

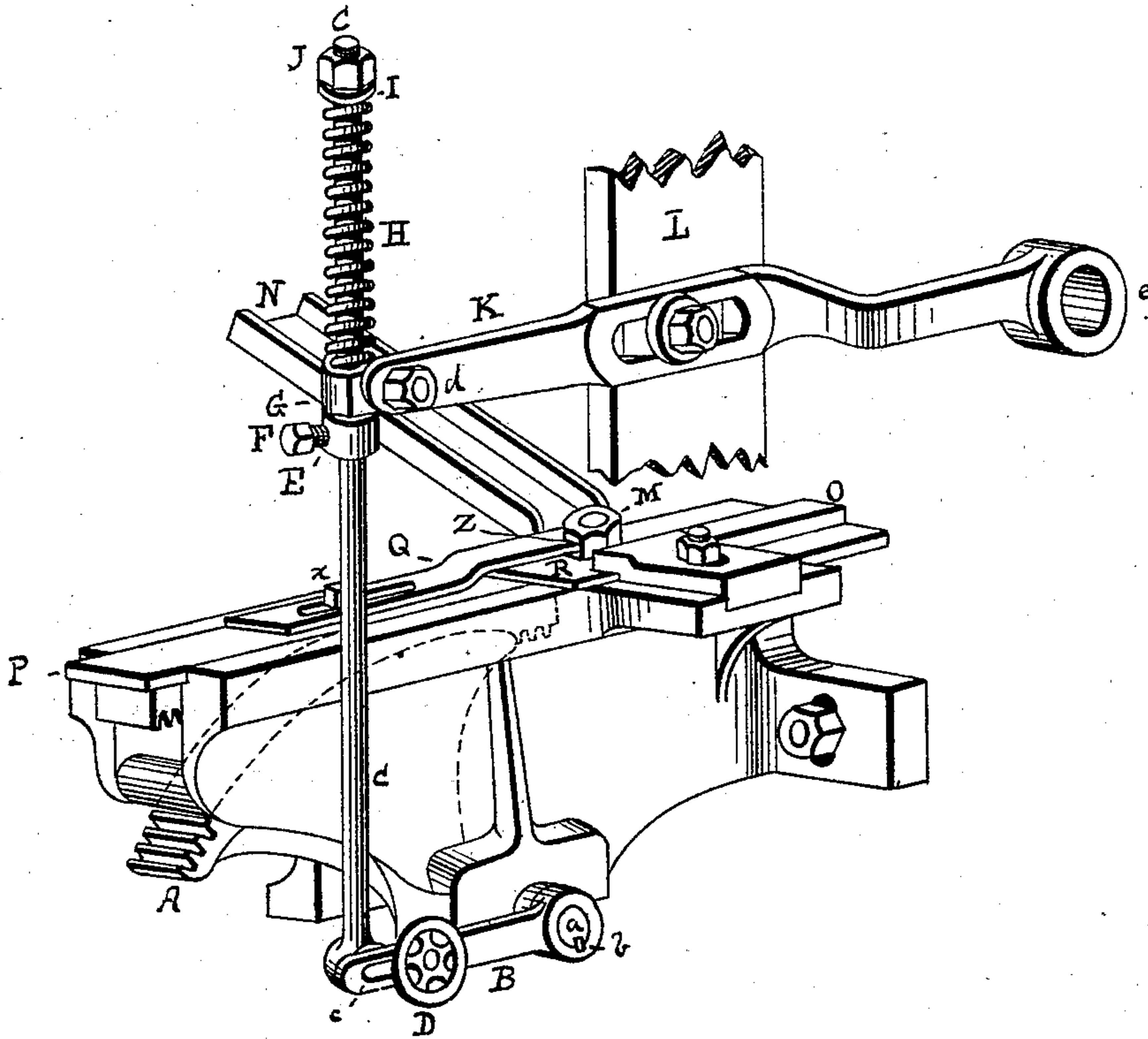
(No Model.)

G. H. WEBB.

MECHANISM FOR TRIMMING AND CHAMFERING NUTS.

No. 285,447.

Patented Sept. 25, 1883.



WITNESSES.

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MECHANISM FOR TRIMMING AND CHAMFERING NUTS.

