

(No Model.)

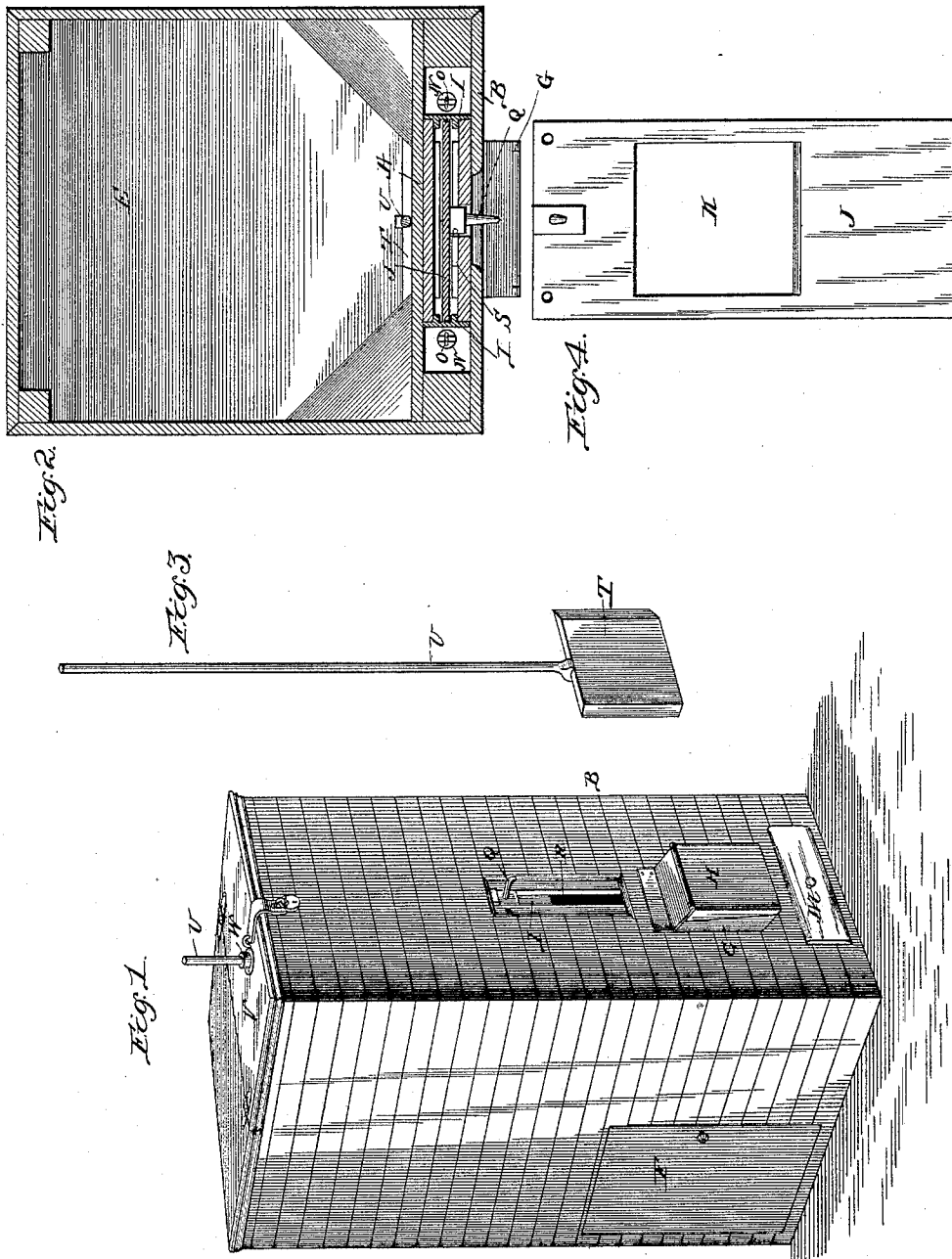
2 Sheets—Sheet 1.

B. F. PITEZEL.

RECEPTACLE FOR GRANULAR SUBSTANCES.

No. 460,181.

Patented Sept. 29, 1891.



Witnesses.

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Inventor.

