

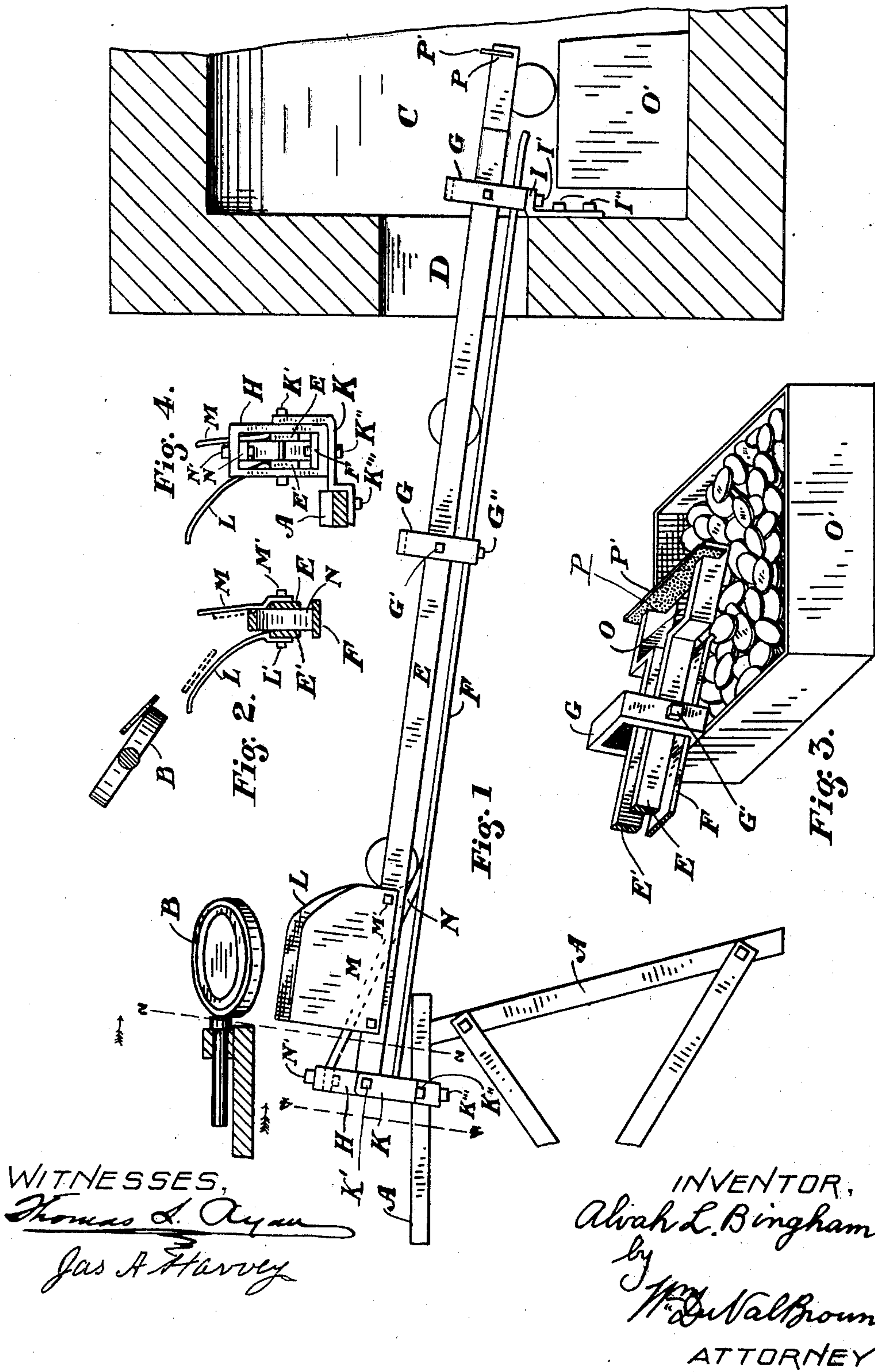
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A. L. BINGHAM.
CHUTE FOR GLASSWARE.

APPLICATION FILED MAR. 15, 1901. RENEWED JULY 2, 1903.

NO MODEL.



UNITED STATES PATENT OFFICE.

