

(No Model.)

2 Sheets—Sheet 1.

J. G. JONES.  
CAN SOLDERING MACHINE.

No. 283,713.

Patented Aug. 21, 1883.

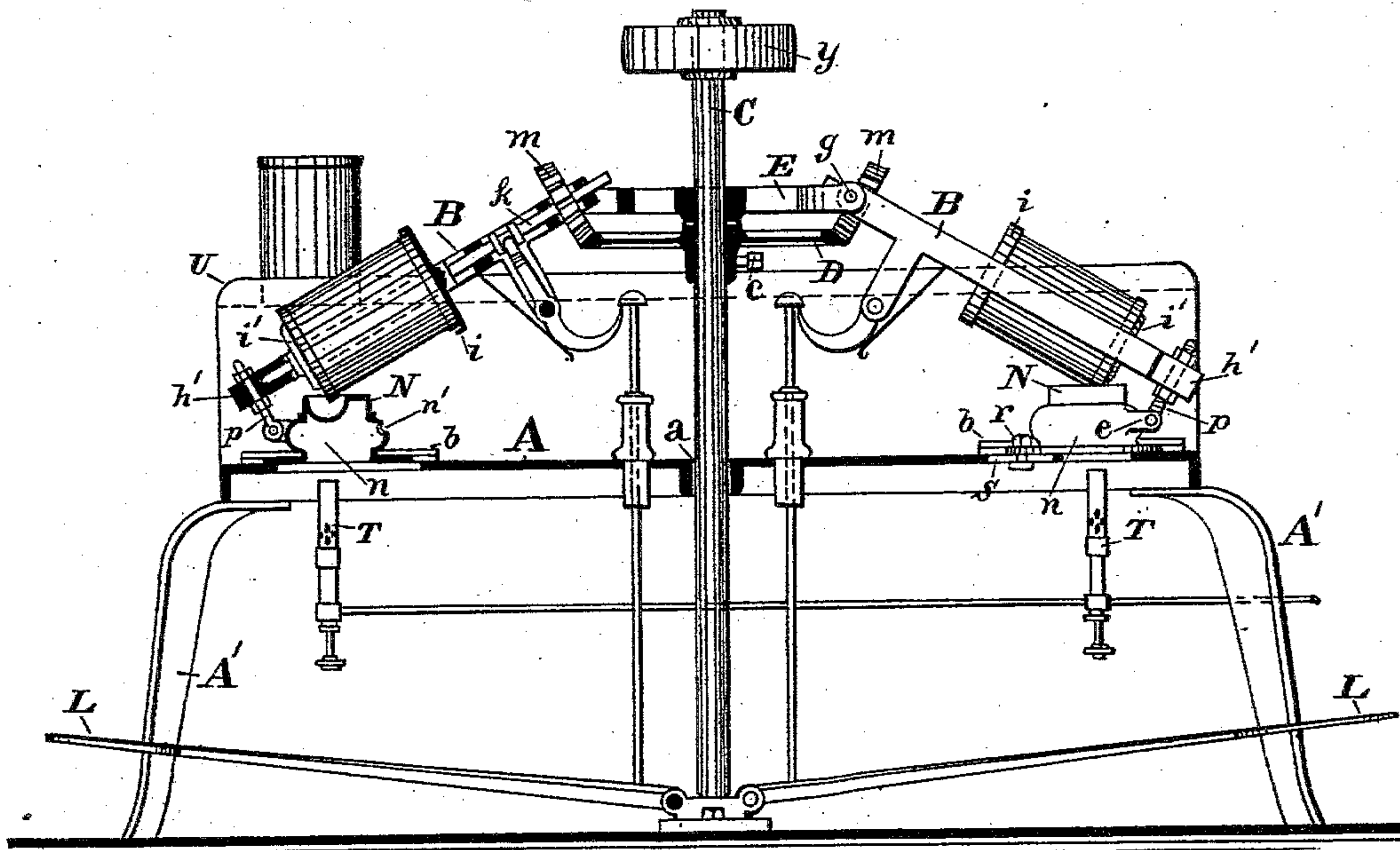


Fig. 1.

