

(No Model.)

2 Sheets—Sheet 1.

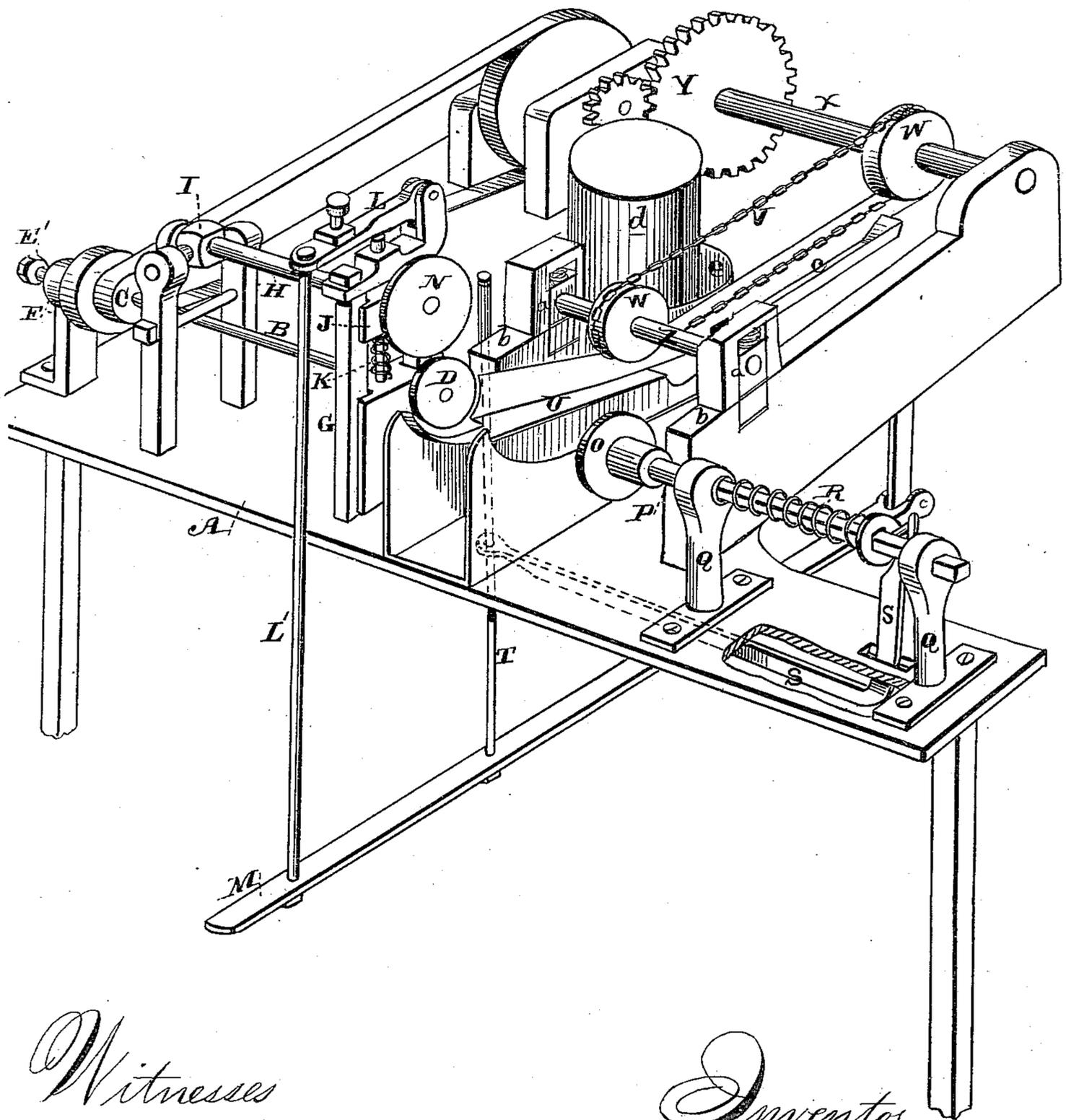
W. WEST.

APPARATUS FOR CRIMPING THE ENDS UPON CIRCULAR CANS.

No. 259,443.

Patented June 13, 1882.

Fig. 1.



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Fig. 2.

