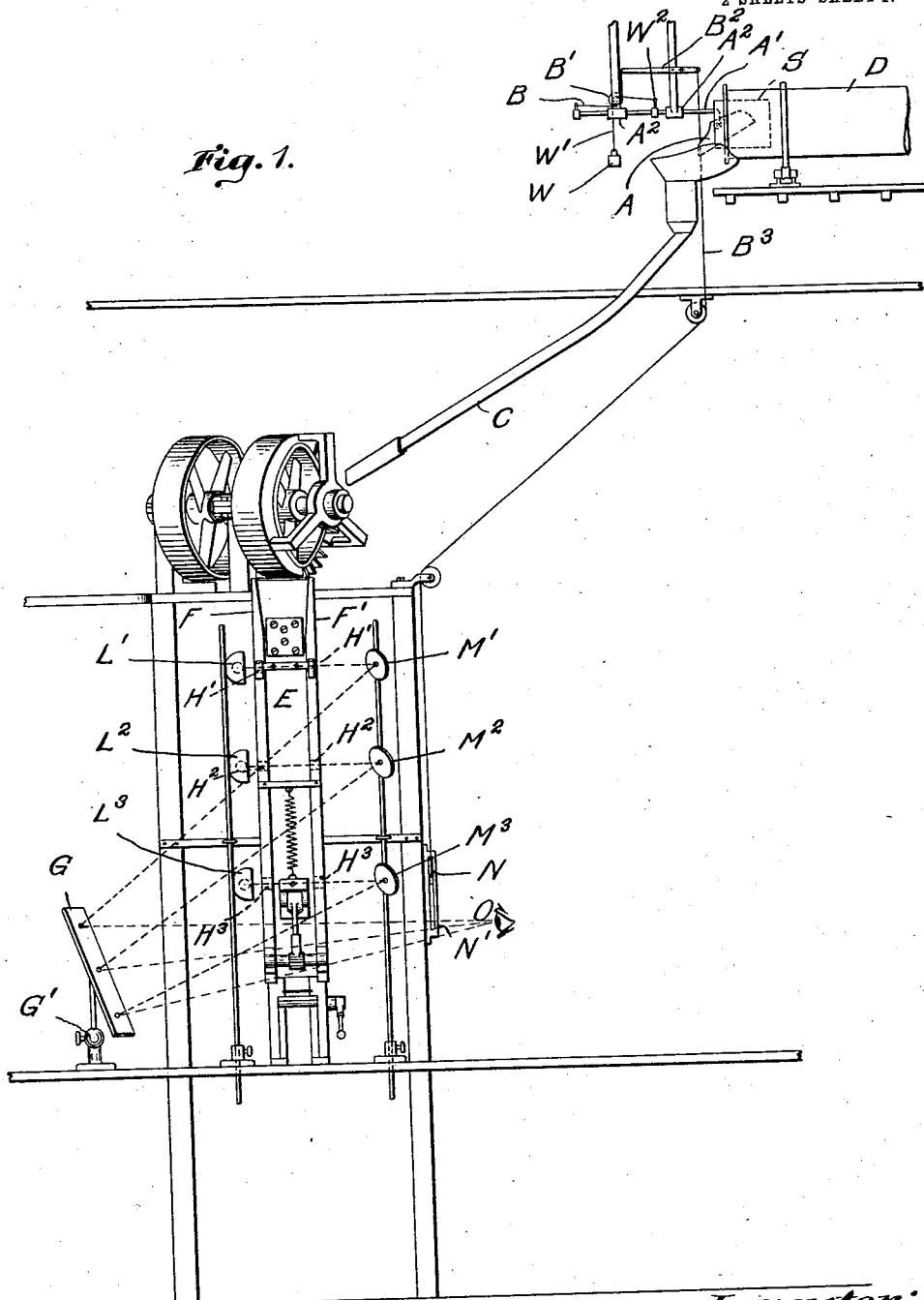


W. W. TAITER.
SIGHT GLASS FOR TOOTHPICK PACKING MACHINES AND THE LIKE.
APPLICATION FILED JAN. 17, 1912.

1,033,128.

Patented July 23, 1912.

2 SHEETS-SHEET 1.



Witnesses:

