

No. 756,133.

PATENTED MAR. 29, 1904.

W. D. NAPIER.
BUNKER, BIN, OR THE LIKE.

APPLICATION FILED JULY 24, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

FIG. 1.

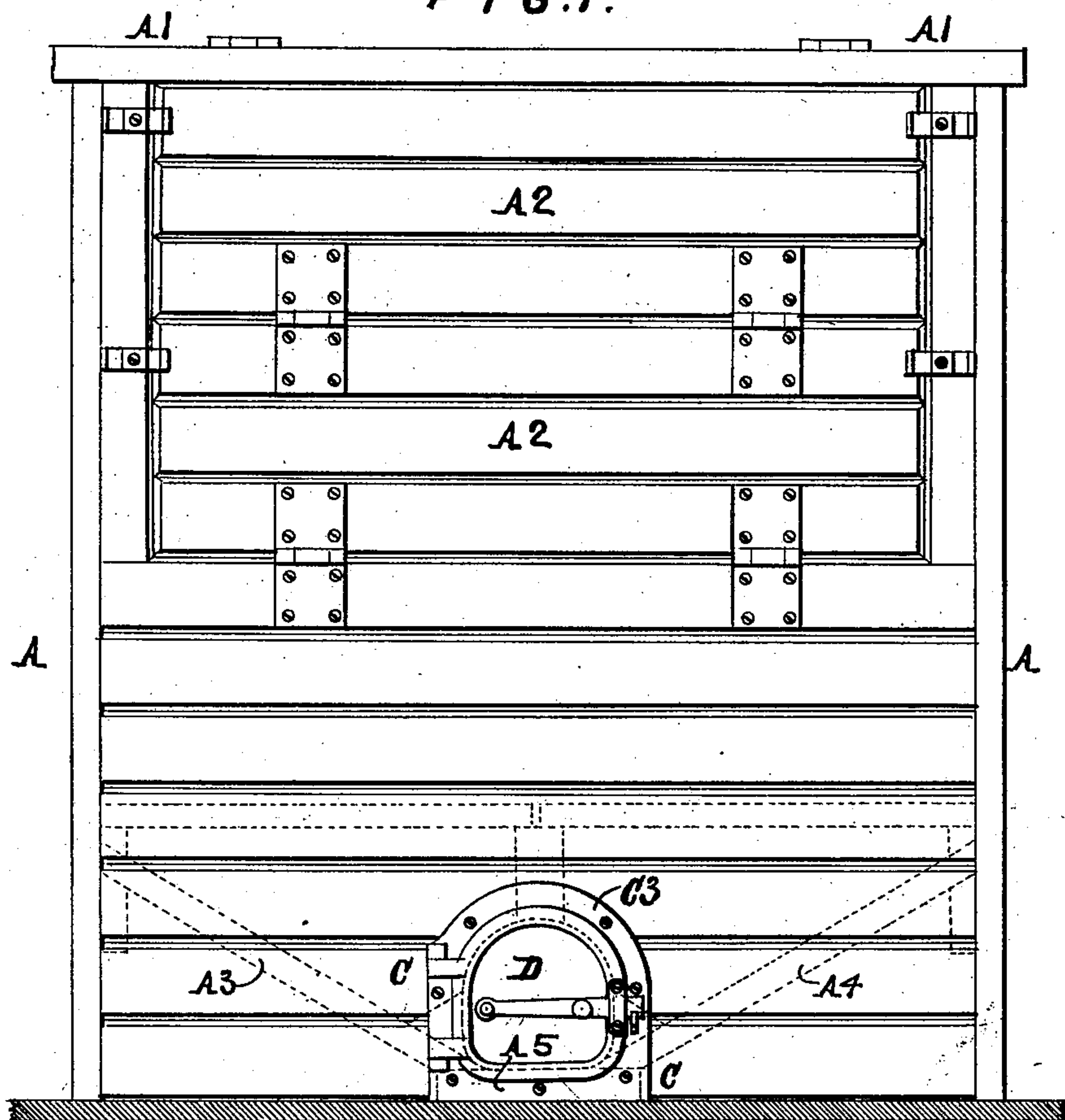
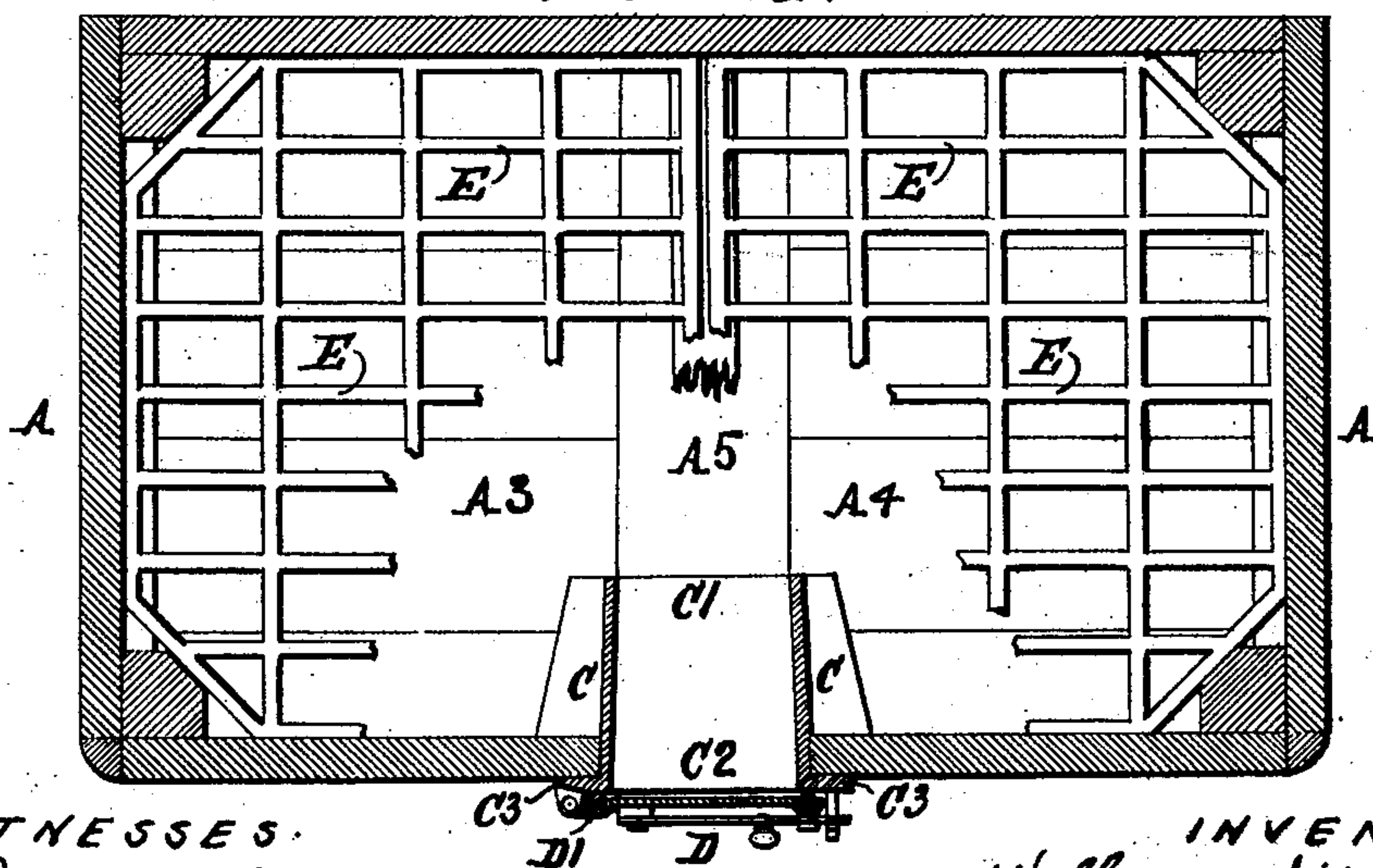