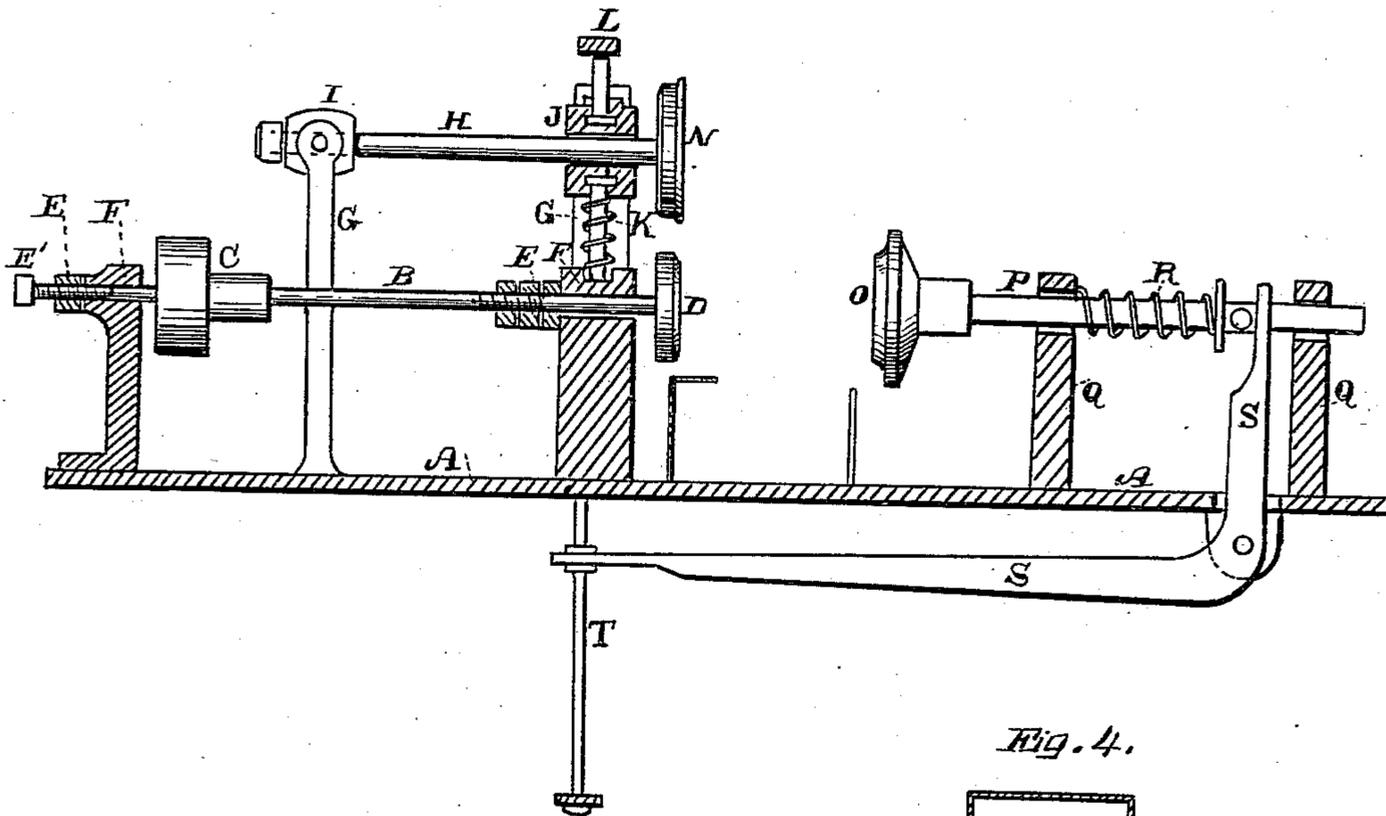


Fig. 4.

