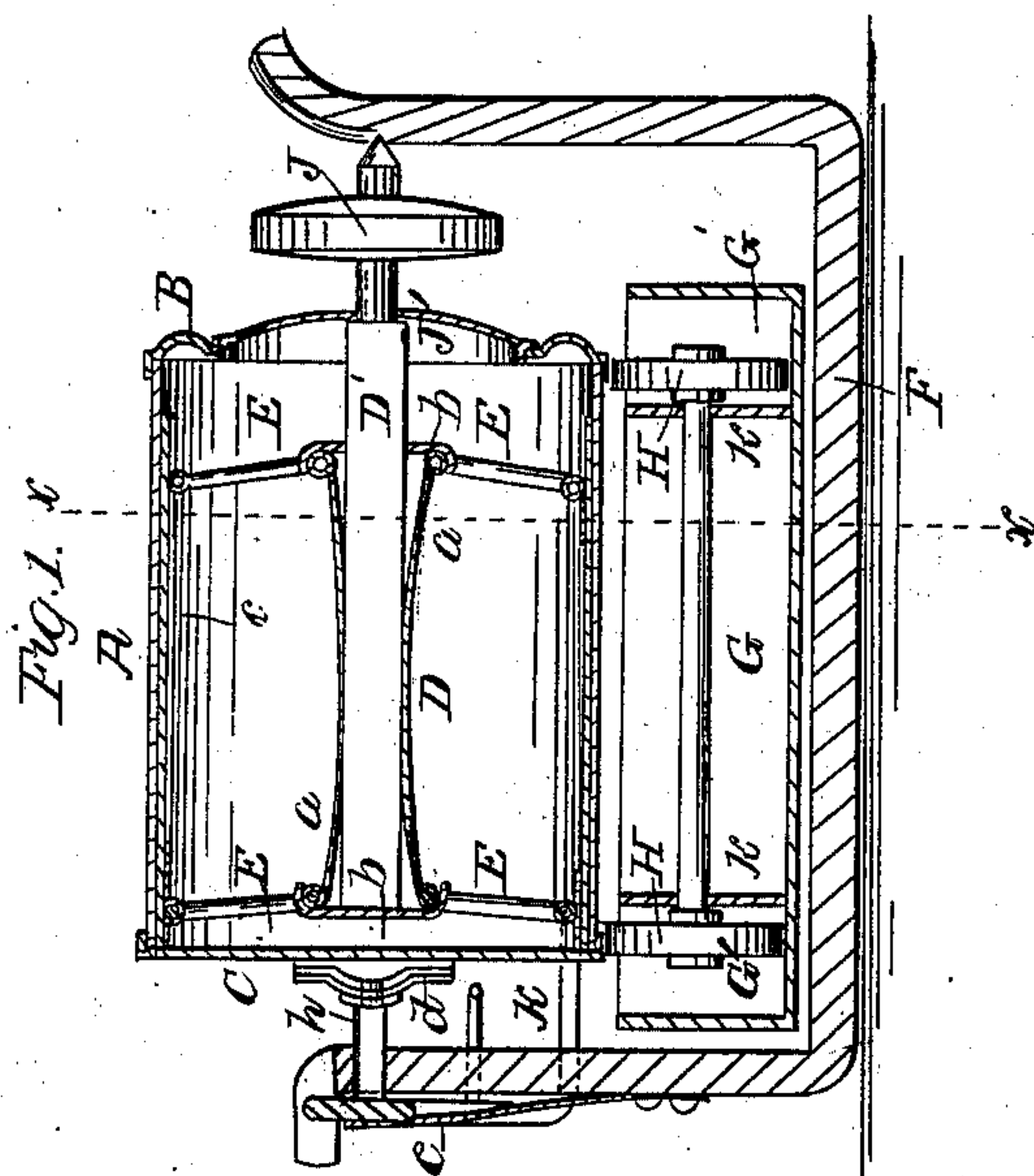
