

W. J. GORDON.
CAN-SEAMING MACHINE.

No. 170,727.

Patented Dec. 7, 1875.

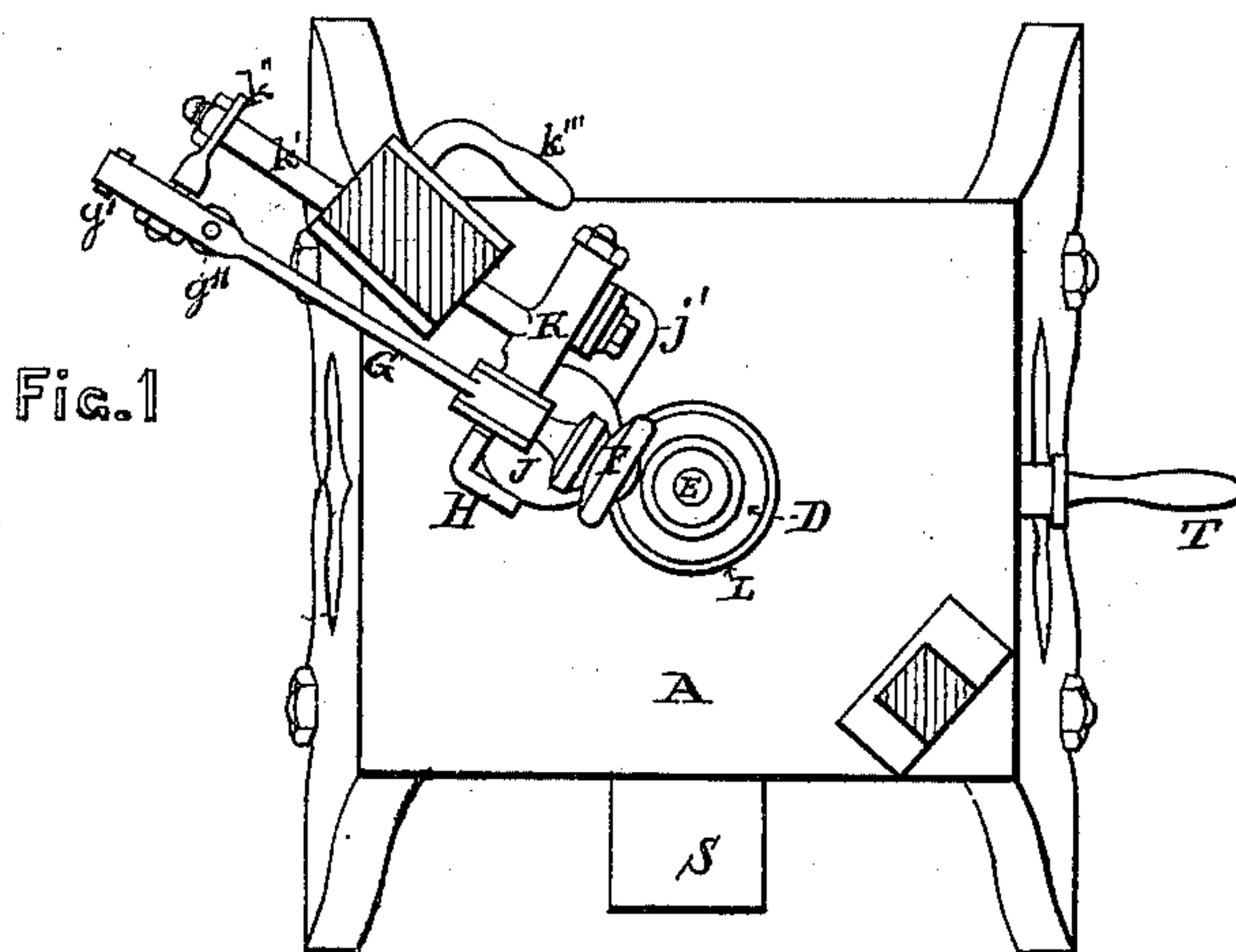


Fig. 1

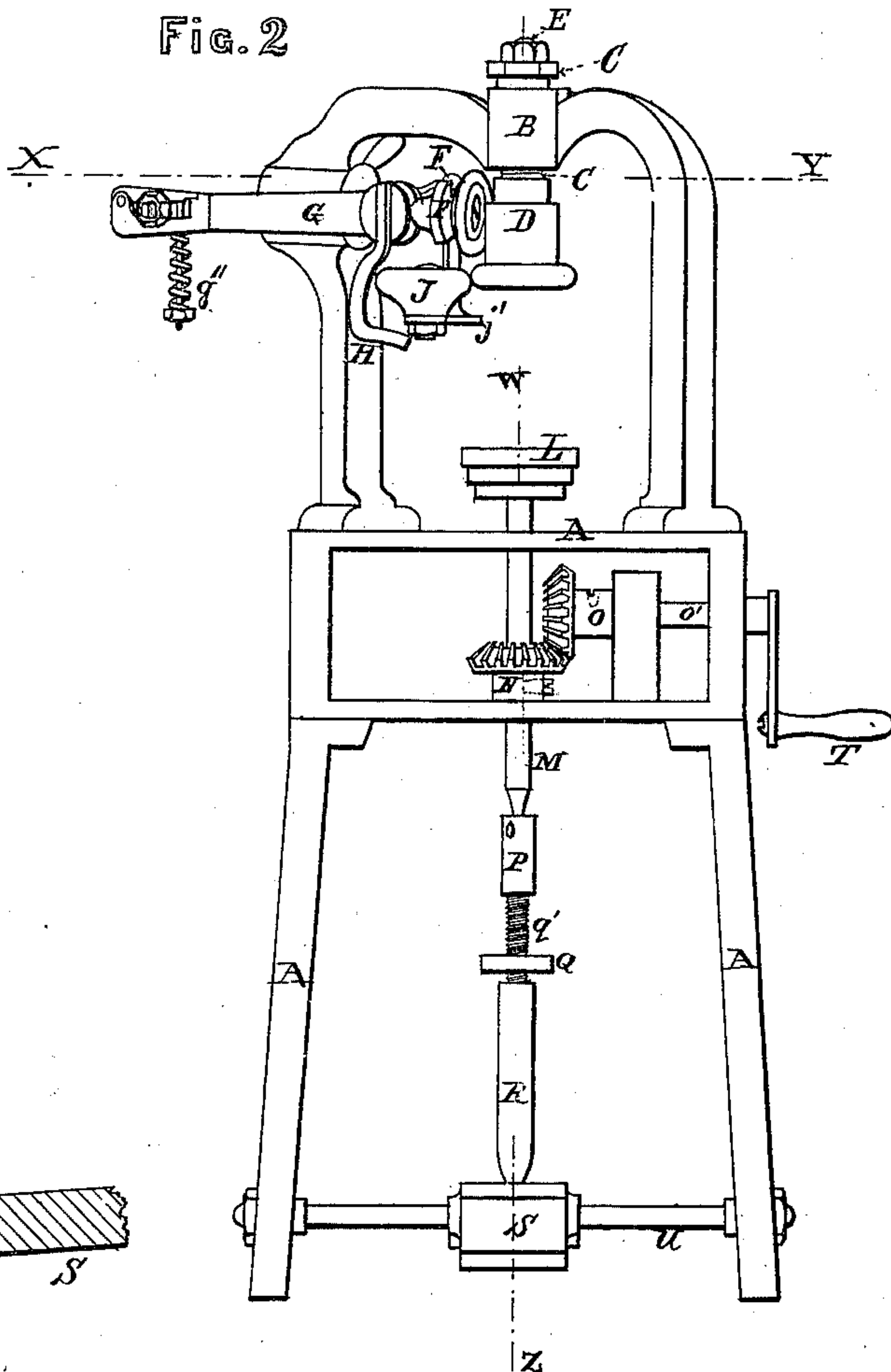


Fig. 2

Fig. 3

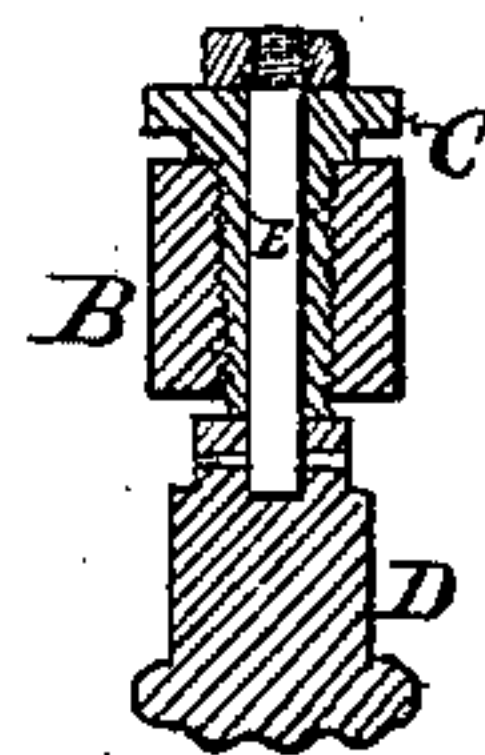
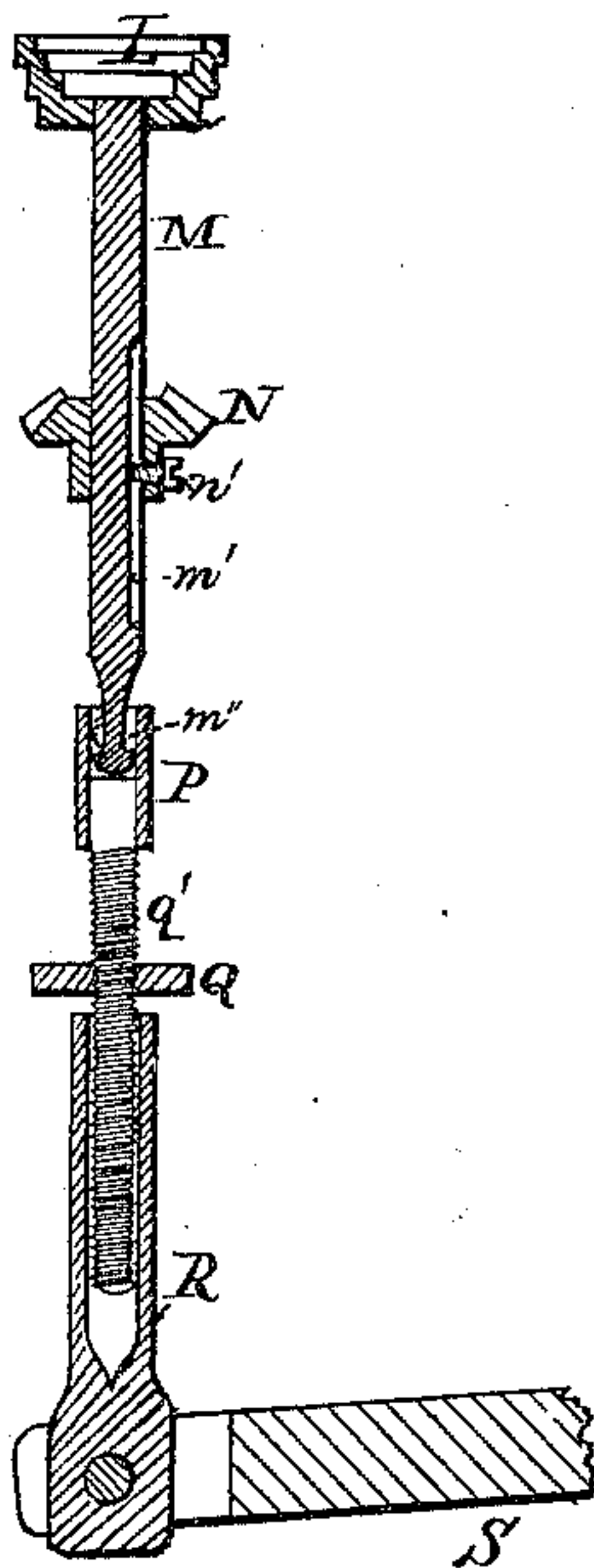


Fig. 4



Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM J. GORDON, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
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IMPROVEMENT IN CAN-SEAMING MACHINES.

Specification forming part of Letters Patent No. **170,727**, dated December 7, 1875; application filed
March 1, 1875.

To all whom it may concern:

Be it known that I, WILLIAM J. GORDON, of the city and county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Can-Closing Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings making part hereof.

