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G. D. BEAVER

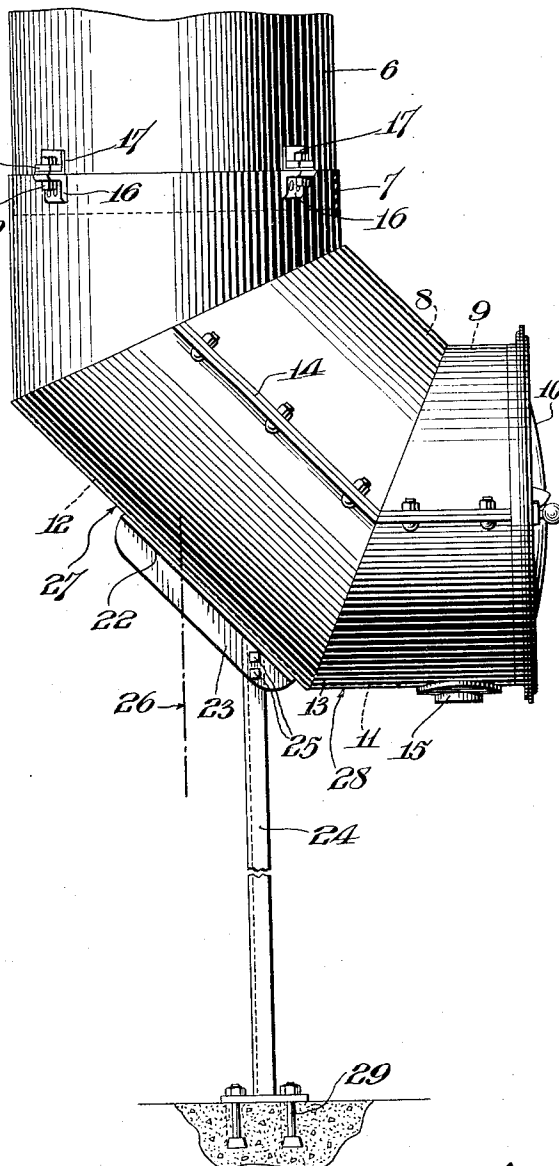
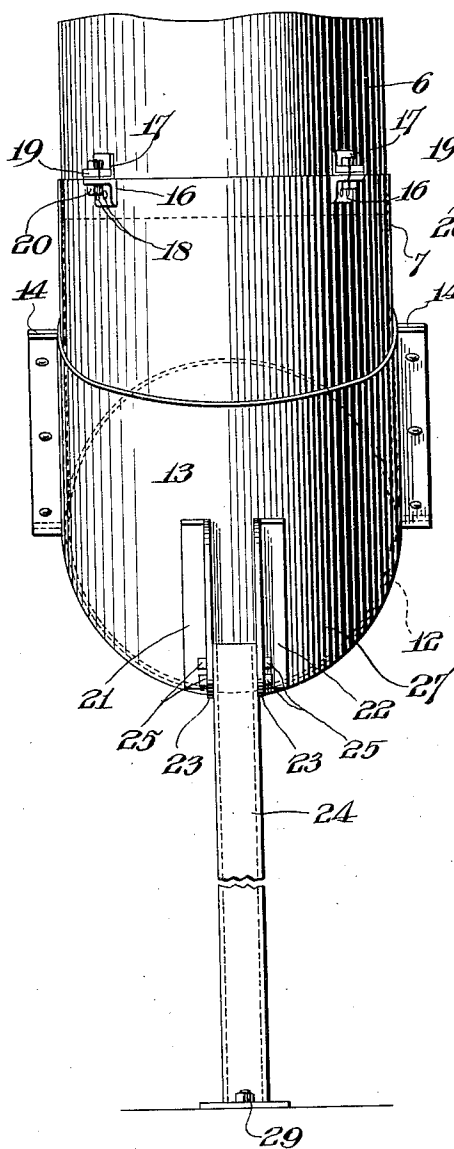
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CHUTE DISCHARGE UNIT

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Fig. 2.