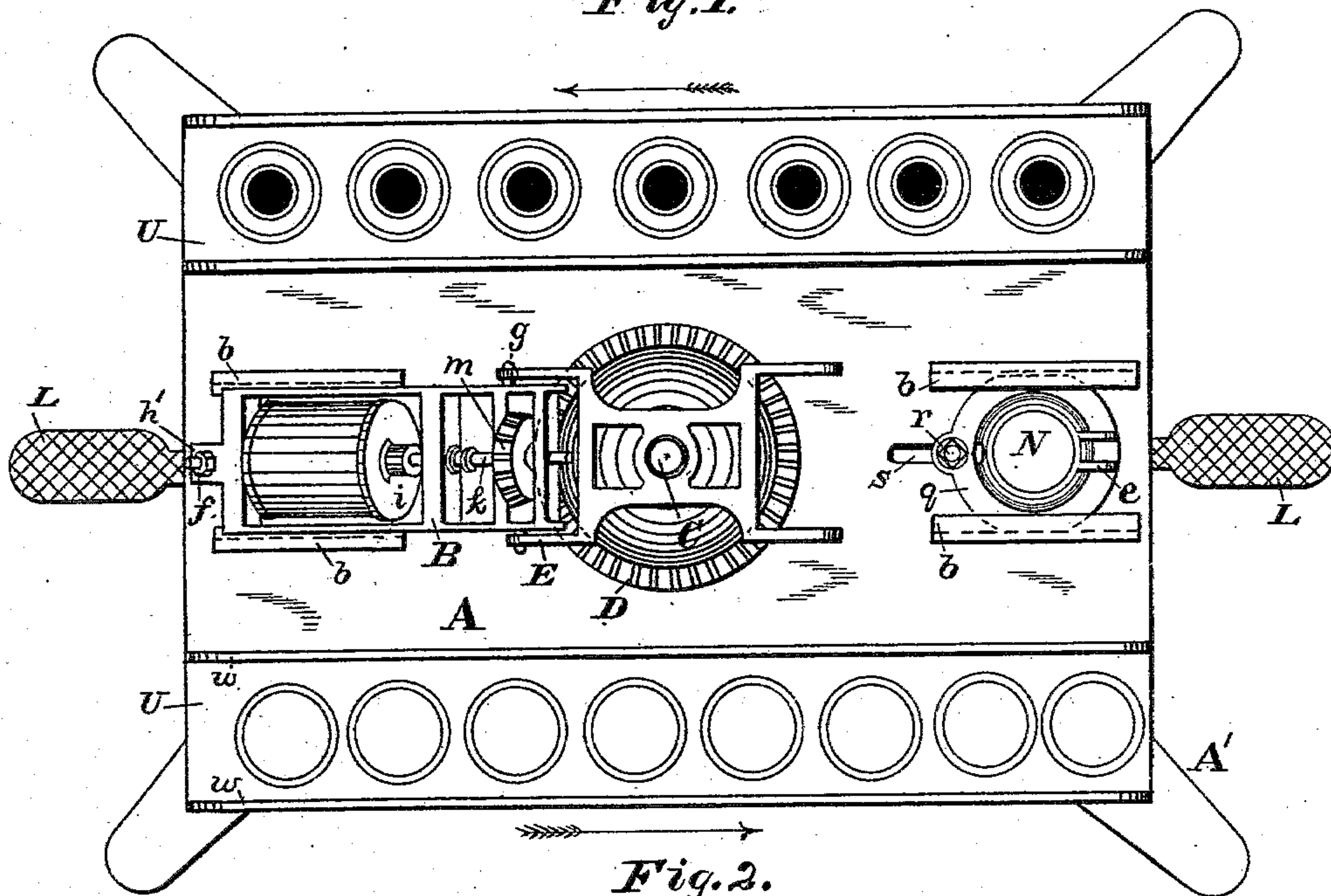


Fig. 2.