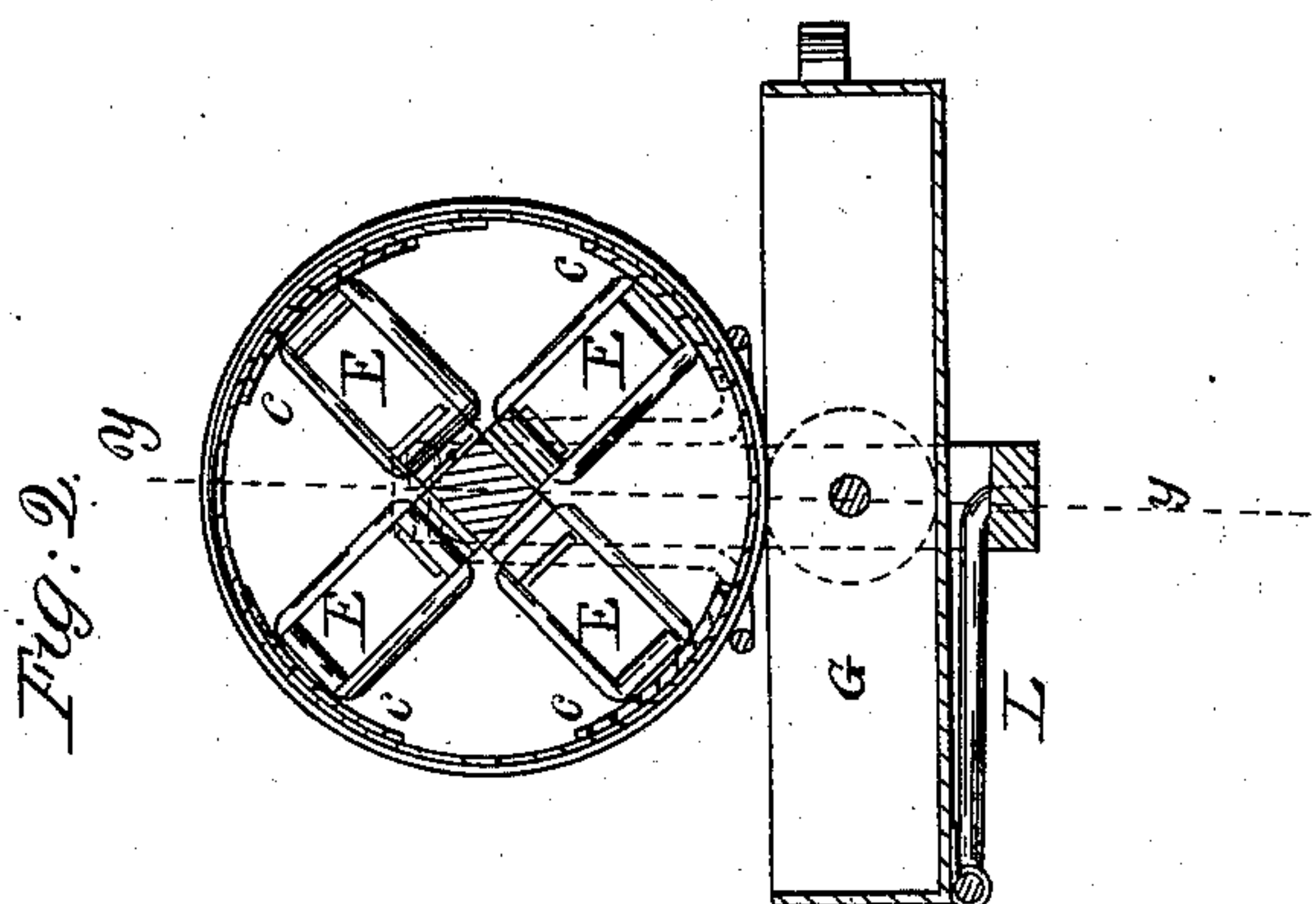


