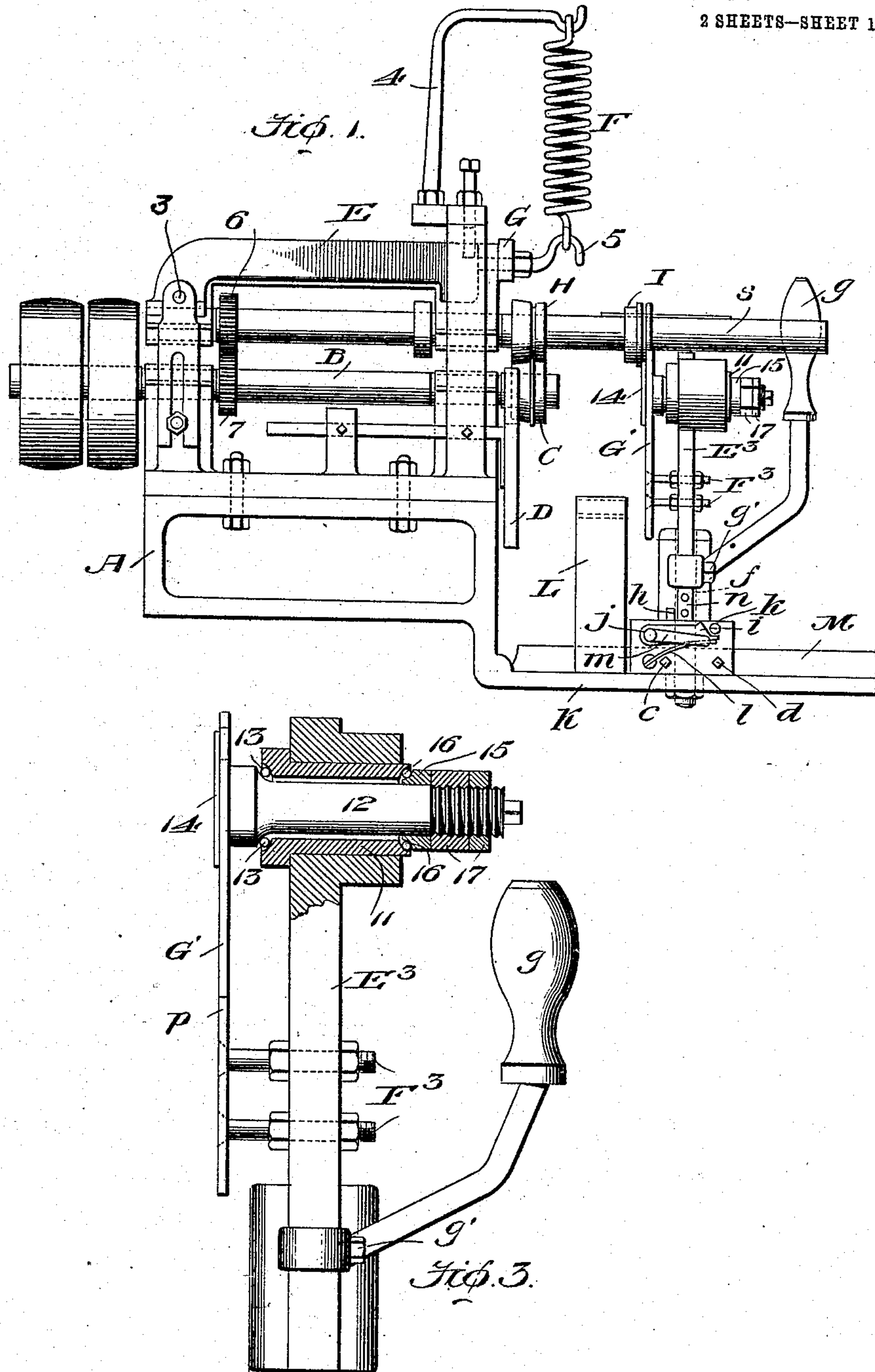


H. JACOB.
CAN SEAMING MACHINE.
APPLICATION FILED OCT. 22, 1908.

908,102.

Patented Dec. 29, 1908.

2 SHEETS—SHEET 1.



Witnesses.

W. C. Stealy

Inventor.

