(No Model.) 2 Sheets—Sheet 1.

D. KLUMP.

CAN SOLDERING MACHINE.

No. 314,536. Patented Mar. 24, 1885.

FIG. 1.

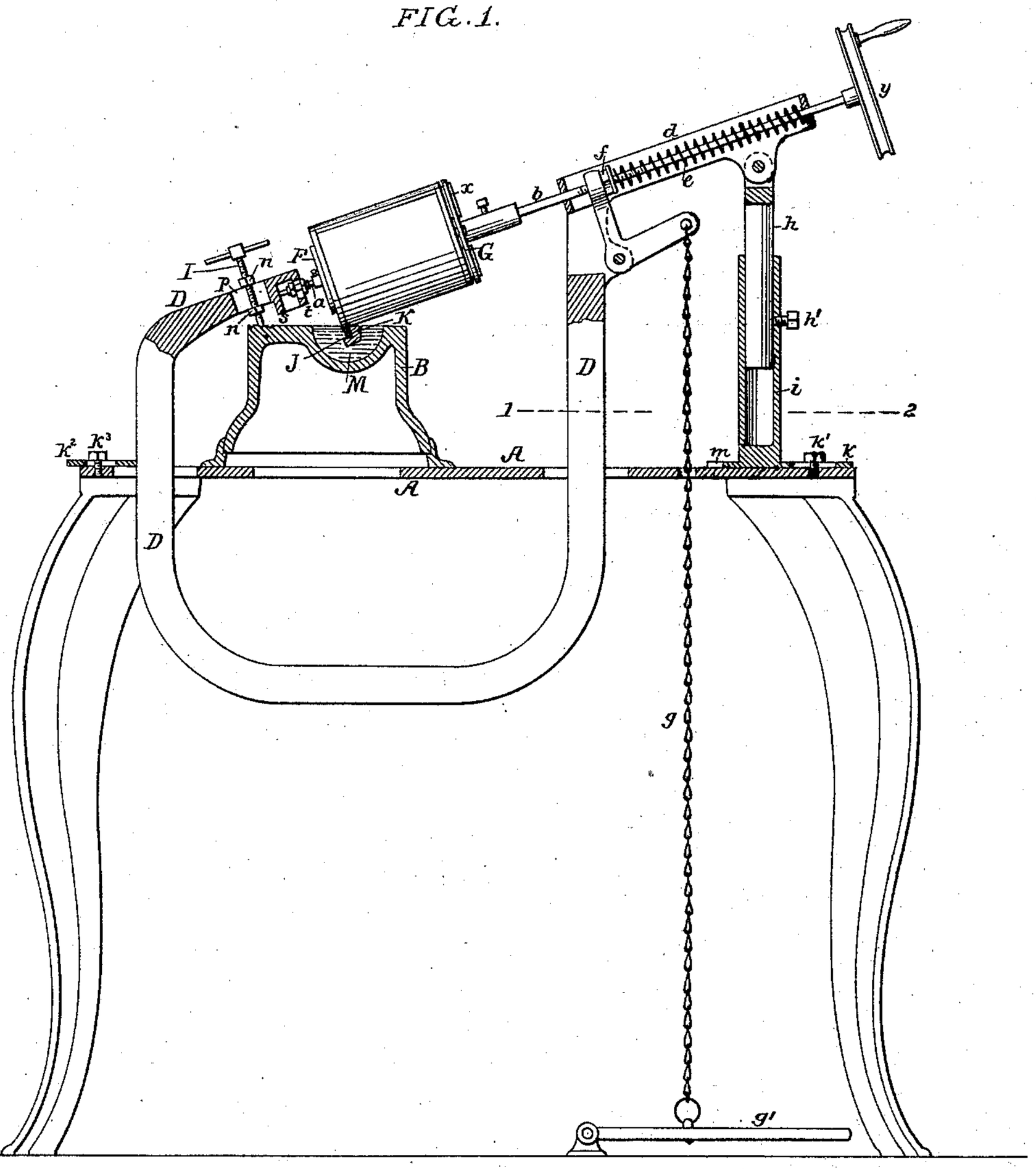
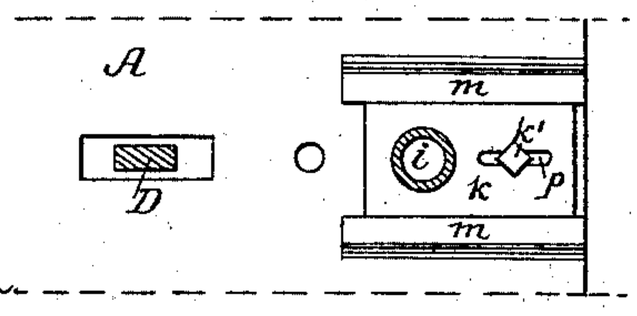


FIG. 2.