Witnesses:  
A. C. Eader  
John E. Morris

Inventor:  
Jacob G. Jones  
By Chas B. Mann  
Attorney.

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2 Sheets—Sheet 2.

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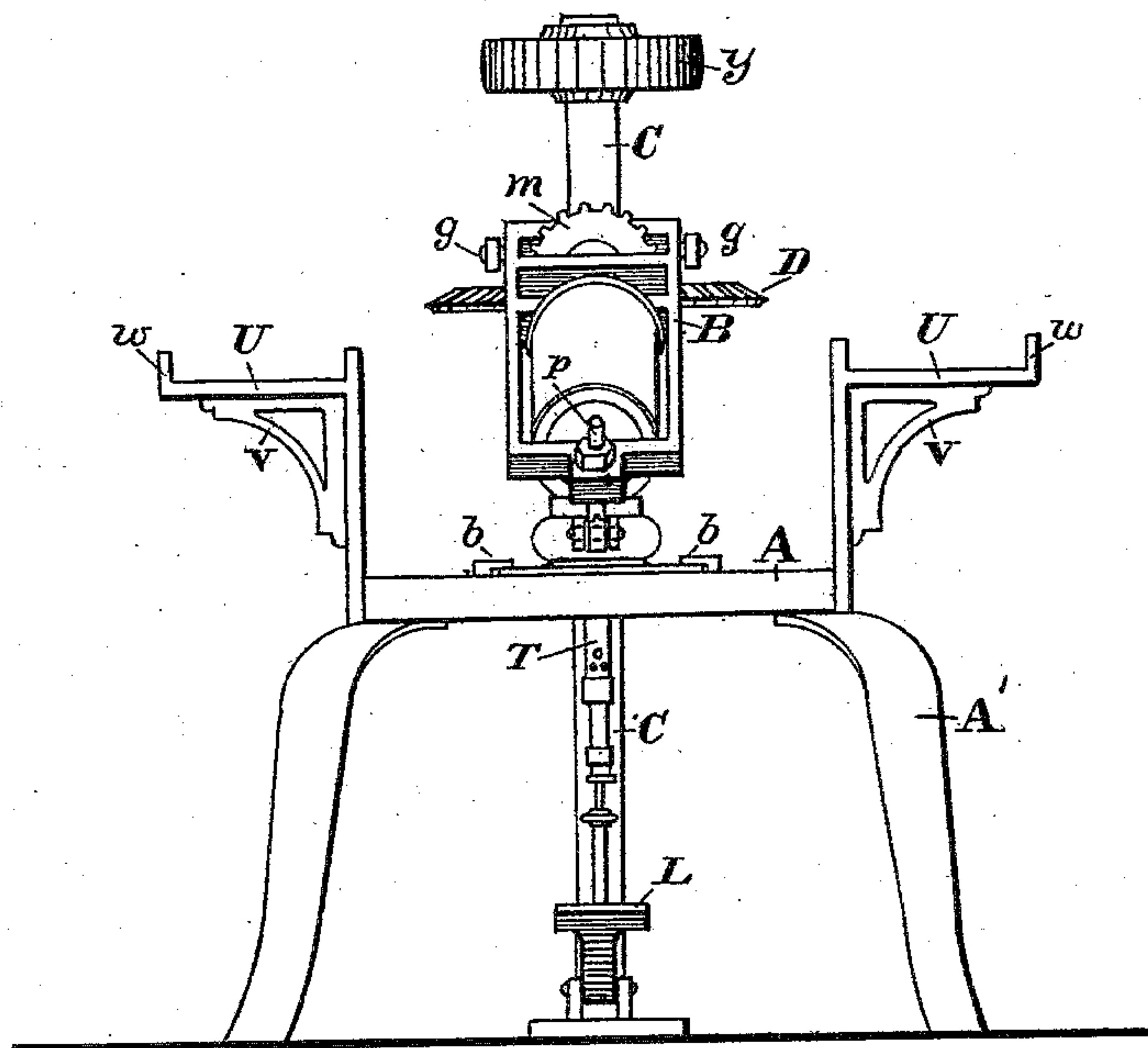


Fig. 3.