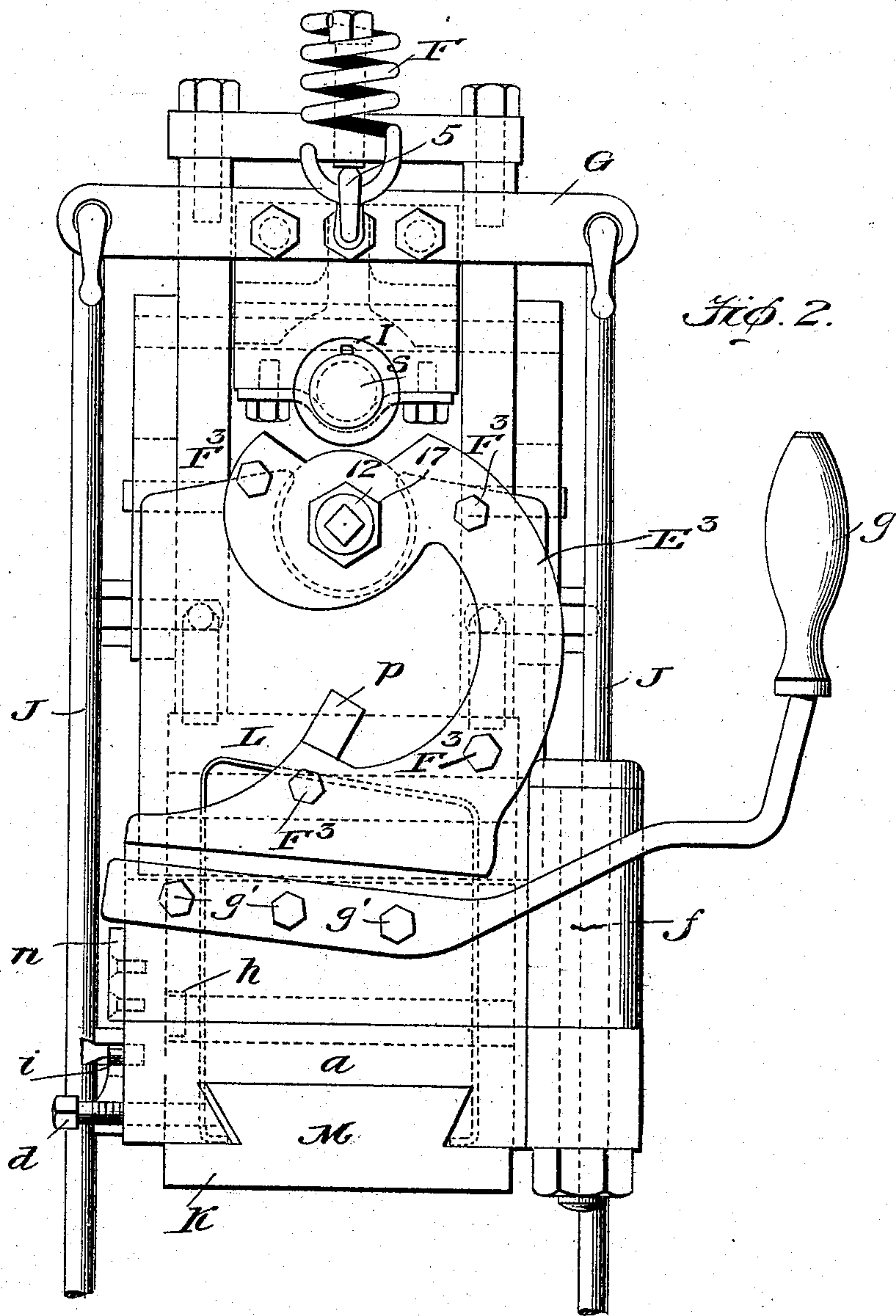
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By *James J. Shuby* atty.

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W. E. Healy

Inventor.

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UNITED STATES PATENT OFFICE.

HENRY JACOB, OF NEW ORLEANS, LOUISIANA, ASSIGNOR OF ONE-HALF TO GULF MANUFACTURING CO., LTD., OF NEW ORLEANS, LOUISIANA.

CAN-SEAMING MACHINE.

No. 908,102.

Specification of Letters Patent.

Patented Dec. 29, 1908.

Application filed October 22, 1908. Serial No. 459,003.

