No. 814,759. PATENTED MAR. 13, 1906.

G. C. WITT.

CAN SEAMING APPARATUS.

APPLICATION FILED JUNE 14, 1905.

2 SHEETS—SHEET 1.

FIG. 1.

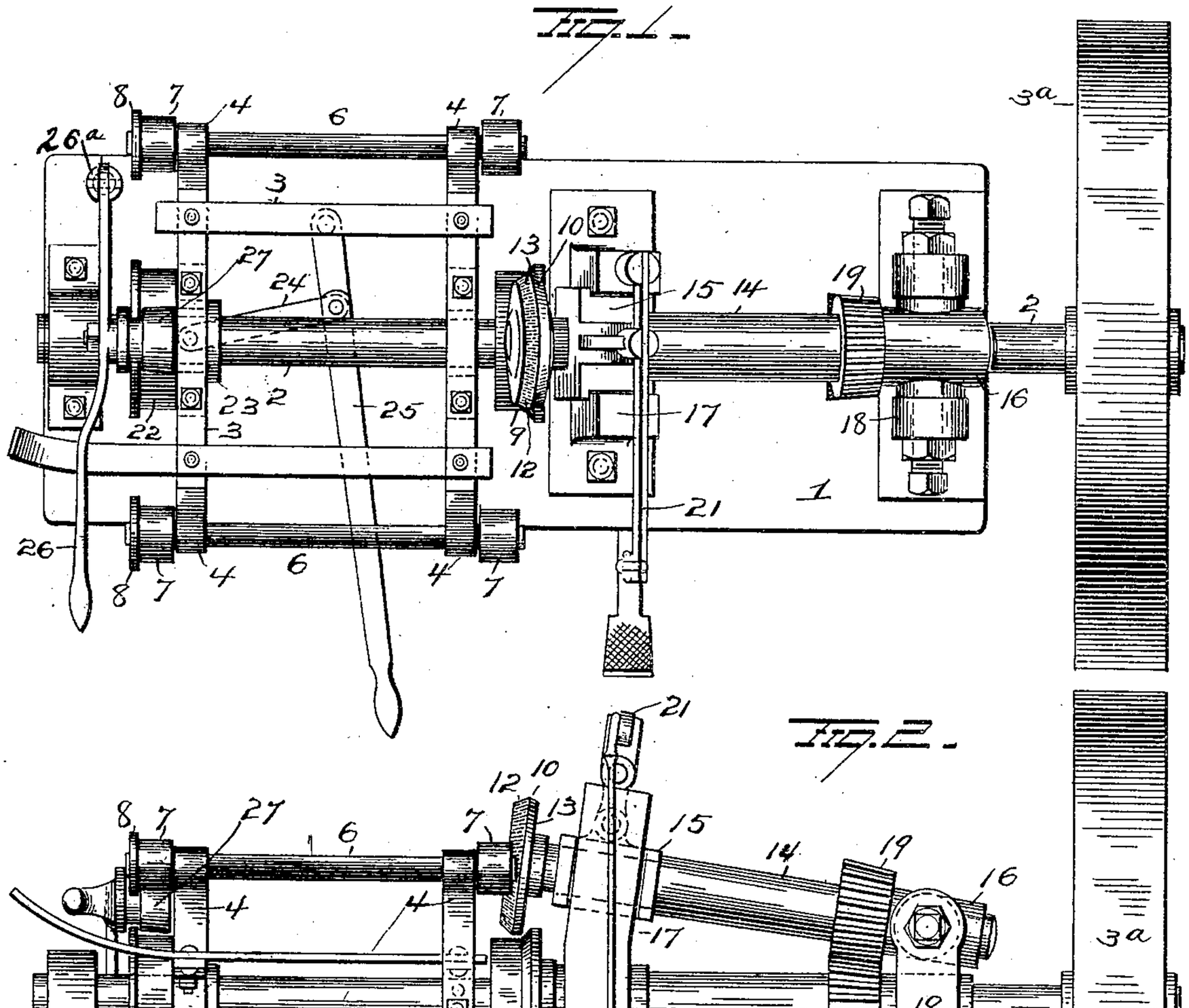

FIG. 2.

