

No. 815,716.

PATENTED MAR. 20, 1906.

S. C. LAITNER.
SEALED MAGAZINE FOR STOVES.

APPLICATION FILED AUG. 8, 1903.

3 SHEETS—SHEET 1.

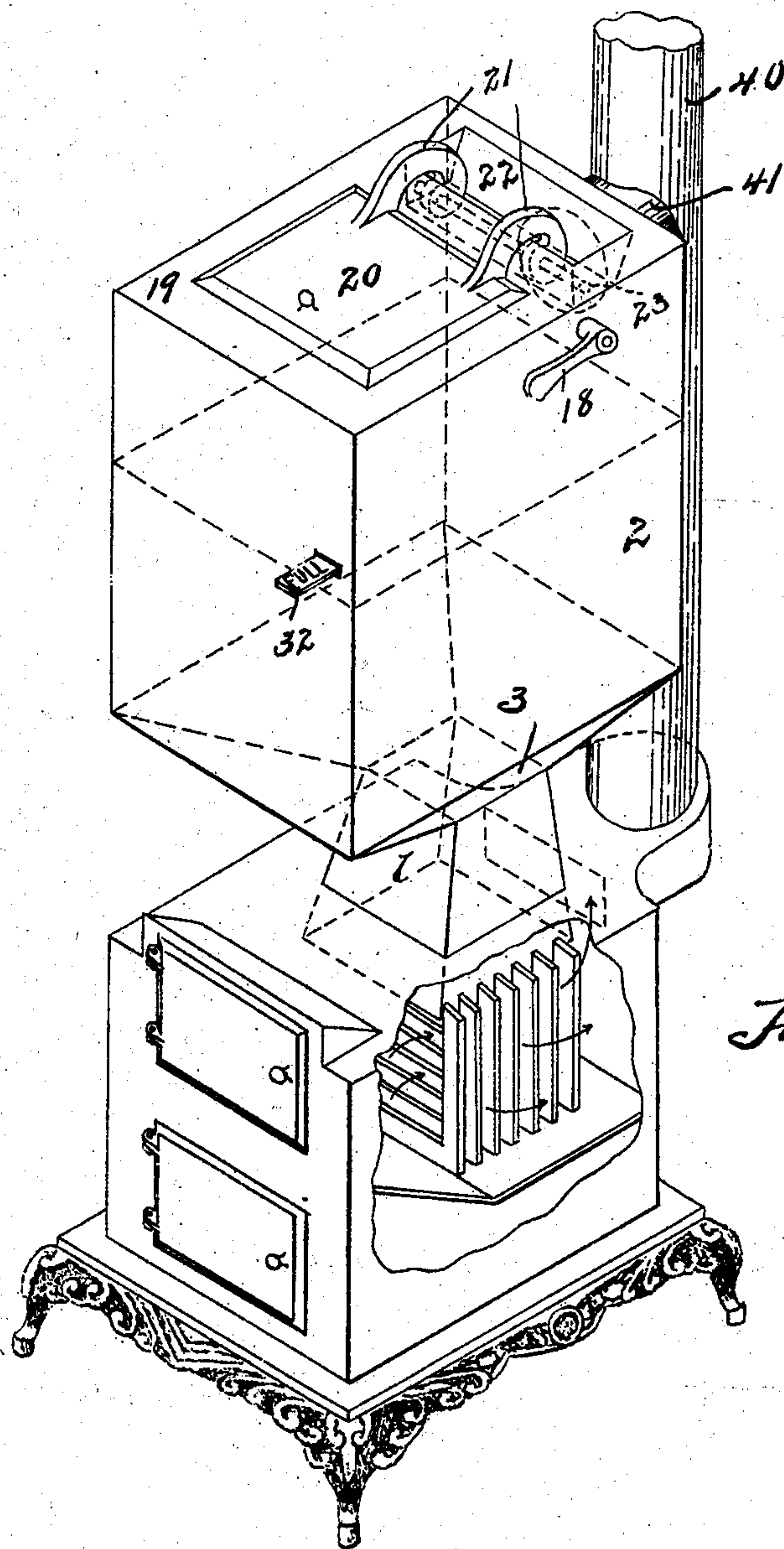


Fig. 1.