FIG. 2.



WITNESSES.

P. W. Wright.

E. W. Collins

INVENTOR

William Dixon Napier

BY Howard Brown

HIS ATTORNEYS.

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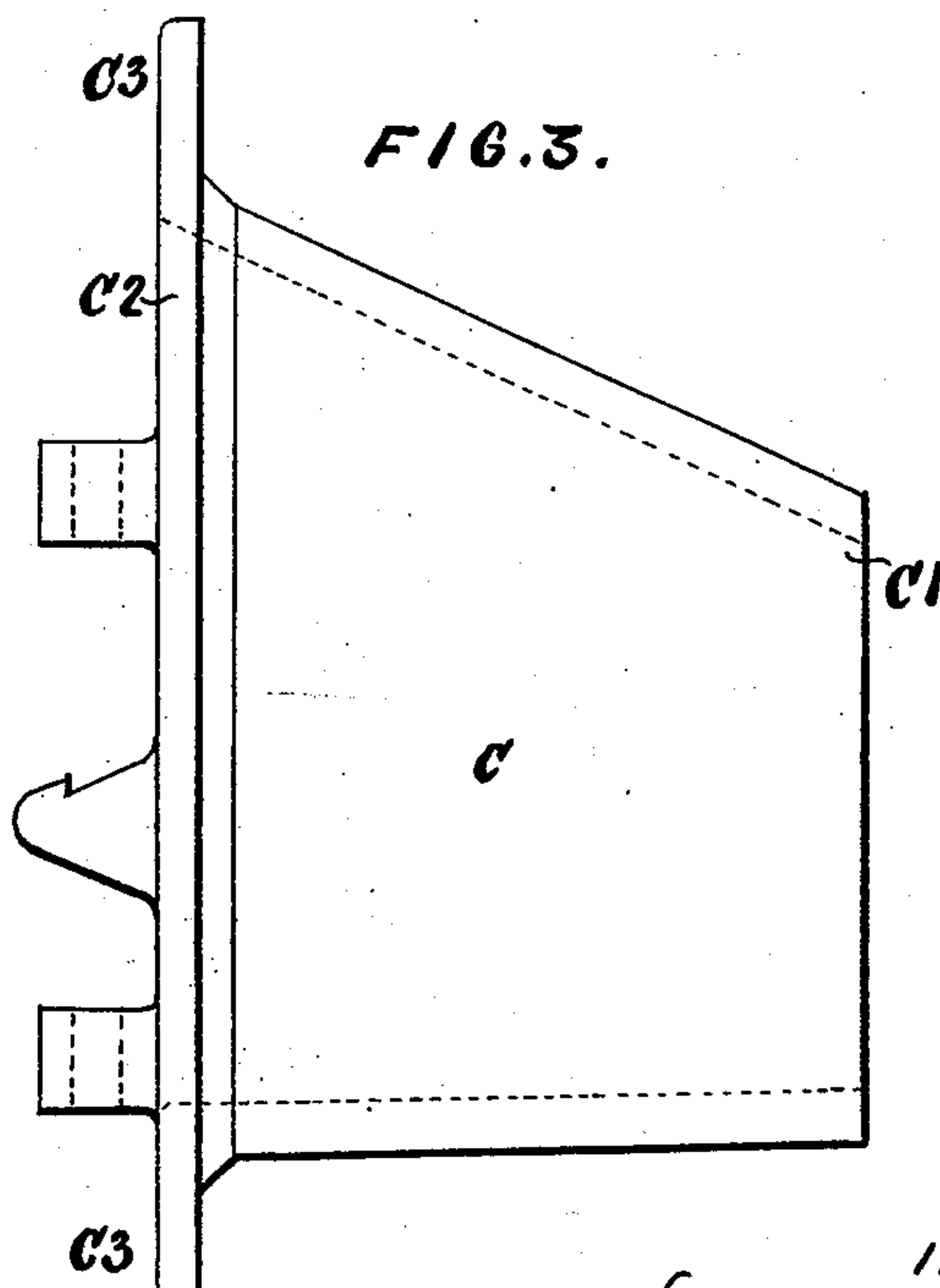
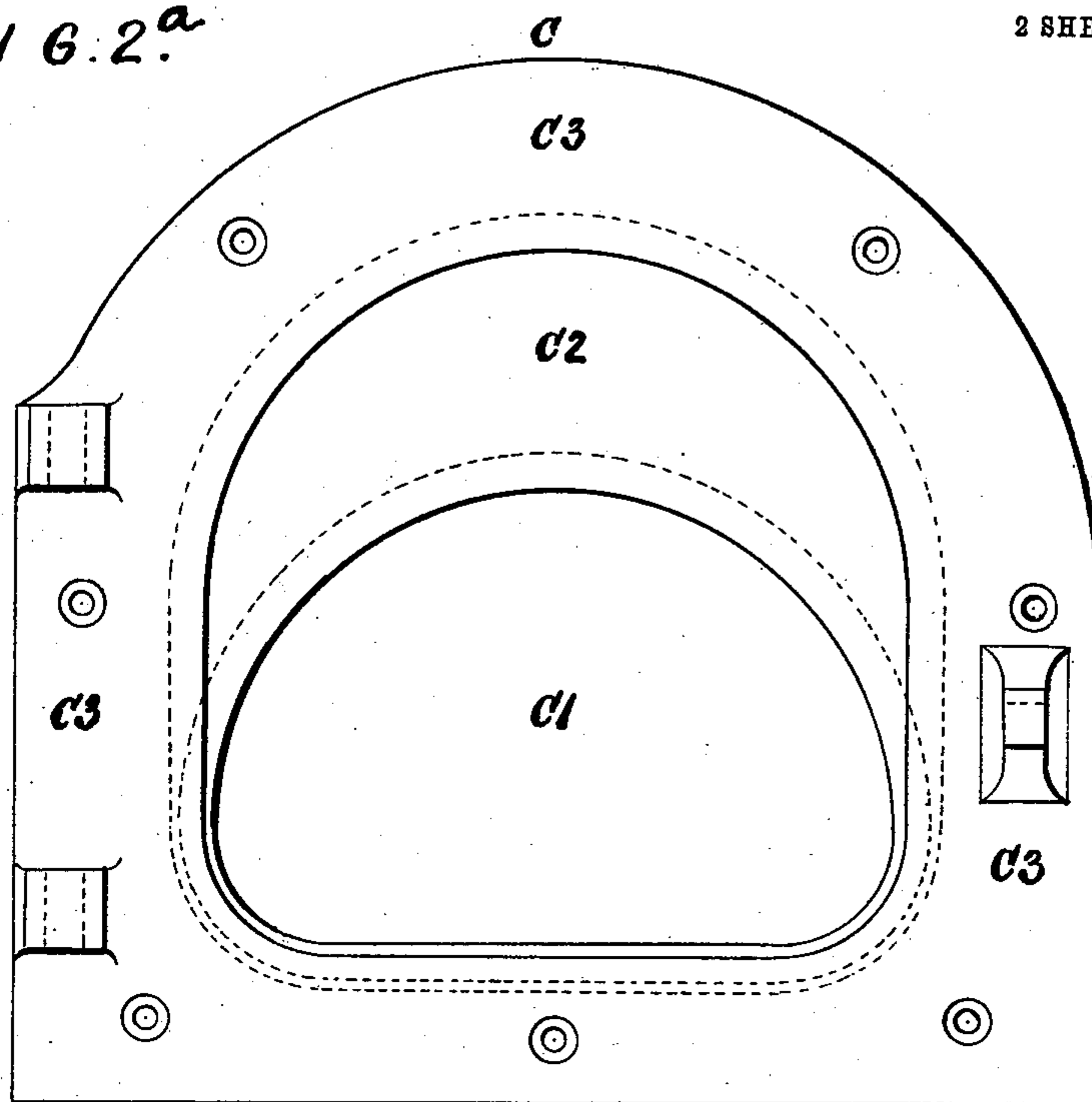
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F 16.2^a