Witnesses:
John M. Clayton
James F. Johns

Inventor
David Klump
by his Attys,
Howson & Sons.

(No Model.) 2 Sheets—Sheet 2.

D. KLUMP.

CAN SOLDERING MACHINE.

No. 314,536. Patented Mar. 24, 1885.

FIG. 3.

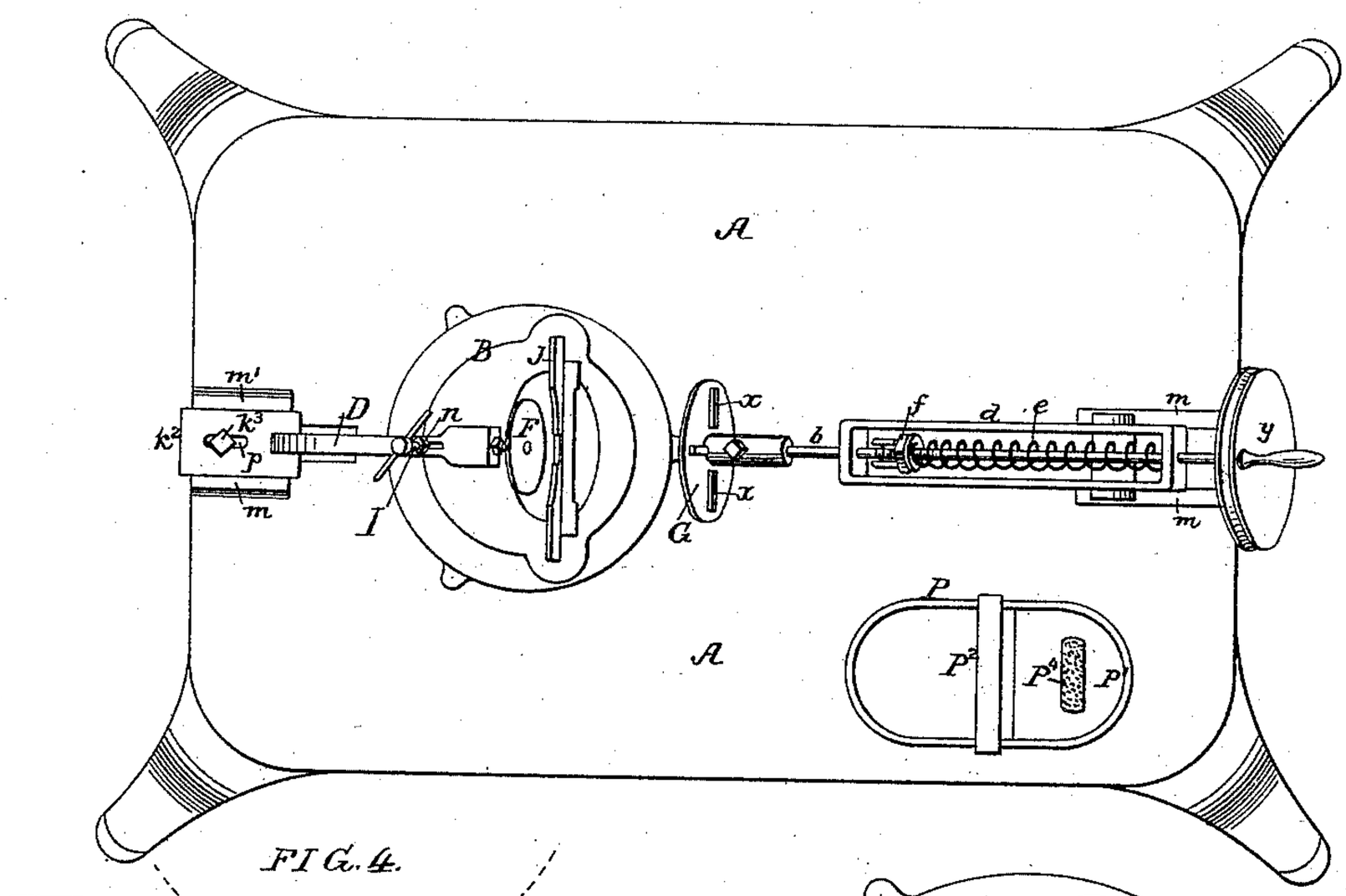


FIG. 4.

