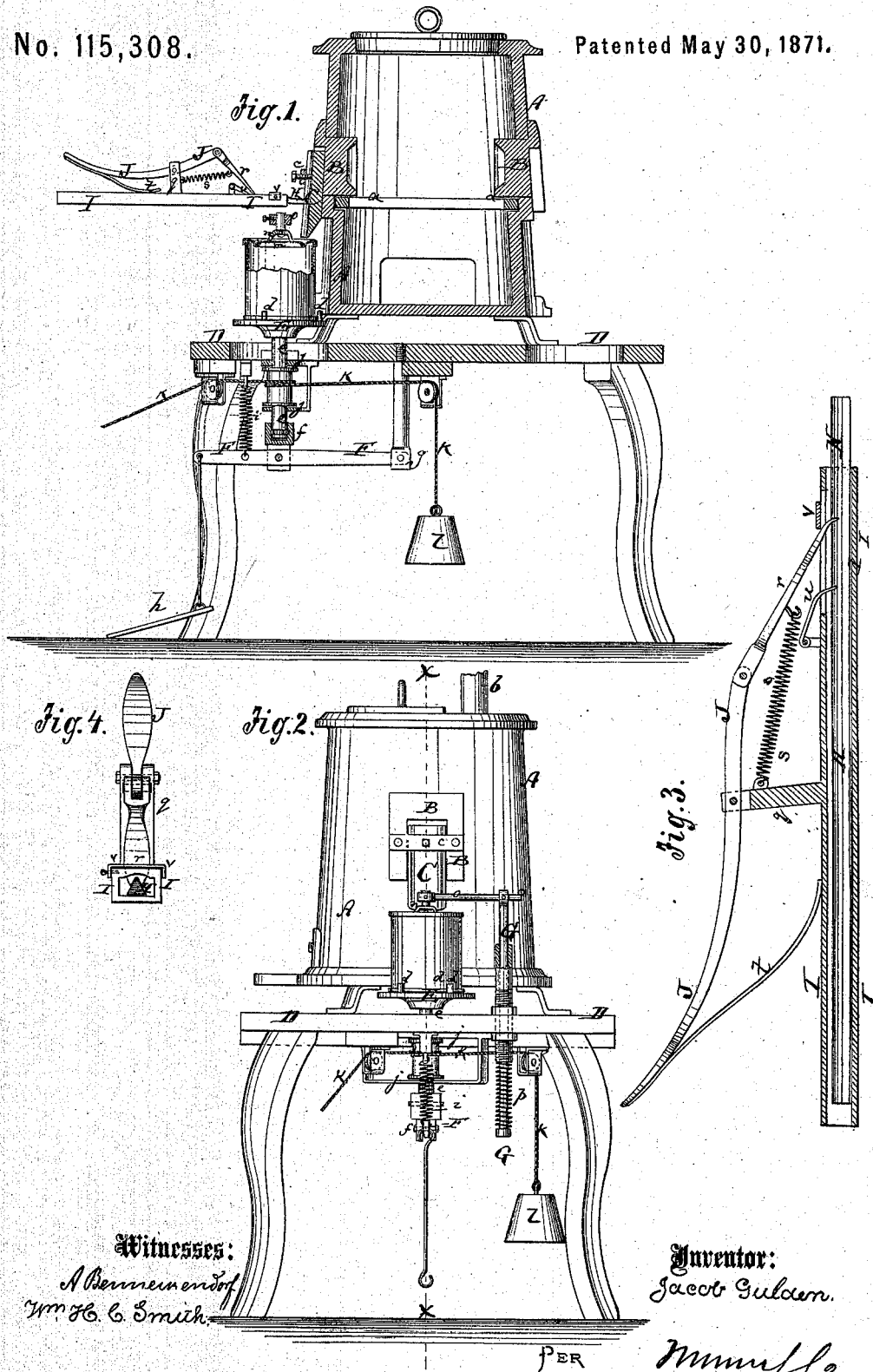


J. GULDEN.

Improvement in Soldering Apparatus.

No. 115,308.

Patented May 30, 1871.



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IMPROVEMENT IN SOLDERING APPARATUS.

Specification forming part of Letters Patent No. 115,308, dated May 30, 1871.

To all whom it may concern:

Be it known that I, JACOB GULDEN, of Keyport, in the county of Monmouth and State of New Jersey, have invented a new and Improved Apparatus for Soldering Caps to Tin Cans; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 represents a vertical longitudinal section of my improved apparatus for soldering caps to cans, the line *x x*, Fig. 2, indicating the plane of section. Fig. 2 is a side elevation of the same. Fig. 3 is a longitudinal section on an enlarged scale of the solder-pistol. Fig. 4 is an end view of the same.