To all whom it may concern:

Be it known that I, HENRY JACOB, citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented new and useful Improvements in Can-Seaming Machines, of which the following is a specification.

My invention pertains to can seaming machines; and it contemplates the provision of a machine designed more particularly for automatically effecting in a single operation the seaming of the bottom of a can and the beading and mouthing of the opposite end thereof, and constructed with a view of permitting of the can being readily placed in position precedent to said operation and as readily removed subsequently to the same.

With the foregoing in view the invention will be fully understood from the following description and claims when the same are read in connection with the drawings, accompanying and forming part of this specification, in which:

Figure 1 is a side elevation of a can seaming machine embodying my improvements. Fig. 2 is an enlarged front elevation of the same. Fig. 3 is a detail, enlarged section illustrative of the manner in which the seaming roller or roller die is mounted on the swinging support by which it is carried.

Similar letters and numerals designate corresponding parts in all of the views of the drawings, referring to which:

A is the main frame of the machine which may be of any construction consonant with the purpose of my invention. B is a longitudinally disposed, drive-shaft journaled in said main frame and equipped, by preference, with fast and loose band pulleys, and also preferably provided with a male roller die C of a combined beading and mouthing set of dies.

D is a stop adjustably fixed to the main frame and having for its office to limit rearward movement of the can.

E is a vertically swinging frame, hinged at 3 to the main frame.

F is a spring connected to a support 4 on the main frame and to a hook 5 on the swinging frame E and having a tendency to raise the latter.

s is a longitudinally disposed shaft journaled in and movable vertically with the swinging frame E and having a spur gear 6 designed to be intermeshed with a corre-

sponding gear 7 on the shaft B, and carrying the female roller die H of the combined beading and mouthing set of dies, and also carrying the swaging roller I of the seaming set.

For the purpose of enabling the machine attendant to draw and hold the frame E and shaft s down, against the action of the spring F, I provide the said frame E with a cross-bar G to which are connected depending rods J, Fig. 2, which, in turn, are designed to be connected with a treadle or the like (not shown).

Fixed to and reaching forwardly from the main frame A is a horizontal arm K, and on said arm is a fixed work-support L and a slide-rest M, the latter of dovetail form in cross-section. Snugly fitting and adjustable on the said slide-rest M is a body a which is designed to be adjustably fixed to the rest through the medium of set screws c and d. At this point I desire to state that I prefer to key or feather the swaging roller I of the seaming set on the shaft s so as to permit of the adjustment of said roller in the direction of the length of the shaft, and that the purpose of adjustably fixing the body a to the slide-rest M is to permit of said body and the parts which it carries, as presently described, being adjusted lengthwise of the machine with the roller I in order to adapt the machine to operate on cans of various lengths.

Pivoted and arranged to swing horizontally on a vertical pin f carried by the body a is the end plate E³ comprised in my improvements, which end plate is designed to be conveniently swung outwardly and inwardly through the medium of a handle g fastened thereto through the medium of bolts g' or other suitable means. The said end plate E³ is provided on its free or swinging end with a portion n, of hard steel, arranged when the plate is swung inwardly to the working position illustrated, to be retained and held between a stop pin h on the body a, and a swinging latch i, pivoted at j to the body and arranged to swing vertically. The said latch i is normally held by a spring l against a stop pin k on the body a; and it is pressed by a spring m against the side of the said body a. From this it follows that when the end plate E³ is swung inwardly to the position illustrated, its portion n will ride over the latch i and be confined between the said latch in such manner that there is no liability of said end plate being casually released and

permitted to swing outwardly during the operation of the machine. It will be understood, however, that when sufficient pull is exerted on the handle *g*, the portion *n* of the end plate E^3 will depress the latch *i* and ride over the same, whereupon the plate may be swung open to the full extent. Connected through four, more or less, bolts F^3 in an adjustable manner with the plate E^3 is an auxiliary plate G' , preferably of steel, which auxiliary plate corresponds in outline to the plate E^3 , with the exception that it is provided with a projecting tongue *p* designed to bear against the outer end of the can with a view of assisting in retaining the same in proper position.

