

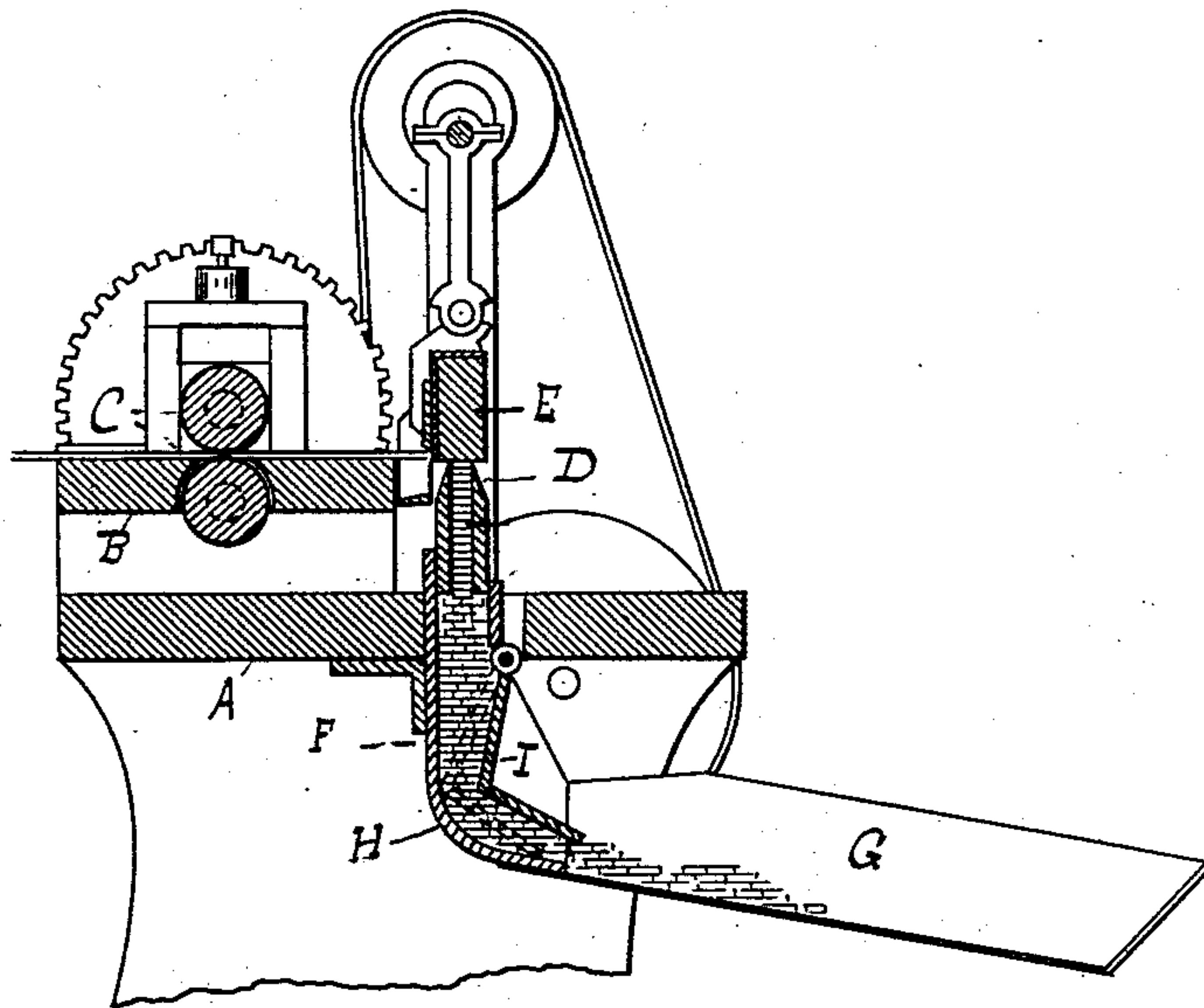
(No Model.)

H. P. CHURCHILL.

RECEIVING AND DELIVERING SPOUT FOR TOOTHPICK MACHINES.

No. 570,744.

Patented Nov. 3, 1896.



Witnesses:

E. B. Gardner.

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Attorneys

UNITED STATES PATENT OFFICE.