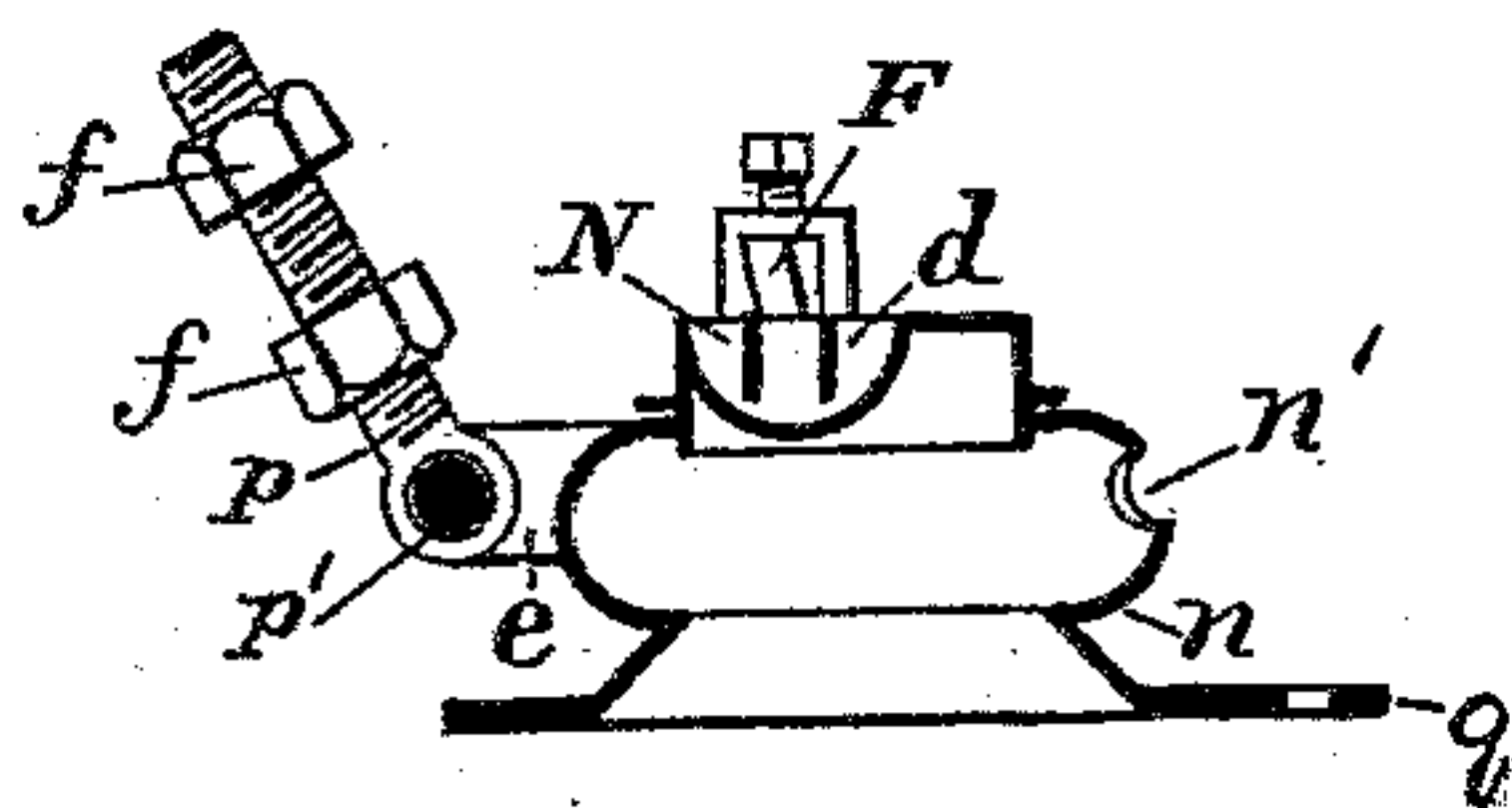


Fig. 4.

