# M. M. Shur,

## Soldering Clamp.

No. 81,420. Patented Aug. 25, 1868.

Fig: 1.

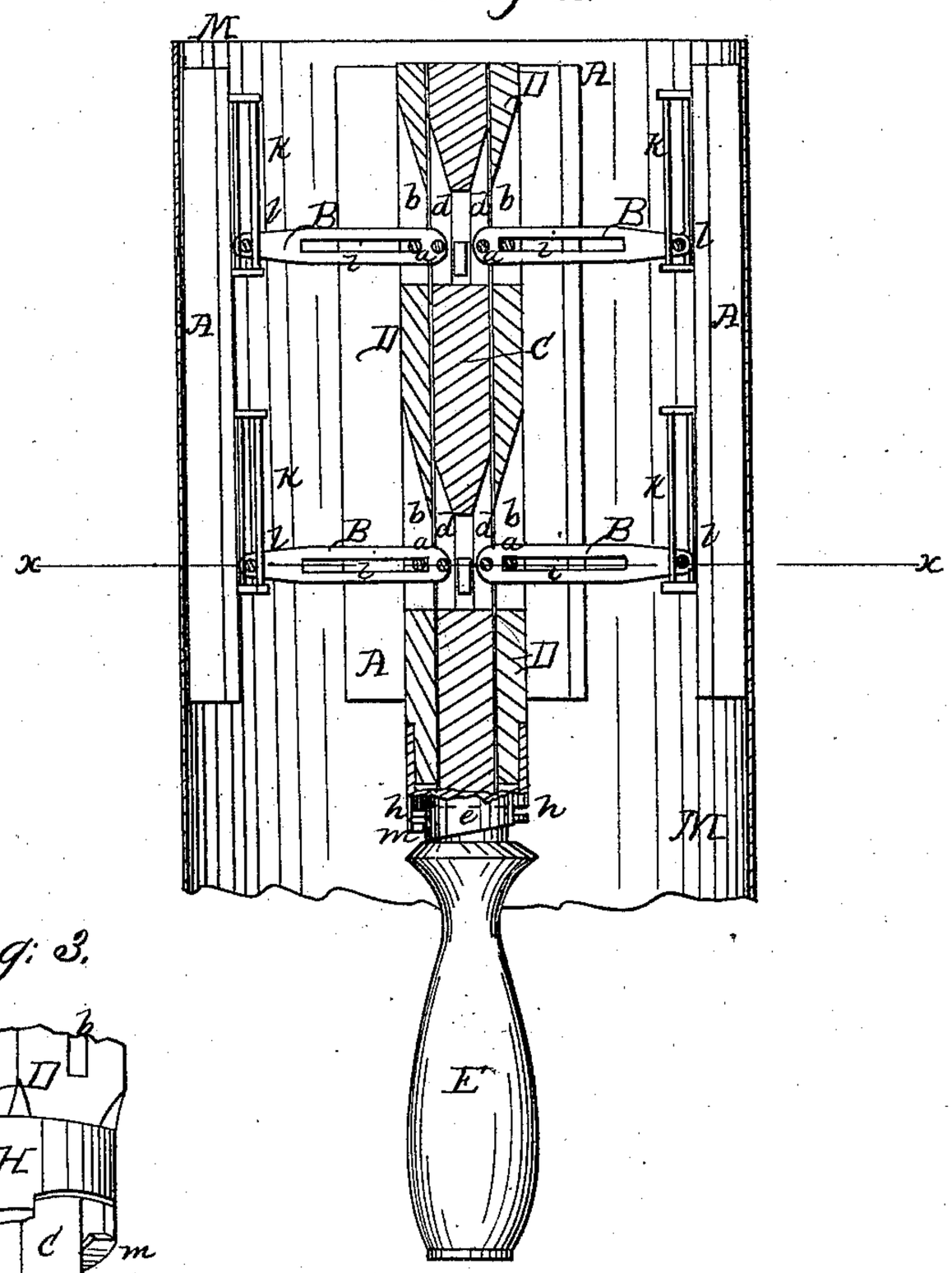



Fig: 3.

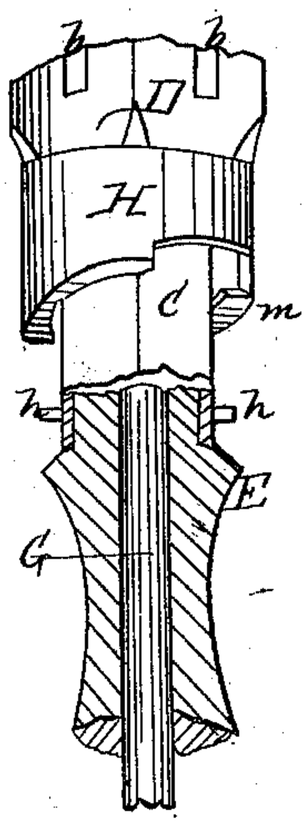
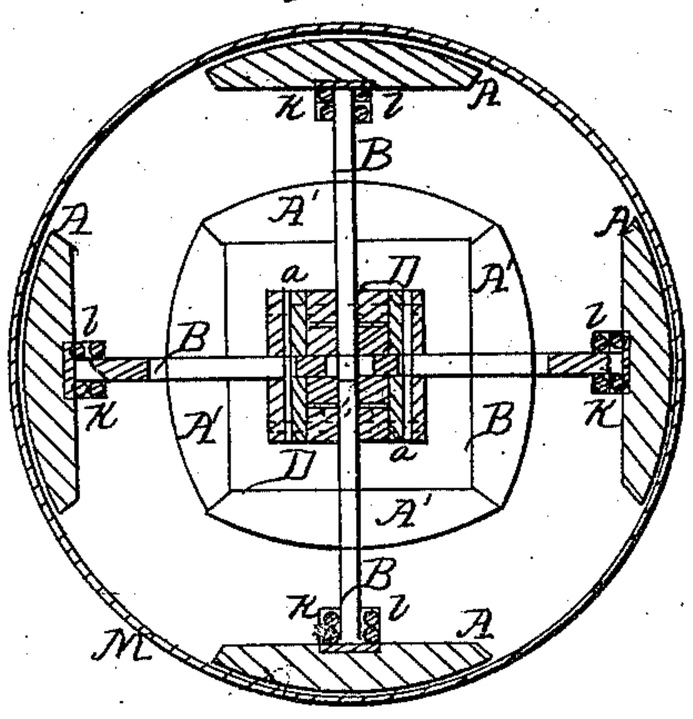