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CHUTE FOR GLASSWARE.

SPECIFICATION forming part of Letters Patent No. 737,568, dated September 1, 1903.

Application filed March 15, 1901. Renewed July 2, 1903. Serial No. 164,099. (No model.)

To all whom it may concern:

Be it known that I, ALVAH L. BINGHAM, a citizen of the United States, residing at Muncie, in the county of Delaware and State of Indiana, have invented a new and useful Chute for Glassware, of which the following is a specification.

The aim and purpose of this invention is to provide a chute for transporting the glass article which is in the shape of a disk, after being pressed or blown, from the forming device to the annealing-furnace.

A more particular object is to provide a chute with means at the feeding end to guide the disk into the conveyer, so that it will rest on its periphery and roll of its own accord down into the furnace and be discharged through an opening in the bottom of the conveyer.

A further object is to provide a chute which will allow a circular article which is in the shape of a disk to roll of its own accord, after being formed, down into a receptacle and be automatically discharged.

These and other objects not hereinbefore mentioned are accomplished by the construction illustrated in the accompanying drawings, wherein like letters of reference indicate corresponding parts in the several views, and in which—

Figure 1 is a side elevation of my chute in position, showing the receiving end under a glass-forming machine and the discharge end extending into a furnace. Fig. 2 is a section on the line 2 2 looking toward the right, Fig. 1. Fig. 3 is a perspective view of the discharge end of the chute, showing a receiving-pan beneath to receive the articles; and Fig. 4 is a section on the line 4 4, Fig. 1, looking toward the right.

In the drawings, A designates a stand for supporting the receiving end of the chute, and B a mold in which the disk is formed.

C designates a portion of a furnace, and D a door or opening therefor.

The chute consists of two vertical side bars E E' and the flat bottom bar F. These bars are spaced apart and secured together by means of one or more clips G. These clips

surround the bars and are secured to the side bars by means of the bolts G' and to the bottom bar by means of the bolt G''.

On the receiving end of the chute is a clip H, similar to the clips G. Secured to this clip is a standard K. This standard has an upright portion secured to the side of the clip by means of a bolt K', which passes through the clip and through the side bars of the chute, a horizontal portion below the clip secured thereto by means of a bolt K'', which also passes through the bottom bar F, and another horizontal portion which is secured to the under side of the support by means of a bolt K'''.

The discharge end of the chute which extends into the furnace is supported by means of a bracket I, on which rests one of the clips G. The clip is secured in place on the bracket by means of the bolt I', and the bracket is secured to the end wall of the furnace by means of the bolts I''.

It will be noticed by referring to Fig. 1 that the chute is supported on an incline, with the receiving end higher than the discharge end. I have shown in the drawings a mold which is adapted to dump and discharge the disk into the chute. To guide the disk after being dumped from the mold so that it will light upon its periphery and roll down to the discharge end, I provide an apron L on one side of the chute and a vertical shield or plate M on the opposite side. The apron is secured to the side bar E' by means of the bolt L', and the shield is secured to the side bar E by means of the bolt M'. By referring to Fig. 2 it will be seen that the apron is curved upwardly and outwardly beneath the mold, so that when the disk leaves the molds it will fall on its face and slide down into the chute and rest upon its periphery. The shield will prevent the disk from bouncing out and compel it to light upon its periphery. To prevent the disk from having too much of a fall, I provide a guideway N, on which the disk first rests and then rolls down onto the chute proper. The front end of this guideway is secured to the clip H by means of the bolt N', and the front end is secured to the

bottom bar F by any suitable means, all as shown in Fig. 1. The discharge end of the chute is enlarged by spreading apart the side bars, as shown at O, Fig. 3. The bottom bar F does not extend beneath this enlarged portion, leaving an open space for the disks to fall through, preferably into a pan O', as shown in Fig. 3. The discharge ends of the side bars are provided with grooves P, in which fits a buffer P' to prevent the articles from breaking when they reach the end of the conveyer. This buffer can be manufactured of wire-netting, asbestos, or any other suitable non-combustible and soft material.