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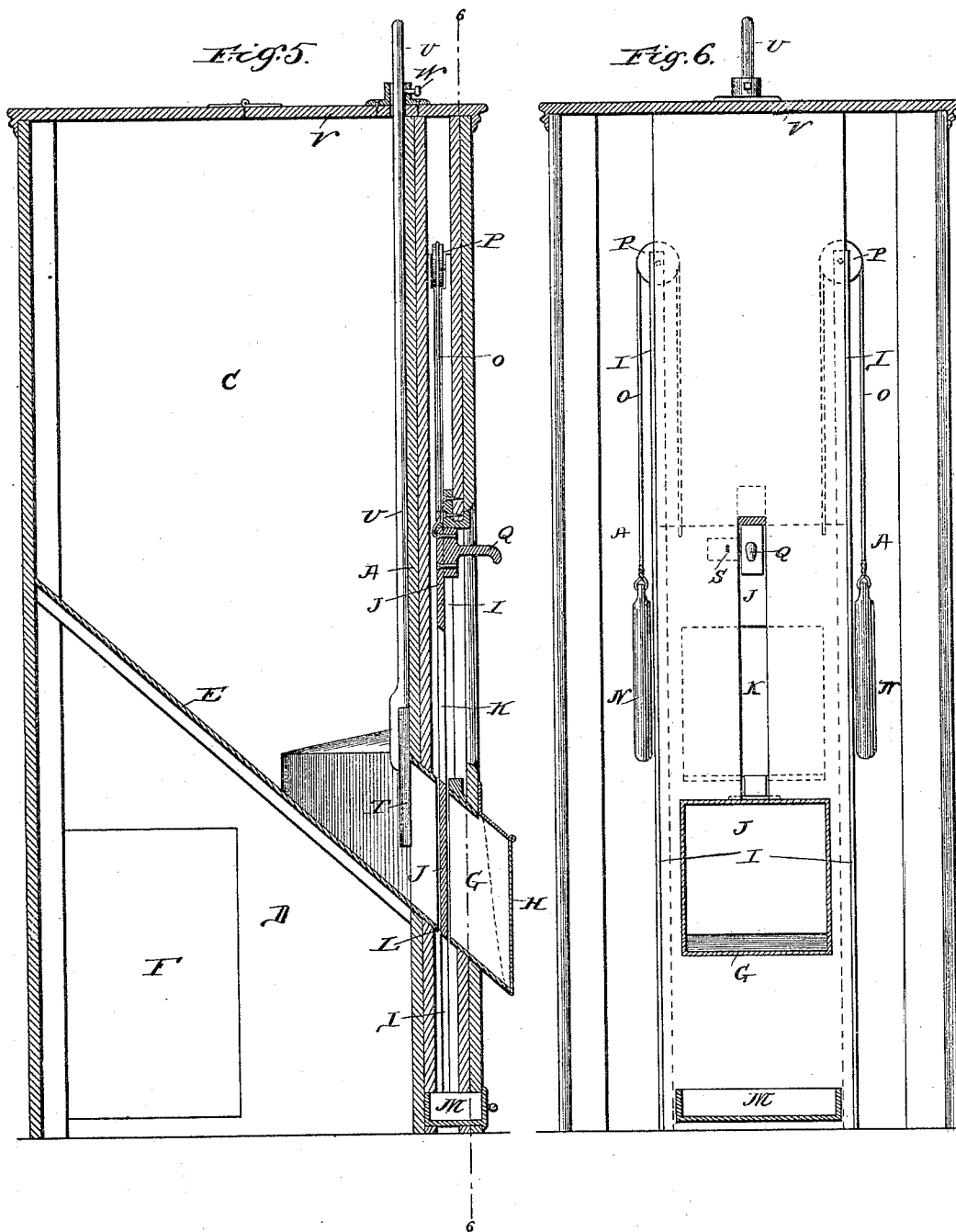
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UNITED STATES PATENT OFFICE.

BENJAMIN F. PITEZEL, OF CHICAGO, ILLINOIS.

RECEPTACLE FOR GRANULAR SUBSTANCES.

SPECIFICATION forming part of Letters Patent No. 460,181, dated September 29, 1891.

Application filed January 7, 1891. Serial No. 376,953. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. PITEZEL, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Receptacles for Granular Substances, of which the following is a specification.

This invention relates to improvements in receptacles for granular substances, but is more especially designed as a coal-box for domestic purposes, and has for its prime object to provide a receptacle of novel construction combining in the maximum degree convenience and utility, as well as economy of the commodity contained therein.

Another object is to have the receptacle of such construction that the door for opening and cutting off the discharge will be easy of manipulation, will be relieved of the weight of the contained commodity, and may be locked against surreptitious opening or unwarranted tampering therewith.

