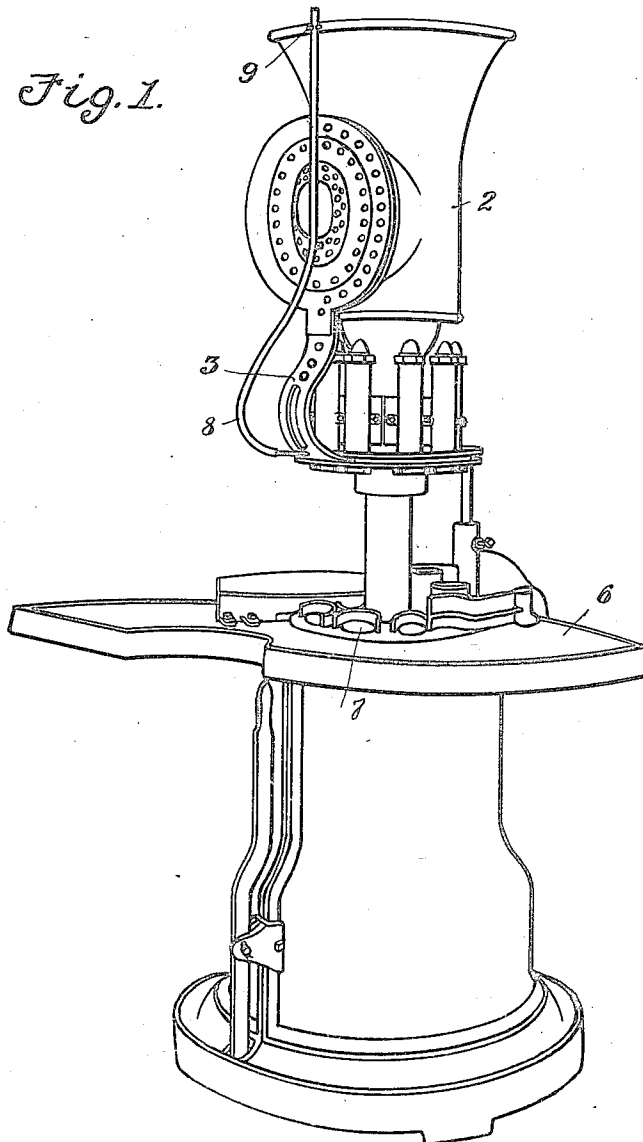


H. A. MUESSEL.
BOTTLE CROWNING MACHINE.
APPLICATION FILED APR. 17, 1913.

1,165,700.

Patented Dec. 28, 1915.
2 SHEETS—SHEET 1.



Witnesses:
Marie Brickell
Lela Cook

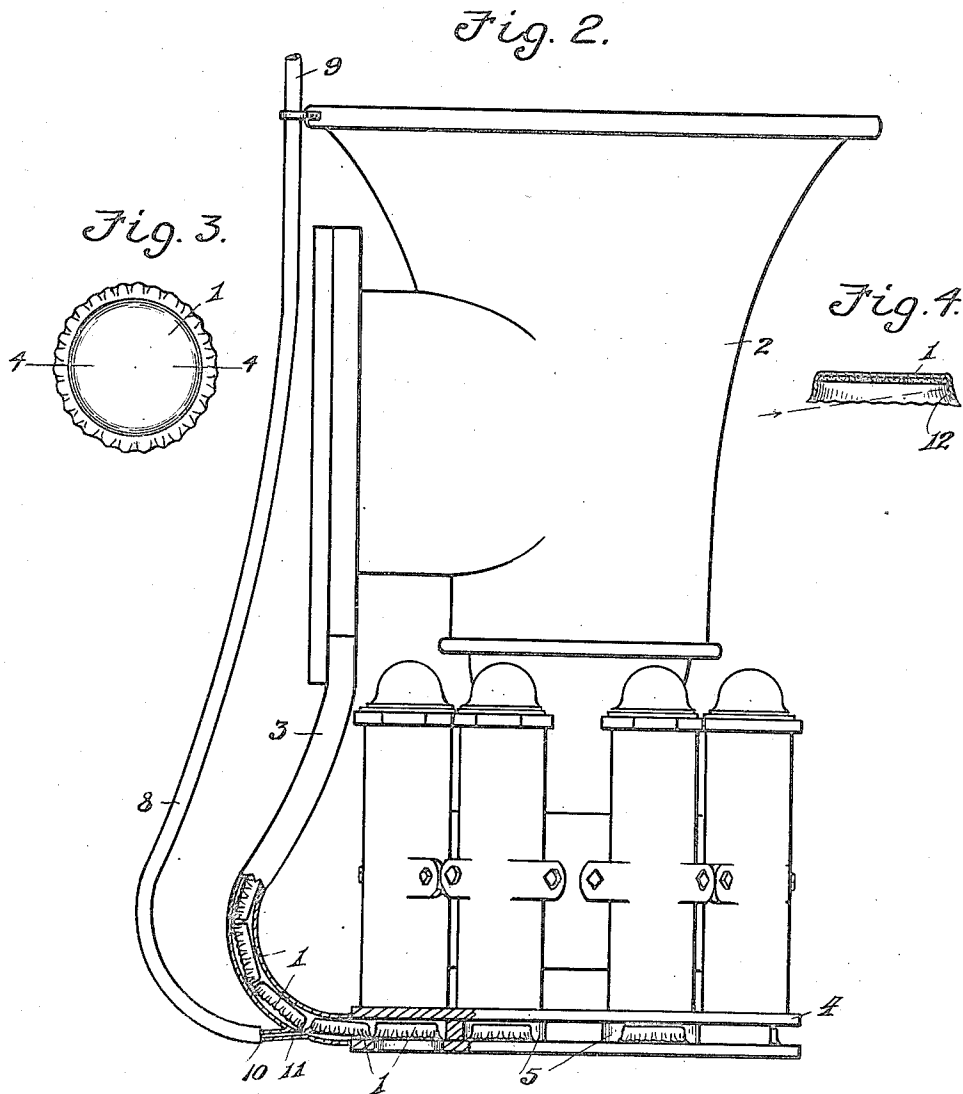
Henry A. Muesel.
INVENTOR.