Underwood & Johnson,

Soldering Clamp.

N^o 67,931.

Patented Aug. 20, 1867.



Witnesses:
Theo. Tuschke.
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United States Patent Office.

JOHN C. UNDERWOOD AND PETER JOHNSON, OF RICHMOND, INDIANA, ASSIGNORS TO THEMSELVES, CHARLES A. VAILE, AND DAVID NORDYKE, OF THE SAME PLACE.

Letters Patent No. 67,931, dated August 20, 1867

IMPROVED DEVICE FOR SOLDERING CANS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, JOHN C. UNDERWOOD and PETER JOHNSON, of Richmond, in the county of Wayne, and State of Indiana, have invented a new and useful Improvement in Manufacturing Fruit-Cans; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to certain improvements in apparatus for holding fruit-cans while being soldered, and it consists in attaching to the shafts of the expander a series of springs, connected by means of hinges to the bands which fit against the inner surface of the can, whereby the expander shall be accommodated to any variation in the size of the cans being soldered. And it further consists in a series of wheels for distributing rosin from the box containing the same, as will be hereinafter more fully described, and also in attaching a spring guide to the supporting frame, whereby the can is properly centred.

Figure 1 represents a vertical section of the machine, showing the can in place in the machine and expanded to the proper diameter. The expander is also shown as it appears when pressing out the sides of the can, it being through the line *x x* of fig. 2.

Figure 2 is a cross-section of the machine through the line *y y* of fig. 1.

Similar letters of reference indicate like parts.

A is the body of the can, B is the head, and C is the bottom; D is the expander; D' the expander shaft; E represents the expanding bands; F is the frame which supports the machine; G is an adjustable pan or basin; G' represents basins or boxes which contain rosin, and H represents wheels which distribute the rosin. The expander is formed of a shaft, D', with eight rods, (more or less may be used,) which are attached to each end of four springs, *a*. These springs are attached to the shaft at their middle by screws or otherwise, and are somewhat circular in form, as represented. The bands E are attached to the springs *a* by hinges, and the ends of the springs are confined by clasp-pieces *b*, which are attached to the shaft. Upon the outer end of each pair of the bands E there is attached by a jointed connection a plate marked *c* in the drawing. In shape this plate conforms to the circle or shape of the can. It will be seen that this expander, with the plate *c*, will fold down on to the four springs, assuming nearly a square form when in that position. J is a hand-wheel on the shaft D'. J' is a false can head, which is attached permanently to the shaft D'. *h* is a centre-pin which passes through the frame F, having a disk, *d*, upon its inner end. Its outer end is in contact with a spring, *e*, which presses the pin and the disk upon the end inwardly. The disk is placed loosely upon the end of the centre-pin, so that it may readily adjust itself to the bottom of the can. K is a forked guide, upon which one end of the can rests when being adjusted for soldering. L is a bent rod, which supports one side of the basin G, as seen in fig. 2. The rod L is attached to the frame F. Only one end of the rod is seen in fig. 2. The basin G is attached to this rod on one side by a hinged connection, which allows the opposite side to be raised up. This movement of the basin brings the wheels H in contact with the can where the rosin is to be distributed. When thus in contact the can is revolved, so that the wheels H traverse the whole circumference of the can. There are partitions, *k*, in the pan or basin G, upon which the shaft *m* (to which the wheels are attached) rests. These wheels are formed by compressing elastic or fibrous material between two disks. They revolve in the rosin which is contained in the compartments G' G' of the basin.

In operating the machine, the parts of the can are put together, (can shape,) and the expander is inserted, when a slight but quick rotary movement throws out the bands E, with the plates *c*, as seen in the drawing, thereby expanding the body of the can to the required diameter. It will be understood that the body of the can is only formed, it is not soldered; all the soldering is done after the can is expanded. The expander is supported at one end by the disk *d* and at the other end by a centre on the frame F, as seen in the drawing.

What we claim as new, and desire to secure by Letters Patent, is—

1. The springs *a*, in combination with the expander-shaft D', bands E, and hinges, substantially as and for the purpose specified.

2. The frame F, disk *d*, and adjustable spring-guide K, constructed and arranged as described for centring the can, substantially as herein set forth.

3. The combination and arrangement of the expander D, frame F, and rosin-box G', substantially as described for the purpose specified.

4. The compartments G' and wheels H, with the pan G', for distributing the rosin, constructed and arranged to operate substantially as and for the purpose set forth.

JNO. C. UNDERWOOD,
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Witnesses:

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HENRY NAGLE.