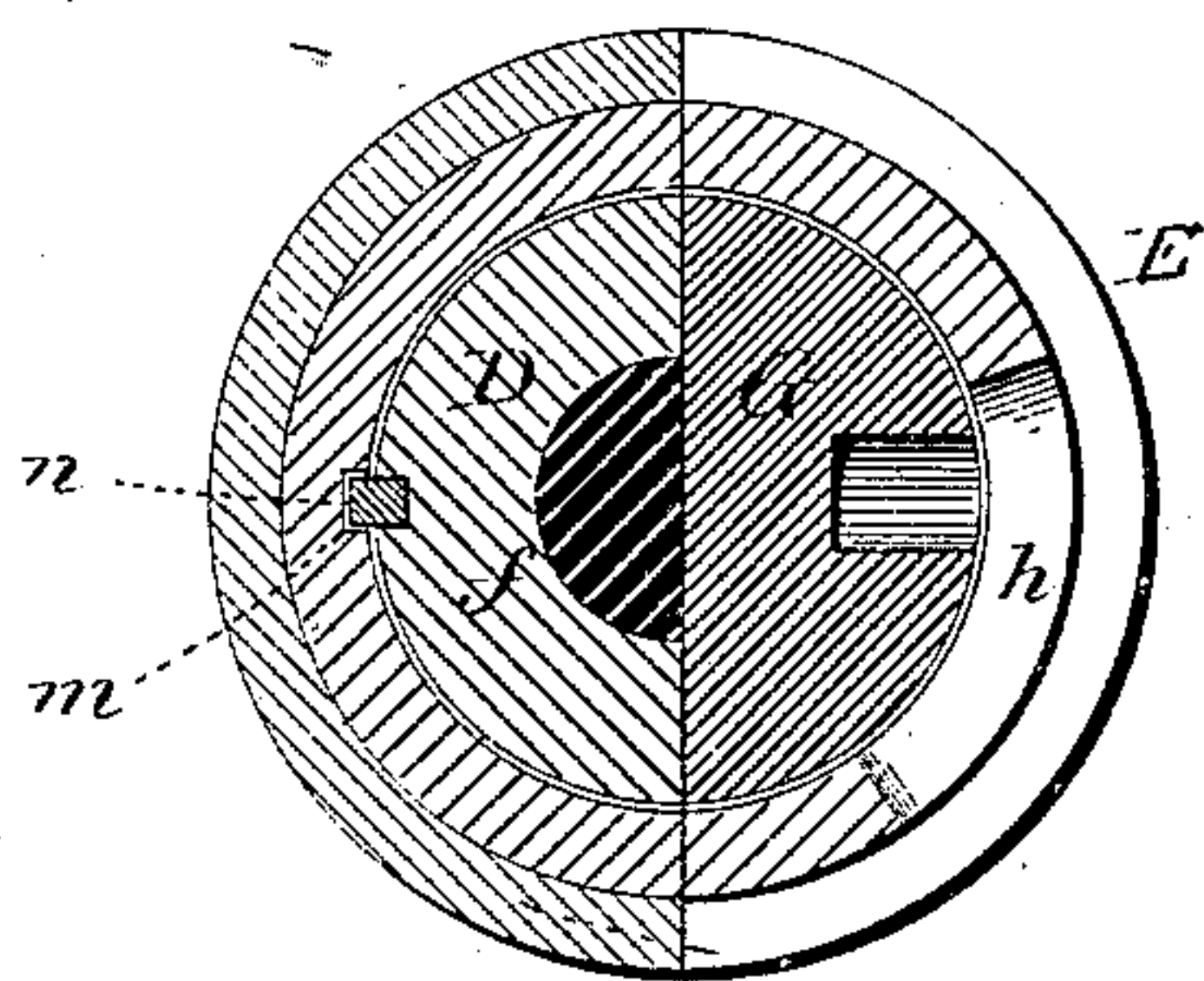
No. 257,004.

Patented Apr. 25, 1882.

*fig. 1.*



*fig. 2.*



*Witnesses.*

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# UNITED STATES PATENT OFFICE.

WESTEL E. HAWKINS, OF WALLINGFORD, CONNECTICUT, ASSIGNOR OF ONE-HALF TO WALTER J. LEAVENWORTH, OF SAME PLACE.

## ADJUSTABLE PITMAN.

SPECIFICATION forming part of Letters Patent No. 257,004, dated April 25, 1882.

Application filed March 13, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, WESTEL E. HAWKINS, of Wallingford, in the county of New Haven and State of Connecticut, have invented a new  
5 Improvement in Adjustable Pitmen; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same,  
10 and which said drawings constitute part of this specification, and represent, in—

Figure 1, a longitudinal or vertical central section; Fig. 2, a transverse section on line *xx*.

This invention relates to a device for adjusting the length of a pitman, with special reference to power-presses and other machinery in which nice adjustment of the length of the pitman is required.

