H. A. WILLIAMS.

CAPPING STEEL.

APPLICATION FILED MAR. 31, 1915.

1,186,354.

Patented June 6, 1916.

2 SHEETS—SHEET 1.

Fig. 1.

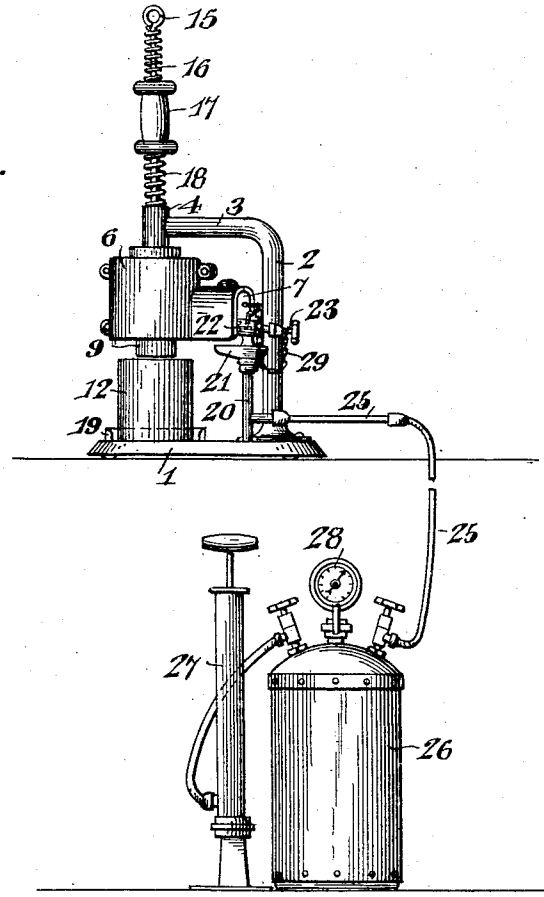
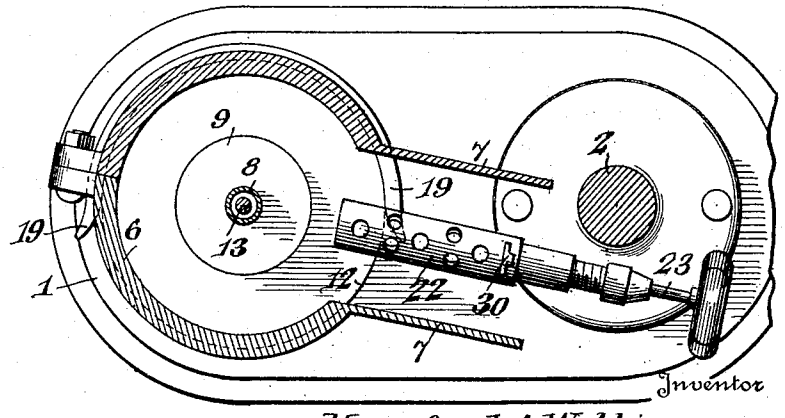


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 2.