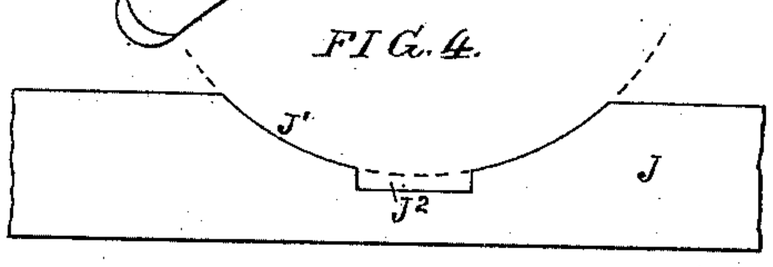


FIG. 5.

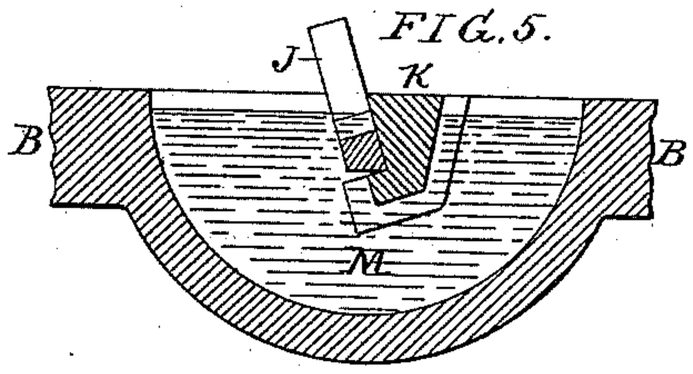


FIG. 6.

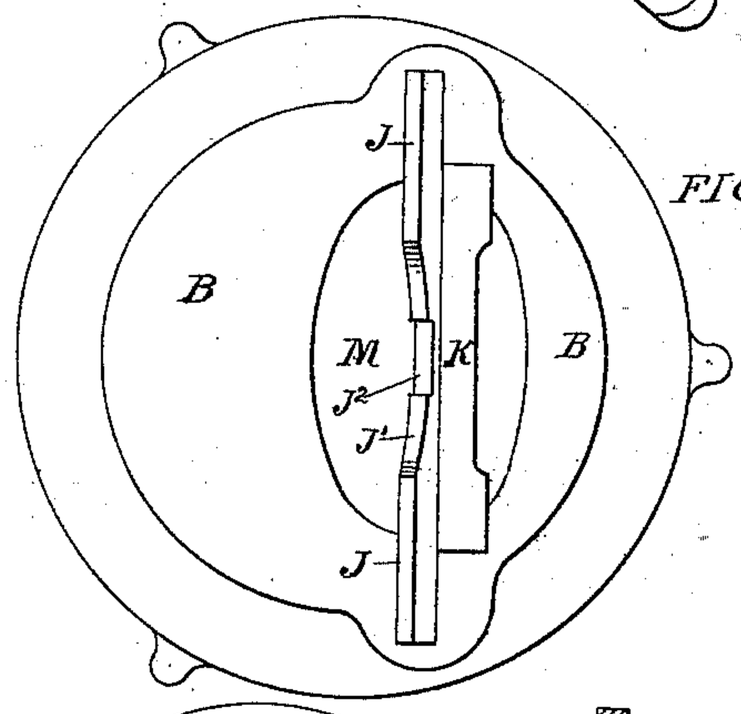


FIG. 7.

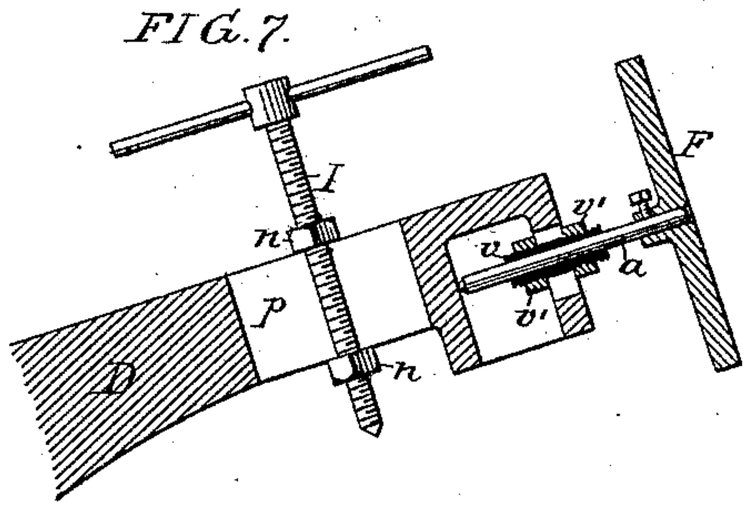


FIG. 8.

