

J. M. FREDERICK.
CAN SEALING MACHINE.
APPLICATION FILED MAR. 3, 1915.

Patented July 3, 1917.

3 SHEETS—SHEET 1.

1,232,273.

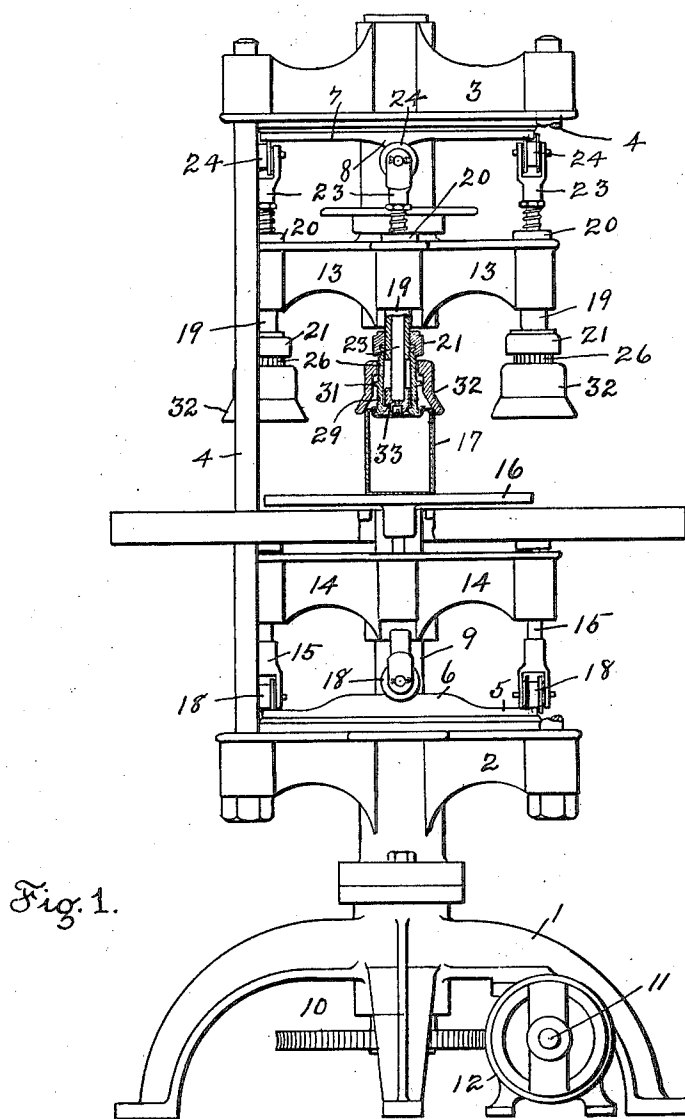


Fig. 1.

Witnesses:
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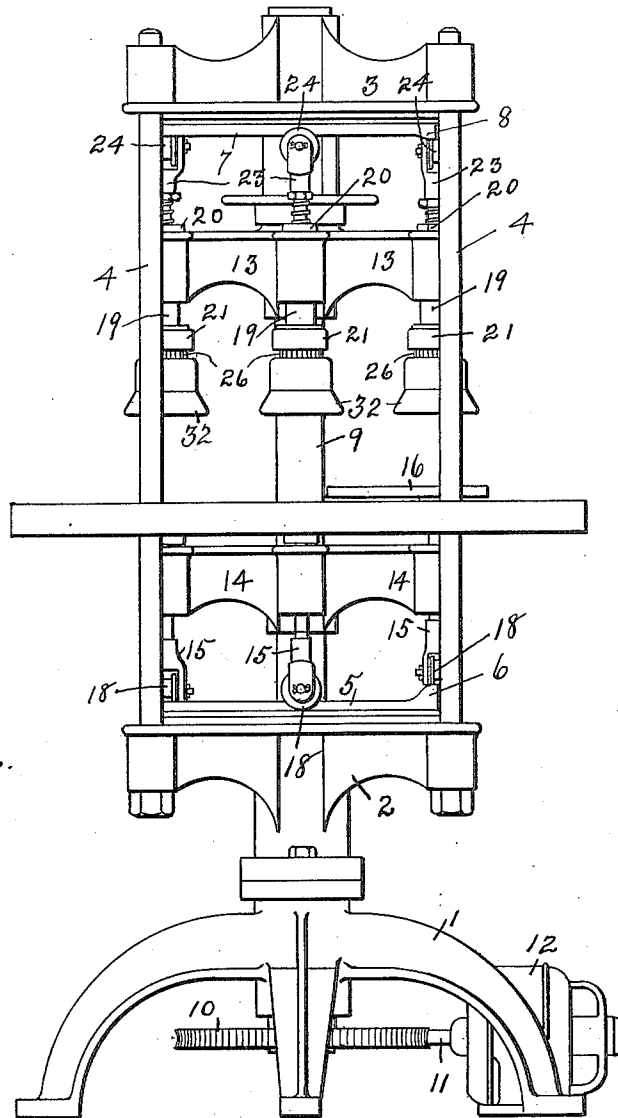
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Fig. 2.