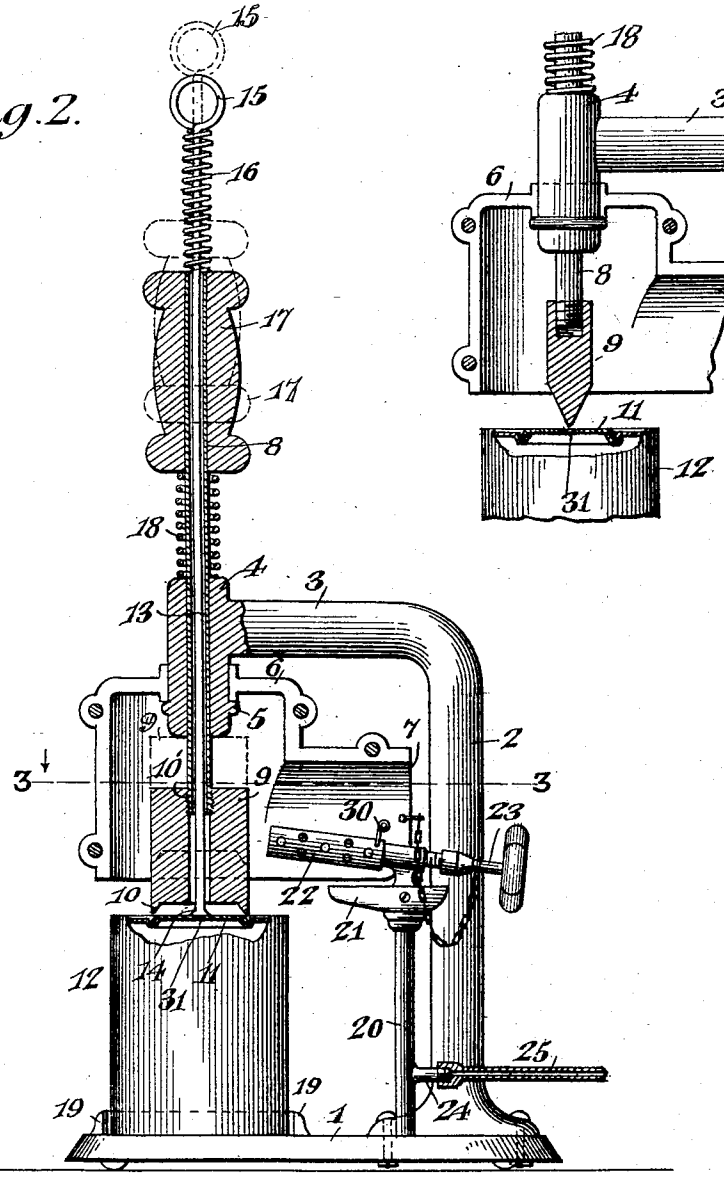


Fig. 4.

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UNITED STATES PATENT OFFICE.

HANSFORD A. WILLIAMS, OF HOT SPRINGS, ARKANSAS.

CAPPING-STEEL.

1,186,354. Specification of Letters Patent. Patented June 6, 1916.

Application filed March 31, 1915. Serial No. 18,377.

To all whom it may concern:

Be it known that I, HANSFORD A. WILLIAMS, a citizen of the United States of America, residing at Hot Springs, in the county of Garland and State of Arkansas, have invented certain new and useful Improvements in Capping-Steels, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to a machine for soldering caps on fruit and vegetable cans, and sealing the hole in the center of the cap thereof, and has for its object the production of a simple and efficient means for facilitating the efficient heating of the several parts of the device to permit the efficient soldering of the can at the desired point.

Another object of this invention is the production of a simple and efficient means for controlling the heating of the capping steel in an efficient manner to permit the efficient soldering of the can at the desired point.

With these and other objects in view this invention consists of certain novel combinations, constructions, and arrangements of parts as will be hereinafter fully described and claimed.

In the accompanying drawings:—Figure 1 is a side elevation of the apparatus. Fig. 2 is a central vertical section through the can sealing machine, certain parts being shown in elevation. Fig. 3 is a section taken on line 3—3, of Fig. 2. Fig. 4 is a vertical section of a modified form of the device taken through the tipping copper or soldering iron and supporting means therefor.

By referring to the drawings it will be seen that 1 designates the base of the device which is provided with a standard 2, which standard 2 has an overhanging arm 3 and is provided upon the outer end thereof with a vertically extending sleeve portion 4. This sleeve portion 4 is provided near the lower end thereof with an annular bead 5 upon which fits a sectional heating casing 6 as clearly illustrated in Fig. 2 of the drawings. This heating casing 6 comprises two detachable sections formed of cast iron, steel or other suitable material and has an open rear end 7 as clearly illustrated in Fig. 2 of the drawings.

A supporting rod 8 is supported by the sleeve portion 4 and is capable of being reciprocated therein, and this supporting rod 8 carries at the lower end thereof a capping steel 9 which is threaded upon the threaded end 10′ of the rod 8 and is detachable therefrom. This capping steel 9 is provided around the lower edge thereof with a tapering flange 10, which tapering flange is adapted to conveniently fit around the edge of the cap 11 of the can 12 and efficiently heat the solder which is applied thereto in the usual manner for conveniently sealing the cap 11 upon the can 12. A capping retaining rod 13 is slidably mounted through the hollow rod 8 and is provided with an enlarged lower end 14 which is adapted to fit snugly upon the cap 11 and hold the same in a set position while the capping steel is being forced down around the side flanges of the cap 11. The rod 13 is provided upon the upper end thereof with an eye 15 to permit the convenient reciprocation of the rod 13 and the forcing of the rod 13 into firm engagement with the cap 11. A coil spring 16 is carried by the rod 13, and the lower end thereof engages the upper end of the handle 17 and is adapted to normally urge an upward movement upon the rod 13 as clearly illustrated in Fig. 2 of the drawings in dotted lines.

