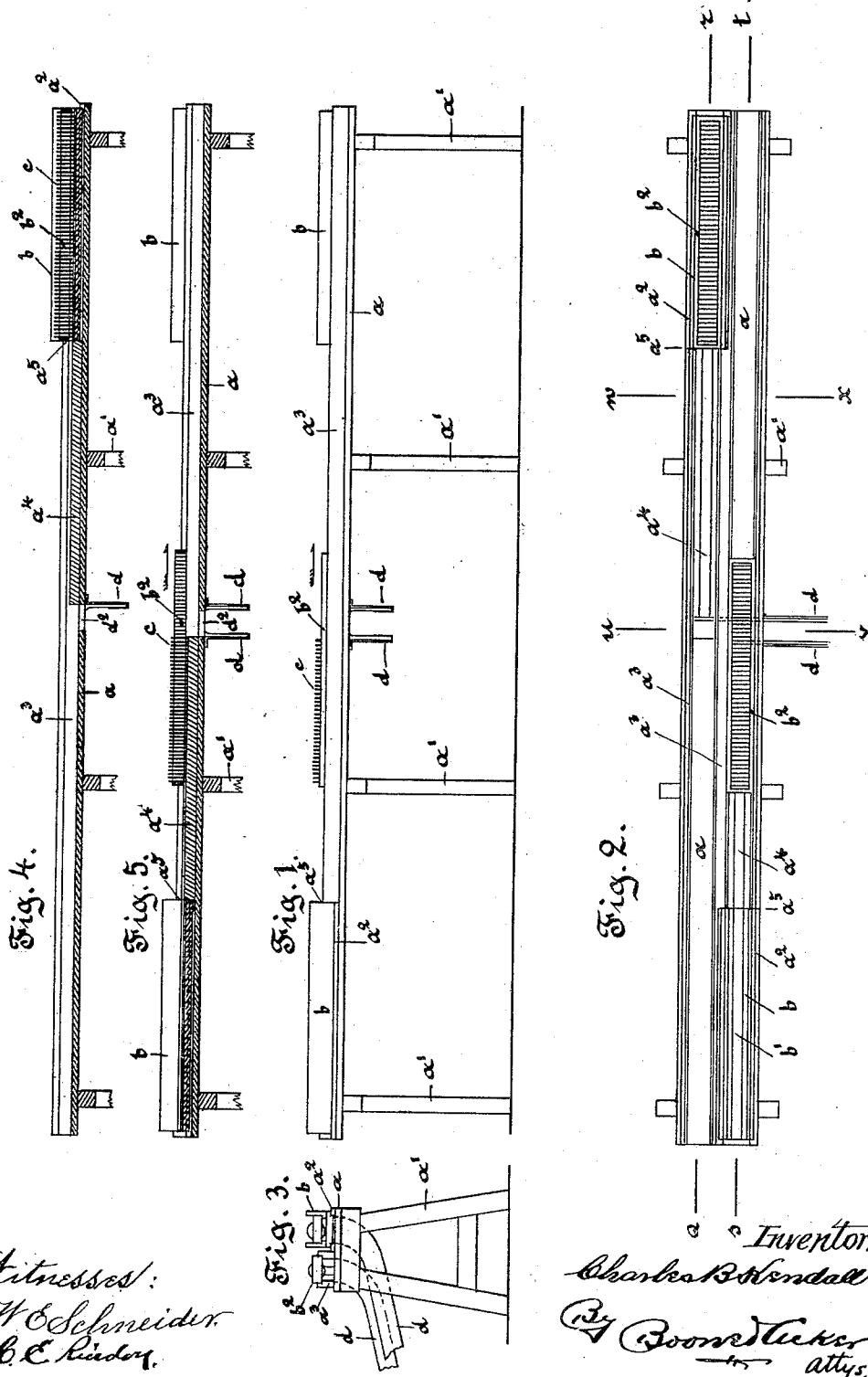


C. B. KENDALL.
CAN HEAD FEEDING APPARATUS.

No. 469,388.