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Fig. 3.

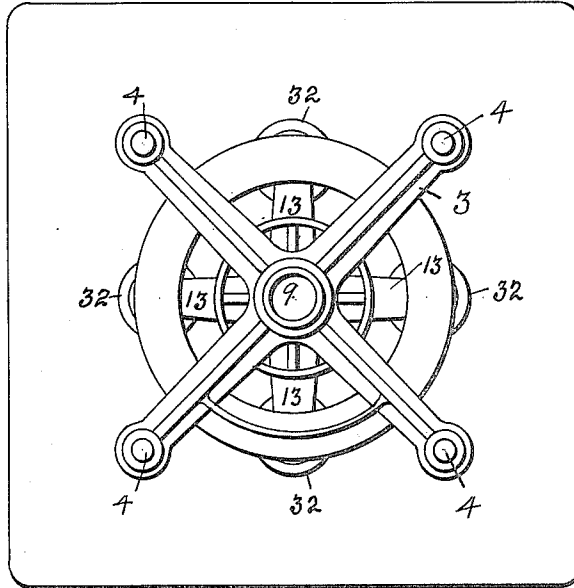
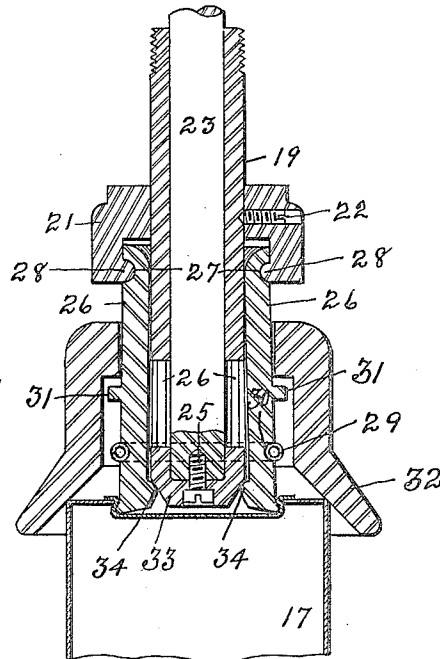


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOSEPH M. FREDERICK, OF BALTIMORE, MARYLAND, ASSIGNOR, BY MESNE ASSIGNMENTS, TO UNIVERSAL CAN CORPORATION, A CORPORATION OF DELAWARE.

CAN-SEALING MACHINE.

1,232,273.

Specification of Letters Patent.

Patented July 3, 1917.

Application filed March 3, 1915. Serial No. 11,889.

To all whom it may concern:

Be it known that I, JOSEPH M. FREDERICK, a citizen of the United States, residing at Baltimore, in the State of Maryland, have
5 invented certain new and useful Improvements in Can-Sealing Machines, of which the following is a specification.

This invention relates to improvements in can sealing machines, and has for its object
10 to provide a machine for hermetically sealing packing cans without the use of solder.

The invention consists of the novel construction and arrangement of the parts and combination of parts hereinafter more fully
15 set forth in the following specification and pointed out in detail in the appended claims.

In the accompanying drawings,—

Figure 1 is a front elevation, partly in section, of my invention, with one of the
20 heads in the position of sealing a can.

Fig. 2 is a side elevation of Fig. 1.

Fig. 3 is a plan view of Fig. 1.

Fig. 4 is a detail vertical section, on an enlarged scale, of one of the expansion heads,
25 showing the position of the plunger and the expansion sections, or fingers, when sealing a can.

