(No Model.)

J. SOLTER.

MECHANISM FOR FLUXING CANS.

No. 512,403. Patented Jan. 9, 1894.

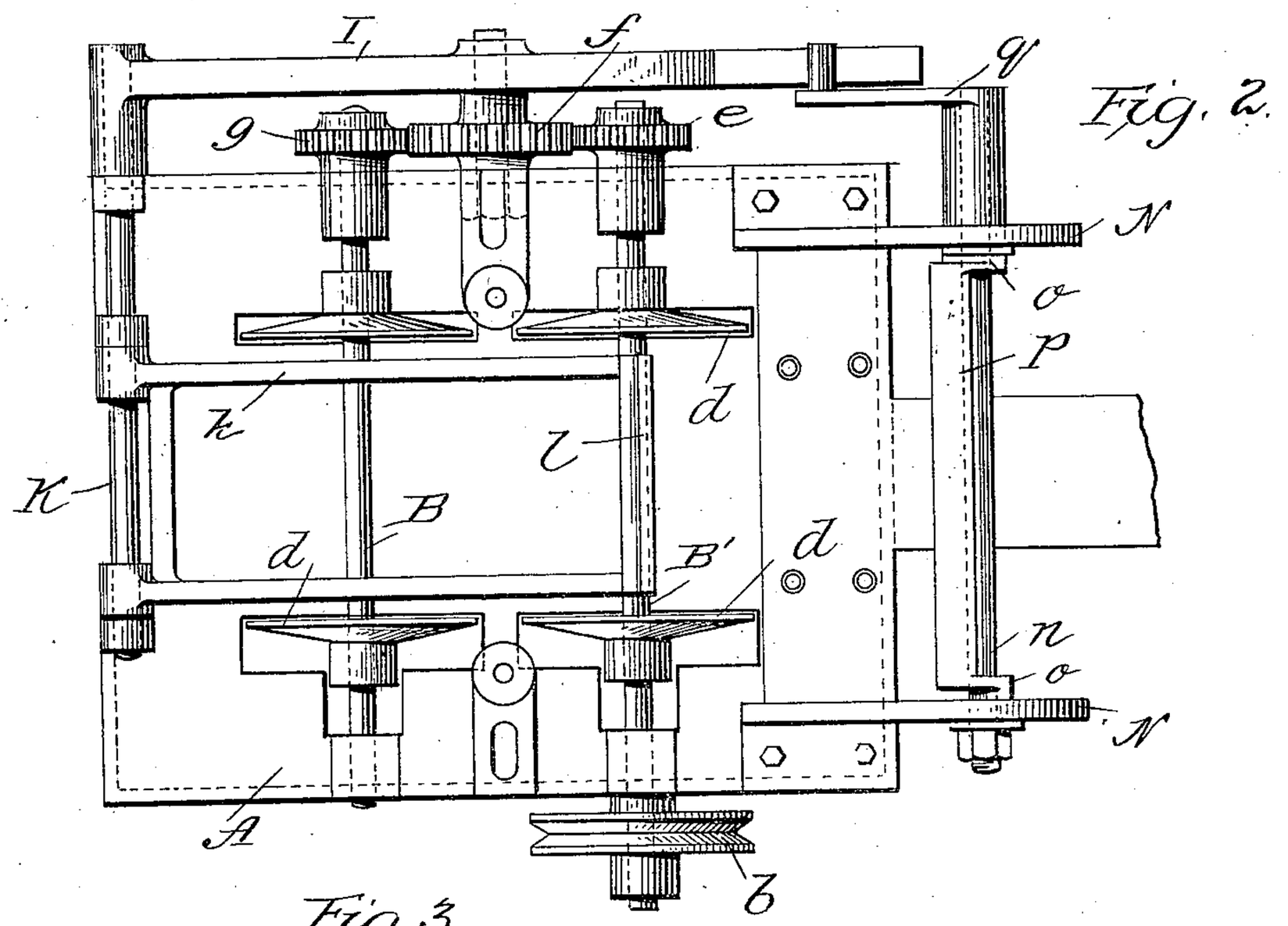
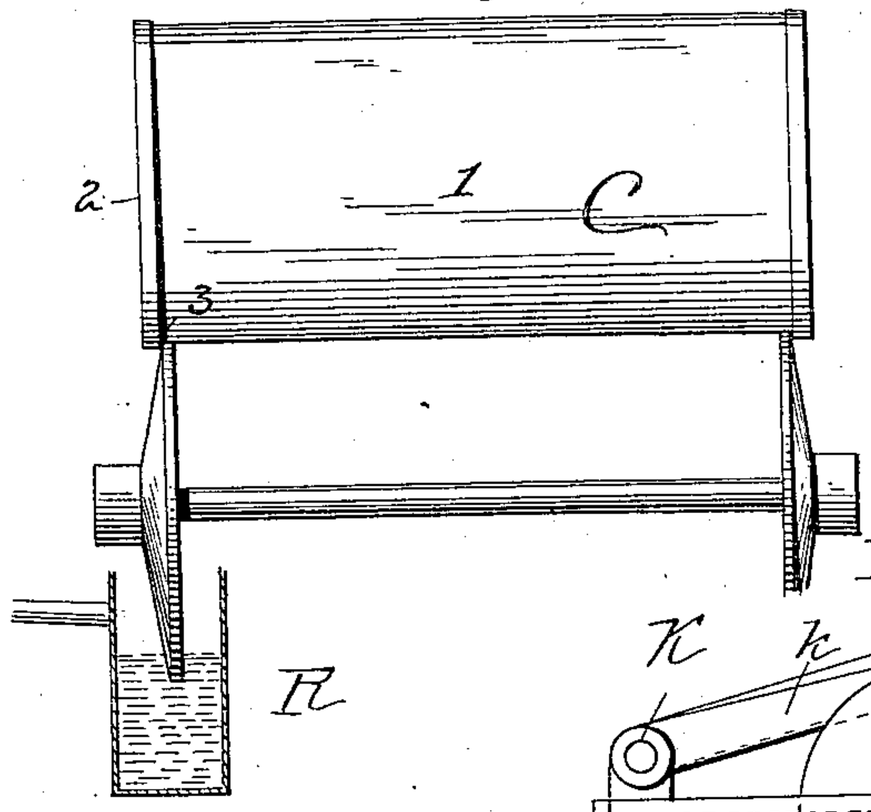