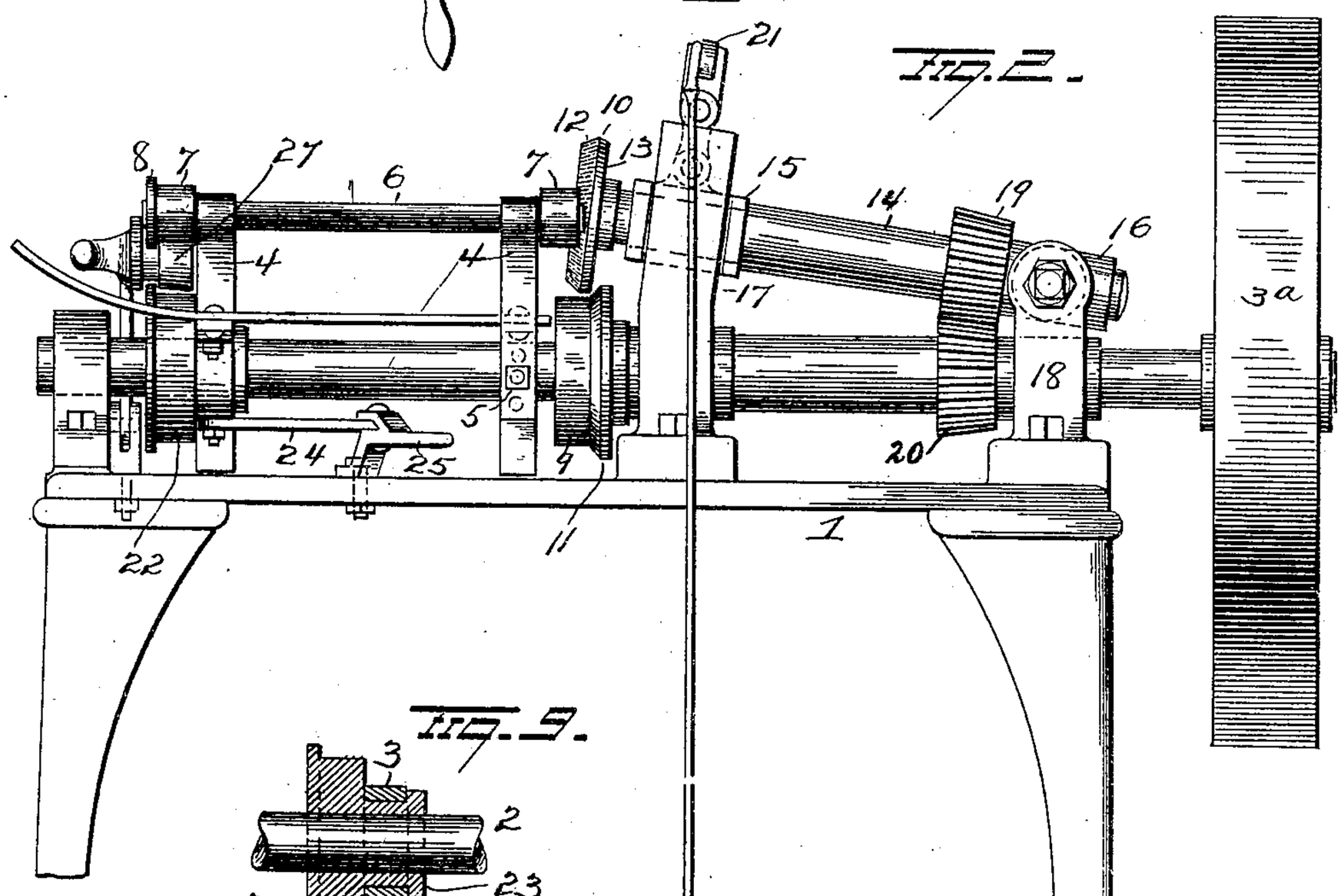

FIG. 3.

WITNESSES

E. L. Nottingham

G. F. Downing.

INVENTOR

G. C. Witt

By H. G. Seymour

Attorney

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2 SHEETS—SHEET 2.

FIG. 3.