Referring to the accompanying drawings, forming part of this specification, and in
30 which like reference numerals designate like parts throughout the several views thereof, 1 designates the base to which is bolted a head 2 which is connected to the head 3 at the top of the machine by the four rods 4.
35 The head 2 is provided with an annular flange 5 on its upper surface and having a cam 6 at the front thereof, and the head 3 has an annular flange, 7 on its lower surface provided with a cam 8 at the front of the
40 machine and on a vertical line with the cam 6. The shaft 9 projects through the heads 2 and 3 and through the base 1 and is provided with a gear-wheel 10 in mesh with the worm on the shaft 11 which latter is driven
45 by the motor 12. The said shaft 9, may, however, be driven from any source of power. Fixed to the said shaft 9, and revolvable therewith, are the cross-arms 13 and 14. The arms 14 each being provided at the
50 outer ends with a short shaft 15 adapted to be reciprocated vertically therein. The upper end of each of said short shafts 15 being provided with a rest 16 for the can 17 and their lower ends being provided with
55 rollers 18 which run on the flange 5 and are

raised and lowered by the cam 6. The arms 13 are each provided with a sleeve 19 held by the nut 20 at the upper end and having a collar 21 held thereon by the set-screw 22. The plungers 23 are each provided with a
60 wheel 24 which runs on the flange 7 and are forced down by the action of the cam 8. Each of the said plungers 23 project through the sleeves 19 and have a coiled spring between wheel 24 and the nut 20. The lower
65 end of each of the plungers 23 is provided with a tapered head 33 held to the plunger by the screw 25. The expansion head is composed of a number of fingers, or sections, 26 each provided with a recess 27 into which
70 the annular flange 28 of the collar 21 fits, their lower inner ends being provided with projections 34 against which the tapered head 24 operates to expand the said fingers, or sections, 26. Said sections 26 are held
75 normally against the side of the head 24 by the spring 29 which extends around all of said sections and fits into the grooves 30. Surrounding said sections 26 and normally
80 resting on the lugs 31 of each of said sections, is a guide-head 32 which serves to guide the can into the proper position with respect to the expanding head. This guide-head 32 is raised from the lugs 31 by the
85 action of the cam as the latter is raised and permits the sections 26 to be expanded by the plunger, and when the can is lowered the guide-head 32 is lowered by gravitation to said lugs 31 which also holds the said
90 sections to their normal position. The lower outer ends of said section 26 are shaped to force the can cap under the top of the can when they are expanded as described. The cans may be fed upon the rests and removed therefrom automatically if desired.

Alterations in the construction and arrangement of the parts and combination of parts may be made, within the scope of the
100 appended claims without departing from the spirit of my present invention.

Having thus described my invention, what I claim is:

1. A can sealing machine comprising a can rest, an expansion head comprising a
105 number of sections, a can guide hung on the outer surface of said sections and adapted to raise and lower thereon, means for raising the can rest to bring the can cap into contact with the expansion head, means to
110 expand said sections, and a coiled spring

surrounding said sections to force them back to their normal position after the can is sealed.

2. A can sealing machine having a base, 5 a vertical shaft mounted in said base, a plurality of can rests carried by said shaft, means for raising and lowering said can rests consecutively, a plurality of expansion heads carried by said shaft each comprising 10 a number of sections, a plunger mounted in each of said expansion heads, means for lowering said plungers consecutively to expand the sections of said heads, a coiled spring surrounding said sections to return them to 15 their normal position after the can is sealed, and a can guide hung on the outer surface of the sections of each head and adapted to raise and lower thereon.

3. A can sealing machine comprising an 20 upper and a lower stationary head, the lower head having an annular flange on its upper surface provided with a cam, and the upper stationary head having an annular flange

on its lower surface provided with a cam, a vertical shaft mounted in said stationary 25 heads, a number of can rests carried by said shaft, a roller on the lower end of each can rest traveling on the flange on the lower stationary head and adapted to cooperate with the cam thereon to raise the can rests 30 consecutively, a number of expansion heads each comprising a number of sections, a can guide hung on the outer surface of the sections of each head and adapted to raise and lower thereon, a plunger in each expansion 35 head, and a roller on the upper end of each of said plungers traveling on the flange on the upper stationary head and adapted to cooperate with the cam thereon to lower the said plunger consecutively. 40

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH M. FREDERICK.

Witnesses:

MAUDE M. AMOSS,
CHAPIN A. FERGUSON.