

No. 618,397.

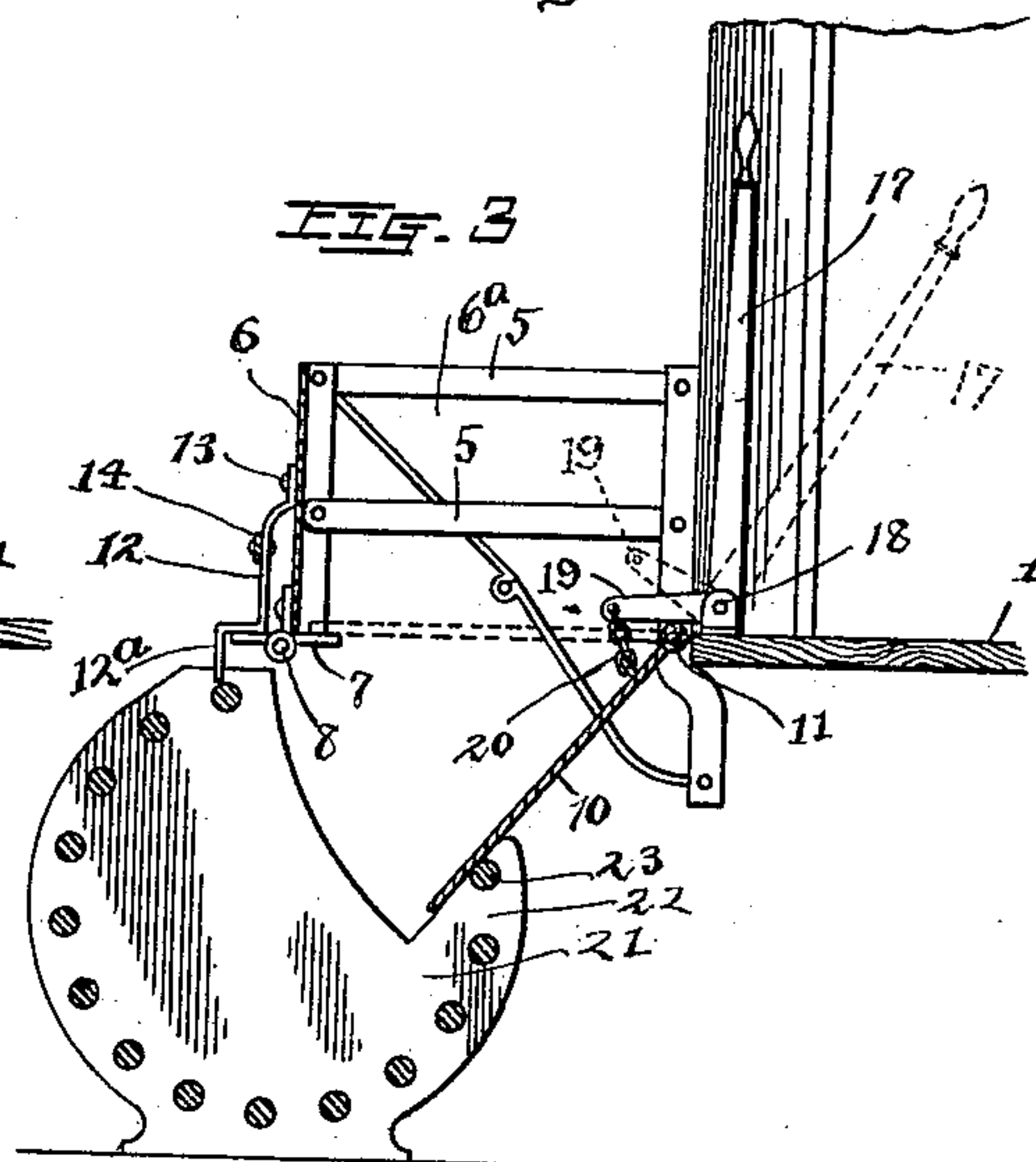
