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L. H. SIMON

RETARDING CHUTE

Filed Oct. 1, 1924

FIG. 1

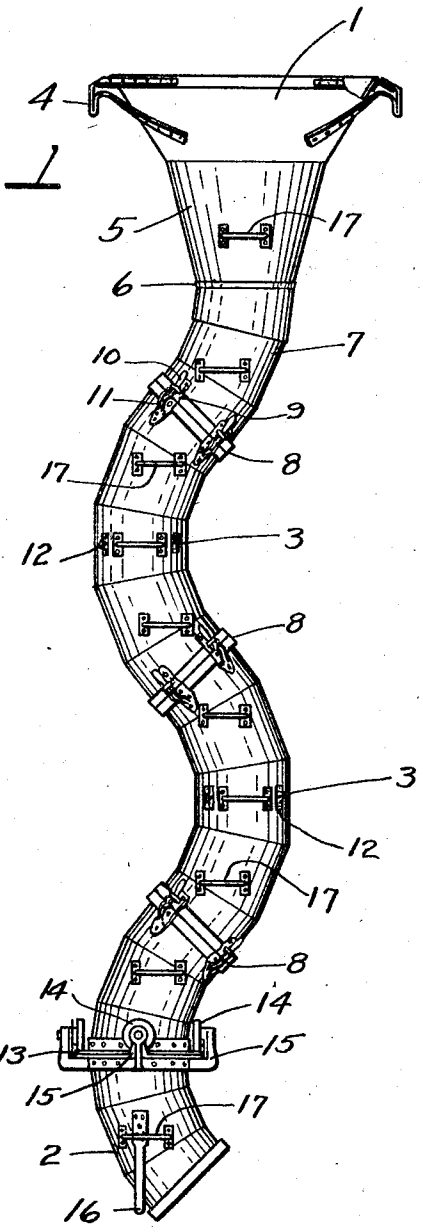
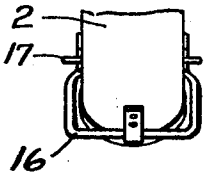


FIG. 2



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UNITED STATES PATENT OFFICE.

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RETARDING CHUTE.

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To all whom it may concern:

Be it known that I, LOUIS H. SIMON, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented a new and useful Retarding Chute; and I do hereby declare that the following is a full, clear, and exact specification, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention is a chute having curved sections for retarding the progress of objects passing through it, a hopper at the upper end, and a revolving section at the lower end.

The object of the invention is to provide a simple and efficient chute through which bags or the like may pass which will retard their downward movement.

Another object of the invention is to provide a chute in which the downward motion of objects passing through it will be retarded which is constructed of similar intermediate sections so that its length may be varied as desired.

And a further object of the invention is to provide a retarding chute for bags or the like which is of a simple, economical, and durable construction.

With these ends in view the invention embodies a chute having a rectangular shaped hopper at its upper end, a tapering section at the bottom of the hopper; another section at the bottom of the tapering section which is slightly curved to one side and provided with means for attaching another section to it, intermediate curved sections with means for attaching them together and to the section at the lower end of the cylindrical shaped section, and a curved section with a revolving joint in it at the lower end.

Other features and advantages of the invention will be seen from the following description taken in connection with the drawings, wherein:—

Figure 1 is a side view of the chute.

Figure 2 is a rear view of the lower end.

In the drawings I have shown my device as it would be constructed wherein numeral 1 indicates the hopper, numeral 2 the lower end, and numeral 3 the intermediate sections.

The hopper 1 may be constructed with an angle iron frame having sheet metal sides converging from the square edges to a circle at the center. Hooks 4 may be placed at the edges at the ends which may be made of strap iron as shown and connected to the frame and also to the body of the hopper. A tapering cylindrical shaped section 5 extends from the center of the hopper downward to a point 6 where the first stationary section 7 of the main chute is attached to it. The axis of the section 7 extends to one side on a slight curve so that objects dropping through the hopper may not pass directly downward but will be guided to one side so that their motion will be retarded. The lower end of this section may be provided with a band 8 and sockets 9 in which hinge bolts 10, having swivel handles integral with the bolts, that are hinged in sockets 11 in one of the intermediate sections, may be held. The intermediate sections 3 may be constructed as shown with their axis conforming to the arc of a circle and with bands and sockets at their ends similar to those hereinbefore described for the above sections. These sections may be provided with eyes 12 so that they may be held by cables or the like while being placed in position, and to which guy wires may be attached for holding the chute.

The lower end 2 may be constructed of a similar section with similar connections at its upper end and the revolving joint 13 at about its center. This joint may be formed as shown by placing angle iron around the ends of its upper and lower sections and rollers 14 in brackets 15 extending upward from the lower section so that they will roll upon the outstanding leg at the bottom of the upper section. The lower section may also be provided with a bail 16 for supporting the end of the wood chute to the sides of the vessel. All of the sections may be provided with handles 17 so that a man may readily climb up the chute or so that they may be readily gripped by a hook from a hoist or the like.

It will be understod that changes may be made in the construction without departing from the spirit of the invention. One of which changes may be in the design or shape of the hopper at the upper end; another may be in the design of the lower end or in the means for constructing the revolving joint; another may be in the means for joining the sections together; another may be in the placing of additional means on the sections by which they may

be held; another may be in the use of any number of sections; and still another may be in the actual shape of the chute as it is understood that this may be oval or square or of any suitable shape.

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

In a retarding chute a plurality of detachable sections which, when in place, form a zig-zag line, the intermediate sections having rings at their ends the planes of which are substantially at right angles to each other, each of the said sections being made up of a plurality of straight sections, clamping and holding means at one end of each of the said sections, sockets for engaging the said clamping and holding means at the opposite ends of the said sections to receive the said clamping and holding means of the succeeding section, other sections forming the end sections also made of short straight sections and equipped with the said clamping and holding means, the planes of the ends of the said end sections forming substantially 45° angles, a hopper with converging sides attached to the top of the said chute for receiving and guiding material into the said chute, handles on the sides of the said chute, and another of the said end sections having rollers projecting upward from it to engage a flange on the lower end of the said chute thereby forming a revolving, deflecting member at the end of the said chute.

LOUIS H. SIMON.