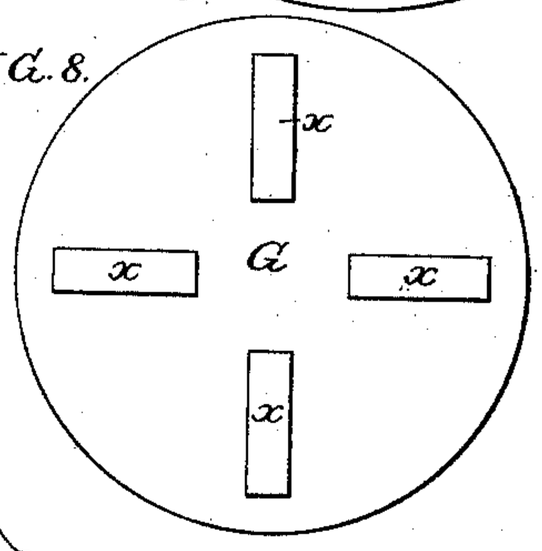


FIG. 9.

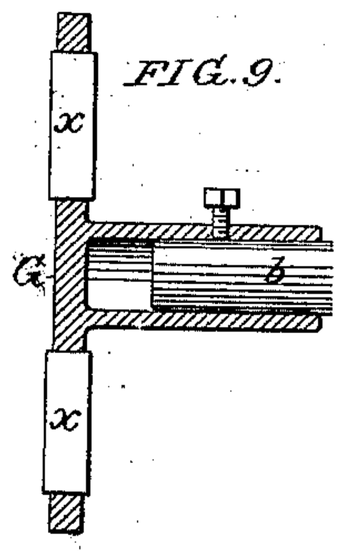
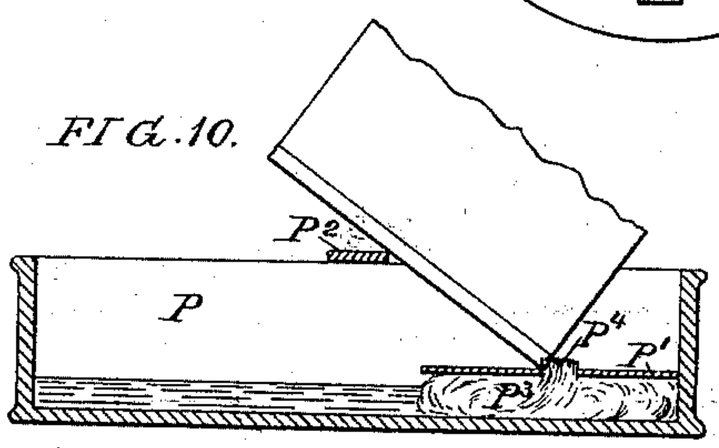


FIG. 10.



Witnesses:
John M. Clayton.
James F. Dobin,

Inventor.
David Klump
by his Attys.
Howson & Sons

UNITED STATES PATENT OFFICE.

DAVID KLUMP, OF MOORESTOWN, NEW JERSEY.

CAN-SOLDERING MACHINE.

SPECIFICATION forming part of Letters Patent No. 314,536, dated March 24, 1885.

Application filed May 15, 1884. (No model.)

To all whom it may concern:

Be it known that I, DAVID KLUMP, a citizen of the United States, and a resident of Moorestown, Burlington county, New Jersey, have invented certain Improvements in Can-Soldering Machines, of which the following is a specification.

My improvements relate to the construction of the can-carrying frame, to the gage-bar and guard of the solder-pot, and to a certain fluxing-pan, the improvements being too fully described and claimed hereinafter to need detailed preliminary explanation.

In the accompanying drawings, Figure 1, Sheet 1, is a longitudinal section of my improved can-soldering machine; Fig. 2, a sectional plan on the line 1 2, Fig. 1; Fig. 3, Sheet 2, a plan view of Fig. 1 with the can removed; and Figs. 4 to 9, detached views of parts of the machine on a larger scale than Figs. 1, 2, and 3.