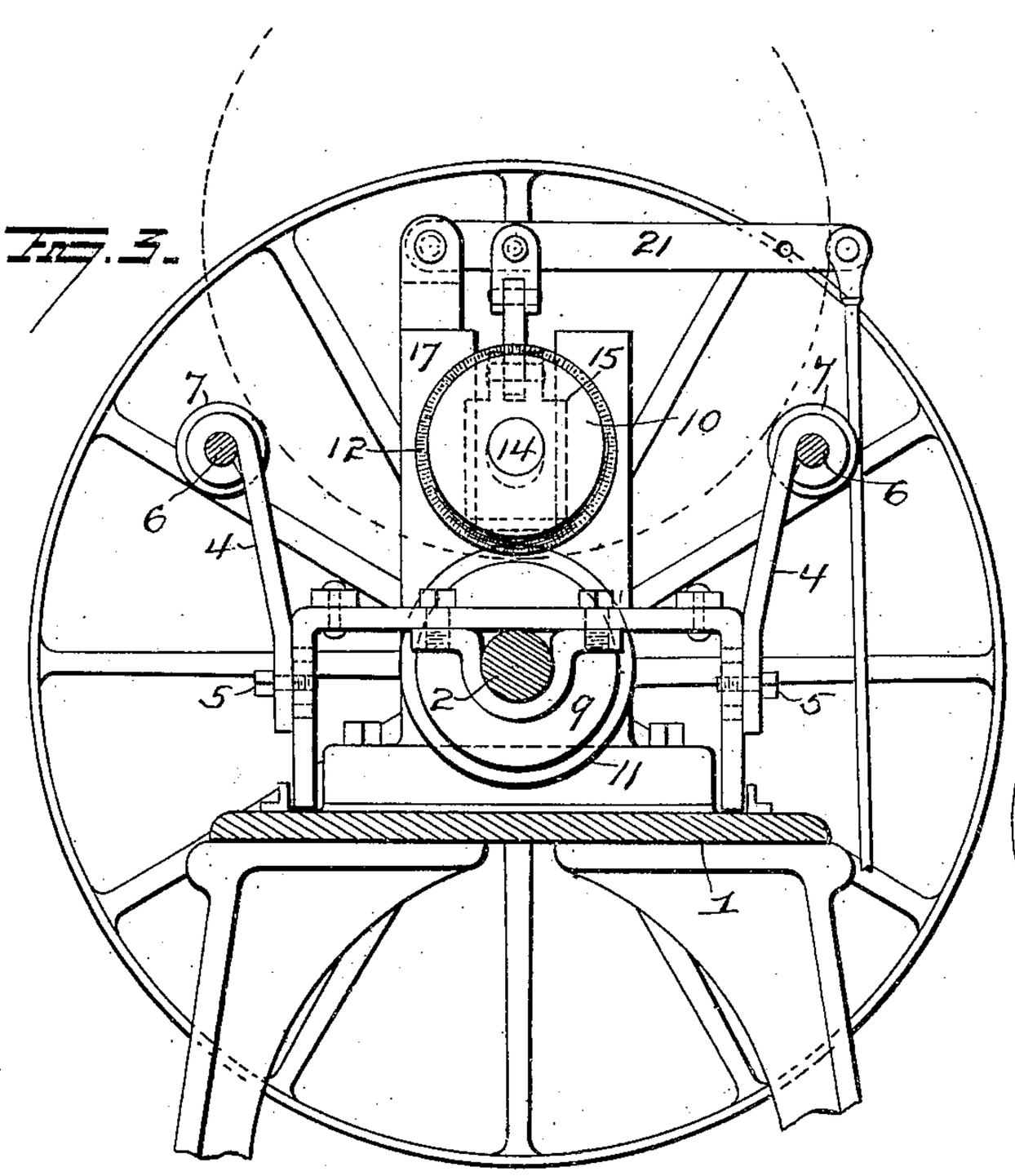
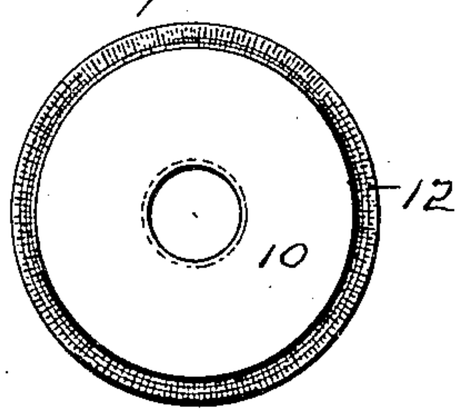


FIG. 4.