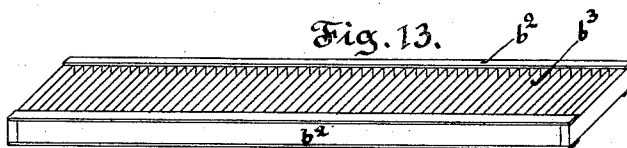
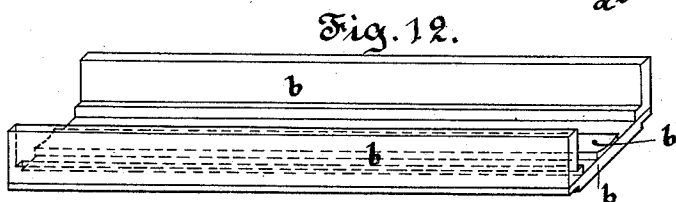
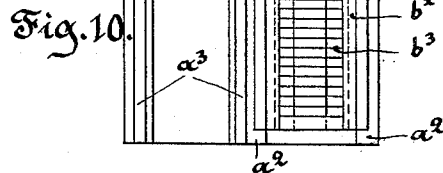
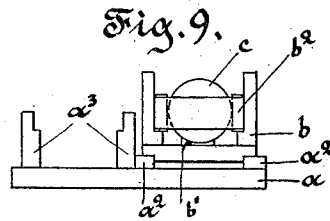
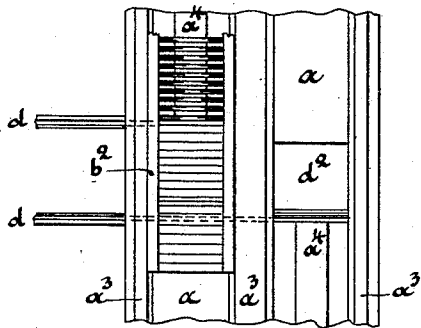
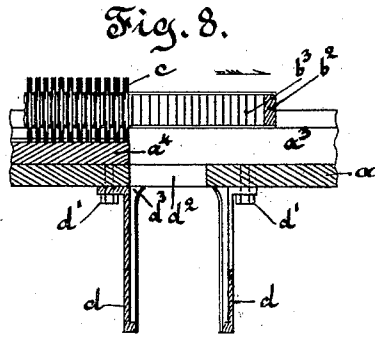
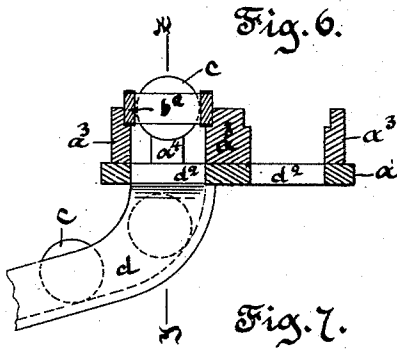
Patented Feb. 23, 1892.



C. B. KENDALL.
CAN HEAD FEEDING APPARATUS.

No. 469,388.

Patented Feb. 23, 1892.



Witnesses:
W. E. Schneider
W. C. Rindorf.

Inventor
Charles B. Kendall
By Boone & Tucker
attys.

UNITED STATES PATENT OFFICE.

CHARLES B. KENDALL, OF NEWTON, MASSACHUSETTS.

CAN-HEAD-FEEDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 469,388, dated February 23, 1892.

Application filed September 29, 1890. Renewed December 29, 1891. Serial No. 416,491. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. KENDALL, a citizen of the United States, residing at Newton, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Can-Head-Feeding Apparatus; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

My invention relates to certain new and useful improvements in feeding mechanism for the automatic conveyance of can-heads to and discharging the same into the can-head chutes for travel toward the can-heading machinery, as will be hereinafter more fully set forth in the drawings, described and pointed out in the specification.

The main objects sought to be derived from the use of the present invention consist, first, in the increased rapidity with which the can-heads may be supplied or fed to the heading machinery; secondly, in the decrease of labor required in the handling and feeding thereof, thereby lessening the daily running expense; thirdly, in providing against the heads being fed irregularly to the chutes, and, lastly, in providing a device which shall be simpler in its construction and more effective in its operation than any device heretofore known to me for the accomplishment of the same purpose.

Referring to the drawings forming a part of this specification, wherein similar letters of reference are used to denote corresponding parts throughout the entire specification and drawings, Figure 1 is a side view in elevation showing the entire machine; Fig. 2, a top plan thereof, showing the can-head crate at one side and end of the table in position within its shell and the crate upon the opposite side moved out of its shell and in position above the discharge-opening; Fig. 3, an end view in elevation; Fig. 4, a longitudinal sectional view showing filled crate placed in position for movement toward discharge-chute; Fig. 5, a similar view of Fig. 1; Fig. 6, a cross-sectional view taken on line *v u*, Fig. 2; Fig. 7, a top plan in detail of Fig. 6; Fig. 8, a longitudinal sectional view on line *y z*, Fig. 6; Fig.

9, an end view of the feed-table, showing one of the runways or guides empty; Fig. 10, a top plan of Fig. 9; Fig. 11, an end view in cross-section of the feed-table; Fig. 12, a top plan of the crate-shell, and Fig. 13 a top plan of the crate.

The letter *a* represents the feed-table, which is supported by and has secured thereto the legs *a'*, of which any suitable number may be employed. On the top of said table I secure, in any suitable manner, the guides *a²*, within which the can-head-crate shell *b* operates, as hereinafter described. These guides or runways for the shell *b* extend only a partial length of the table, as shown at *a³*, from which points they are converted into crate guides or runways *a³*, which project inward and extend considerably above the shell-guideway.

