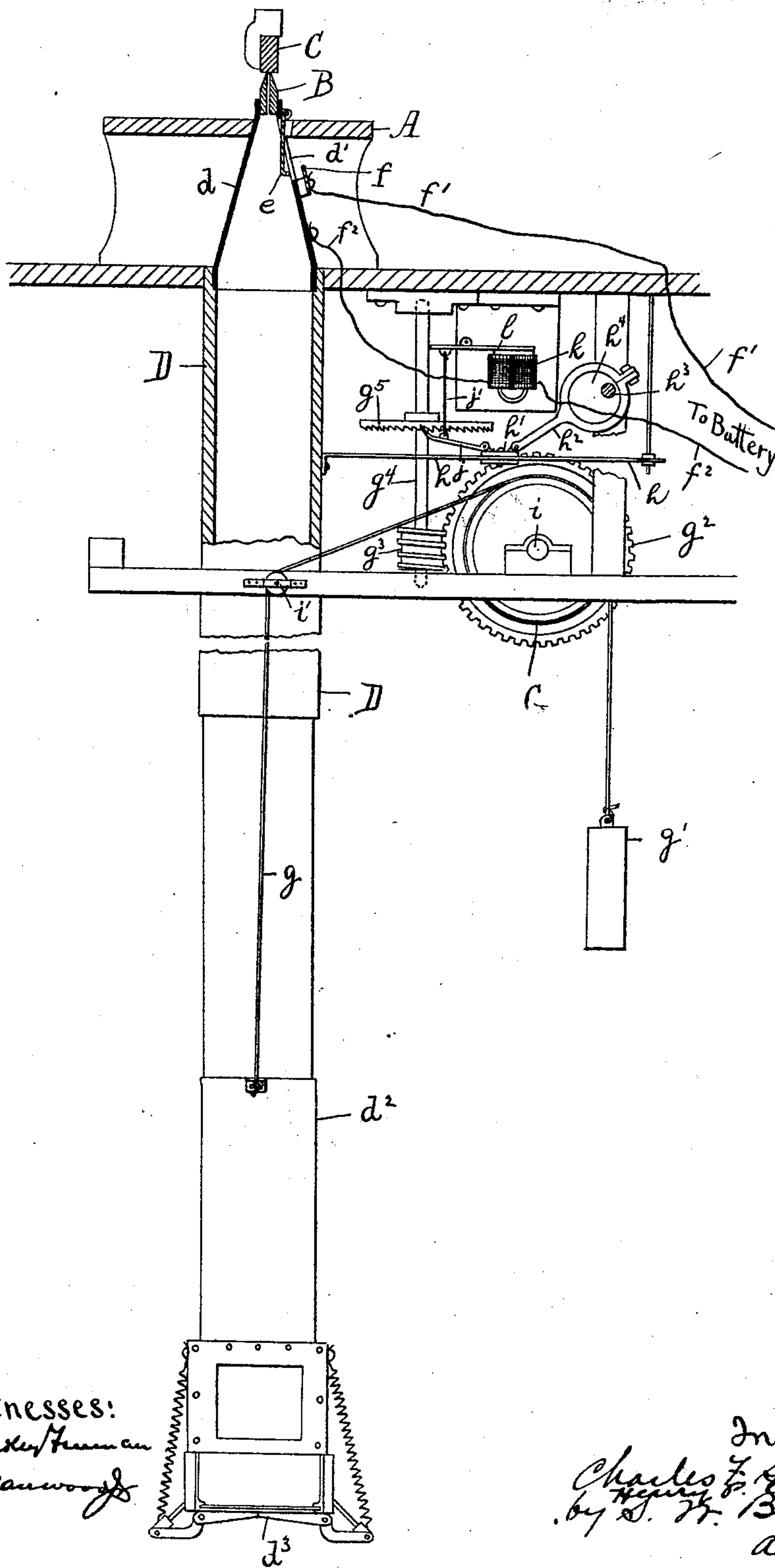


(No Model.)

C. F. SCAMMAN & H. P. CHURCHILL.
APPARATUS FOR HANDLING AND PACKING TOOTHPICKS.

No. 521,735.

Patented June 19, 1894.



Witnesses:
E. D. S. / H. P. Churchill
E. S. S. / H. P. Churchill

Inventors
Charles F. Scamman
H. P. Churchill.
by S. W. Bates
atty.

UNITED STATES PATENT OFFICE.

CHARLES F. SCAMMAN AND HENRY P. CHURCHILL, OF DEERING, MAINE.

APPARATUS FOR HANDLING AND PACKING TOOTHPICKS.

SPECIFICATION forming part of Letters Patent No. 521,735, dated June 19, 1894.

Application filed February 7, 1894. Serial No. 499,321. (No model.)

To all whom it may concern:

Be it known that we, CHARLES F. SCAMMAN and HENRY P. CHURCHILL, citizens of the United States, residing at Deering, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Apparatus for Handling and Packing Toothpicks; and we 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.