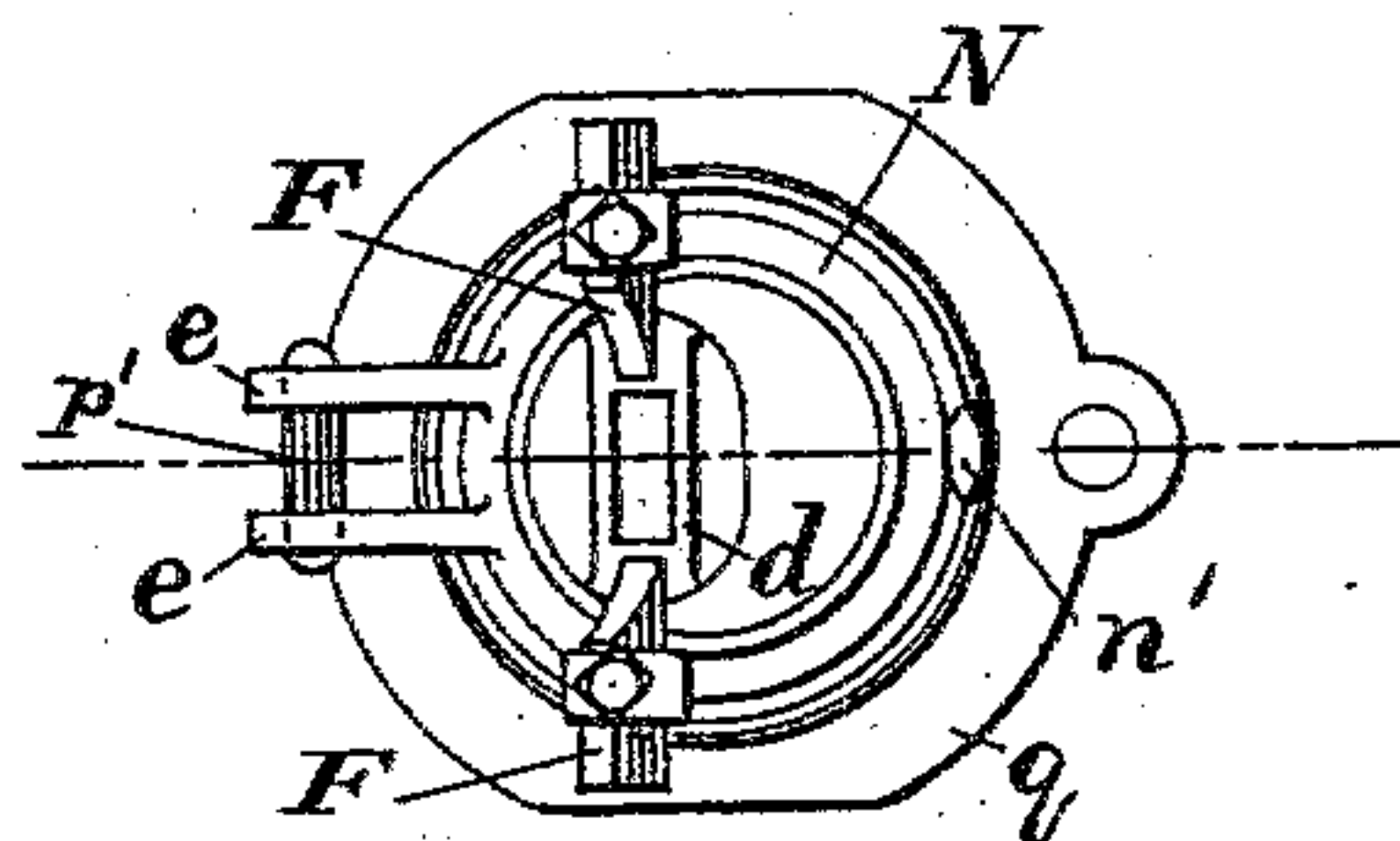


Fig. 5.

