

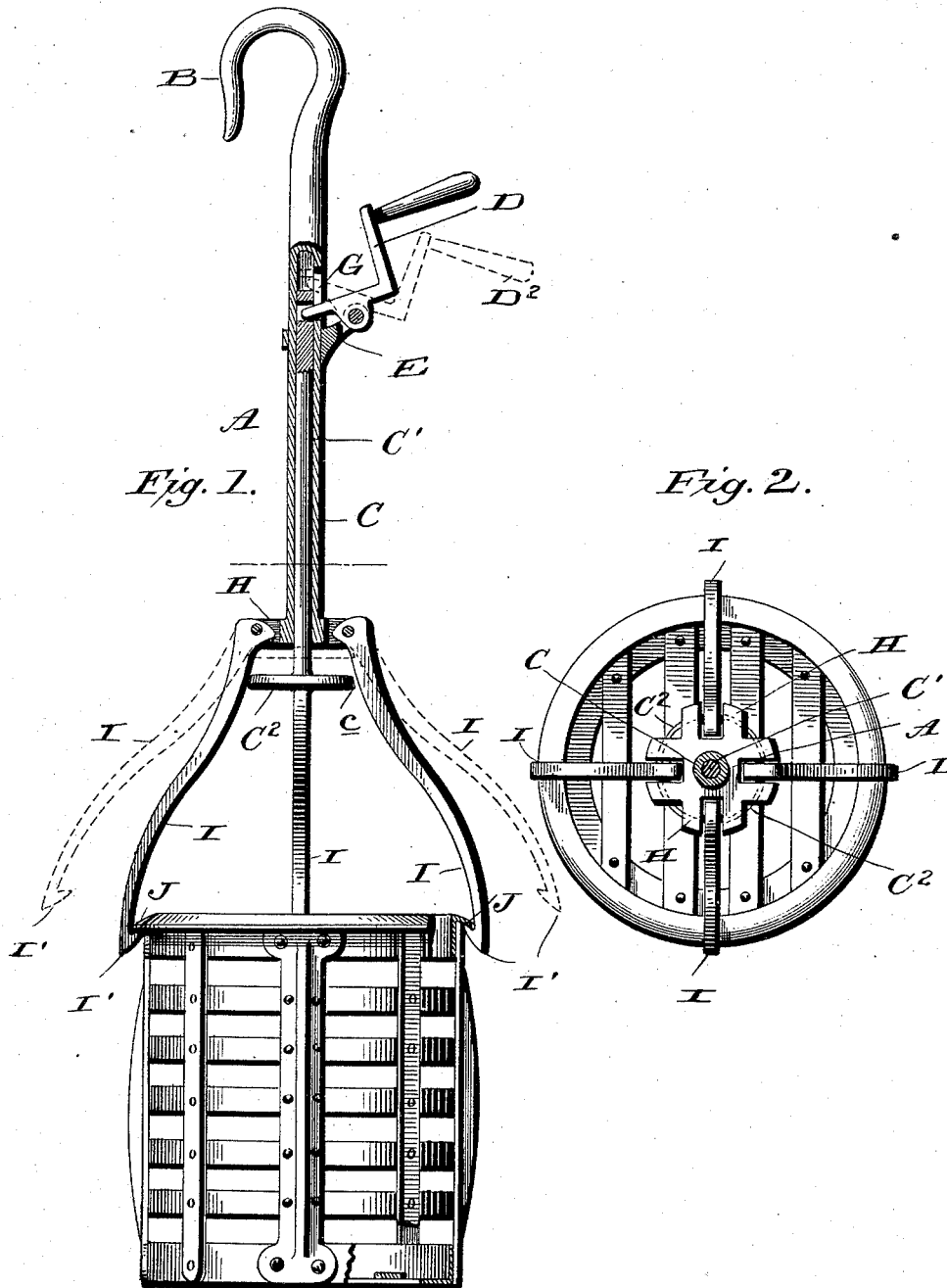
(No Model.)

W. W. ABBOTT & J. GREEN.

DEVICE FOR REMOVING CAN HOLDING CRATES FROM RETORTS.

No. 524,696.

Patented Aug. 21, 1894.



Witnesses:

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# UNITED STATES PATENT OFFICE.

WILLARD W. ABBOTT AND JOHN GREEN, OF HOOPESTON, ILLINOIS.

DEVICE FOR REMOVING CAN-HOLDING CRATES FROM RETORTS.

SPECIFICATION forming part of Letters Patent No. 524,696, dated August 21, 1894.