My invention consists of the combination, with an arm to support the turning-down roller, of an opening springing section on the arm to permit the roller to jump a seam in the can; also in combination with the turning-down roller, an eccentric pivoting the arm which supports the roller, so as to throw the roller forward and downward by a double motion; also, of the combination of a supporting-arm for the roller, an eccentric, and a slotted joint to permit the arm to throw the roller forward and down.

In the drawings, Figure 1 is a cross-sectional view on the line X Y of Fig. 2. Fig. 2 is an elevation. Fig. 3 is a detached view of the adjustable upper disk. Fig. 4 is a detached longitudinal sectional view of the adjustable lower disk, with its operating mechanism, including the treadle.

A are the legs or supports; B, the frame for supporting the upper disk and the rollers with their mechanism; C, the thumb-screw sleeve passing through frame B, to adjust or alter the height of the upper disk D. This disk D is grooved on its lower surface to fit corresponding grooves or corrugations in the lid of the can to be finished, so as to hold the can in place while it is revolving. This disk is removable, and can be changed at will for other sizes. E is a rod or bar upon which the upper disk D is secured, and which passes up through the adjustable screw-sleeve C, and is held in place by a screw-thread and nut at its upper end. F is the upper roller for turning the edge of the can over, and for closing it down; G, the lever or arm of roller F, operated by eccentric H, which eccentric is pivoted by joint K to the arm K'. By turning the handle of the eccentric H the roller F is elevated to turn the edge of the can over, or is depressed to close said edge down. This arm G is connect-