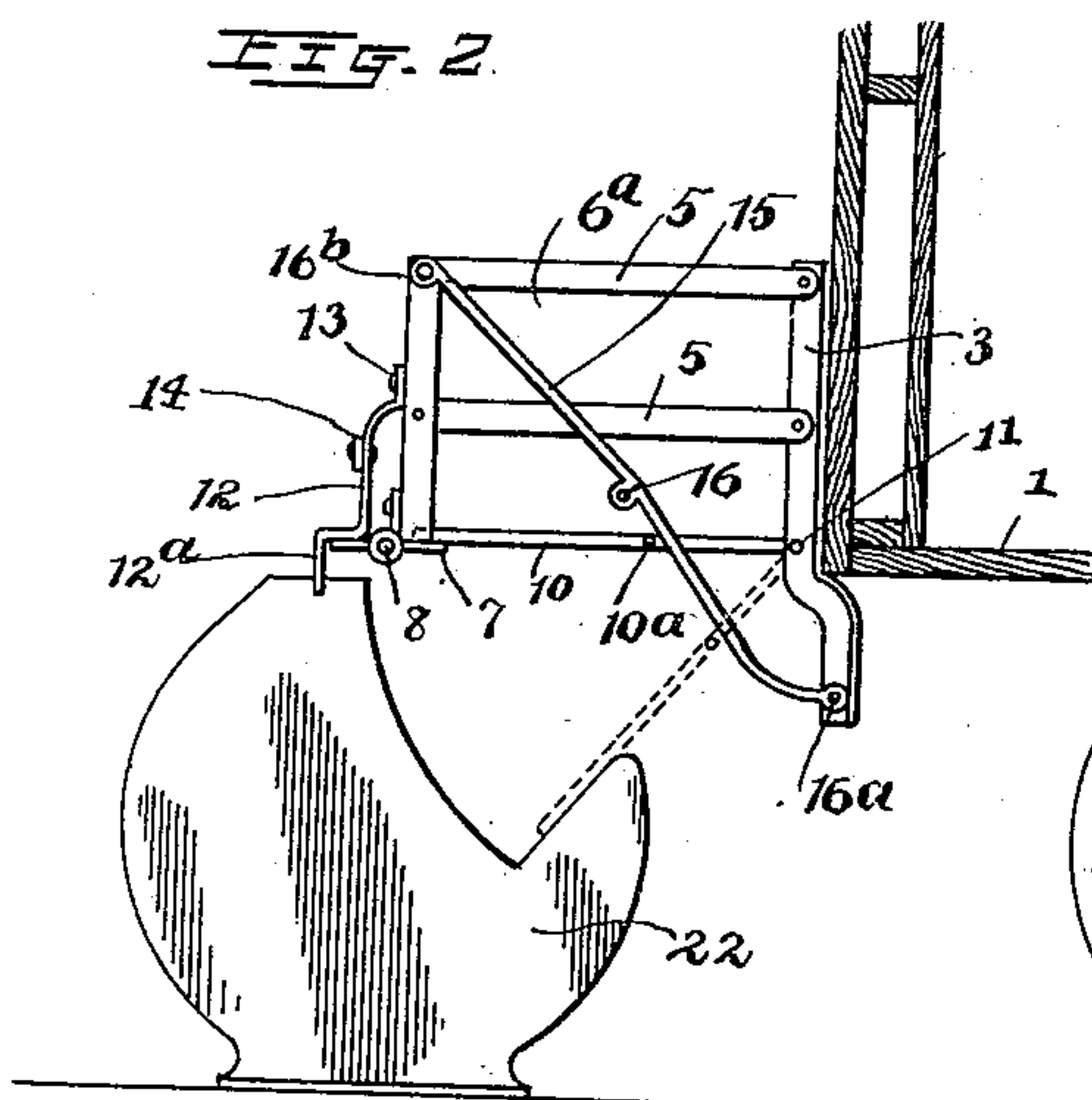
