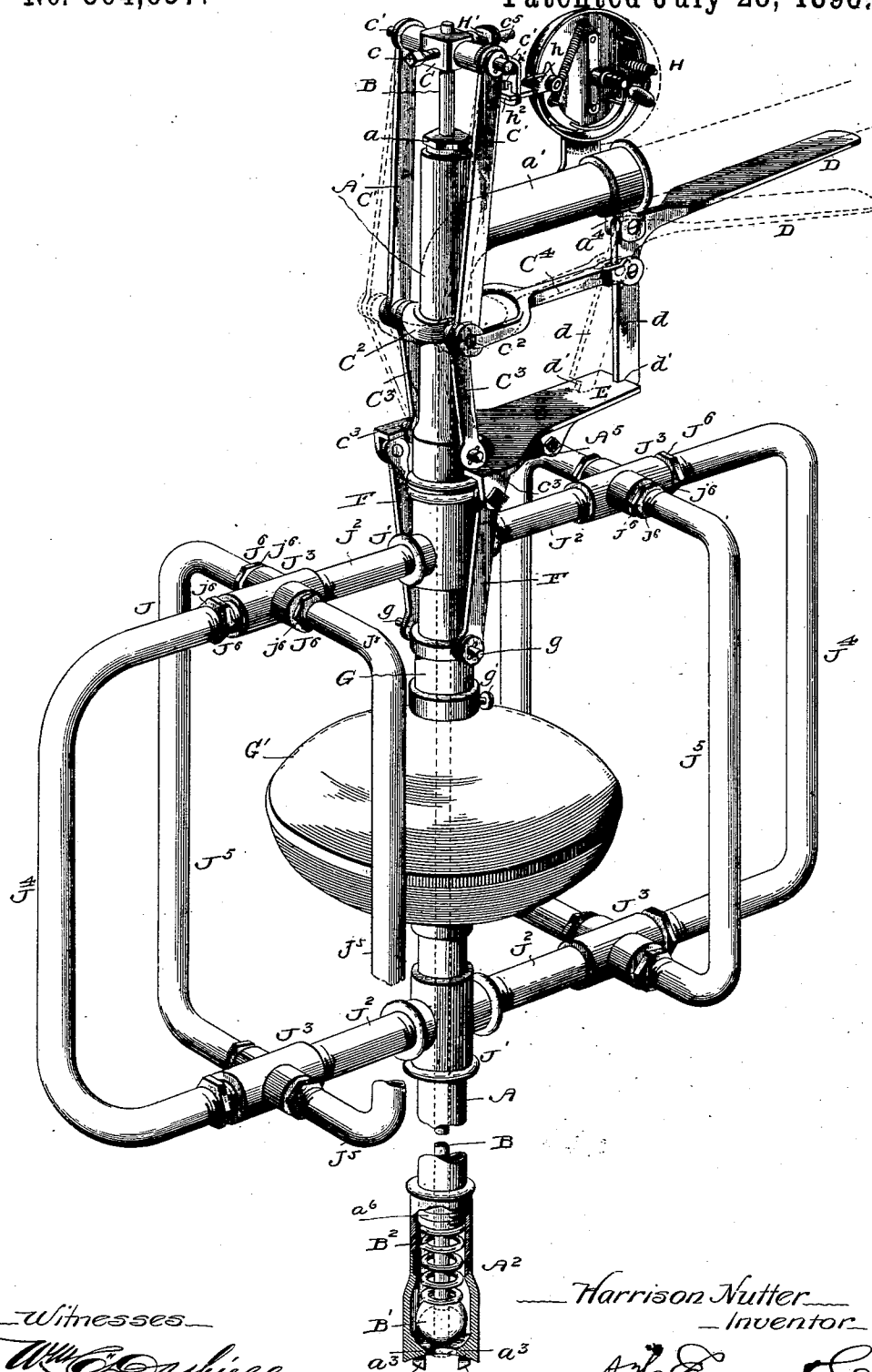


(No Model.)

H. NUTTER.  
CAN FILLER.

No. 564,637.

Patented July 28, 1896.



Witnesses  
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# UNITED STATES PATENT OFFICE.