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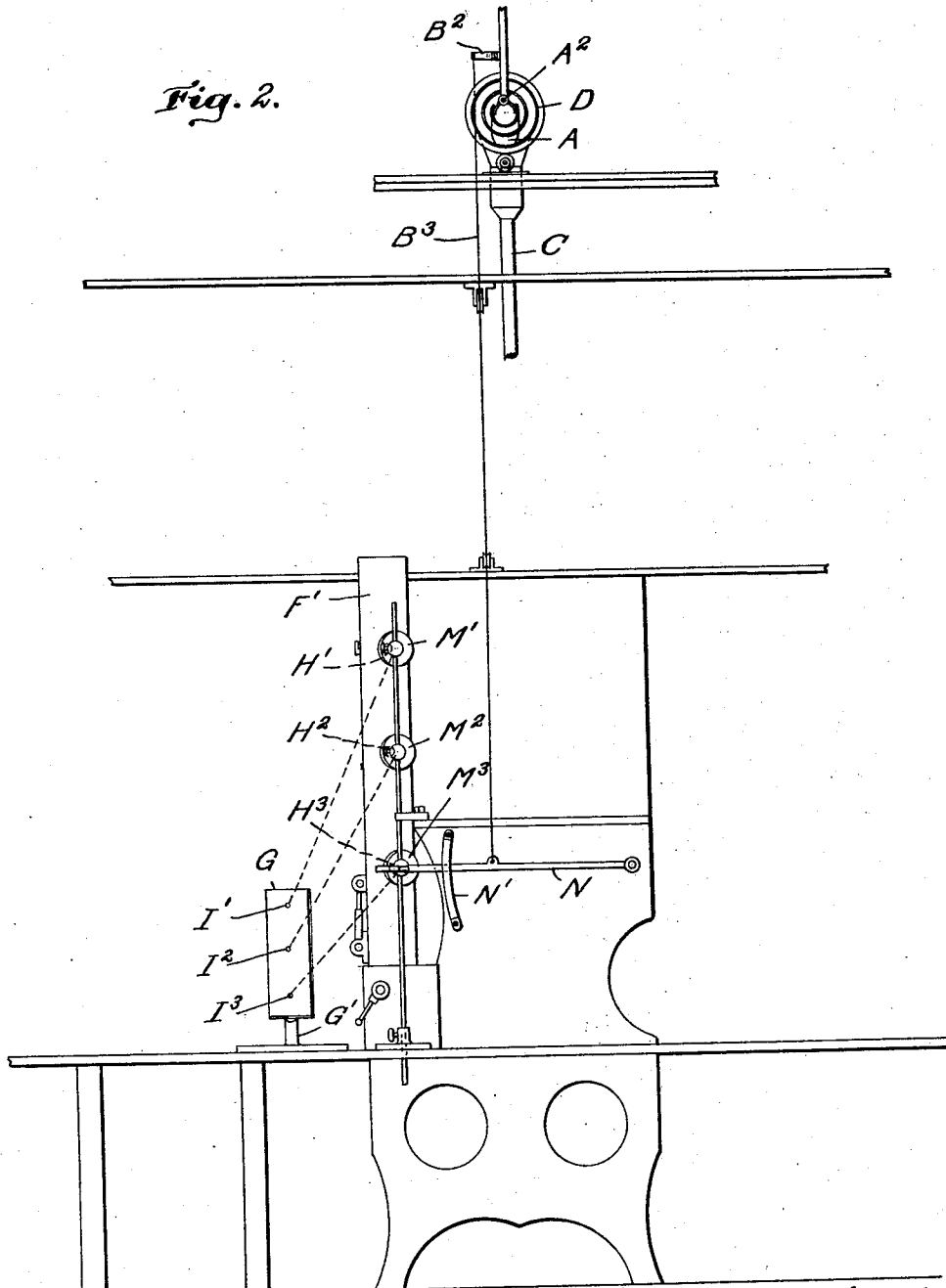
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UNITED STATES PATENT OFFICE.

WILLIS W. TAINTER, OF DIXFIELD, MAINE, ASSIGNOR TO FRANK W. BUTLER AND ROBERT T. WHITEHOUSE, TRUSTEES OF THE ESTATE OF CHARLES FORSTER, DECEASED.

SIGHT-GLASS FOR TOOTHPICK-PACKING MACHINES AND THE LIKE.

1,033,128.

Specification of Letters Patent.

Patented July 23, 1912.

Application filed January 17, 1912. Serial No. 671,686.

To all whom it may concern:

Be it known that I, WILLIS W. TAINTER, a citizen of the United States, and resident of Dixfield, in the county of Oxford and State of Maine, have invented new and useful Improvements in Sight-Glasses for Toothpick-Packing Machines and the Like, of which the following is a specification.

My invention relates to machines of the general character illustrated in United States Letters Patent No. 953,358, dated March 29, 1910, granted to Simon S. and Willis W. Tainter and George P. Stanley for a boxing machine and the improvements herein to be described will be shown as associated with such a boxing machine. The boxing machine described in the said patent is one for automatically filling boxes with tooth picks and comprises a vertical inclosed channel through which the tooth picks are fed, and in which they are arranged in parallelism and from which they are delivered by an intermittently operating measuring gate. Tooth picks are delivered to this arranging and delivering machine by feed apparatus which comprises a channel or chute which leads from a source of more or less regular supply. The irregularity of the supply of material not infrequently leads to the interruption of the operations of the box filling machine; occasionally without previous warning the supply of material runs short, the inclosed channel is empty and it may be that several boxes have to pass the machine without being filled. Or again, the supply from above may be too copious until the inclosed channel becomes filled, when the material spills out at the top of the channel and is liable to clog the feeding mechanism. The vertical height of these automatic box filling machines is such that it is impracticable to expect the operator in charge of the machine (who is kept quite busy in handling the filled boxes) to keep any watch upon the contents of the inclosed channel, so that even if peep holes were provided in the side of the channel the operator could not make use of them and at the same time attend properly to other duties connected with the machine.