Fig. 2.

Fig. 3.



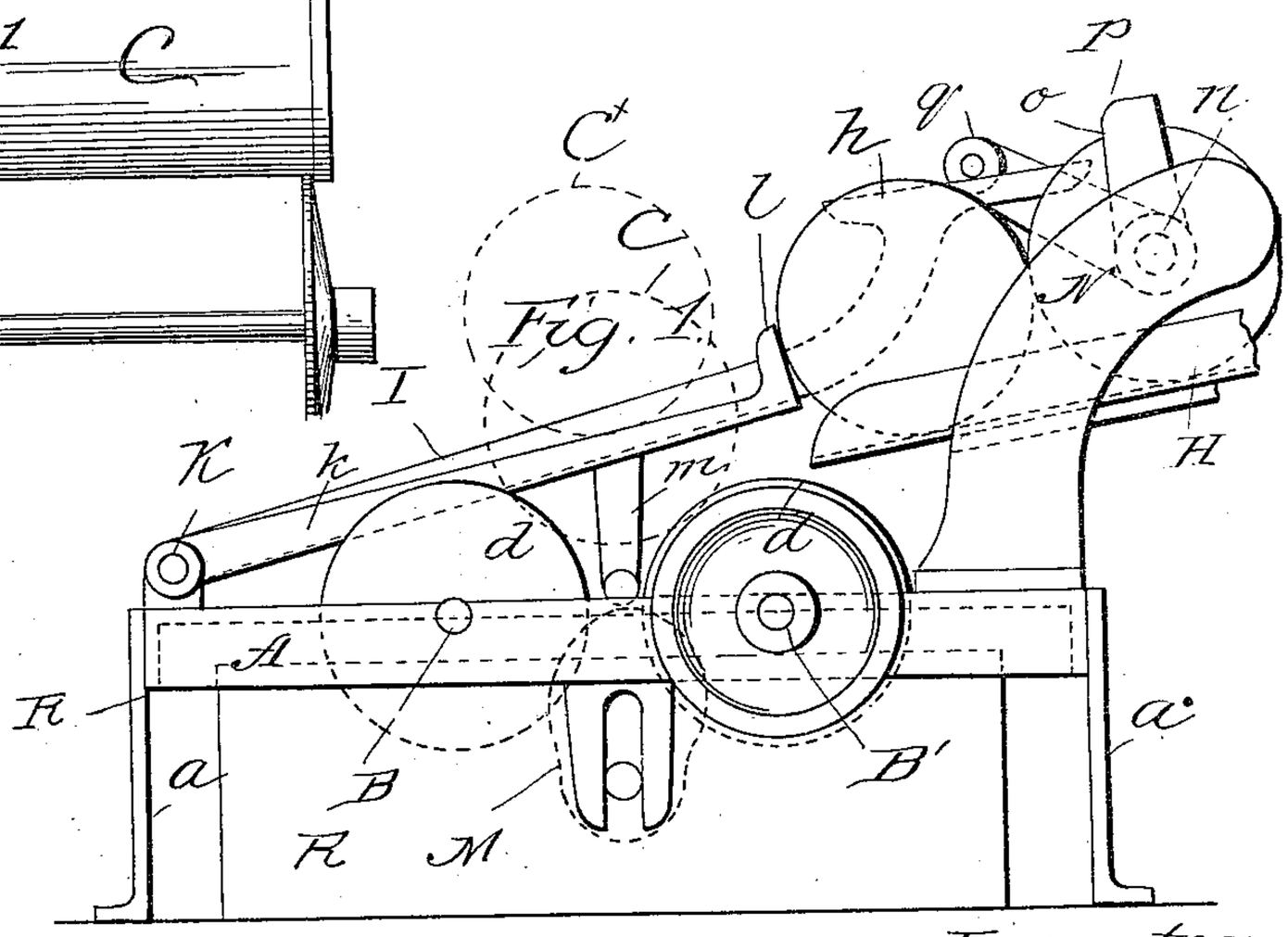


Fig. 1.

Attest
Walter Dallas Addison
F. L. Middleton

Inventor
John Solter
by Ellis Spear
Atty

THE NATIONAL LITHOGRAPHING COMPANY.
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN SOLTER, OF BALTIMORE, MARYLAND.

MECHANISM FOR FLUXING CANS.

SPECIFICATION forming part of Letters Patent No. 512,403, dated January 9, 1894.

Application filed May 1, 1893. Serial No. 472,541. (No model.)

To all whom it may concern:

Be it known that I, JOHN SOLTER, a citizen of the United States of America, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Fluxing Cans, of which the following is a specification.

My invention hereinafter described, relates to the manufacture of tin cans and more particularly to the fluxing of the cans preparatory to the soldering.

My invention consists of a new method of applying the flux to the can, and of mechanism by which the method is most conveniently exercised.

The method relates to the fluxing of cans having outside heads.

The apparatus is designed for the fluxing of such cans, but is not necessarily in its main features, confined to such cans.

The apparatus is shown in the accompanying drawings, in which—

Figure 1— represents the side elevation; Fig. 2— a plan view. Fig. 3— shows a can and illustrates its relation to the disks.

The mechanisms are mounted upon a frame A, which is supported upon legs *a*. In suitable bearings upon this frame are mounted two shafts B B′. These shafts carry each a pair of fluxing disks *d*, having peripheries suited to apply the flux to the can. They are arranged upon the shafts, at such a distance asunder, that the cans will rest upon the peripheries of the disk, with the edge of the overlapping or outside flange of the can head, bearing closely against the outer face of the disk. That is to say, the disks of each shaft travel just within the edges of the head flanges, with their peripheries resting upon the periphery of the can body. The can C rests over the space between the two sets of disks and bears equally upon both, as shown in dotted lines in Fig. 1. The shaft B′ is provided with a band wheel *b*, through which the apparatus is operated, and at the other end is a pinion *e* connected to a pinion *g* on the other shaft by an intermediate cog wheel *f*, mounted in the frame. Both shafts are turned therefore in the same direction and rotate the can through frictional contact therewith. The cans are fed to their position upon the disks, by means of a chute H.