Our invention relates to an apparatus for handling and packing toothpicks as they come from the toothpick machine and it relates particularly to a stop motion to be applied to the apparatus invented by Charles F. Scamman one of the joint inventors named herein, an application on said apparatus being filed herewith. In Scamman's apparatus spoken of there is a spout located below the knives of the toothpick machine into which the picks drop as they are formed and on the lower end of the spout is a telescoping section which is automatically released or let off by a let-off mechanism operated by a reciprocating pawl. It is the design to keep the spout full of picks at all times so that they will have little or no distance to fall below the knives and will thus lie perfectly straight in the spout, but in order to do this the telescoping section must be let off at the same rate that the picks feed in at the top. If for any reason the picks stop feeding through the machine when the latter is running, it is desirable and necessary to stop the let-off mechanism which lowers the telescoping section so that the upper level of the picks will not fall far from the underside of the knives. To remedy this difficulty we have devised a stop motion which is the subject of the present application.

The invention is illustrated in the accompanying drawing which shows the Scamman apparatus as fully as is necessary to understand the application of our stop motion.

The view shown is a general vertical section through the upper part of the spout the other parts being in elevation.

B represents the cutting knives of a tooth-

pick machine and C is the reciprocating block which acts against the knives to cut off the picks, A being the machine proper.

The picks as they come from the knives fall into the vertical spout D the upper end d of which, is drawn in or contracted to a narrow opening immediately below the knives. On the lower end of the spout D is a telescoping section d^2 the lower end of which is provided with a valve d^3 by which the picks are removed. As the picks are fed in at the top, the section d^2 is lowered or let off by suitable mechanism by which the upper level of the picks is kept always at or a little below the knives. The let off consists of a cord g counter-weighted by means of a weight g' and passing over a drum G on a shaft i . Connected with the drum is a gear g^2 which is operated by a worm g^3 secured to a shaft g^4 . On the shaft g^4 is also a ratchet g^5 which is operated by a pawl j pivoted to a carriage h' , said carriage being reciprocated on guides h by means of an eccentric h^4 and eccentric rod h^2 the former being mounted on a shaft h^3 .

The parts so far set out are features of the Scamman apparatus and are properly no part of the present invention.

Our stop motion is applied to the pawl j to bring it into engagement according as the spout is full at the top or is drawn down. In order to do this we provide a movable arm e which we connect with the upper end of the spout in such a manner that it will extend into said spout. We prefer to pivot it so that it will hang down into the spout through an opening d' in the same when the spout is empty, but will be pressed outward by the weight of picks when the spout is full. The pawl j is raised and lowered by means of a pivoted lever l to which it is connected by means of a cord j' . To one end of the lever l is secured the armature of an electro-magnet k and this magnet is in an electric circuit formed by the wires f' and f^2 . One of the wires, f' connects with a fixed arm f so located on the upper end of the spout that when the arm e swings outward it will make a contact with it, and the other wire is connected with the arm z . As here shown the upper end of the spout is of metal and the wire f^2

is simply connected with the spout, the arm *f* being insulated therefrom. It will be seen that when the spout is full of picks the arm *e* is pressed outward and a contact is made with the arm *f* the electric circuit being thus completed. The magnet then depresses the end of the lever *l* and so lifts the pawl *j* bringing the same into engagement and so setting the let-off mechanism into operation. As long as the arm *e* is out and the spout full of picks the let-off is in operation but when it is empty at the top and the upper level is drawn down below the arm *e* then the latter swings inward and breaks the connection allowing the pawl to drop and stopping the let-off.

We claim—

1. In an apparatus for handling and packing toothpicks the combination with the knives of the toothpick machine, of a spout beneath said knives into which the toothpicks drop, a movable arm projecting into said spout through an opening in the same, a telescoping section on the lower end of said spout, a let-off device for releasing the said section, the said let-off device being operated by a ratchet and pawl and mechanism connecting said arm and said pawl by which the pawl is lifted into engagement when said arm is

pressed outward by the weight of the picks in said spout, substantially as described. 30

2. In an apparatus for handling and packing toothpicks, the combination with the knives of a toothpick machine, of a spout beneath said knives into which the toothpicks drop, a pivoted arm hanging normally in said spout when the same is empty, a telescoping section on the lower end of said spout and let-off mechanism for releasing the same, said let-off mechanism being operated by a ratchet and a reciprocating pawl, a pivoted lever for lifting said pawl, said lever being connected with the armature of an electro-magnet, a fixed arm against which said pivoted arm is adapted to swing and an electric circuit connecting said fixed arm, said pivoted arm and said magnet whereby the said pawl will be lifted into engagement when said pivoted arm is pressed outward by the weight of picks in said spout, substantially as described. 40 45 50

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

CHARLES F. SCAMMAN.
HENRY P. CHURCHILL.

Witnesses:

S. W. BATES,
E. DUDLEY FREEMAN.