A is a table or stand to which is secured the solder-pot B, and D is the can-carrying frame, which is made in the form of a bow, having at one end a bearing for the spindle *a* of the lower can-clamping disk, F, and at the upper end a bearing for the spindle *b* of the upper disk, G, said upper end, *d*, of the frame being of rectangular form and containing a spring, *e*, bearing on a washer which rests against a nut, *f*, on the spindle *b*, this nut being under the control of the forked arm of a bell-crank lever, H, hung to the frame D and connected by a chain or cord, *g*, to a treadle, *g'*, so that the disk G can be retracted for the insertion or removal of a can and then allowed to descend so as to clamp the can between the two disks F and G. The lower end of the frame D is supported by a screw-pin, I, adapted to one of a number of recesses in the top of the solder-pot, and to the upper end, *d*, of the frame is pivoted a stem, *h*, which is adapted to a socket, *i*, carried by a plate, *k*, fitted between guides *m* on the table A and secured in position by a bolt, *k'*, Figs. 1 and 2, so that the frame D can be moved longitudinally but not laterally on the table A. A notched plate, k^2, secured by a bolt, k^3, and adapted to guides *m'* at the opposite end of the table A, serves to laterally retain the lower end of the frame D, Figs. 1 and 3. The stem *h* is adjustable in the socket *i*, being secured after adjustment by a set-screw, *h'*, and the frame D is adjustable vertically on the screw-pin I, being retained in position by jam-nuts *n*, and both the table A and the plates *k* and k^2 have slots, so that said frame D can be adjusted longitudinally, this combined longitudinal and vertical adjustment of the frame permitting the application to the same of cans of different diameters without interfering with the proper relation of the flanged head of the can to the gage-bar J and guard K of the solder-pot. The ends of said gage-bar and guard are adapted to sockets in the solder-pot, as shown in Figs. 3 and 6, and said bar and guard extend longitudinally across the well M of the pot, the bar J having the usual segmental recess, J', for the reception of the flanged can-head, and the guard K being recessed for the reception of the bar, and serving to prevent the splashing or running up of solder onto the sides of the can.

In the bottom of the recess J' is another recess, J^2, which serves to maintain a reservoir of solder at this point, and thus insures a free access of solder to all parts of the joint between the head and body of the can as the latter is rotated. (See Figs. 4 and 5.) When there is a change in the size of the cans to be operated upon, the gage-bar J can be removed and another bar having a segmental opening of the proper size inserted in its place, the guard K, however, remaining undisturbed. The lower end of the frame D has two flanges, *s* and *t*, and a spindle, *a*, of the lower disk, F, has an end bearing on the flange *s* and passes through a sleeve, *v*, adapted to a slot in the flange *t* and secured by nuts *v'*, (see Fig. 7,) so that the sleeve can be readily removed and replaced by a new one when it becomes worn.

In order to insure a firm hold of the disk G on the upper head of the can, said disk has a series of radial slots—three in the present instance—in which are secured slabs or blocks *x*, of rubber, leather, cork, or like material, which form the bearing surface of the disk. (See Figs. 8 and 9.)

In order to provide for the rotation of the can when the latter is clamped between the disks F and G, the spindle *b* of the upper disk has at the end a crank-wheel, *y*, the periphery

of which is grooved for the reception of a belt when the machine is to be driven by power. The disk G is adjustable on the spindle *b*, so as to supplement the action of the lever H and spring *e* in adjusting the machine to cans of different lengths.

On the table A is a vessel, P, having a partition, P′, and a top cross-bar, P². In the vessel beneath the partition is packed a mass, P³, of sponge, cotton-waste, or other suitable absorbent material, which is saturated with a fluxing liquid and projects through a slot in the partition, so as to form a pad, P⁴. A can is adjusted to the vessel so that the head of the can bears against the bar P², the flange of the head resting on the pad P⁴, as shown in Fig. 10. By rotating the can a uniform distribution of the fluxing liquid around the joint is effected, this distribution being confined within proper limits.

I claim as my invention—

1. The combination of the table and its solder-pot with the upper and lower can-clamping disks and their spindles, the frame D, having bearings for said spindles, the adjustable support for the lower end of said frame, the stem *h*, pivoted to the upper end of the frame, and the plate *k*, guided longitudinally on the table and having a guide, *i*, for the stem *h*, as set forth.

2. The combination of the solder-pot with the guard K, and the recessed gage-bar J, detachable from said guard, as set forth.

3. The gage-bar J, having a segmental recess, J′, and supplementary recess J², as set forth.

4. The combination of the lower clamping-disk, F, and its spindle *a* with the frame D, having a flange, *s*, with end bearing for the spindle, and a flange, *t*, with detachable sleeve *v*, as set forth.

5. The fluxing-box P, having a slotted partition, P′, absorbent packing P³, and a transverse bar, P², serving as a rest for the head of the can, as set forth.

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

DAVID KLUMP.

Witnesses:

JOHN M. CLAYTON,

HARRY SMITH.