The machine as described, is entirely automatic. The apron and shield will guide the formed disk to the chute, and the opening at the discharge end will allow the disk to fall out either into the pan, as shown, or any other suitable receptacle. The chute can handle any kind of disks, either pressed, blown, or otherwise formed, which are capable of rolling from the receiving end to the discharge end—such, for instance, as white liners for jar-caps, stoppers for bottles, tops of ink-wells, &c. As the device is automatic, requiring no handling of the disks, they will roll at once into the annealing-furnace. This I regard as an important feature of my invention, for the reason that each disk after being formed will take the same time to reach the furnace, so that they will each reach the same with the same degree of heat and all will be properly and evenly annealed.

While I have shown the mold B as being a dumping-mold, it is obvious that I could employ any kind of mold and any kind of means for removing the disk from the mold, as the apron and shield will guide the article to the chute so that it will light upon its periphery.

I am aware that many minor changes can be made in the construction and arrangement of parts without in the least departing from the nature and principles of my invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with an inclined chute adapted to be used with a glass-disk-forming machine, the chute consisting of a bottom and side guide portions, of means on the upper end of the chute adapted to receive and guide the disk from the forming-machine, one at a time, to fall upon its periphery upon the bottom of the chute, the side guide portions being spaced apart a sufficient distance to hold and guide each individual disk upon its periphery on the bottom of the chute during its rolling movement over the same, and the lower end of the chute being open to discharge the disk.

2. The combination with an inclined chute adapted to be used with a glass-disk-forming machine, the chute consisting of a bottom and vertical side guide portions, of means on

the upper end of the chute adapted to receive and guide the disk from the machine to fall upon its periphery upon the bottom of the chute, the vertical side guide portions being spaced apart a sufficient distance to hold and guide the disk upon its periphery on the bottom of the chute during its rolling movement over the same and the bottom at the lower end of the chute terminating before the side portions terminate.

3. In a chute for glassware, the combination with an inclined chute consisting of a bottom and side guide portions, the bottom and side guide portions being spaced apart, and clips for securing the portions together, of means on the upper end of the chute for guiding and receiving the ware to fall on its periphery upon the bottom of the chute, the side guide portions adapted to hold and guide the ware upon its periphery during its movement through the chute, the lower end of the chute being open to discharge the ware.

4. The combination with a chute, of an upwardly and outwardly extending apron secured to the receiving end and on one side thereof, a shield opposite the apron, and means for discharging the ware at the opposite end.

5. The combination with a chute, of an upwardly and outwardly extending apron secured to the receiving end and on one side thereof, a shield opposite the apron, an inclined guideway located between the apron and shield for first receiving the ware, the lower end of the guideway being secured to the bottom of the conveyer, and means for discharging the ware at the opposite end.

6. The combination with a chute, of means for guiding and receiving the ware on its periphery at one end thereof, an inclined guideway at the receiving end for first receiving the ware, the rear end of the guideway terminating at the bottom of the chute, and means for discharging the ware at the opposite end.

7. The combination with an inclined chute adapted to be used with a glass-disk-forming machine, the chute consisting of a bottom and side guide portions, of means on the upper end of the chute adapted to receive and guide the disk from the forming-machine to fall on its periphery upon the bottom of the chute, the side guide portions being spaced apart a sufficient distance to hold and guide the disk upon its periphery on the bottom of the chute during its rolling movement over the same, the bottom at the lower end of the chute terminating before the side portions terminate, and a buffer carried by the lower ends of the side portions beyond the terminating-point of the bottom against which the disk is adapted to strike before leaving the chute.

8. The combination with a chute consisting of a bottom and vertical side portions, of means for guiding the ware to the receiving end, the bottom of the chute terminating be-

fore reaching the discharge end, and the side portions being spread apart beyond the terminating-point of the bottom.

5 9. The combination with a chute consisting of a bottom and vertical side portions, of means for guiding the ware to the receiving end, the bottom of the chute terminating before reaching the discharge end, the side portions being spread apart beyond the termi-

nating-point of the bottom and provided with 10 a groove, and a buffer positioned in the grooves.

In testimony whereof I have hereunto set my hand in the presence of two witnesses.

ALVAH L. BINGHAM.

Witnesses:

WM. DU VAL BROWN,
E. B. BALL.