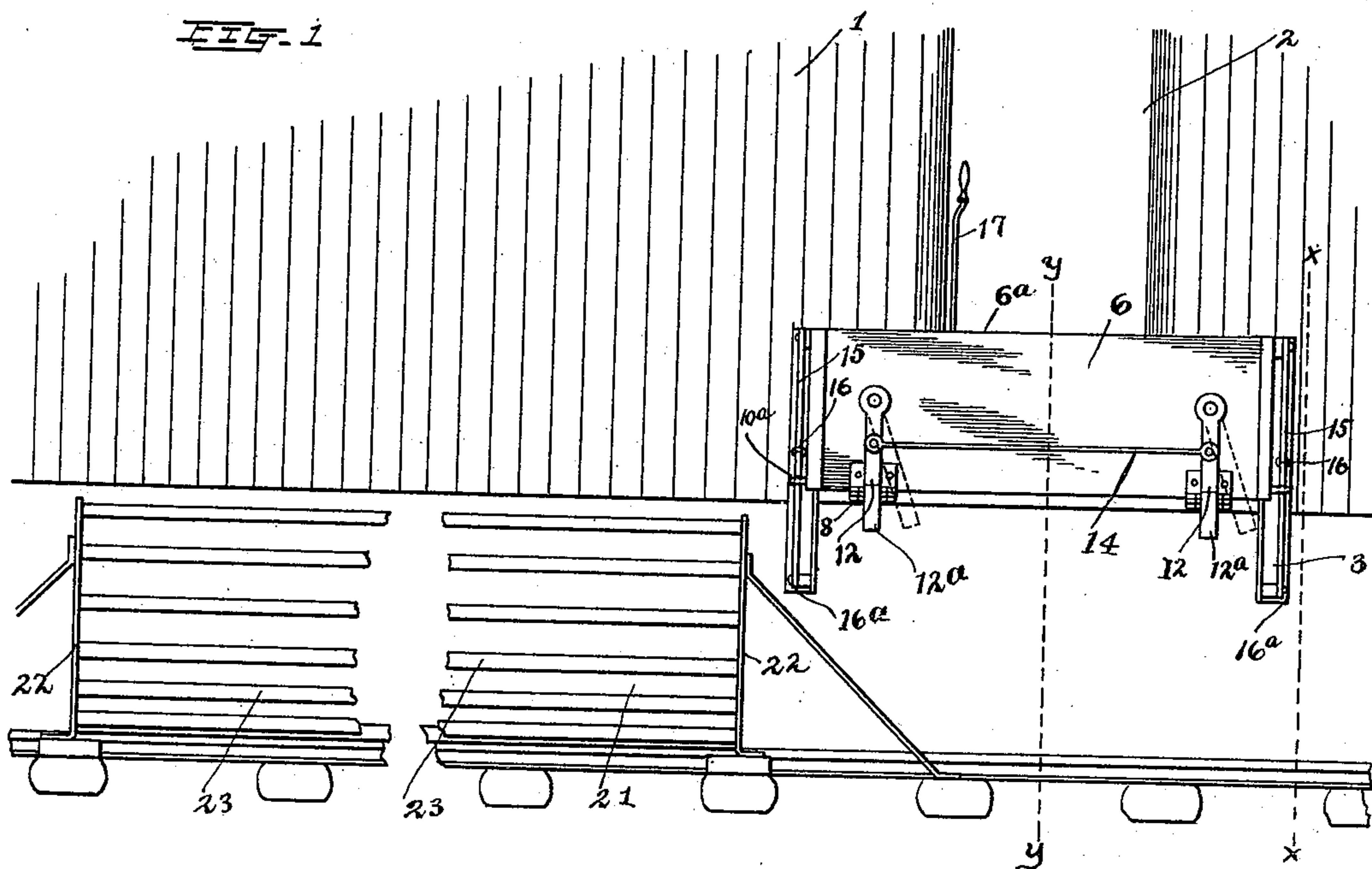
Patented Jan. 31, 1899.