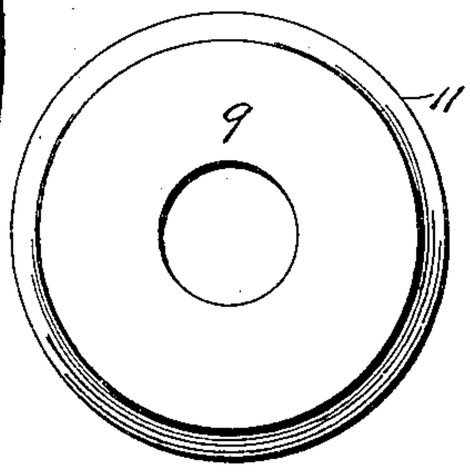


FIG. 5.

FIG. 6.

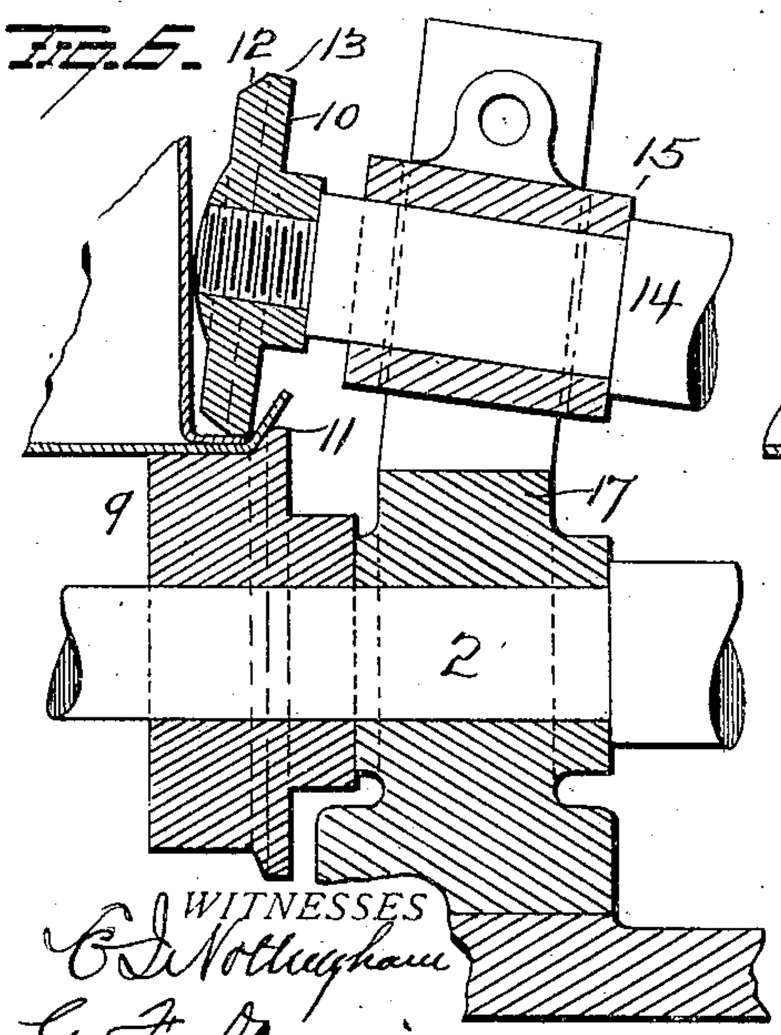


FIG. 7.