Witnesses:  
A. C. Eader.  
John E. Morris.

Inventor:  
Jacob G. Jones  
By Chas B. Mann  
Attorney.



# UNITED STATES PATENT OFFICE.

JACOB G. JONES, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF TO  
HORACE K. THURBER, OF NEW YORK, N. Y.

## CAN-SOLDERING MACHINE.

SPECIFICATION forming part of Letters Patent No. 283,713, dated August 21, 1883.

Application filed July 14, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB G. JONES, a citizen of the United States, residing at Baltimore and State of Maryland, have invented certain new and useful Improvements in Can-Soldering Machines, of which the following is a specification.

This invention relates to certain improvements in can-soldering machines of that class in which the can to be soldered is rotated while in an inclined position.

In the drawings hereto annexed, Figure 1 is a side elevation of the machine, parts of which are shown in section. Fig. 2 is a top view of the machine, except the drive-pulley and one can-holder, which are omitted. Fig. 3 is an end elevation of the machine. Fig. 4 is a section of the solder-pot, showing the pivoted regulating-screw. Fig. 5 is a top view of the solder-pot.

The letter A designates a square or rectangular stand, supported on legs A'. Two can-holder frames, B, are supported above the stand in an inclined position, and a vertical shaft, C, has bearing in the center of the stand at a. A bevel-gear wheel, D, is made fast to the shaft by a set-screw, c, and thereby is adapted to be adjusted to a higher or lower position on the shaft, for a purpose hereinafter specified.

Above the gear-wheel D is a frame, E, which is supported by resting on the hub of the wheel, and is vertically adjustable with said wheel. This frame has a central hole, through which the vertical shaft turns freely.

Each can-holder frame B has two disks, *i* and *i'*, which are adapted to press against the ends of a cylindric can. The disk *i* has a flange to center the can end, while the disk *i'* is flangeless, with a spindle which enters a socket in the lower end of the holder. The disk *i* has a rotary movement, and also a movement toward and away from the other disk, to permit a can to be inserted between the two disks. The latter movement is effected by depressing the treadle L. The construction by which these movements are effected is fully described in Letters Patent granted on my application, and dated August 29, 1882, No. 263,659.

At the upper end of the can-holder frame a pinion, *m*, is mounted on the disk-shaft K, and gears with the wheel D, and this end of the

can-holder frame is jointed by pins *g* to the frame E. The lower end of the can-holder frame has a projection, *h'*.

A solder-pot, N, contains the solder, and a reversible bar, *d*, having a central slot or recess, (see Figs. 4 and 5,) extends across the pot, and an iron or scraping blade, F, at each side of the central recess, is adjustable laterally, and serves to remove the surplus solder from the outside of the can-seam as the can rotates.

The construction of the reversible slotted bar and the adjustable scraping-blades is substantially like that shown and described in Letters Patent granted D. Klump, October 4, 1881, No. 247,926. A further description of the same here, therefore, is unnecessary.

To the solder-pot shown in Klump's patent, or one of any other similar construction, I attach lugs *e*, to project horizontally or vertically, and between these lugs one end of a regulating-screw, *p*, is pivoted on a bolt, *p'*. This regulating-screw passes loosely through a hole in the projection *h'*, at the lower end of the can-holder frame, and a nut, *f*, on the screw above and one below the said projection enables the lower end of the can-holder frame to be vertically adjusted more or less above the slotted bar and scraping-blades, so as to suit cans of different sizes. The screw also permanently connects the lower end of the can-holder frame to the solder-pot, the connection being that of a pivot or joint. Two solder-pots are employed—one at each end of the table. One end of a can is soldered at one pot, and is then passed across to the other, as hereinafter described, and the other end of the can is then soldered at the other pot. It will thus be seen the two solder-pots are connected by the stationary central frame, E, and the two can-holder frames B, while the wheel D rotates the disks which clamp and turn the can.