The proper motion of the cans is regulated by the mechanism shown more clearly in Fig. 1. In that figure, is shown an arm I fixed on the frame shaft and extending to the front, the front end being provided with a lifting piece *h*. On the same shaft K to which this arm is fixed, is fixed a frame *k*, the front end of which is provided with a stop *l*, arranged when raised, to lie across the path of the can and to detain it upon the chute. This frame when down, lies immediately under the can, when the can is in position on the disks. The frame is raised by means of a cam M, which is fixed to the shaft of the intermediate gear wheel. The cam in its rotation strikes with its high part a bearing piece on the end of a downwardly projecting arm *m* on one side of the frame. On standards N on the front of the machine is mounted shaft *n*. Fixed to this shaft are arms *o*, which carry a retaining bar *p*. The arms *o* are outside of the chute and the retaining bar is outside of the peripheries of the cans, when they are in the chute. Fixed to the shaft *n*, is an arm *q*, extending rearward and provided with a pin, which is in line with the lifting piece *h* of the arm. The arrangement of the parts is such that when the arm is lifted, the lifting piece raises the arm *q* and lifts the retaining bar into the position shown in Fig. 1. At the same time it lifts the stop *l* so that the can which is released by the lifting of the retaining bar can roll down against the stop. When the stop frame falls, the can next to it rolls upon the disks. At the same time the retaining bar is brought down and holds the can next behind. The disks continue to revolve and make their revolution before the frame is again lifted. When the frame is lifted, it raises the can which has been fluxed and permits it to roll off and another immediately drops into its place. Below the disks is a pan R, shown in Fig. 3, which by any suitable mechanism is supplied with a constant amount of liquid flux, into which the edges of the disks dip slightly as they revolve. They therefore carry up an even amount of flux and transfer it to that part of the can which bears upon the peripheries of the disks.

In Fig. 3— is shown the can as it bears upon the disks. The body of the can is marked 1— and the head is marked 2. The

flange of the head, which overlaps the body, is marked 3.

After the flux has been applied, the solder is placed within the can and is "sweated" through from the interior to the exterior. The flux applied to the outside in a liquid condition and close against the edge of the flange 3, penetrates the unsoldered seam and practically fluxes the surfaces in contact, so that the solder sweated through, finds the flux in the seam, but none of the flux is exposed on the interior surface.

It will be apparent that only one wheel or one set of wheels may be used for fluxing, but the arrangement shown is better.

The position of the can when on the disks is shown in dotted lines at C, it being understood that the lifting frame is down when the can rests on the disks and not up in the position shown in full lines. The position of the can when raised by the lifting frame is shown at $C^{\times}$.

Having thus described my invention, what I claim is—

1. In a fluxing machine having revolving fluxing disks arranged to support the revolving can, means for supplying the disks with flux, mechanism for rotating the disks, and mechanism for feeding the cans to the disks, substantially as described.

2. A pair of shafts carrying rotating disks and mechanism for revolving them in the same direction, the said disks being arranged to support and turn the can, means for supplying flux to the said disks and a chute provided with stop mechanism the parts being combined and operating substantially as described.

3. In combination, the pair of shafts, carrying fluxing disks arranged to receive and rotate the cans, means for supplying flux to the disks, the frame arranged to lift the can from said disks, said frame carrying a stop and mechanism for operating said frame and for retaining the cans in rear when the stop is removed, substantially as described.

4. In combination, the pairs of revolving disks, mechanism for operating them, the chute leading to the disks, the lifting frame arranged to lift the can from the disks and having a stop to lie opposite the mouth of the chute when the frame is raised, the retainer arranged adjacent to the chute to hold the cans when the lifting frame is down, said frame having an arm to lift the retainer when the frame is raised, substantially as described.

5. A can fluxing apparatus consisting of a flux pan, and a revolving fluxing disk arranged to receive the flux therefrom, and to support and revolve the can, and apply the flux thereto substantially as described.

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

JOHN SOLTER.

Witnesses:
THOMAS H. GARDNER,
F. C. BOESCH.