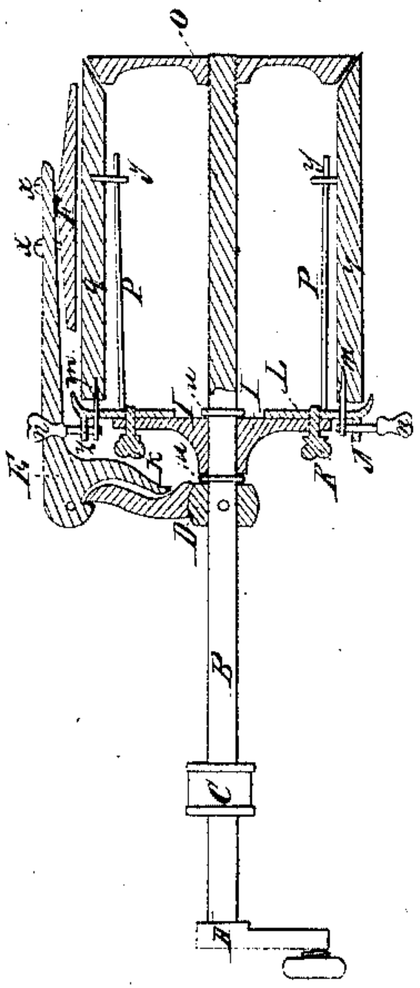
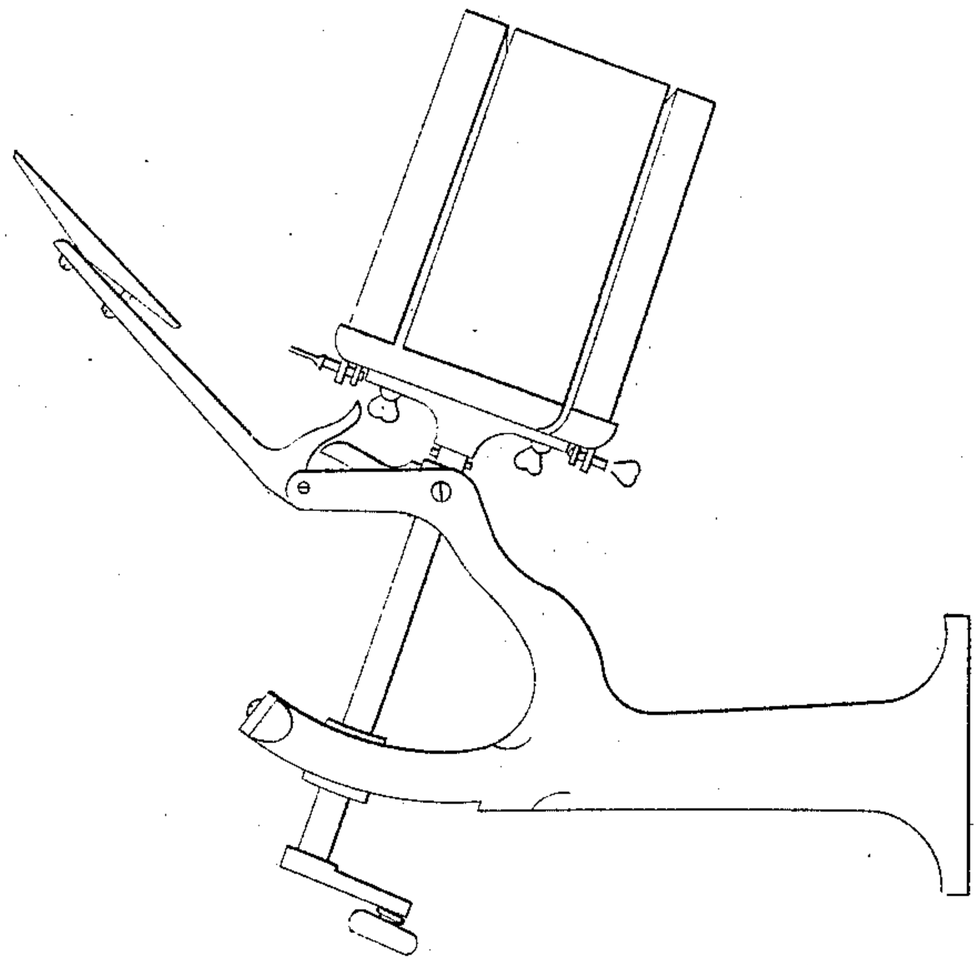