The handle 17 is fixedly secured to the hollow rod or tube 8 and a coil spring 18 is interposed between the lower end of the handle 17 and the upper end of the sleeve portion 4 to normally urge an upward pressure upon the handle 17 and normally hold the capping steel 9 in an inoperative position such as is shown in dotted lines and out of engagement with the cap 11. It should be understood that the capping steel 9 is adapted to be normally retained entirely within the casing 6 and is adapted to be forced out through the lower end of the casing into engagement with the edges of the cap 11.

The base 1 is provided with a plurality of upwardly extending flanges 19, which flanges are spaced a sufficient distance to permit the holding or anchoring of the can 12 upon the standard in the proper position for receiving the capping steel 9 and tipping copper soldering rod to be hereinafter more fully described. A taut supporting standard 20 is carried by the base 1, and this standard 20 carries a generating pan 21 for the purpose of receiving gasolene or other suitable fuel to permit the heating of the torch 22 in the usual manner. The torch 22 is supported above the pan 21 as illustrated in Fig. 2 and the feed of fuel to the torch 22 is controlled in the usual manner by means of the valve

operating handle 23. The standard 20 carries a laterally projecting tube 24 to which is connected a fuel supply tube 25 for facilitating the supply of fuel to the burner or torch 22. The tube 25 connects to a supply tank 26, which supply tank is provided with the usual compressing pump 27 and gage 28. A chain 29 is connected to the casing 6 as clearly illustrated in Fig. 1 of the drawings, and is also connected to the operating handle 23 for the purpose of preventing the handle from being lost or misplaced when the handle is entirely detached from the torch 22. The lift slide or vertically sliding valve 30 is carried by the torch to regulate the size of the flame discharged therefrom.

By carefully considering Fig. 4 it will be seen that a tipping copper soldering rod may be attached to the hollow tube 8 when so desired for the purpose of permitting the central aperture 31 formed in the cap 11 to be sealed after the cap 11 has been firmly secured to the can 12.

From the foregoing description it will be seen that a very simple and efficient means has been produced for conveniently and quickly sealing a can, and efficiently holding the cap in a set position while the can is being sealed. It should also be understood that the present device is a portable one and may be moved from place to place for efficiently sealing the cans at the convenience of the operator.

Having thus described the invention what is claimed as new, is:—

1. In a device of the class described, the combination with a base, a standard carried thereby, of a capping steel, a plunger rod supported upon said standard, said supporting rod provided with an operating handle secured thereto, a coil spring mounted upon said supporting rod and interposed between the lower end of said handle and the top of said standard for normally urging an upward pressure upon said handle and normally retaining said capping steel in an inoperative position, and a heat retaining hood supported upon said standard and overhanging said capping steel.

2. In a machine of the class described, the combination with a base, a standard carried by said base and provided with an overhanging arm, said arm provided with a vertically extending sleeve at its outer end, a retaining flange formed upon said sleeve near the lower end thereof, a heat retaining hood fitting over said sleeve and resting upon said flange, said heat retaining hood provided with an open rear end, a heating torch supported upon said base and projecting through said heat retaining hood, a heating iron supporting rod carried by said sleeve and working vertically therethrough, a coil spring for normally urging an upward pull upon said heating iron supporting rod, a cap retaining rod passing through said heating iron supporting rod provided with an eye upon the upper end thereof for facilitating the operation of said cap retaining rod, and a coil spring interposed between said eye and the upper end of said heating iron supporting rod for normally urging an upward pressure upon said cap retaining rod.

3. In a device of the class described, the combination with a base, a standard carried thereby, of a hollow rod passing through said standard, capping means carried by said rod, yieldable means for normally urging an upward pressure upon said hollow rod, a cap retaining rod slidably mounted in said hollow rod, and yieldable means engaging said cap retaining rod for normally urging an upward pressure thereon, for holding said cap retaining rod in an inoperative position.

4. In a device of the class described, the combination with a base, a standard carried thereby, a capping device, a rod supporting said capping device, a cap retaining rod, independent means for yieldably holding said rods in an inoperative position.

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

HAMP WILLIAMS.

Witnesses:
W. C. SEAY,
W. A. DAVIS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."