By George J. Oltsch.
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UNITED STATES PATENT OFFICE.

HENRY A. MUESSEL, OF SOUTH BEND, INDIANA.

BOTTLE-CROWNING MACHINE.

1,165,700.

Specification of Letters Patent.

Patented Dec. 28, 1915.

Application filed April 17, 1913. Serial No. 761,805.

To all whom it may concern:

Be it known that I, HENRY A. MUESSEL, a citizen of the United States, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Bottle-Crowning Machines, of which the following is a specification.

The invention relates generally to an improvement in bottle crowning or capping machine, being particularly directed to a means for feeding the caps from the hopper chute to a position beneath the crowning heads or plungers.

The main object of the present invention is the provision of pneumatic means for feeding the caps into positions beneath the crowning heads, the air current being particularly directed with respect to the cap being operated upon to utilize the full force of said current and at the same time cushion the cap and position it to reduce its friction in the feeding operation.

The invention in the preferred form of details, will be described in the following specification, reference being had particularly to the accompanying drawings, in which—

Figure 1 is a perspective view illustrating the application of the improvement to an accepted type of crowning machine. Fig. 2 is an enlarged elevation, partly in section of the crowning head and superimposed parts of such machine, illustrating the improved feeding means. Fig. 3 is a bottom view of a cap or crown. Fig. 4 is a transverse section of the same, the line of air current being indicated.

In the accompanying drawings, I have illustrated the invention as applied to an accepted type of bottle crowning machine, and desire it to be understood that in the illustration of such machine I intend to represent any desired type of such machine, contemplating the application of the improvement to any machine in which bottles or the like are automatically crowned or capped, and in which the caps are successively fed to the crowning devices.

In the particular type of machine shown, the caps 1, placed in bulk in a hopper 2, are fed therefrom through a chute 3, to the crowning head 4. The crowning head is rotated and is formed to provide a series of throats 5 which successively register with the delivery end of the chute 3, to receive a

cap, the plungers serving the purpose of forcing the caps on to the bottles placed upon the table 6, and in the bottle rests 7.

The present invention is particularly concerned with the means for feeding the caps from the delivery end of the chute 3 into the throats 5, as the latter successively register with the end of the chute. To accomplish this I arrange an air pipe 8 lengthwise the machine, and if desired connect the same with the hopper, as at 9. The pipe 8, which beyond the machine communicates with any suitable source of air under pressure is at its outlet end 10, connected with a jet tube 11, preferably forming an integral part of the chute 3. The jet tube is in open communication with the chute, slightly beyond the delivery end thereof, being directed into said chute from beneath.

Under a continuous air blast or pressure, the air passing through the tube 11 will be directed beneath, or more properly, into the opening of the cap 1 and against that portion of the edge wall next the crowning head, that is against that portion of the edge wall indicated at 12 in Fig. 4. Under this pressure, the cap that is in position to be delivered to the head, is forced into the throat of such head by the air jet. In addition to the feeding operation, the air jet has another and important function, namely in forming a cushion beneath the cap, with the effect to raise the cap from what, in this position of the parts, is the bottom wall of the chute, and force the smooth top of the cap into contact with the upper wall of the chute. It will be noted that the lower portion of the chute 3 has a decided bend in order that the bottle caps may be fed beneath the plungers. A very important function of the blast pipe 8 is to direct a flow of air into the underside of the chute at the sharpest portion of the bend which prevents the caps from clogging and assists them in their movement through the chute. As in the ordinary feeding operation, the cap rests upon the lower edge of the wall, and as in the majority of caps the wall is corrugated, the avoidance of contact between such roughened edge and the chute, will materially facilitate the feeding movement of the cap, while at the same time preventing any distortion of the edge wall.

It is of course to be understood that the air pipe 8 may be arranged, secured, and applied in any desired manner, the sole re-

quirement being that it provide a means for delivering air under pressure from any suitable source to the feed chute and direct said air into the hollow of the cap from beneath.

5 What is claimed is:—

In a bottle crowning machine, a hopper, a crowning head, a chute leading from the hopper to the crowning head and having a sharp bend in its lower end adjacent said
10 crowning head, a short tube projecting from the chute and opening into the latter beneath the same and at a slight angle to the

path of the travel of the crowns at the sharpest bend of said chute and an air blast pipe connected to said short pipe whereby 15 a blast of air will be directed into the chute at the sharpest bend thereof for preventing clogging of the crowns in said bend.

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

HENRY A. MUESSEL,

Witnesses:

L. W. COOK,

GEORGE OLTSCH.