Application filed May 26, 1894. Serial No. 512,531. (No model.)

*To all whom it may concern:*

Be it known that we, WILLARD W. ABBOTT and JOHN GREEN, citizens of the United States, residing at Hoopeton, in the county of Vermilion and State of Illinois, have invented certain new and useful Improvements in Devices for Removing Can-Holding Crates from Retorts; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in appliances for use in canning factories, and it relates more particularly to the apparatus which is employed in removing crates containing cans from the retorts, during the process of cooking. The difficulty heretofore experienced in placing the crates containing the cans into the retort and in removing the same therefrom, has been great owing to the extreme heat and the dense volumes of steam escaping from the retort. These difficulties contribute to render the expeditious placing and removal of the crates difficult, when resort is had to any of the various forms of grapples which, under other circumstances might be employed for the purpose. The difficulties above enumerated are frequently enhanced by reason of the discoloration of the water in the retort.

The present invention has for its object the providing of a simple and effective grappling device, which, when lowered within the retort will automatically engage the flanged rim at the upper edge of the crate, and hold the same firmly until the crate has been raised and swung to one side, after which, by simple lever mechanism the grapple may be released from its engagement with the crate.

To these ends and to such others as the invention may pertain, the same consists in the novel construction and in the peculiar arrangement, combination and adaptation of parts, all as more fully hereinafter described, shown in the accompanying drawings, and then specifically defined in the appended claims.

The invention is clearly illustrated in the

accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, like letters of reference indicating the same parts throughout both views, and in which drawings—

Figure 1, is a side view, partly in section, of our device, the same being shown as in engagement with the flanged upper rim of a crate, the positions occupied by the operative parts when the crate has been released being indicated by dotted lines. Fig. 2 is a horizontal section of the same.

Reference now being had to the details of the drawings by letter, A designates the main stem or shaft of the device, which at its upper end is provided with a suitable hook B by which it may be suspended from any suitable swinging crane, or may be otherwise suspended. The lower portion of the shaft A is provided with a central opening C' for the reception of the shaft C, which is loosely seated within said opening and capable of vertical movement therein. This movable shaft C is, at its lower end provided with a disk C<sup>2</sup>, which is integral with the shaft, and at its outer edge is beveled, as shown at c. At its upper end the shaft C is pivotally connected to the inner end of the lever D which lever is pivoted between ears E, E extending outward from the side of the shaft A, the inner end of the said lever being passed loosely through a slot G in the shaft and communicating with the hollow interior thereof. The outer end of the lever D is provided with a suitable operating handle D<sup>2</sup> by means of which the lever may be actuated so as to force the movable shaft C upward when desired. The downward movement of the shaft is effected by gravity, and the normal position of the shaft will be at the lowest point of its moving limit.

The shaft A is, at its lower end provided with a series of laterally extending bifurcated stub arms H, H, between the bifurcations of which arms are pivoted the upper ends of the grapple-arms I, I, which arms are, at their lower ends provided with hooks I', which are inclined inward and upward, as shown, and are designed when in use to catch under the outwardly flaring rim J upon the upper edge of the crate.

The operation of the device is simple and

from the foregoing description will be readily understood. When the apparatus is swung over the open retort the grapple-arms will be in position to engage the flanged rim of the crate. The crate thus grasped is raised and swung to the position in which it is to be placed, when, by a slight downward movement imparted by the operator to the operating lever D<sup>2</sup>, the shaft C is raised, thus drawing the disk C<sup>2</sup> upward and the outer beveled edges of the disk engaging the inner faces of the grappling arms serves to force the said arms outward and disengaging the hooked lower ends of the arms from the rim of the crate.

Having thus described our invention, what we claim to be new, and desire to secure by Letters Patent, is—

1. In a device for the purpose described, a shaft having at its upper end a hook for attachment to a crane, a beveled disk, a lever pivotally connected with the shaft and connection between the lever and disk whereby

the disk may be moved vertically to raise the arms and a series of pivoted arms carried by the shaft and having at their free ends hooks adapted to engage the flanged edge of a crate, substantially as described.

2. In combination, the main shaft the pivoted arms at the lower end of the shaft, an independent shaft within the interior of the main shaft, a beveled disk at the lower end of the inner shaft and carried thereby, and an operating lever pivoted as described and having its inner end extended through an opening in the main shaft and attached to the upper end of the inner shaft, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLARD W. ABBOTT.  
JOHN GREEN.

Witnesses:

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