My improvement herein to be described obviates this difficulty and enables the operator in charge of a machine of this character

to keep substantially constant watch on the condition of the material in the machine without diverting attention from other and more important duties involved in attendance upon the machine.

In the drawings hereto annexed which illustrate my improvements,—Figure 1, is a front view of a machine of the character above indicated with my improvements attached; and Fig. 2 is a side view of the same.

The material, such as tooth picks, which is fed to the machine comes from a polishing drum D in which the material is tumbled and polished, finally to find its way through a cylindrical box-like screen S from which the individual pieces fall into the adjustable chute A from which they slide into the conductor C. The quantity of picks or similar articles delivered to the conductor C depends in part upon the extent of supply by the drum D and in part also upon the location of the chute A in relation to the screen S; the farther the chute A is thrust into the inclosure made by the screen the larger will be the quantity of tooth picks delivered by it to the conductor C, in a given time, other things being equal.

The chute A is mounted upon the slide rod A' which slides in the hangers A² A²; a weight W hanging by a cord W' which is attached to the slide rod A' at W² tends constantly to withdraw the chute A from the cylindrical screen S. A cord P passing over a guide wheel B' is attached at one end to the outer end of the slide rod A' and at the other to a lever B²; attached to the lever B² at its opposite end a cord or wire B³ leads and is attached to the handle N pivoted to the frame of the machine and within easy reach of the operator. It will now be observed that when the handle N is pulled down, the chute A will be inserted farther into the screen S and that an opposite movement of the handle N will cause the chute A to be withdrawn to a greater or less extent from the screen S. To increase the feed of material, the handle N is pulled down, to decrease it the handle is raised. The sector N' through which the handle N passes exerts sufficient friction upon the handle to hold it in any position in which it happens to be left.

The automatic box filling machine (of

which only a few parts are herein shown, reference being had to the aforesaid patent No. 953,368, for fuller description) comprises the vertical inclosed channel with side plates F' F' and the front plate E seen in Fig. 1. A rear plate similar to E completes the rectangular inclosure of the channel. The side plates F' F' are perforated at a plurality of stations, preferably three as H', H², H³; the perforations in the two opposite plates being so arranged or alined that each pair of perforations forms an aperture or passage for a beam of light. Rays from the electric lights L', L², L³, pass through the passages made by the apertures H', H², H³, provided the inclosed channel between the side plates F' F', is empty; if it be filled with material of course the light cannot pass. Provided the inclosed channel is empty beams of light from three sources pass through the three apertures and impinge respectively on mirrors M', M², M³, which are mounted and adjusted so as to reflect these rays upon the observation glass G which is mounted at the side of the machine and is so adjusted that it in turn will reflect the images of all three lights to a single point indicated by the letter O, this being the point where in the normal conditions of things the eye of the attending operator will be located.

Referring to Fig. 2, the point O may be supposed to be occupied by the eye of the person observing the drawing, and I', I², I³, represent the images of the three lights L', L², L³ in the observation glass G. By this arrangement the attendant at the machine can see at a glance the condition of the interior of the inclosed channel in respect to material passing through it. If the supply is properly adjusted to the speed of operation of the machine, the material should fill the lower part of the channel so as to ob-

struct the rays of light passing through holes H³ and thus cut out the image of the light-source L³. If the image I³ appears in the observation glass G the attendant by drawing down the handle N will increase the rate of supply from the drum D until the image I³ disappears. If the image I² disappears this indicates that the supply is too fast for the machine and the attendant will thereupon raise the handle N until the diminished supply causes the image I² to reappear. Thus observation and regulation of the machine can easily be carried on without interruption of the manipulation and disposition of boxes which devolves upon the attendant.

What I claim and desire to secure by Letters Patent is:

1. In a machine of the character described, an inclosed channel, means to direct beams of light across said channel at several points, mirrors to reflect said beams, respectively upon an observation glass, and said observation glass, located and arranged to present images of the several lights to one point of observation.

2. In a machine of the character described, an inclosed channel, apertures providing a plurality of transverse light passages through the channel, lights to throw beams through said apertures, a plurality of mirrors to reflect said beams respectively, upon an observation glass, and said observation glass, located and arranged to present images of the several lights to one point of observation.

Signed by me at Strong, Maine, this eighth day of January 1912.

WILLIS W. TAINTER.

Witnesses:

FRANK W. BUTLER,
A. L. FENDERSON.