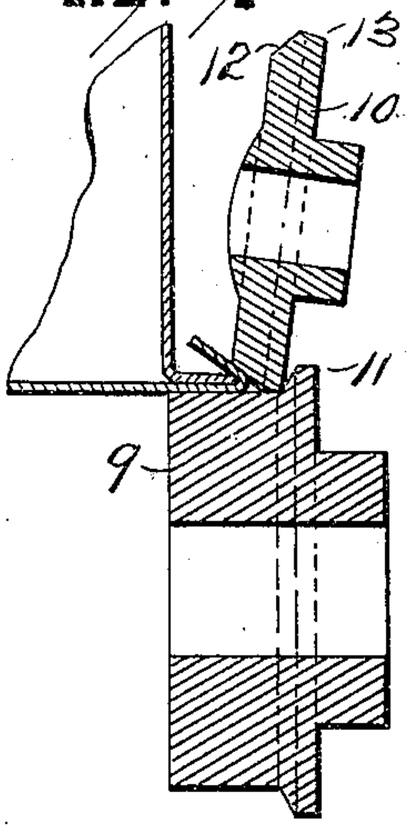
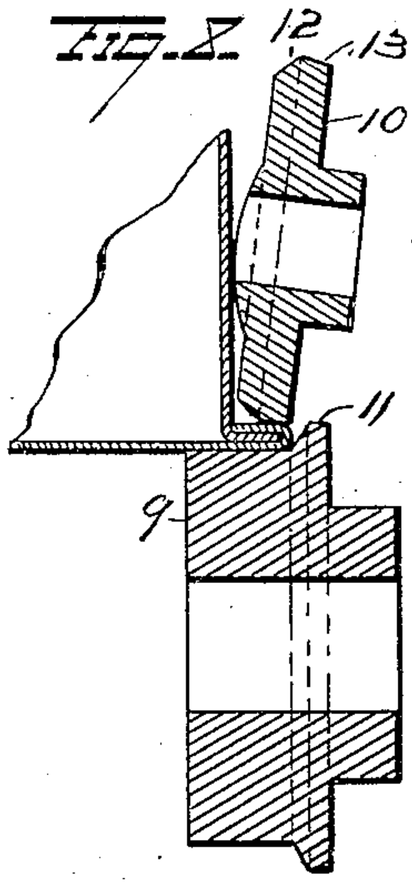


FIG. 8.



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Attorney

UNITED STATES PATENT OFFICE.

GEORGE C. WITT, OF CINCINNATI, OHIO.

CAN-SEAMING APPARATUS.

No. 814,759. Specification of Letters Patent. Patented March 13, 1906.

Application filed June 14, 1905. Serial No. 265,270.

To all whom it may concern:

Be it known that I, GEORGE C. WITT, a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Can-Seaming Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved apparatus for seaming the ends of cylindrical cans, and more particularly for securing can-bottoms in place or turning in the flange at the can-top, the object of the invention being to provide a machine of this character which will easily and quickly turn the edge of a can inward upon itself or upon a flange or ring and form a smooth tight seam, and the invention is of extremely simple construction and easy to operate.

With these and other objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a top plan view illustrating my improvements. Fig. 2 is a view in side elevation. Fig. 3 is a view in cross-section. Figs. 4 and 5 are face views of the flanging-rolls. Figs. 6, 7, and 8 illustrate the steps in the seaming operation, and Fig. 9 is a detail view illustrating the connection between the movable frame and operating means.

1 represents a table or platform having suitable bearings supporting a horizontal shaft 2, driven by a pulley 3^a or other suitable means.

A can-supporting frame 3 is mounted to slide longitudinally of table 1 and is provided with outwardly-flared arms 4, adjustably connected by screws 5 with frame 3, and said arms may be adjusted to suit the diameter of the can on the frame. These arms 4 support at their upper ends rods 6, on which rollers 7 are mounted to receive the smooth end portions of the can and permit the latter to freely turn, and at least one of these rollers 7 is made with an annular flange 8 to hold the can in position, as will hereinafter appear.