HARRISON NUTTER, OF ALTON, ILLINOIS.

## CAN-FILLER.

SPECIFICATION forming part of Letters Patent No. 564,637, dated July 28, 1896.

Application filed September 11, 1895. Serial No. 562,138. (No model.)

*To all whom it may concern:*

Be it known that I, HARRISON NUTTER, a citizen of the United States, residing at Alton, in the county of Madison and State of Illinois, have invented certain new and useful Improvements in Can-Fillers, of which the following specification contains a full, clear, and exact description, reference being had to the accompanying drawing, in which the figure is a perspective of my improved can-filler, parts being broken away.

The invention relates to that class of fillers adapted to fill the cans of ice-machines.

The objects of the invention are to provide an improved valve-operating mechanism, and also to provide a gage or steadying frame, to center the filler in the cans.

The invention consists in the construction and combinations hereinafter described and claimed.

A is the vertical pipe, having an elbow A' at its upper end, to the horizontal member a' of which the flexible supply-pipe is connected, as shown in dotted lines. The upper end of the elbow A' is provided with a gland a, through which the vertical valve-rod B freely slides, and the lower end of the pipe A has a valve-casing A<sup>2</sup> thereon, provided at its lower end with spaced lugs or feet a<sup>2</sup> and with an internal annular valve-seat a<sup>3</sup>, upon which seats the upwardly-opening ball-valve B', carried by the lower end of the rod B.

The valve-casing A<sup>2</sup> is formed in two sections screwed together, and within the upper section is formed a centrally-apertured cross-piece or spider a<sup>6</sup>, through which the rod B freely slides.

B<sup>2</sup> is a spiral spring encircling the rod B and bearing at its ends against cross-piece a<sup>6</sup> and valve B', so as to press the rod and its valve downward. By removing the lower section of the valve-casing the valve and its spring may be removed for repair, &c.

The upper end of the rod B is provided with a cross-head C, adjustable by means of its set-screw c and provided with reduced ends or trunnions c', to which are pivotally connected the upper ends of the links C', the lower ends of said links being pivotally connected by a cross-piece C<sup>2</sup>, having reduced ends or trunnions c<sup>2</sup>, on which the lower ends of the links C' and the upper ends of the

shorter links C<sup>3</sup> pivot. The lower ends of the shorter links C<sup>3</sup> pivot on the trunnions c<sup>2</sup>, formed on the lower end of the vertical member of the elbow A'. Thus the cross-head C is connected to the elbow A' by a toggle-lever, through the medium of which the rod B and its valve may be raised against the spring B<sup>2</sup>.

C<sup>4</sup> is a forked horizontal link or yoke pivoted at its forked ends on the trunnions c<sup>2</sup> and at its opposite end pivoted to the vertical arm d of the angular valve-operating lever D, which is pivoted at its angle between lugs or ears a<sup>4</sup> on the under side of the member a' of the elbow A'. The lower end of this angular lever D is formed with a notch d' to engage the outer edge of the vertically-tilting latch E, which is pivoted to the lug A<sup>5</sup> on the lower end of elbow A' and provided with a forked inner end to which are pivoted the upper ends of the links F, which are pivotally connected at their lower ends to the pivots g in the upper end of the sleeve G, which slides freely on the pipe A and carries the float G'. The float is adjustable on the sleeve by means of the set-screw g'.

It will be seen that when the above-described valve-operating mechanism is set, as shown in full lines, the trunnions c<sup>2</sup>, on which the adjacent ends of the links pivot, are outside of a vertical line drawn through the trunnions c' c<sup>3</sup>, so that the links C' C<sup>3</sup> will move outwardly and permit the spring-pressed rod B to descend and seat its valve just as soon as the float G' ascends and tilts the latch E, and thereby releases the lever D, as shown in dotted lines. To open the valve, it is simply necessary to grasp the horizontal member or handle of the lever D and force it upwardly, which causes the lower notched end d' to tilt the trip against the action of the weight of the float till the notch again engages the free end of the trip, as shown in full lines. This action of the lever D will draw the links toward the pipe till stopped by the cross-piece C<sup>2</sup>, and the links will raise the valve-rod B and its valve against the action of the spring B<sup>2</sup> to permit the flow of the water till the float is raised again, when the latch E will release the lever D, as before described.