In the use of power-presses for stamping and  
20 embossing purposes it is essential that the two parts of the die shall come into a certain or positive relation to each other, in order that the embossed surface may be sharply defined. In practice the method most generally used is  
25 to introduce pieces of thin metal or paper between either part of the die and its bed, whereby the relation of one part to the other is changed to the extent of such packing; but this is a difficult and tedious operation, because it necessitates the removing or loosening the dies from  
30 or in their seats in order to introduce the packing. Pitmen have been made adjustable as to length, whereby the extreme point of the thing moved could be varied or adjusted; but such constructions have been such as require a special  
35 adaptation of machine to them, or so complicated in their construction as to make them impracticable.

The object of this invention is a simple, easy,  
40 and positive adjustment made in the pitman itself; and it consists in constructing the pitman in two parts, the one part arranged to enter longitudinally into a corresponding cavity in the other part, with a set-screw between the  
45 two parts, arranged to move the one part to or from the other by the rotation of the screw, combined with a threaded nut or sleeve, which holds the two parts together when properly adjusted, as more fully hereinafter described.

50 In the illustration I show a pitman adapted for use in a power-press, which is sufficient to

enable those skilled in the arts to which this invention pertains to apply the invention to pitmen for other purposes.

A represents the part of the pitman which  
55 is attached to the crank or mechanism for imparting a reciprocating movement; B, the other part, which is attached to the slide or thing to be moved. The one part is constructed with a recess, C, in its end, and the other constructed  
60 with a shank, D, to fit into said recess and move freely therein. It is also constructed with a collar, *a*, at the lower end of the shank D. The part A is threaded upon the outside around the recess C, and over the end a sleeve, E, is  
65 fitted correspondingly threaded. This sleeve has an opening at its lower end, so as to pass freely on over the part B, to be screwed onto the other part, A, and is constructed with an  
70 internal shoulder, *b*, corresponding to the collar *a*, so as to come to a bearing against the said collar, as shown in Fig. 1.

F is a spindle, its upper end inserted into a corresponding cavity in the part A, its lower end, *f*, screw-threaded to fit a corresponding  
75 internal screw-thread in the shank D of the other part, B. The spindle is constructed with a collar, G, which stands in the recess C above the shank D. The spindle takes a solid bearing in the part A, either at its upper end, or  
80 may be on the collar C, as shown. Hence the thrusts which may come upon the reciprocating part, moved through the pitman, will come upon the spindle through the threaded portion in the part D and its bearing on the part A.  
85 If the spindle be turned in one direction, it will force the part B away from the part A to the extent of such turning, because the spindle has no longitudinal movement. If it be turned in the opposite direction, then the distance be-  
90 tween the bearing and the part A and the part B may be shortened to the extent of such turning.

Through one side of the part A, and in line with the collar G, is an opening, *h*, through  
95 which a lever may be inserted into holes in the collar G, as seen in Fig. 2, for the purpose of turning the screw or adjusting the spindle. Suppose the present condition of the parts to be as seen in Fig. 1, and it is desired to length-  
100 en the pitman; unscrew the sleeve F; then turn the spindle, as before described or other-



wise, to the supposed extent; then return the sleeve, which, bearing against the collar *a*, will force the part B into firm bearing contact with the part A; then, if upon trial it be found that the length is insufficient, repeat the operation. If, on the contrary, the reverse adjustment be required, loosen the nut to relieve the screw-spindle; then turn that spindle in the opposite direction, and return the sleeve E to bring the parts to a bearing, as before. By this construction the adjustment may be made with the greatest nicety and without disturbing the dies or parts which may be attached thereto, and it may be applied to presses and other devices already in use, as it requires no change, except in the pitman itself, that containing the entire adjusting mechanism. Another great advantage of this adjustment as relating to power-presses is that the dies having been once arranged in their proper level position with relation to each other they are not changed by subsequent adjustment, as they generally are in the common packing adjustment.

In the construction of the pitman the parts are made cylindrical or tubular. Hence it is necessary that the shank D should be prevented from turning when the adjusting screw spindle is turned. To this end I provide a groove, *m*, on the one part and spline *n* on the other, which leaves the parts free for longitudinal movement without possible rotation.

It will be readily seen that the spindle may

be inverted and be threaded into the part A while taking its bearing in the other part, and also that the sleeve may pass over the part A to bear against a shoulder thereon, and screw-threaded onto the other part. I therefore do not limit my invention to the particular arrangement of the parts shown and hereinbefore described.

I claim—

1. The combination, in an adjustable pitman, of the two parts A B, the one part arranged to move longitudinally in a recess in the other part, with a spindle taking a bearing on one part and screw-threaded into the other part, with a locking-sleeve to bind the two parts together, substantially as described.

2. The combination, in an adjustable pitman, of the two parts A B, the one part arranged to move longitudinally in a recess in the other part, with a spindle taking a bearing on one part and screw-threaded into the other part, with a locking-sleeve to bind the two parts together, the said spindle provided with a collar, G, with an opening, *h*, through the part in which it is arranged, and means, substantially such as described, for rotating the said spindle through said opening, substantially as described.

W. E. HAWKINS.

Witnesses:

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