The table is provided with two parallel guides, *b*, between which the flange *q* of the solder-pot fits. This permits the solder-pot to slide, thereby enabling it to be adjusted horizontally to suit any change in the vertical adjustment of the frame E. The position of the solder-pot is made permanent by the set-screw *r* in the flange of the pot passing through a slot, *s*, in the table.

By the above-described arrangement of the



can-holder frame, with its upper end jointed to the frame E and its lower end jointed to the solder-pot, and the horizontal adjustment of the solder-pot, provision is made for changing or varying the inclination of the can, so as to allow the solder to take effect more or less on the body of the can.

The solder-pot has a shell or bottomless walled inclosure, *n*, depending down below it, into which the heating-flame enters, and which serves to confine the heat about the bottom of the pot. This shell may be separate from the pot, the latter setting into the top of the former, as in Fig. 4, or it may be integral with the pot, as in Fig. 1. At the rear side of the shell is an opening, *n'*, to allow the escape of smoke from the shell and to facilitate the draft of the burner. It is immaterial whether the lugs *e* be attached to the solder-pot proper or to the shell just below the solder-pot. A burner, T, of any suitable kind, is supported below the shell or bottomless walled inclosure, and its heat keeps the solder in a molten state.

At the top of the vertical shaft is a drive-pulley, *y*, by which motion is imparted to the can-holders.

A horizontal slideway or chute, U, is supported at each of two sides of the machine on brackets *v*, which sustain them above the stand, as seen in Figs. 1 and 3. These horizontal chutes have vertical flanges *w*, and extend from one end of the stand to the other. By means of these the cans having one end soldered at one pot are slid or passed across to the other pot, where the other end is soldered.

The operation, briefly stated, is as follows: The can-holders being revolved, a can may be inserted by depressing one of the treadles. The lowermost end of the can will at once be soldered by rotating in the slotted bar secured in the solder-pot. The treadle is then depressed to remove this can, and the latter, now being hot, is stood on its soldered end upon one of the horizontal chutes. Another can is then placed in the same holder and the operation repeated. As each hot can is placed upon the chute those in front of it are gradually passed across to the second solder-pot at the other end of the machine. By the time a can arrives at

the other end of the chute at a point near the second solder-pot, it has become cool, and then an operator at that end of the machine places the cool can in the holder at that end and solders the remaining end seam. The finished can, now being again hot, is stood on its last soldered end upon the other horizontal chute, to be gradually passed along until cool, when an attendant removes it.

Having described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a can-soldering machine, a solder-pot provided with lugs *e*, and having a regulating-screw, *p*, attached to the lugs, in combination with an inclined can-holder frame provided with rotary disks and having its lower end adjustably connected to the solder-pot by means of the said regulating-screw, as set forth.

2. In a can-soldering machine, the combination of a stationary frame adapted to be vertically adjusted, a solder-pot horizontally adjustable, and an inclined can-holder frame having one end jointed to the stationary frame and the other end permanently connected to the solder-pot, as set forth.

3. In a can-soldering machine, the combination of a vertical shaft and gear-wheel D, the stationary central frame, E, vertically adjustable, two inclined can-holder frames, B, one opposite the other, and having their uppermost ends jointed to the frame, and two solder-pots, each of which has a jointed connection to the lowermost end of a can-holder frame, as set forth.

4. A can-soldering machine, having a stationary frame, E, two inclined can-holder frames, B, one being opposite the other, two solder-pots, one below the lowermost end of each can-holder frame, and a horizontal chute, U, extending from a point near one solder-pot to the other, as set forth.

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

JACOB G. JONES.

Witnesses:

JOHN E. MORRIS,  
JNO. T. MADDOX.