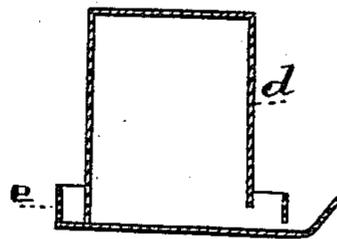
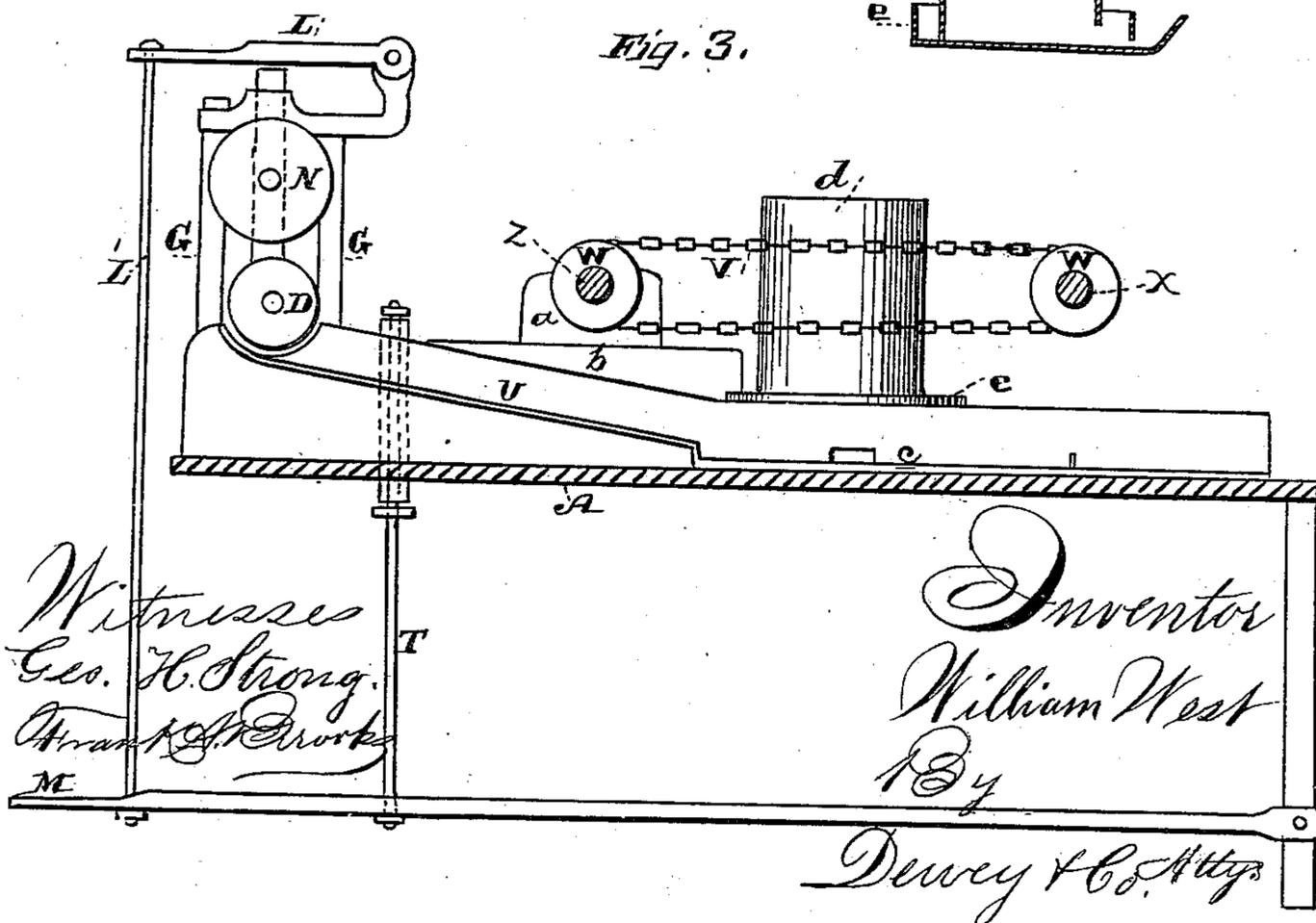


Fig. 3.



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# UNITED STATES PATENT OFFICE.

WILLIAM WEST, OF KEENE, ONTARIO, CANADA.

## APPARATUS FOR CRIMPING THE ENDS UPON CIRCULAR CANS.

SPECIFICATION forming part of Letters Patent No. 259,443, dated June 13, 1882.

Application filed January 31, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM WEST, of Keene, Peterborough county, Province of Ontario, Canada, have invented an Apparatus for Crimping the Ends upon Circular Cans and Preparing Them for Soldering; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to an apparatus for crimping the ends upon cylindrical cans and for preparing these ends for soldering by applying the acid thereto after being crimped upon the can.

My invention consists in certain construction and combinations of devices, as will be hereinafter fully described, and specifically claimed.

Referring to the accompanying drawings, Figure 1 is a general view of my apparatus. Fig. 2 is an end view partly in section. Fig. 3 is a longitudinal section. Fig. 4 is a sectional view of the acid-tank.