ed to the heel of arm K' by a cross-bolt, K'', which passes through a slot in arm G, forming a horizontally-slotted joint. The upper section of this slot opens by a joint, g', on the heel of the arm G, and this jointed section is held down at its forward end by a pin and spring, g''. The object of this open section is to permit the roller F to lift and jump a seam in the can, in which event the roller F rises, and the eccentric, acting as a stationary pivoted point of the arm G, the heel of the arm is depressed, thus raising the jointed section of the slot, which, immediately on the seam being passed by roller F, is closed by the action of the spring g''. The roller F has a deep groove, F', around its edge to receive the edge of the can after it is half turned over, and to hold the upper bent edge of the can while the edge of the roller closes down the lap. J is the lower roller to impinge against and to bear up the edge of the can while the roller F is bending it over. It, as well as roller F, revolves upon its axis. This roller is attached to the L-shaped arm J, which, in its turn, is secured to the end of arm K' at K by a nut and washer, which leave it capable of being adjusted to different positions with respect to roller F. The arm K' passes loosely through, and is sustained by, the frame B, and is held in position by a set-screw, K'''. By loosening this set-screw this arm K' can be pushed forward or backward, thus bringing the rollers F and J near to or distant from disk D to accommodate various sized cans. L is lower hollow inverted conical disks, having within it several gradually-decreasing circular and concentric ridges, for the reception and support of various sized cans. M is a vertical shaft attached firmly to disk L, (which may be made movable,) and having upon it a beveled gear-wheel, N, secured upon said shaft by a screw, N', which pierces a collar on the bottom of said gear-wheel, and projects through into a vertical groove or long slot, M', in the side of shaft M. This screw thus turns the shaft M when the wheel N revolves, while it leaves the shaft free to play up and down, as the screw N' fits loosely in the said slot. O is another beveled-gear wheel, gearing into wheel N, and operated by a shaft, O', to which

action can

motion is communicated by hand or by steam power from the outside T. Shaft M terminates below in a narrow neck and head, M'', which are inclosed within the hollow sleeve P, and are secured loosely therein by a pin, P', which passes through the upper part of said sleeve, a little to one side of its middle, to pass closely to the said neck and hold the head down. The said neck and head are thus free to revolve within sleeve P, while they cannot be drawn out. Q is a pierced screw-threaded disk, through which is passed a screw-threaded rod, q'. The latter is secured at its upper end firmly in the lower end of sleeve P, while below it drops loosely into the sleeve R, which, in its turn, is operated by treadle S. By screwing down the disk Q, which impinges down upon the upper end of sleeve R, the rod q' is forced upward. This lengthens the whole standard formed by the sleeve R, rod q', sleeve P, and shaft M, and, consequently, raises the disk L.

The operation is as follows: The can, the head of which is to be inserted, is first filled with the paint or other desired contents. The head, a tin disk, is then dropped inside the upper rim of the can, which flares or inclines outward and upward. This disk is stamped or corrugated to correspond with the grooves in the bottom of disk D. The rim of this lid is also bent slantingly upward, so as to follow for a short distance the flare of the upper rim of the sides of the can, which latter project, say the sixth or seventh of an inch, above this edge of the lid when it is dropped in. The can is then placed on the disk L, which receives it on one of the circular ridges, and clasps around the lower end of the can. The operator then raises the disk L by placing his foot on the treadle S. If this action does not raise the head of the can against the lower side of disk D, the disk L is further raised by screwing down the disk Q, in the manner above

described, until the can is so driven against disk D, and the corrugations of the lid fit into the grooves in the bottom of disk D. This preserves the can in a center while revolving. The rim of the sides of the can then passes between the disk D and roller F, the upper edge resting against the latter. The shaft O' is then revolved, as described, and the can is turned, and the upper edge is forced over and down upon the lid by the roller F. The roller F is then depressed by turning the handle H of the eccentric, and the new edge of the side, formed by the turning over of the upper rim, then fits into the groove F' of this roller. The edge of the roller clamps down the bent edge of the lid tightly at the point of contact. The roller J impinges immediately under the rim on the outside, and as the can is revolved the roller F forces the bent edge of the sides tightly down upon the lid, thus closely clamping the edge of the lid all around. The action of the eccentric H is to throw the roller F forward to start the edge of the can over, and then to drop the roller down to tighten the bent edge upon the lid.

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

1. The combination of rod or arm G, roller F, and opening spring-section g'', to permit the roller to jump a seam in the can, substantially as described.

2. The combination of roller F and eccentric H, substantially as and for the purposes described.

3. The combination of arm G, roller F, eccentric H, and the slotted joint on the heel of the arm G, substantially as described.

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Witnesses:

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