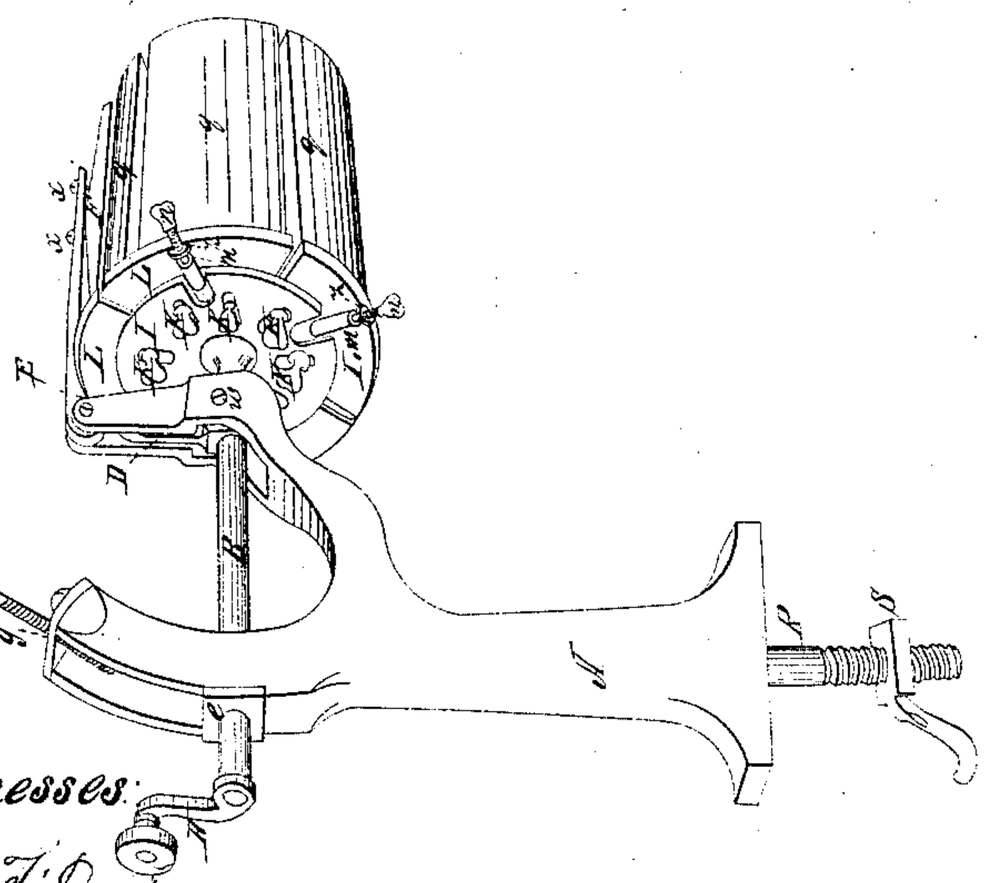
H. P. Dennis.