A is a base or table upon which the required mechanism is supported. B is a shaft, having its ends supported in appropriate boxes, and it has upon it a pulley, C, through which the driving-belt communicates motion to it. At one end is secured the circular head or disk D, having its edges beveled off slightly, so as to just fit against the head of a can. Lock-nuts E, upon the shaft just back of the box F, serve to adjust its position and that of the disk D, a bearing-screw, E', working against the rear end of the shaft to move it. Open standards or pillars G support boxes within which a shaft, H, revolves. The rear box, I, is hinged in the top of its standard, so that the front end of the shaft may move up and down about it as a pivotal point while keeping a parallel bearing within it. The front box, J, moves up and down between guides in the upper part of its standard, being held up by a spiral or other spring, K. A lever-arm, L, is hinged on the standard at one side of the box J and extends above it so as to rest upon it. Its free end extends beyond the standards, and has a rod, L', connecting it with a treadle, M, below the table, so that by pressing the foot upon the treadle the lever will depress the box J, and with it the shaft H. Upon the front end of this shaft is fixed a disk, N, having a flange which pro-

jects a little beyond the plane of the disk D, and when the shaft H is depressed this flanged disk is brought down so that the flange rests upon the turned-over edge of the bottom or top of the can when it is held against the disk D, and when both are revolved the top or bottom will be crimped upon the can ready for soldering.

In order to hold the can firmly against the disk D a disk, O, is loosely mounted to turn on a shaft, P, which is supported in bearings at the upper ends of standards Q. This shaft is in line with the shaft B and has an end movement in its bearings, so that the disk O may be made to approach the disk D or recede from it when desired. A spiral spring, R, holds the disk back and a bent or bell-crank lever, S, has one arm connected with the shaft, and the other is connected with the treadle M by a connecting-rod, T, so that when the treadle is depressed the shaft and its disk are advanced, and when released the spring R will force it back. The face of the disk O is formed with a conical rim, which projects a short distance from the larger flange, and this rim will just enter the open end of a can when the bottom is being crimped upon the opposite end. When the can has been placed between the two disks D and O the latter is advanced by placing the foot upon the treadle M, the projecting part O entering the open end of the can, while the bottom, which has been placed upon the can, will be pressed firmly against the disk D, the beveled edge of this disk allowing it to press squarely against the bottom, which is thus centered and held firmly in place. The last part of the movement of the treadle causes the lever-arm L to act upon the box J and depress it and the front end of the shaft H until the flange of the crimper presses upon the edge of the bottom, when a complete revolution of the disk and can will have brought all parts in contact with the crimper and firmly secured it, after which the can is allowed to escape and roll down the inclined ways U until it reaches the traveling chain V. This chain passes around pulleys W, which move it above the center of the can, and it is driven slowly by a shaft, X, connected with the main driving-shaft by gearing Y, or belting.

The boxes *a* of the front shaft, Z, are mounted upon elastic supports *b* and yield upward to

allow the approaching can to pass beneath the pulley W, and the chain will thus have a sufficient pressure upon the can to roll it along the ways or guides upon which it is traveling. At 5 one side of these guides is an elongated trough, *c*, to contain acid, so that as the can rolls along the seam formed by crimping the end upon it will just dip into the acid and be thus prepared for the solder bath through which it is rolled 10 after leaving this machine. The acid-trough is supplied and kept just full automatically from a tank, *d*. This tank stands in a cup or trough, *e*, from which a passage opens into the trough *c*. The bottom of the tank *d* has a hole made 15 in it of a height equal to that desired for the acid in the trough. The tank being filled is inverted into its trough, when enough acid will run out through this hole to fill the trough to a level with the top of the hole, after which no 20 more air can enter to displace the acid, and the latter will then stand at a constant height in the trough. Whenever it becomes lowered a little a small quantity of air will enter the tank and will displace an equal quantity of acid, 25 which will then flow into the trough, and this keeps a constant level of the acid in the trough, so that all the can edges will be equally dipped. After the bottoms are thus prepared they pass to the soldering-bath, through which they are

also rolled and the joint is finished. The cans 30 are then filled and the tops put on. They are then again passed through the machine and the tops secured in a similar manner to that described for the bottoms. When the tops are 35 to be soldered on a disk slightly larger than O is substituted therefor, so that it will exert pressure upon the slightly-projecting rim and be held and rotated more certainly.

Having thus described my invention, what I claim as new, and desire to secure by Letters 40 Patent, is—

1. The combination, with the holding and crimping disks, as shown, of the inclined track or ways U and the acid-trough *c*, through which 45 the crimped joint may pass, substantially as herein described.

2. In combination with the way or track U and the endless chain moving above the track upon pulleys W, the boxes *a* of the shaft Z, 50 having the vertically-movable elastic supports *b*, substantially as and for the purpose herein described.

In witness whereof I have hereunto set my hand.

WILLIAM WEST.

Witnesses:

FRANK A. BROOKS,  
S. H. NOURSE.