Fig. 1.



Witnesses:

N. H. Farnell
Walter Cherry

Inventor
Gail D. Beaver,
By *W. Scott Johnson*
Attorney.

UNITED STATES PATENT OFFICE

GAIL D. BEAVER, OF NORRISTOWN, PENNSYLVANIA

CHUTE DISCHARGE UNIT

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My invention relates to the discharge end or boot of a chute for linen or the like with particular reference to a support for the casing of the boot.

5 A purpose of my invention is to support a boot casing that encloses outlet and intermediate sections of the boot length, adjoining sections that respectively slope downwardly and extend substantially horizontal, at a point from below on the sloping section of the casing, and toward the forward end of the sloping section.

10 A further purpose is to mount two laterally spaced angles under and along a sloping portion of a boot casing that receives the shock stresses incident to material dropping down the chute, and to support the angles from below by a pedestal toward the forward end of said sloping portion.

15 A further purpose is to support impact stresses incident to bundles dropping down a chute of the character indicated upon a light pedestal offset well forwardly from the point of impact so that the impacts may be deadened by a resilient yielding of the boot.

20 A further purpose is to provide a support from below that in connection with the adjoining chute section is adequate without further support from above and is adapted to easy and inexpensive manufacture.

25 Further purposes will appear in the specification and in the claims.

I have elected to show one only of the different forms of my invention, selecting however a form that is practical and efficient in operation and which well illustrates the principles involved.

30 Figure 1 is a side elevation of chute structure embodying a desirable form of my invention.

Figure 2 is a left end elevation of Figure 1. Describing in illustration and not in limitation and referring to the drawings:—

35 My invention is believed to find its best application with linen chutes, such as are used in multi-story buildings, the chute often running from the top floor to the basement with inlets at the individual floors and an elbow outlet, technically known as a boot, in the basement supported within and by a boot casing

that is to be desirably supported by mechanism embodying my invention.

The chute proper 6 is made of thin sheet material, preferably aluminum or other metal unable to stain linen passing down the chute, the lower end of the vertical body 6 fitting inside the upper and vertical inlet-section 7 of the three-section boot 8 which has a lateral outlet at 9 normally closed by a suitable door 10.

60 The boot comprises a three-section elbow with the upper and lower sections 7 and 11 respectively vertical and horizontal and the intermediate section 12 having a forty-five degree slope.

65 The boot will normally be of the same material as the chute body, usually aluminum or an aluminum alloy, and of gauge too light to permanently withstand the often repeated sudden shock stresses incident to linen or the like dropping down the chute and striking the upwardly directed inclined inner surface of the boot section 12.

70 The boot is protected and supported by a casing 13 that includes the non-vertical sections 11 and 12 of the boot and is divided at 14 along horizontally opposite sides, the upper and lower divisions of the boot casing being fastened together after installation along mating flanges at 14, as by riveting, bolting or welding.

75 I show a drain pipe flange 15 on the bottom of the casing, a little rearward of the door, the boot being provided with a corresponding drain connection into a drain pipe carried by the flange 15.

80 The upper end of the upper boot section 7 receives the downwardly directed end of the body 6. Relatively heavy brackets 16, desirably steel and riveted to the chute section at circumferential intervals, each present a top horizontal face to a mating bottom face of a corresponding bracket 17 of the main chute 6.

85 The horizontal top faces of the heavy brackets 16 are preferably even with the top edge of the boot section, the inner ends of the rivets 18 that hold the brackets to the boot section 7 being covered when in place by the downward overlap of the upper chute 6.

The brackets 17 of the upper section are preferably of the same material as the body of the chute, as light sheet aluminum, with their upwardly extending vertical portions desirably welded to the body of the chute.

The outwardly extending portions of the light brackets 17 rest on the horizontal faces of the heavy brackets 16 being clamped between the upper faces of the heavy brackets 16 and relatively heavy plates 19 by suitable bolts 20.

The bottoms of the light brackets form stops that limit and register the overlap between the chute body and the boot section 7.