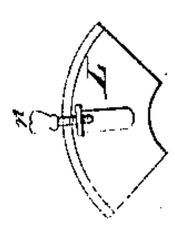
Soldering Clamp.

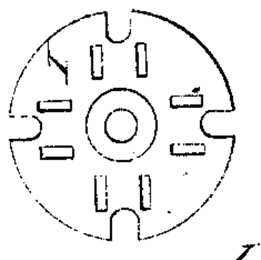
No. 45,143. Patented Nov. 22, 1864.











Witnesses:
William J. Dennis
James S. Taylor

Inventor:
Henry P. Dennis

UNITED STATES PATENT OFFICE.

HENRY P. DENNIS, OF PEORIA, ILLINOIS.

IMPROVEMENT IN SOLDERING METAL VESSELS.

Specification forming part of Letters Patent No. **45,143**, dated November 22, 1864.

To all whom it may concern:

Be it known that I, HENRY P. DENNIS, of the city and county of Peoria, State of Illinois, have invented a new and useful machine entitled "Dennis' Soldering-Machine," to be used in soldering round, square, oval, or any required shape or form, tin or metal vessels; and I do hereby declare that the annexed explanation (marked A) and the accompanying drawing (marked B) make a full, perfect, and clear description of said machine and the operation of the same, and that said drawing and specification are made a part of this specification and expressly referred to for explanation of use and operation of the same.

A is the stand or post of the machine, which is made fast to a board or bench by means of screw R and nut S.

B is the oscillatory lever-screw, which has two positions and two motions. First, the lever B is in an inclined position and represented by dotted lines. The can or vessel body is put on the cylinder or staves *q q q q*. Then the bottom is put on and held by the right hand until the left hand turns crank H around enough to cause shaft B to screw into expansion-plate O and cause *q q q q* to expand out tight to the bottom of the can or vessel. When this is done, the left hand throws down shaft B into a horizontal position, which is guided by shaft-box C, and is held to its place by means of oscillatory lever-box D, which is held by means of two screws, W, opposite to each other, and causes the lever of box D to pass back into the notch of lever-finger E, which holds the lever-finger rest F down on the side seam or lap of the can or vessel, which keeps the seam of the aforesaid can or vessel to its place while soldering. When this is done, the lever B is thrown up again into inclined plane, as at first, which causes the lever-box D to pass out under the lever-finger E and causes it to stand in a perpendicular position. By this means it will be out of the way while the bottom of the can or vessel is being soldered. When finished, the can is taken off by means of turning crank H to reverse until it forces out expansion-plate O and lets the stave *q q q q* contract by means of springs P, which are riveted into stave-plates L, just below the stave-slot, and are fastened at the other end by means of staples *y*, which are fastened into the staves of *q q q q*, which are fastened into the stave-plates L L L L by means of stave-plate slot-screws M M M M, which are screwed into staves *q q q q* and pass through the slots of stave-plates L L L L and receive the ends of screws N N N N, which causes the aforesaid screws M M M M to be moved in the aforesaid slots of stave-plates L L L L by means of aforesaid thumb-screws N N N N, which are screwed through lugs Z Z Z Z and riveted fast to aforesaid screws M M M M. The stave-plates L L L L are made fast to slot-plate I by means of eight thumb-screws, K, which pass through the slots in the aforesaid slot-plate I and screw into the stave-plate L L L L, which may be moved at any given point in the slots aforesaid, plate I. The shaft B is held in by means of three pins, U U U U—one on each side of box D, and one inside slot-plate I—while the end toward the crank is guided by box C, as set forth.

T is a screw by which to set or keep the cylinder in any certain pitch while soldering. This passes through cap *g* down onto box C, which slides in stand A, as set forth. The screws X X pass through finger E and screw into finger-rest F, and equalize the pressure on the can or vessel, as set forth. When the can or vessel to be soldered is of conical or square form, the cylinder is changed to suit the shape of the vessel to be soldered.

The benefits of this machine are to save edging, grooving, and solder. Also this machine fits the bottom by pressing out or expanding the body or sides to fit the bottom; also saves great time and labor in comparison to mode of doing the same work by hand.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A new and useful machine on which to solder tin or metal vessels in any required form, the form of stand A, in combination with shaft B and lever-box D, as set forth.

2. The application of box C, in combination with the machine, for the purpose set forth.

3. The form of lever-finger E, in combination with lever-finger rest F, and for the purpose set forth.

4. The application of slot-plate I, in combination with stave-plates L L L L and expansion-staves *q q q q*, for the purpose set forth.

5. The application of the screws M M M M and N N N N in the mode of adjusting the staves *q q q q*, also the thumb-screws K K K K K K K K, used in setting the machine to expand to any required size.

6. The application of expansion-plate O, in combination with pins U U U and springs P P P P, for the purpose set forth.

7. The use of cylinder-staves of round, square, oval, or any required form in their application to this machine.

HENRY P. DENNIS.

Witnesses:
JAS. T. TAYLOR,
W. F. DENNIS.