2 SHEETS—SHEET 2.



WITNESSES:

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E. W. Collins

INVENTOR

William Dixon Napier
BY *Howson & Howson*
HIS ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM DIXON NAPIER, OF PAISLEY, SCOTLAND.

BUNKER, BIN, OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 756,133, dated March 29, 1904.

Application filed July 24, 1903. Serial No. 166,907. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM DIXON NAPIER, a subject of the King of Great Britain and Ireland, and a resident of Paisley, in the county of Renfrew, Scotland, (whose postal address is 99 High street, Paisley, Scotland,) have invented certain new and useful Improvements in Bunkers, Bins, or the Like, (for which application for British Patent No. 1,723, dated January 24, 1903, has been made,) of which the following is a specification.

My said invention has for its object to provide a discharge-fitting for bunkers, bins, and the like in which such materials, for example, as coal and grain in bulk are stored. As ordinarily arranged in some cases the contents of such bunkers are withdrawn through a discharge port or opening formed at the front or side and close to the bunker-floor, the said opening being furnished with a sliding door. Such discharge arrangement is, however, defective, as when the bulk of the material in the bunker extends above the top edge of the door or opening if the door is once open the weight of the mass tends to force the material out through the opening, and the door cannot be properly shut again, which prevents cleanliness, while being objectionable in other ways. My improvements are designed to overcome such defects, and in order that they may be fully understood I hereunto append two sheets of explanatory drawings, to be hereinafter referred to in the course of the following description of the improved parts.

Figure 1 of the drawings is a front elevation, and Fig. 2 a horizontal section, of a bunker as made with my improvements. Figs. 2^a and 3 are respectively a front elevation and a side elevation of a discharge-fitting for the bunker.

In the drawings the same reference-letters are used to mark the same or like parts.

As shown in Figs. 1 and 2 of the drawings, the bunker A is provided with the usual admission doors or lids A' A² at the top and with the discharge-port B, ordinarily arranged for the withdrawal of the material placed in the bunker, such opening being formed in the front wall of the bunker and close to the

floor or the bottom end. In this discharge-port B is fixedly fitted a funnel-shaped discharge-fitting or hood-piece C, formed with a curved and sloping top, the depth of the opening C' at the back of the hood being less than that of the opening C² at the front. The hood C projects sufficiently into the bunker A so that when the material is forced into it by the full weight of the mass above it the said material will be retained in the hood, and thus will not fall out past the outer end or opening C² of the hood. By this arrangement of hood-piece C the natural outward flow of the material is thus made to expend itself within the bunker, the hood being made long enough to hold such outward flow, so that the material cannot fall out at the front discharge-opening C². A flange C³ is formed on the outer end of the hood C for the purpose of attaching it to the front of the bunker A, this flange also serving as a frame for carrying a door D, which is preferably hinged thereto and can be readily closed, as the material presents no interference. The door D is preferably provided with a ring D', of rubber or other suitable jointing material, to bear on the flange C³ when the door is shut, and thus form a tight joint. The bunker-floor instead of being made quite flat is preferably made with side parts A³ A⁴, which slope downward toward a central flat portion A⁵, extending from back to front immediately opposite the discharge-opening C², the sloping parts being provided for the purpose of throwing or directing the material suitably toward the aforesaid opening. Immediately above the sloping parts A³ A⁴ a grating E is preferably fitted and arranged with suitable perforations, so as to intercept large lumps of coal or material which might block up the hood-piece openings.

In some cases the discharge-fitting or hood-piece C may be arranged to project outside the bunker instead of inside, as hereinbefore described.

What I claim as my invention is—

1. A bunker or bin, having a port or opening in the bunker, arranged close to the floor thereof, and a four-sided stationary discharge-fitting or hood-piece in the said opening, ex-

tending into the bunker, and having its vertical sides extending from its top downwardly to its bottom, substantially as described.

2. In combination, a bunker or bin, a floor
5 therein composed of sloping side parts and a central flat portion, a port or opening in the bunker arranged close to and opposite the flat portion, a four-sided stationary discharge-fitting or hood-piece fitted to the said opening
10 and projecting through it into the bunker, a door fitted to the hood-piece, and jointing material in the door.

3. In combination, a bunker or bin, a floor
15 therein composed of sloping side parts, and a central flat portion, a grating fitted across the bunker above the sloping parts, a port or opening in the bunker, arranged close to and opposite the flat portion of the floor, a discharge-fitting or hood-piece fitted to the said

opening and projecting through it into the
20 bunker, a door fitted to the hood-piece, substantially as herein set forth.

4. A discharge-fitting for bunkers, comprising a stationary four-sided funnel portion, an opening at each end of said fitting, the top of
25 said fitting slanting downwardly toward the interior of the bunker, and the vertical sides being adapted to extend with the top into the bunker, said sides comprising, with the top and bottom, a funnel portion closed except at
30 opposite ends, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM DIXON NAPIER.

Witnesses:

WILFRED HUNT,

GEORGE PATTERSON.