M. D. CUMMINGS.
MAIL SACK DELIVERING MECHANISM.

(Application filed Sept. 20, 1897.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

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MAIL-SACK-DELIVERING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 618,397, dated January 31, 1899.

Application filed September 20, 1897. Serial No. 652,321. (No model.)

To all whom it may concern:

Be it known that I, MONTROVILL D. CUMMINGS, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Mail-Sack-Delivering Mechanism, of which the following is a specification.

My invention relates to the improvement of mail-sack-delivering mechanism; and the objects of my invention are to provide for use, in conjunction with mail-cars and railway-stations, a superior mechanism for the safe discharge of mail-matter from a moving car; to so construct and arrange the parts of my improved mechanism as to deliver one or more sacks or bundles of mail or similar matter in a suitable receptacle provided therefor at a station; to so construct the delivering mechanism which is connected with the car as to provide for the contents thereof being automatically discharged therefrom and to provide for the automatic folding of said device into a compact form after such discharge; to admit of my improved delivering mechanism being rapidly and conveniently operated; to construct the same in a reliable and inexpensive manner, and to produce other improvements, which will be more fully pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a side view of a portion of a mail-car, showing the delivering device in the position which it occupies just prior to the discharge of its contents. Fig. 2 is a sectional view of a portion of a car, taken on line *xx* of Fig. 1, showing end views of my improved discharging and receiving mechanism. Fig. 3 is a sectional view on line *yy* of Fig. 1, showing in full lines the position of the parts during the discharge of the mail-sacks and in dotted lines the position of said parts immediately prior to such discharge. Fig. 4 is a side elevation of a portion of a car, showing the position of my improved discharging device after the same has discharged its contents and passed the receiver; and Fig. 5 is a sectional view on line *zz* of Fig. 4.

Similar numerals refer to similar parts throughout the several views.

1 represents a mail-car, of which 2 repre-

sents one of the side doorways. Secured to the side of the car on opposite sides of the doorway are vertical angle-bars 3, the latter extending below the bottom of the car-body and being preferably bent slightly beneath the latter in the manner indicated more clearly in Figs. 2 and 3 of the drawings. With the upper portion of these angle-bars are jointly connected corresponding ends of arms or bars 5, the outer or remaining ends of the latter being jointly connected with the ends of a vertical front plate 6, which extends between said bar ends and forms the outer wall of a sack holding and discharging cage 6^a.

7 represents small catch-plates, which are centrally journaled at 8 to the under side and forward portion of the front plate 6, these catch-plates being normally retained in the horizontal positions indicated in the drawings.

10 represents the bottom plate of the sack supporting and discharging cage, which has its inner edge hinged, as indicated, to a horizontal hinge-rod 11, which extends in front of the door-sill of the car. Each end of the bottom plate 10 is provided in its rear portion with an outwardly-extending pin 10^a. The forward edge portion of the bottom plate 10 is adapted, as indicated in the drawings, to be supported upon the rearwardly-extending portions of the catch-plates 7, said plate 10 thus forming a bottom for the folding cage formed by the front plate 6 and end bars 5. The catches 7 are normally retained in horizontal positions or in such positions as to support said bottom plate 10 through the medium of triggers 12, the upper end portions of which are pivoted at 13 to the front plate 6, while the lower and angular portions of said triggers bear upon the forwardly-extending portions of said catch-plates. As indicated in the drawings, the triggers are connected by a transverse rod 14, and each of said triggers is provided with a downwardly-extending contact portion 12^a. 15 represents jointed brace-arms, each of said arms being formed, as shown in the drawings, of two sections which are jointly connected at 16. I employ one of these brace-arms at each end of the cage 6^a, the rear or inner end of the rear or inner arm section being pivoted at 16^a to the lower end of the angle-bar 3, while the forward end of

the remaining section is similarly connected with the outer end of the upper bar 5 at 16^b. It is obvious that when said brace-arm sections are extended to the positions indicated in full lines in Figs. 2 and 3 the cage or box will be supported in an open position from the car or with its end arms 5 at right angles with its front plate 6.

17 represents a lever which is substantially of a bell-crank form and which is fulcrumed at its angle within the car-doorway, as indicated at 18. The lower and outwardly-extending arm 19 of the lever 17 is, through the medium of the desired number of links 20 or otherwise, jointedly connected with the bottom plate 10 of the cage.

In conjunction with the above-described folding cage I support adjacent to the railway-track at each station a mail-sack-receiving receptacle 21. This receptacle 21 is preferably formed, as indicated in the drawings, of two suitably-formed end plates 22, which are supported vertically from its extensions or other suitable foundations and between which extend parallel rods 23. The arrangement of these rods is such as to provide, in conjunction with said end pieces, a partial cylindrical receptacle, the upper side of which is open to receive the mail-sacks in the manner hereinafter described.