I provide the bottom of the boot casing with angles 21 and 22 which extend along the bottom of the casing on opposite sides of a vertical plane through the center line of the chute and boot, the downwardly directed vertical flanges 23 of the angles being preferably on their inward sides, and fitting against and fastening to opposite sides of a pedestal 24.

The angles 21 and 22 are preferably located along a portion of the boot casing that is vertically under the middle of the main chute, extending across a portion or all of the transverse extension of the chute.

I fasten the opposing vertical flanges 23 of the angles to the top of the pedestal 24, which is desirably of channel section, opposite sides of the upper end fitting between the vertical faces of the opposing angles to which they are fastened as by bolting at 25 or less desirably by welding.

I place the pedestal preferably well to the forward side of the center line 26 of the main chute, thereby giving the support as a whole a resilience which permits a slight resilient downward yielding when bundles dropped down the chute strike the upwardly directed sloping surface presented by the boot. As a result the blows of the striking bundles are quieter and less hard on both the bundles dropped down the chute and on the boot receiving the blows, my offset support yielding resiliently under the force of the blows, taking them up along a relatively long range of resilient deflection.

While obviously I may extend the angles 21 and 22 along the full length of the bottom of the sloping section of the boot casing 27, or even make them overlap onto the horizontal section 28 of the casing, I find in practice this is neither necessary nor desirable, the structure illustrated in which the angles extend along a portion only of the bottom of the diagonal section, affording an adequate advantageously resilient support, being less expensive to manufacture and install and presenting a better appearance than a longer one. I support the pedestal base at 29.

The angles 21 and 22 are preferably welded to the boot casing and bolted to the top of the channel pedestal, the channel being placed

so that the flat sides fit against and between the vertical flanges 23 of the angles and selected with sectional dimensions not too great for the desirable resilient yielding of the channel under the impacts of bundles dropping down the chute but great enough to limit movements of the boot to such as cannot cause permanent strain of the upper portion of the boot or of the connection between the boot and main chute.

In view of my invention and disclosure variations and modifications to meet individual whim or particular need will doubtless become evident to others skilled in the art, to obtain all or part of the benefits of my invention without copying the structure shown, and I, therefore, claim all such in so far as they fall within the reasonable spirit and scope of my invention.

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

1. In chute mechanism of the character indicated, a main chute section, a boot at the delivery end thereof, a casing about a lower and forward portion of the boot and a light pedestal under the casing and offset forwardly from the center line of the main chute section.

2. In chute mechanism of the character indicated, a main chute section, a boot at the discharge end thereof, a casing around a forward portion of the boot, a pedestal support thereof at a point of the casing offset forwardly from the center line of the main chute section and a connection between the boot and said main section including relatively heavy brackets spaced around the upper edge of the boot, light flaps correspondingly spaced around the main chute section at a point spaced somewhat above the lower end thereof, said end fitting inside the top of the boot, and means for firmly clamping the flaps to the said brackets.

3. In chute mechanism of the character indicated, a main chute section, a boot at the delivery end thereof, a casing about a lower and forward portion of the boot, downwardly extending flanges along a rearward portion of the bottom of the casing upon opposite sides of a vertical plane through the center line of the boot and chute section, and a pedestal support forwardly offset from the center line of the main chute section and having its upper end lying between and fastened to the flanges.

4. In chute mechanism of the character indicated, a main chute section, a boot at the delivery end thereof including a vertical inlet, a sloping intermediate portion and a horizontal outlet, a boot casing about the sloping portion and the outlet and angles welded along the bottom of the sloping portion of the casing having vertical flanges directed downwardly upon opposite sides of a vertical plane

through the center line of the boot and main section and a vertical pedestal having top side portions between and fastened to the vertical flanges.

- 5 5. In chute mechanism of the character indicated, a main chute section, a boot at the lower end thereof and a boot casing including upper and lower divisions separated at lines along horizontally opposite sides of the boot and a pedestal support for the lower division of the casing offset well forwardly from the vertical center line of the main section.
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GAIL D. BEAVER.

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