Other objects are to have the receptacle capable of equally successful use with granular and similar substances varying materially in size, to collect and retain the dust from such substances, and thereby prevent its discharge from the receptacle at least in objectionable quantities, and to provide certain details in the carrying out of my invention, all as illustrated in the accompanying drawings, in which—

Figure 1 represents a perspective view of a receptacle embodying my invention; Fig. 2, a horizontal section thereof; Fig. 3, a detail perspective view of the adjustable gate; Fig. 4, a detail front elevation of the apertured sliding door; Fig. 5, a central vertical section through the receptacle, and Fig. 6 a transverse vertical section taken on the line 6 6 of Fig. 5.

Similar letters of reference indicate the same parts in the several figures of the drawings.

The receptacle in general may be of any suitable form, dimensions, and material, but preferably has the rectangular oblong shape illustrated in the drawings, and is provided with a double wall at the front side thereof by the addition of the partition A, between which and the front wall B there is sufficient

space to contain most of the operative parts of my invention, the receptacle being divided into two compartments C D by means of an oblique or inclined partition E about the center of height thereof. This inclined partition E serves as a bottom or floor for the upper chamber C, which latter is designed to contain coal or other granular material, the floor inclining toward the front wall of the receptacle and subserving the further purpose of a top or roof for the compartment D, to which access is gained through a door F in the sides of the receptacle, and in which compartment wood or any other material may be stored.

In the front double wall, connecting the wall A B and extending a suitable distance beyond the latter for convenience, is a chute G, the bottom of which is flush with the partition E and inclined at the same angle as said partition, so as to constitute a continuation thereof. This chute is provided with an external gravity-door H, covering the discharge end thereof and preferably hinged thereto along its upper edge, so that the discharging substances will swing the door open, and it will close by gravity, thus avoiding the necessity for manipulating the same by hand.

In suitable guides I, (see Fig. 2,) secured between the walls A B, works a sliding door J, provided with a central squared aperture K, conforming in shape and dimensions with the cross-section of the chute, which latter is divided into two sections between which the door slides, as clearly illustrated in Fig. 5, there being sufficient room between the edge L of the inner section of the chute and the door to permit dust and other fine particles from the commodity contained in the receptacle to fall down between the walls A B into a dust-drawer M in the lower part of the receptacle. This door is counterbalanced by a pair of weights N, attached to cords O, working over pulleys P in the upper part of the receptacle and attached at their opposite ends to the upper edge of the door, which latter is also provided with a handle Q near the upper end thereof, projecting and working through a slot R in the front wall of the receptacle for convenience of manipulation.

To prevent surreptitious opening of the door, a lock of any suitable nature may be

provided, such as the lock S, (illustrated in Fig. 6,) the key to which will be retained in possession of the user of the receptacle.

Within the upper compartment C, and adapted and arranged to partially or wholly close the chute G, is an adjustable gate T, of substantially the dimensions as the chute or slightly greater, which is secured to the lower end of a rod U, lying along the inner side of the partition A and projecting up through a suitable opening in the hinged top or cover V of the receptacle, where it may be secured at any desirable point of its adjustment by some suitable locking device, such as set screw W, (illustrated in the drawings.) This gate in practice is designed to be adjusted over the mouth of the chute to an extent corresponding with the nature of the material contained in the receptacle to be discharged through the chute, leaving a less opening at the mouth of the chute for the smaller materials and a correspondingly larger opening for the larger materials, a familiar example of which use for household purposes is that of "chestnut" coal for some purposes and small or large "egg" coal for other purposes. By the employment of this gate the door is practically relieved of the entire weight of the body of the material contained in the receptacle and renders the opening and closing of the door a very easy matter, while it would be an extremely difficult matter, as practice has demonstrated, without the employment of this gate. For convenience in opening the receptacle for refilling, the entire top of the receptacle, or the front half thereof, as shown, may be hinged for the purpose of gaining access to the interior of the receptacle or for refilling the same, at which time the gate, with its carrying-rod, will be dropped down sufficiently to permit the swinging of the top on its hinges, leaving the gate in the box.

In practice, supposing the receptacle to be in domestic use and filled with coal, some of which it is desired to remove, the scuttle will be placed under the chute and the door unlocked and depressed until the aperture K therein registers with the chute, when the coal will pass therethrough into the scuttle until the latter is filled, when by pulling up on the handle Q the supply may be easily and quickly cut off by returning the door to its elevated position with the lower solid portion thereof spanning the chute and the aperture therein above the chute.