To seam the end of the can, I provide two rolls 9 and 10, the former being of general cylindrical form having a beveled flange 11 at its edge and fixed on shaft 2, and the latter or upper seaming-roll 10 is of beveled form having the beveled face 12 and flat face 13, the beveled face being preferably serrated or roughened to increase friction to turn the can, as will more fully hereinafter appear. The roll 10 is secured upon an inclined shaft 14, supported in boxes 15 and 16, the former mounted to slide in a slotted standard 17 and the latter pivoted to a standard 18, and this shaft 14 is provided with a pinion 19, meshing with a pinion 20 on shaft 2 and driven thereby. Fulcrumed to standard 17 is a lever 21, controlled by treadle mechanism shown and connected by pivoted links with box 15 to permit the upper roll 10 to be forced down at the will of the operator, and any suitable means may be provided to normally hold the roll 10 elevated. A flanged roller 22 is keyed to slide on shaft 2 and has a collar 23 connecting the roll with frame 3 and also with a link 24, the latter being secured to a horizontally-swinging lever 25, fulcrumed at one end to the table 1, and by means of this lever the operator can move the frame and can thereon toward or away from the securing-rolls. A lever 26 is pivotally attached to a post 26^a, swiveled on the platform 1, and this lever carries a grooved roller 27, which can be moved by the lever over the roller 22, so as to receive the flange of the latter in its groove. The open end of the can will be pressed tightly between the rollers 27 and 22, so that the latter will transmit rotary motion to the can.

The machine operates as follows: The body of the can, with the bottom in position to be secured thereto, is disposed upon the frame 3, and its open end is made to rest on roller 22. The operator will then move the frame 3 until that end of the can to which the bottom is to be secured rests on the flange of the lower seaming-roller 9. Then as the roller 27 is held tightly down on the can by means of the lever 26 the seaming-roller 10 will be moved downwardly and caused to bend the edge of the can inwardly, as shown in Fig. 6, while the can is being rotated. When the edge of the can has been thus bent, roll 10 will be raised and the can will then be moved back. Roll 10 will now be again lowered and held down on roll 9, after which the can will be forced forwardly against the beveled face of said rolls 10. This operation will cause the bent edge of the can to be further bent until it assumes an angle to the body of the can, which shall be less than a right angle,

as shown in Fig. 7. The roll 10 will then be raised, and the operator will move the can forwardly, so as to dispose its flanged bottom portion under the peripheral face 13 of roll 10. The latter will then be pressed down and its face 13 caused to bend the inturned edge flat, as shown in Fig. 8, thus completing a smooth seam all around the flange of the can at the bottom thereof.

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

1. In an apparatus of the character described, the combination of a flanged roll, and a movable roll having a flat edge to engage a can on the first-mentioned roll and perform one step in the flanging operation, and also having a beveled bending face to be engaged by the bent edge of the can and perform another step of the bending operation.

2. In an apparatus of the character described, the combination of a lower flanged roll, an upper movable roll having a flat and a beveled face to perform separate steps of the flanging operation, and means for feeding a cylindrical body to and between the rolls.

3. In an apparatus of the character described, the combination of a longitudinally-movable frame for supporting a can, and seaming-rolls engaging the edge of the can to turn, by three separate steps, a seam at the end of the can.

4. In an apparatus of the character described, the combination of a longitudinally-movable frame supporting a can, means for moving the frame longitudinally, a seaming-roll supporting and turning one end of the can when the latter is thereon, a beveled flange on said roll, and a movable seaming-roll having a flat and a beveled face to contact with the can end.

5. In an apparatus of the character described, the combination of an adjustable frame-support for a can, means for moving the frame longitudinally, of a flanged roller-support for the can at one end of the frame a lever, a grooved roller to secure the flange of the first-mentioned roller and hold the can firmly against the same, and seaming-rolls at the other end of the frame.

6. In an apparatus of the character described, the combination with a supporting-frame, of a fixed flanged seaming-roll, a movable seaming-roll above the same having an annular smooth face, and a beveled roughened face, a lever controlling the movement of the movable seaming-roll, and a lever to move the frame toward and away from said seaming-rolls.

7. In an apparatus of the character described, the combination with a fixed driving-shaft, a pivotally-supported shaft, and gearing connecting them, of a flanged seaming-roll on the fixed shaft, a beveled seaming-roll on the pivotally-supported shaft, a manually-movable frame to support a can and move it to and from the rolls and means, independent of the seaming-rolls and operated by the driving-shaft for rotating the can.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

GEORGE C. WITT.

Witnesses:
S. W. FOSTER,
EDITH GETZENDANNER.