HENRY P. CHURCHILL, OF DEERING, MAINE, ASSIGNOR TO ALVIN S. WILCOX AND JOHN M. ADAMS, OF SAME PLACE.

RECEIVING AND DELIVERING SPOUT FOR TOOTHPICK-MACHINES.

SPECIFICATION forming part of Letters Patent No. 570,744, dated November 3, 1896.

Application filed January 10, 1896. Serial No. 574,940. (No model.)

To all whom it may concern:

Be it known that I, HENRY P. CHURCHILL, a citizen of the United States of America, residing at Deering, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Receiving and Delivery Spouts for Toothpick-Machines; and I do hereby 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.

My invention relates to improvements in machines for making wooden toothpicks, and more particularly to spouts for receiving and delivering the picks as they are cut from the blanks. So far as I am aware spouts for this purpose as now constructed consist of an open tube, into which the picks are fed and from which they are delivered by action of gravity. The objection to these devices is that the picks falling a considerable distance are apt to get crossed, whereby it becomes difficult to gather and pack them properly in boxes.

The object of my invention is to obviate this difficulty, and I do this by making a spout of any convenient form and suspending in it a yielding pressure-plate, which, when in its normal position, closes the delivery end of the spout, but which may be opened by the pressure of the picks as they are forced down by the plunger, or, in other words, by giving the picks a pressure feed.

My improved spout is adapted to be attached to machines which form the pick by pressing a strip of veneer over a hollow knife, a type of which machines is illustrated in Letters Patent No. 549,488, issued to me November 12, 1895.

In the drawing herewith accompanying and forming a part of this application I have shown a vertical sectional view of such a machine having my improved spout attached thereto.

Same letters refer to like parts.

In said drawing, A represents a suitable base; B, a feed-table; C, feed-rolls; D, a hollow knife over which the veneer is fed and which cuts the picks; E, a reciprocating plunger adapted to press the veneer down upon

said knife. Beneath the knife is arranged my improved spout, which consists of an upright portion F, a horizontal portion G, and an inclined intermediate portion H. Suspended in said spout is an angular pressure-plate I, which in its normal position entirely closes the spout at a point near the bottom of the upright portion, but which is capable of being pressed outwardly by the picks as they are forced downwardly behind it, the free end serving to regulate the depth of picks as they are delivered to the trough. It will be evident that the yielding pressure-plate may be actuated either by gravity or a spring.

The operation of my improved device is as follows: When the machine is started, the pressure-plate is in the position shown. The space between the pressure-plate and the back of the upright portion of the tube being very narrow, a very few picks only fall by gravity a short distance, but not sufficient to raise the pressure-plate. As soon, however, as the closed space is full each successive pick is pressed against the ones beneath and thus forces up the pressure-plate to permit the picks to be discharged from the bottom. The picks being fed by a force feed from the knife to the point of delivery prevents them from getting out of orderly position, and they may be taken from the horizontal portion of the spout after passing out from under the gravity-plate without at any time destroying the force feed, the space between the plate and back of the spout being always full. By this means the forced feed is continuous.

The advantages of my improved device are that it prevents waste of picks and saves time in gathering them into bunches for package.

Having thus described my invention and its use, I claim—

1. The herein-described delivery-spout for toothpick-machines, consisting of a spout having an angular yielding plate mounted therein adapted normally to close the spout and hold the picks from falling by gravity alone but capable of being forced open by the picks under pressure when said closed portion of the spout is full of picks to permit egress of the picks from the spout and to admit others from above, the angle of said plate lying opposite the point where the spout

changes from the vertical to the horizontal, whereby the spout is kept full and a continuous and even flow of picks is secured, substantially as and for the purposes set forth.

5 2. In a receiving and delivering spout for toothpick-machines, a spout having vertical and horizontal sections, an angular yielding pressure-plate mounted in said spout, the
10 angle of the plate being opposite the angle of the spout and the free end of the angular plate serving to regulate and afford a uni-

form height for the delivery of the picks into the horizontal part of the spout, substantially as and for the purposes set forth.

In testimony whereof I affix my signature, 15
in presence of two witnesses, this 23d day of December, A. D. 1895.

HENRY P. CHURCHILL.

Witnesses:

NATHAN CLIFFORD,
ALFRED J. PHELPS.