Within the crate-shell operates the crate *b²*, carrying the can-heads *c*, which are maintained apart by means of the partition or vertical guides *b³*. Within the crate-shell I secure the supporting-tracks *b'*, upon which the can-heads contained within the crate *b²* rest, which track is secured therein for the purpose of providing against the dropping out of the heads while the crate is contained within its shell. The crate *b²* travels with the movement of the shell until the end of the latter contacts with the walls of the crate-guide runway *a³*, when the movement thereof ceases. The crate *b²*, however, continues its longitudinal movement within the guide-runway *a³* until the opposite end of the table is reached.

In order to provide against the dropping of the can-heads from within the crate before reaching the discharge-opening, I provide the track *a⁴*, which is secured within the crate-runway at a height equal to supporting-track *b'*, and extends in length to the discharge-opening, so as to be in vertical line with the wall of the discharge-chute. The location of the can-head-supporting tracks will be clearly seen by reference to Figs. 6, 7, 8, and 11. The feed-table I form solid and provide the same with central opening *d²*, Figs. 4, 5, 6, 7, and 8, below which and in vertical line therewith I secure the can-head chutes *d* (which run at right angles to the table) by means of screws or bolts *d'*. As the filled crates travel from

each end of the feed-table over the opening d^2 , the can-heads are allowed to drop successively into chutes d , by which they are carried or conveyed to the can-header. Should, however, the heads be carried beyond the chutes d , the same will fall through the opening d^2 into a basket located thereunder for the purpose of catching the same. I provide the feed-table with two guides and runways, so as to permit the travel of the crates from each end of the table, one for carrying can-tops and the oppositely-moving one for can-bottoms, so as to allow the two being fed simultaneously.

15 In operating my improved feeder it is only requisite that two workers be employed, one at each end of the table, in order to feed the crate-shell containing the filled crate thereto and remove the empty crates as they reach the opposite end. When the filled crate moves from within the crate-shell into the crate-runway a^3 , the empty shell is removed from within guideway a^2 and placed to one side to be refilled while another is inserted in place thereof, thus keeping the crate-guide continually supplied with moving crates carrying can tops and bottoms. As the empty crates reach the opposite end, the operator there stationed removes the same, so as to be refilled, and at the same time keep the guideway running parallel therewith continually supplied with filled crates. As the crates pass over the opening d^2 , the can-heads move from off the track a^4 and are discharged therethrough into chutes d , by means of which, as before stated, they are conveyed to the heading mechanism. (Not shown.) By providing the crate b^2 with the partitions b^3 the can-heads are kept separated from one another and in true vertical position, so as to insure perfect and correct dropping into the chutes d . The can-head crates and shell are operated by hand by preference; but any suitable mechanism may be employed for this purpose.

45 By means of my improved feeder I am enabled to supply about two hundred heads and bottoms each to the heading mechanism, while by the employment of the present feed mechanism only about sixty per minute can be fed, which, being by hand, does not insure accuracy. By my improved feeder it is impossible for the heads to drop imperfectly into the conveying-chutes.

The feeding apparatus herein shown and described may be easily adjusted to any of the headers now in use and be operated by

hand or automatically from the movement of the heading machinery.

It is obvious that many minor changes may be made in the arrangement of parts and details of construction herein shown and described without necessitating or creating a departure from the nature and scope of my invention.

Having thus described my invention, what I claim as new, and desire to secure protection in by Letters Patent of the United States, is—

1. In a can-head-feeding device, the combination of the feed-table thereof provided with a discharge-opening, guides and runways formed thereon, and the can-head crate adapted to move therein and upon the travel thereof to automatically discharge the can heads and bottoms, substantially as and for the purpose set forth.

2. In a can-head-feeding device, the combination of the table thereof, guides and runways formed thereon, crate-shell provided with can-head supports working thereon, can-head crate fitting therein, and head-supporting tracks secured within the crate-runways, said crate adapted to automatically, upon the travel thereof, empty itself of heads and bottoms, substantially as set forth and described.

3. The combination, with a can-head crate, of the crate-shell within which the crate fits, said shell being provided with can-head supports, so as to prevent the outfalling of the heads, substantially as set forth and described.

4. In a can-head-feeding apparatus, the combination, with the can-head crate adapted to hold tops and bottoms, of a guideway, said crate upon travel thereover adapted to automatically and successively discharge the can tops and bottoms, substantially as and for the purpose set forth.

5. In a can-head-feeding apparatus, the combination of the feed-table or guide-support provided with discharge-opening, crate for carrying of heads, adapted to travel thereover and automatically discharge the heads, and the can-head chutes secured beneath the guide-supports and adapted to receive the discharged heads, substantially as set forth, and for the purpose described.

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

CHARLES B. KENDALL.

Witnesses:

S. W. SEELY,
N. A. ACKER.