As indicated in the drawings, the receptacle 21 is supported in such position with reference to the track and car thereon as to result in the depending end portions 12^a of the triggers 12 coming into contact with the end of said receptacle when the discharging-cage is in its extended or open position.

In order to illustrate the operation of my improved mail-sack-discharging mechanism, we will assume that the discharging-cage is in the open or extended position indicated in Figs. 1 and 2 of the drawings. On approaching a station where a sack or sacks are to be delivered from the moving train said sacks are placed in the cage 6^a upon the floor-plate 10 thereof. When the car has reached the delivering-point, the contact of the trigger extensions 12^a with that end of the receiving-receptacle which is nearest the approaching car results in throwing said trigger-arms to the angle indicated in dotted lines in Fig. 1 of the drawings. In this manner the forwardly-projecting portions of the catch-plates are released and the latter caused, through the weight of the bottom plate 10, to temporarily swing to vertical positions. This operation results in said bottom plate dropping downward until its forward portion is resting and traveling within the mouth of the receptacle 21, and the contents of the cage are discharged, in the manner indicated in Fig. 3 of the drawings, into the receptacle. The inclined bottom plate 10, having become disengaged from the receptacle 21, swings inward to a vertical position, and this inward-swinging movement of said bottom plate results in a

contact of the pins 10^a with the under sides of the inner sections of the brace-arms 15 and in the said sections being thus caused to fold upward and inward, one against the other. The brace-arms thus folding against the bars 3, it is obvious that the jointedly-connected end bars and front plate of the cage will fold into the substantially vertical positions indicated more clearly in Fig. 5 of the drawings. In the manner described it will be seen that the cage will thus be caused to depend from the car in a compact form and in such position as to prevent its parts coming into contact with platforms or other constructions adjacent to the trackway.

Owing to the receptacle 21 being formed of open-work, it is evident that said receptacle will not retain water, snow, &c.

It is obvious that my improved mail-sack-delivering mechanism may be employed on cars which are provided with the ordinary or any suitable mail-sack-catching device.

From the construction and operation described it will be seen that simple and reliable means are provided for delivering sacks or bundles of mail from a rapidly-moving postal car and that the same will be delivered safely and without unnecessary injury to the sacks or their contents. It is also evident that my improved delivering mechanism may be produced at a reasonable cost of manufacture and that the same may be connected with any of the ordinary forms of mail-cars.

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

1. In a mail-sack-delivering device the combination with a mail-car, of a delivering-receptacle having the sides hinged to said car and adapted to be temporarily supported in an open or extended position therefrom, a hinged bottom in said receptacle and means for automatically releasing said bottom to allow it to drop downward or to an open position, substantially as and for the purpose specified.

2. In a mail-sack-delivering mechanism the combination with a mail-car, of a delivering-receptacle consisting of jointedly connecting and folding parts and having a hinged bottom piece, means for automatically releasing said bottom piece to allow it to drop downward, and means for automatically closing the parts of said receptacle into a folded position and compact form, substantially as and for the purpose specified.

3. In a mail-sack-delivering mechanism the combination with a car having a doorway, a delivering-receptacle jointedly connected with said car and consisting of jointedly-connected parts, a hinged bottom in said receptacle, catch-plates adapted to support said bottom in a closed or horizontal position, triggers pivotally connected with said receptacle and adapted by contact with a structure at the

side of the track, to release said catch-plates, substantially as and for the purpose specified.

4. In a mail-sack-delivering mechanism the
5 combination with a car having a doorway, of
a mail-delivering receptacle jointedly connected with said car and consisting of jointedly-connecting parts, said receptacle having
a hinged bottom piece, fulcrumed catch-plates
10 adapted to normally support said bottom
plate in a closed position, triggers pivotally

connected with said receptacle and normally retaining said catch-plates in locked positions, a stationary mail-receiving receptacle arranged at the side of the car-track and in 15 the path of said triggers, substantially as and for the purpose specified.

MONTROVILL D. CUMMINGS.

In presence of—

C. C. SHEPHERD,

P. S. KARSHNER.