SPECIFICATION forming part of Letters Patent No. 285,447, dated September 25, 1883.

Application filed April 21, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. WEBB, of Pawtucket, in the county of Providence, in the State of Rhode Island, have invented a new and useful Improvement in Mechanism for Trimming and Chamfering Nuts; and I declare the following to be a specification thereof, reference being had to the accompanying drawing, which is a perspective view of my invention.

My invention is a device to relieve the machine from the danger of breakage by the misplacement of the nut therein during the process of trimming or chamfering.

It consists in providing the connecting-rod with a sliding block, engaging with a spiral spring, and movable on said rod by its attachment to the lever or arm, which is actuated by the plunger, as hereinafter more fully specified.

In the drawing, A represents a pinion, of sector shape, oscillating with its axis *a* in the usual manner. An arm, B, is fastened to the axis *a* by a spline, *b*, so that the bar B and pinion A have an exactly corresponding motion. The connecting-rod C, at the outer end of the bar B, has a vertical reciprocating motion, and rocks the sector-pinion A to a distance regulated by the hand-wheel D, which adjusts the bottom stud of the rod C within the slot *c* of the bar B and secures it in place. A collar, E, is fastened to the rod C at the proper position, and is held by the set-screw F. A sliding block, G, has a longitudinal motion on said rod C, but in the ordinary working of the machine is kept in contact with the fixed collar E by the pressure of the spiral spring H surrounding said rod C. The spring H has its lower bearing on the block G and its upper bearing against the nut I and its accompanying check-nut J. The block G is pivoted to the lever K, as shown at *d*. The lever K is pivoted at its end *e* to the frame of the machine, and is oscillated by the reciprocating vertical movement of the plunger L. The plunger L derives its motion from an eccentric upon the main shaft in the manner usual in this class of machines.

The nut M is fed to the machine through the

trough N by its own weight, and is brought into position to the die by the fixed guide-block O and the rack-bar P, which is alternately advanced and withdrawn by the reciprocating motion of the pinion A. A guide-bar or gage, Q, by means of a longitudinal slot and set-screw, *x*, is exactly adjusted to advance the nut M to a position directly centering with the die, and when in said position the nut M is trimmed or chamfered by force of the descending plunger L. The guide-bar Q is also notched at its forward end, as shown at *z*, to fit the corner of the nut M, which it receives. The rack-bar P and guide-bar Q, after adjustment, as before described, are held firmly together by the set-screw *x*, while the nut M is supported and slides along the shelf R to the distance determined by the advance of the guide-bar Q, and is thereby exactly centered relatively to the die, as already specified. These several parts are so arranged and adjusted relatively to each other that the levers B and K describe their said movements in the same time and bring the nut M into its position to be seasonably worked upon, and the movable parts upon the rod C consequently remain in the relative positions shown in the drawing; but if the lever K were pivoted directly to the connecting-rod C, a breakage of the machinery would be inevitable whenever a nut, M, should be misplaced or other obstruction should prevent the guide-bar Q from advancing said nut to its proper position relative to the die. As the guide-bar Q, by means of its connection with the rack P and pinion A, advances while the plunger L is ascending and recedes while the plunger L is descending, it is evident that all obstructions to the proper feeding of the nut to the die by said guide-bar must occur while the plunger is describing its upstroke; hence, although such obstruction would prevent the advance of the guide-bar Q, the plunger may yet ascend by crowding the lever K up against the block G and overcoming the pressure of the spring H, thus relieving the machine from the strain and breakage to which it would be subjected by such obstruction and interruption if the lever K were rigidly connected to the rod C. As soon as the guide-bar

Q again resumes its proper motion and functions, the spring H normally holds the block G firmly against the collar E, as before.

I claim as a novel and useful invention and
5 desire to secure by Letters Patent—

The automatic relief device herein described,
consisting of the reciprocating pinion A, op-
erated by the levers B K, the plunger L, and
the rod C, said rod C having a fixed collar, E,
10 and check-nuts I J, and a sliding block, G,

and spiral spring H, which are capable of an independent motion along said rod C by attachment to the lever K of the plunger L whenever the correspondence of the movements of said levers B K shall be interrupted, substan- 15
tially as specified.

GEORGE H. WEBB.

Witnesses:

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