11 is a bushing, preferably of tool steel, mounted in the upper portion of the plate E^3 . 12 is a shaft extending through said bushing and also extending through the auxiliary plate G' and provided on its forward or inner end and at the inner or forward side of the auxiliary plate with a seaming roller 14 adapted to coöperate with the swaging roller *I* on the shaft *s*.

13 13 are anti-friction balls arranged in a race formed between the forward end portion of the bushing 11 and the shaft 12.

15 is a collar mounted on the shaft 12 at a point in rear of the bushing 11. 16 16 are anti-friction balls arranged in a race between the bushing 11 and said collar 15, and 17 17 are nuts mounted on the rear portion of the shaft 12 and backing the said collar 15. By virtue of the construction described it will be observed that when wear of the balls or their bearings takes place, such wear may be taken up by adjusting the nuts 17 on the shaft 12 and adjusting the auxiliary plate G' with respect to the plate E^3 .

In the operation of my improvements, the end of a can, after being shaped by a block or other means to provide it at its edge with a channel adapted to receive the end of a straight can body, is slipped on the end of the body, and then the can is placed against the stop *D* and on the two lower roller dies *C* and 14, the plate E^3 being swung inwardly to the position shown in Fig. 1 after the can is placed against the stop *D* and on the roller die *C*. The drive-shaft *B* is then rotated and the shaft *s* is drawn downward whereupon the two sets of rollers will be caused to simultaneously operate upon the can to seam the body to the bottom, produce a bead adjacent to the mouth of the can and form a taper at the mouth for the reception of a slip cover (not shown). Incidental to the seaming of the bottom to the body it will be manifest that the swaging roller *I* will, through the medium of the can, transmit rotary motion to the seaming roller 14. On the completion of the operation on the can, the shaft *s* is permitted to move upwardly under the action of the spring *F*, and the plate E^3

is swung open, when, as will be readily understood, the can may be expeditiously and easily removed from the machine.

The construction herein illustrated and described constitutes the best practical embodiment of my invention of which I am cognizant, but it is obvious that in the future practice of the invention such changes may be made as fairly fall within the scope of my invention as defined in the appended claims.

Having described my invention, what I claim and desire to secure by Letters-Patent, is:

1. In a machine for the purpose described, the combination of a main frame, a drive-shaft, a driven shaft pivotally mounted over the drive-shaft, a driving connection between the two shafts, a horizontally swinging plate pivotally connected with the main frame at one side of the longitudinal vertical plane of the shafts, and a set of rollers, one roller of which is carried by the driven shaft and the other by the horizontally swinging plate.

2. In a machine for the purpose described, the combination of a main frame, a drive-shaft, a driven shaft pivotally mounted over the drive-shaft, a driving connection between the two shafts, a horizontally swinging plate pivotally connected with the main frame at one side of the longitudinal vertical plane of the shafts, means for detachably securing said plate in a position at a right angle to the shafts, and a set of rollers, one roller of which is carried by the driven shaft and the other by the horizontally swinging plate.

3. In a machine for the purpose described, the combination of a main frame, a body adjustable on the main frame in the direction of the length of the machine, means for adjustably fixing the body to the main frame, a drive-shaft, a driven shaft pivotally mounted over the drive-shaft, a driving connection between the two shafts, a combined beading and mouthing set of rollers one of which is mounted on the drive-shaft and the other on the driven shaft, a horizontally swinging plate pivotally connected with the adjustable body, means on the body for detachably securing said plate in its working position at a right angle to the shafts, and a set of seaming rollers, one roller of which derives motion from the driven shaft and is adjustable on said shaft in the direction of the length thereof, and the other roller of which is carried by the swinging plate and movable into and out of its working position with said plate.

4. In a machine for the purpose described, the combination of a main frame, a drive-shaft, a driven shaft pivotally mounted over the drive-shaft, a driving connection between the two shafts, a roller mounted on the

driven shaft and forming one of a seaming
set of rollers, a swinging plate connected
with the main frame, means for detachably
securing said plate in its working position,
5 an auxiliary plate adjustably connected with
and carried by said plate, a shaft extending
through the plate and the auxiliary plate and
provided at the inner side of the latter with
the other roller of the seaming set, and
10 means adjustable on the shaft and adapted

to assist the adjustment of the auxiliary
plate in taking up wear.

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit-
nesses.

HENRY JACOB.

Witnesses:

PETER J. GILLEN,
ANDREW OREN.