Similar letters of reference indicate corresponding parts.

My invention consists of certain improvements in means for soldering cans, which will be first described in connection with all that is necessary to a full understanding thereof, and then clearly pointed out in the claim.

A in the drawing represents a stove or furnace of suitable size and shaped provided with a grate, *a*, and connected with a stove-pipe, *b*, as indicated, so that it may contain fuel in a state of combustion. Into openings in the sides of the stove A are fitted blocks B B, of copper or other metal, which become heated by the fire within the stove. Each block B serves to hold a soldering-iron, C, which is, by a strap, *c*, or equivalent fastening, secured to the outer face of the block, as indicated in Figs. 1 and 2. The lower point or end of the soldering-iron is to work on the can, and must, therefore, project from the side of the stove, as shown in Fig. 1. The connection of the soldering-iron with the block is sufficient to heat the point or end of the iron to the desired degree. The stove is placed upon a suitable table or frame, D. The same serves to support a turn-table, E, in front of each soldering-iron C and block B. Each turn-table is a disk or plate of such size that it will properly support the can to be soldered, having, by preference, a projecting rim or pin, *b*, which embraces the lower part of the can to insure the correct centering of the same. The

turn-table is affixed to the upper end of a vertical shaft, *e*, which rests and is swiveled in a step, *f*, that is pivoted to a lever, F. This lever is, at *g*, pivoted to a pendant or portion of the frame D, and is, at its front end, connected with a treadle, *h*, or equivalent device, whereby it can be swung up or down to raise or lower the turn-table. A spring, *i*, is connected with the lever F, to keep it and the table E elevated. The shaft *e* passes through stationary perforated ears *j j*, which retain it in a vertical position, the pivoted step *f* adjusting itself, as to its angle with the lever, to every new position of the same. To the shaft *e* is secured a cord or chain, *k*, which is weighted at one end, as at *l*, and can be pulled by hand or treadle at the other end. By pulling said cord the shaft will be revolved with the turn-table, and the weight raised, and by then letting go the cord they will be revolved in the opposite direction.

The can to be soldered is placed upon the turn-table, and the cap *m* held down upon it by a tripod, *n*, which is swiveled in an arm, *o*, that projects from an upright vertically-adjustable shaft, G. A spring, *p*, serves to draw the tripod down upon the cap, and to thereby retain the latter on the can. The swiveled shank of the tripod being in line with the shaft *e*, it follows that the cap will revolve with the can whenever the same is revolved on and by the turn-table. The point or end of the soldering-iron reaches the can where the solder is to be applied for securing the cap. When solder is held against the face of the heated iron C and the can revolved, an annular layer of solder will be applied to the can so as to secure the cap to the same.

The solder to be used is put up in sticks or bars of suitable shape. Each such bar, H, to be used is placed into a tube or hollow case, I, which, on a projecting ear, *q*, carries a pivoted lever, J. To the front end of the lever J is pivoted a pawl, *r*, which, with its sharpened or biting lower end, passes through a slot in the tube or case I and reaches the bar H of solder. A spring, *s*, draws the point of pawl back toward the ear *q* whenever the handle of the lever is pressed down. A spring, *t*, stronger than *s*, is placed under the handle end of the lever and raises it, so as to push

the pawl *r* forward, until the same strikes an adjustable guard, *v*, that is placed across the aforesaid slot in the tube or case I. *u* is a retention-pawl, pivoted to the case I, and resting with its edge against the bar H in an inclined position, so as to prevent it from being moved back. The guard *v* regulates, by its position, the length of stroke of the pawl *r*. When the lever J is pressed down the pawl *r* is drawn back loose, and takes a fresh hold on the bar, pushing the same forward the desired length by the power of the spring *t* when released.

The attendant has thus only to depress the lever J and hold the end of solder projecting from the case I against the iron C, when the projecting portion of the solder will melt down to be used on one can. For every subsequent can the lever is again depressed to feed the bar H the requisite distance ahead.

This solder-feeding implement I call the solder-pistol. It is very convenient and economizes solder, as no more but what is absolutely required for each can will be let out.

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

1. The arrangement of a tool-holder, B, in the side of furnace A, resting upon the fire-grate *a*, and abutting laterally upon the fire, for the purpose of firmly holding the tool, easily transmitting heat thereto, and readily retaining said heat at the proper temperature.

2. The metallic block B, having a recess to receive the tool and hold it firmly on three sides, combined with a transverse strap and fastening-screw to form a holder for soldering-tools, which will admit of their ready attachment and detachment, as described.

3. The case I, pawl *r*, and spring-lever J, combined and constructed as and for the purpose specified.

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Witnesses:

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