It will be noted, as before stated, that by the interposition of the gate T the door is relieved of practically all of the weight of the coal in the box, and that as the door closes by lifting, and the little coal above the door is free to be raised thereby, very slight effort is required to close the door, and all danger of clogging the action of the door by the jamming between it and the chute of lumps of coal is avoided, which would not be the case without

the employment of the gate, and which result is especially facilitated by the upward instead of downward movement of the door in closing.

Such a receptacle as is herein shown and described is of great utility and convenience for containing any kind of granular or similar substance, but is of especial convenience and utility for domestic purposes to dwellers in "flat-buildings," in which the supply of fuel is almost invariably and frequently of necessity contained in a box or bin upon the back porch, where the family washing must be dried and where the presence of dust occasioned by getting out coal from such boxes as ordinarily constructed is particularly objectionable and injurious, aside from the ordinary desire for cleanliness, besides which such porches are easy of access from the rear and are subject to the designs of thieving and malicious persons.

While I have shown and described the use of the gate T in connection with the vertically-sliding door and prefer the use thereof for reasons hereinbefore set forth, at the same time it would not be a departure from the spirit of my invention to omit the gate, for by reason of the casing-in of the door, so as to expose but little surface to the action of the coal contained in the chutes, in conjunction with the vertical action of the door in opening and closing for granular substances such a construction would be all sufficient, because by such construction the door is practically relieved from most of the weight of the substance contained in the box and moves in such direction as to best overcome the weight and at the expenditure of the least power.

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

1. A receptacle for granular substances, provided with a discharge-chute, a vertically-sliding door for closing the same, and a vertically-adjustable gate adapted and arranged to close the inner end of said chute, substantially as described.

2. A receptacle for granular material, provided with a discharge-chute, an inclined floor terminating at said chute, a vertically-sliding door for said chute, and a vertically-adjustable gate adapted and arranged to close the inner end of said chute, substantially as described.

3. A receptacle for granular material, provided with an inclined floor, a discharge-chute leading therefrom, a sliding door for said chute between the ends thereof, and an adjustable gate for closing the inner end of said chute, substantially as described.

4. A receptacle for granular materials, provided with an inclined floor, a discharge-chute leading therefrom, a sliding door for said chute between the ends thereof, provided with an aperture of substantially the dimensions

of the chute in cross-section, and an adjustable gate for closing the inner end of said chute, substantially as described.

5 A receptacle for granular material, provided with an inclined floor, a discharge-chute leading therefrom, a vertically-sliding door for said chute between the ends thereof, the lower end of which door is imperforate, but which is provided with an aperture above such
10 imperforate portion of substantially the dimensions of the chute in cross-section, and an adjustable gate for closing the inner end of said chute, substantially as described.

6. A receptacle for granular substances,
15 provided with an inclined floor, a discharge-chute leading therefrom, a sliding door for said chute between the ends thereof, a handle and a lock device therefor, and an adjustable gate for closing the inner end of said chute, sub-
20 stantially as described.

7. A receptacle for granular material, a discharge-chute leading therefrom, a vertically-sliding door for said chute between the ends thereof, the lower end of which door is imperforate, but which is provided above such imperforate portion with an aperture of substantially the dimensions of the chute in cross-section, a handle, a lock and a counter-balance for said door, and an adjustable gate for
30 closing the inner end of the chute, substantially as described.

8. A receptacle for granular material, provided with an inclined floor, a discharge-chute leading therefrom, a gravity-door for the outer
35 end of said chute, a sliding door between the ends of said chute for closing the same, and an adjustable gate for closing the inner end of said chute, substantially as described.

9. A receptacle for granular material, provided with an inclined floor, a sliding door between the ends of said chute for closing the same, a dust-slot in the bottom of said chute adjacent to said door, a dust-drawer located in the lower part of the receptacle and connected by a passage with said slot, and an adjustable gate for closing the inner end of said chute, substantially as described. 40 45

10. A receptacle for granular material, provided with an upper and lower compartment separated by an inclined partition, a door or doors for the lower compartment, a discharge for the upper compartment, a sliding door therefor, and an adjustable gate for closing the inner end of said chute, substantially as described. 50 55

11. A receptacle for granular substances, provided with a discharge-chute and a vertically-sliding door for closing the same, the lower end of which door is imperforate, but which is provided with an aperture above such imperforate portion of substantially the dimensions of the chute in cross-section, substantially as described. 60

12. A receptacle for granular substances, provided with a discharge-chute, a vertically-sliding door for closing the same, the lower end of which is imperforate, but which is provided with an aperture above such imperforate portion of substantially the dimensions of the cross-section of the chute, a handle, and a counter-balance for said door, substantially as described. 65 70

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