Fig: 2.




Witnesses.

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# United States Patent Office.

M. M. SHUR, OF DELAWARE, OHIO.

*Letters Patent No.* 81,420, *dated August* 25, 1868.

## 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 I, M. M. SHUR, of Delaware, in the county of Delaware, and State of Ohio, have invented a new and improved Can-Holder for Use in Soldering Cans and the like; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a transverse section of my improved can-holder through the line *x x*, fig. 1.

Figure 2 is a horizontal section of the same through the line *y y*, fig. 1.

Figure 3 is a detail view of the handle and its actuating-mechanism.

Similar letters of reference indicate corresponding parts.

This invention consists in the combination of expanding-staves with a hollow box, and staff sliding therein, together with other devices, perfecting the whole, as will hereinafter be more fully set forth.

It is used for holding cans to be soldered, and is designed as an improvement upon a machine for the same purpose, patented by Henry P. Dennis, (No. 45,143.)

In the drawings, the expanding-staves A are held by slotted radial arms B.

These arms are pivoted to a central staff, C, in the longitudinal slots *d*, shown in the figure.

The staff works within a central box, D, which is slotted at *b* to receive the arms B, and permits their working in close contact with the said box, when the staves are drawn closely to the centre, as in the red outline at fig. 2.

Pins *a*, located across the slots *i* on the box D, and through the slots *i* in the arms B, serve as fulcrum-pins, by means of which the staves are moved, when the staff C is actuated, in or out of the box B.

The upper ends of the slots *b* and *d*, in the box and staff respectively, are bevelled, as shown, for the purpose of permitting the arms to fit snugly when the staff is drawn out, for the bevelled part of each slot in the box and staff form one and the same plane in that instance, which permits the arms to lie close, and consequently the staves to fit compactly at the centre, thus entirely enclosing the interior mechanism when the machine is not in use.

The handle E revolves on the spindle G, which latter is affixed to and forms a part of the central staff.

A band, *e*, bearing two studs *h*, fits firmly on the handle E.

These studs work within the spiral flanges *m* of the ferrule H, affixed to the box D, as shown.

The handle E has a longitudinal movement on its spindle G, for the purpose of engaging the studs *h* in the spiral flanges *m* when the staves are to be set up tightly against the interior of the can, as will be again alluded to.

The ends of the arms B are provided with studs *l*, which slide within a cage-slot, *k*, affixed to the staves, for the purpose of allowing the arms to be set up against the interior of the can, as before mentioned, for, without such device, or its equivalent, the friction of the staves against the can would prevent the satisfactory operation of the machine in that particular.

In operation, the machine is seized by the handle E, and the staves, more or less contracted toward the centre, are inserted into the open end of the can, when, by pushing against the handle, the staves are actuated outward in contact with the interior of the can.

The studs *h* are then in position between the spiral flanges *m*, and, when the handle is turned, these studs engage upon the said flanges, thereby actuating the staff to enter further within the box D, which action causes the staves to impinge more firmly against the can.

This operation is indicated at fig. 1, where the can is shown in red at M, and the studs entered against the flanges.

Thus the can is held for the operation of soldering, and, when this is completed, the machine is contracted by releasing the studs from the flanges, and pulling out the staff.

The staves are thus capable of being contracted sufficiently to withdraw them through the central hole in one end of the can, so that the soldering may be completed at one operation, for, when the staves are brought

to the position shown in the red outline A′ in fig. 2, they may be withdrawn through the holes usually made in one head of fruit-cans.

This invention is simple, cheap, and not liable to get out of repair, and, by actual trial, has been shown to fully accomplish the end for which it was designed.

I do not wish to claim broadly the use, in can-holders, of staves, combined with a device for expanding the same, as I am aware that this has been done before; but

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

1. The arms B, having slots *i*, and pivoted within the slots *d*, and the pins *a* fixed in the slots *b*, all constructed, arranged, and operating as and for the purpose set forth.

2. In combination with the staves A and arms B, bearing-pins *l*, I claim the cage-slats *k*, as and for the purpose described.

3. In combination with the parts D C G, I claim the collar H, when provided with inclined surfaces *m*, and the loose handle E, having pins *h*, all constructed and operating as and for the purpose specified,

M. M. SHUR.

Witnesses:

J. HIPPER,

J. J. SHUR.