It is desirable to notify the operator as soon as the can has been filled, and this I accomplish by securing the bell H to a lug on the

upper side of the elbow A' and connecting its operating arm or lever *h* with a lateral arm or post *c*<sup>3</sup>, projecting from cross-head C, by means of the link H', having a vertical slot *h*', receiving the transverse head *h*<sup>2</sup> on the lever or arm *h*. The bell will be sounded when the lever D is set and also when it is released.

In order that the apparatus may be properly centered and steadied in the can, I provide the open frame J, which is preferably formed of tubing. This frame is formed of the cruciform couplings J', which fit on the pipe A above and below the float, and from which extend the straight arms J<sup>2</sup>, provided at their ends with horizontal cruciform couplings J<sup>3</sup>, into the outer ends of which enter the extremities of the vertically-disposed [ ]-shaped end pieces J<sup>4</sup>, and similarly-shaped side pieces J<sup>5</sup> are connected to the sides of these couplings J<sup>3</sup>. These end and side pieces are connected to the respective couplings by means of the internally and externally threaded sleeves J<sup>6</sup>, having polygonal outer ends *j*<sup>6</sup> to receive a wrench. By means of these sleeves or tubular nuts J<sup>6</sup> the different members J<sup>4</sup> J<sup>5</sup> may be properly adjusted, so that the frame will properly fit the cans, and there will be no tilting or rocking of the frame as it engages the sides of the can near both ends and also engages both ends of the can.

Having thus described the invention, what is claimed is—

1. The combination with the vertical pipe having a valve-rod extending down through its upper end and provided at its lower end with a downwardly-closing valve, of a toggle-lever, pivoted to the pipe and the upper end of the valve-rod, a hand-lever linked to the adjacent ends of the toggle-links to move them toward the pipe and raise the valve-rod, a latch engaging said lever to hold it set and a float on the pipe below and connected with the said latch to cause it to release the said lever and permit the valve to close, substantially as described.

2. The combination with the vertical pipe having a valve-rod extending down through its upper end and provided at its lower end with a downwardly-closing valve, of the toggle-lever pivoted to the upper end of the valve-rod and the upper end of the pipe, the angle-lever pivoted to upper end of the pipe, a horizontal forked link or yoke connecting the vertical arm of the lever with the adja-

cent ends of the toggle-links, to draw them toward the pipe and thereby raise the valve-rod, a latch pivoted between its ends to the pipe, a float sliding on the pipe and linked to the inner end of the latch to tilt it; the outer end of the latch being adapted to engage the lower end of the angle-lever and lock it, thereby holding the valve-rod raised, substantially as described.

3. The combination with the vertical pipe having a valve-rod sliding through its upper end, and having a downwardly-closing valve on its lower end, of the lever for raising the rod and its valve, the latch for locking the lever and holding the parts in said position, a float on the pipe below and connected with the latch, a bell on the upper end of the pipe and an arm or link connecting the upper end of the valve-rod with the operating arm or lever of the bell, substantially as described.

4. The combination with the pipe, the vertical valve-rod having a depending slotted arm or link at its upper end, and a bell, the operating-arm of which is provided with a head entering the said slot, of the lever operatively connected with the valve-rod for raising it, the latch engaging the lever to lock it when the rod is raised and a float on the pipe and connected with the latch to tilt it and release the valve-operating lever, substantially as described.

5. The combination with a can-filler, of the open centering or gage frame, comprising central upper and lower vertical cruciform couplings, receiving the main filler-pipe, arms projecting from said couplings and provided at their ends with horizontal cruciform couplings, vertically-disposed [ ]-shaped end and side pieces entering the respective branches of said horizontal couplings and tubular internally and externally threaded sleeves or nuts securing them therein, substantially as described.

6. The combination with the vertical pipe and the valve-rod sliding through its upper end, of the valve-operating mechanism, the latch for locking said mechanism in its set position, a sleeve sliding on the pipe below the latch and connected therewith and a float adjustable on the sleeve, substantially as described.

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Witnesses:

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