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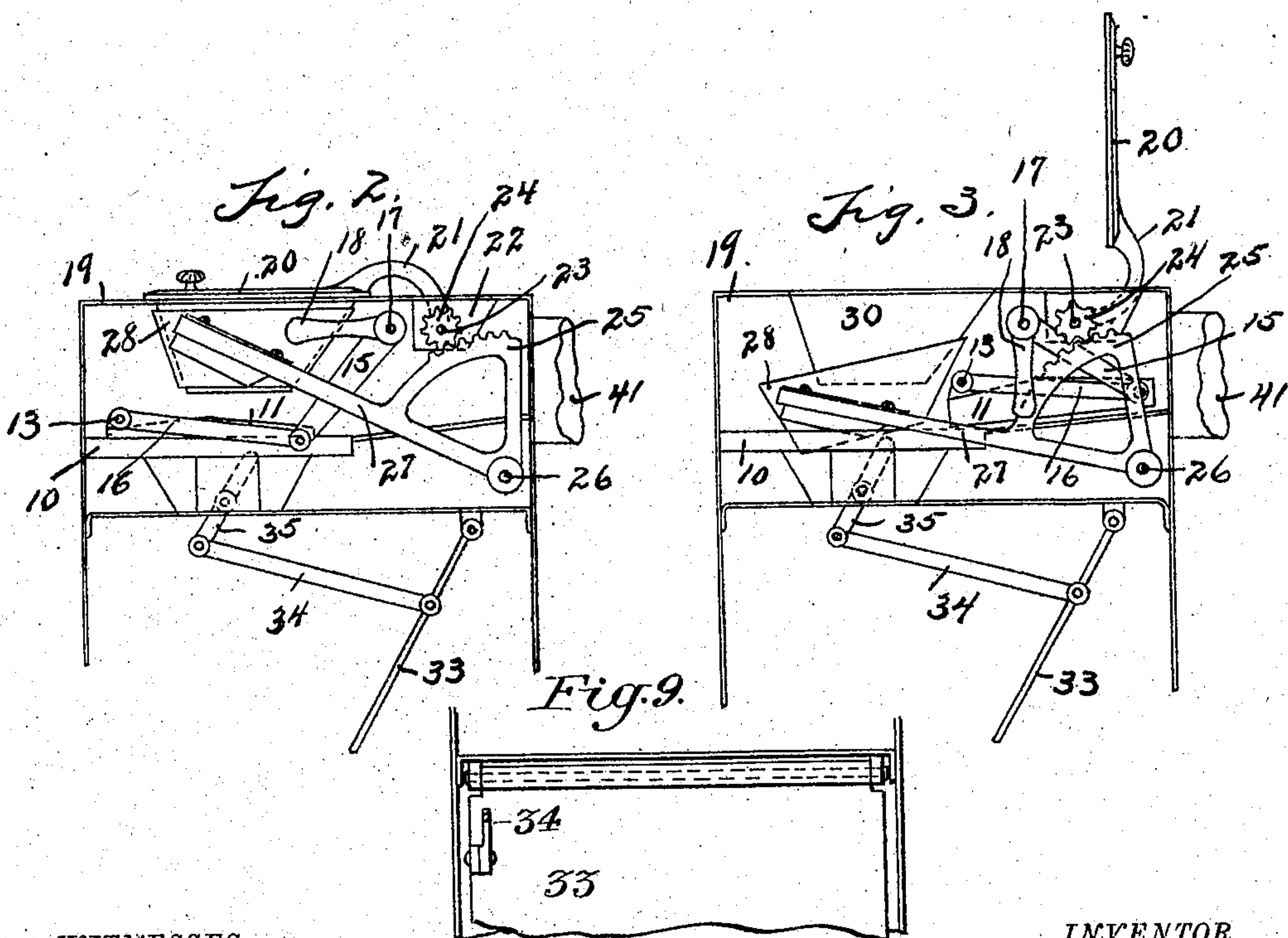
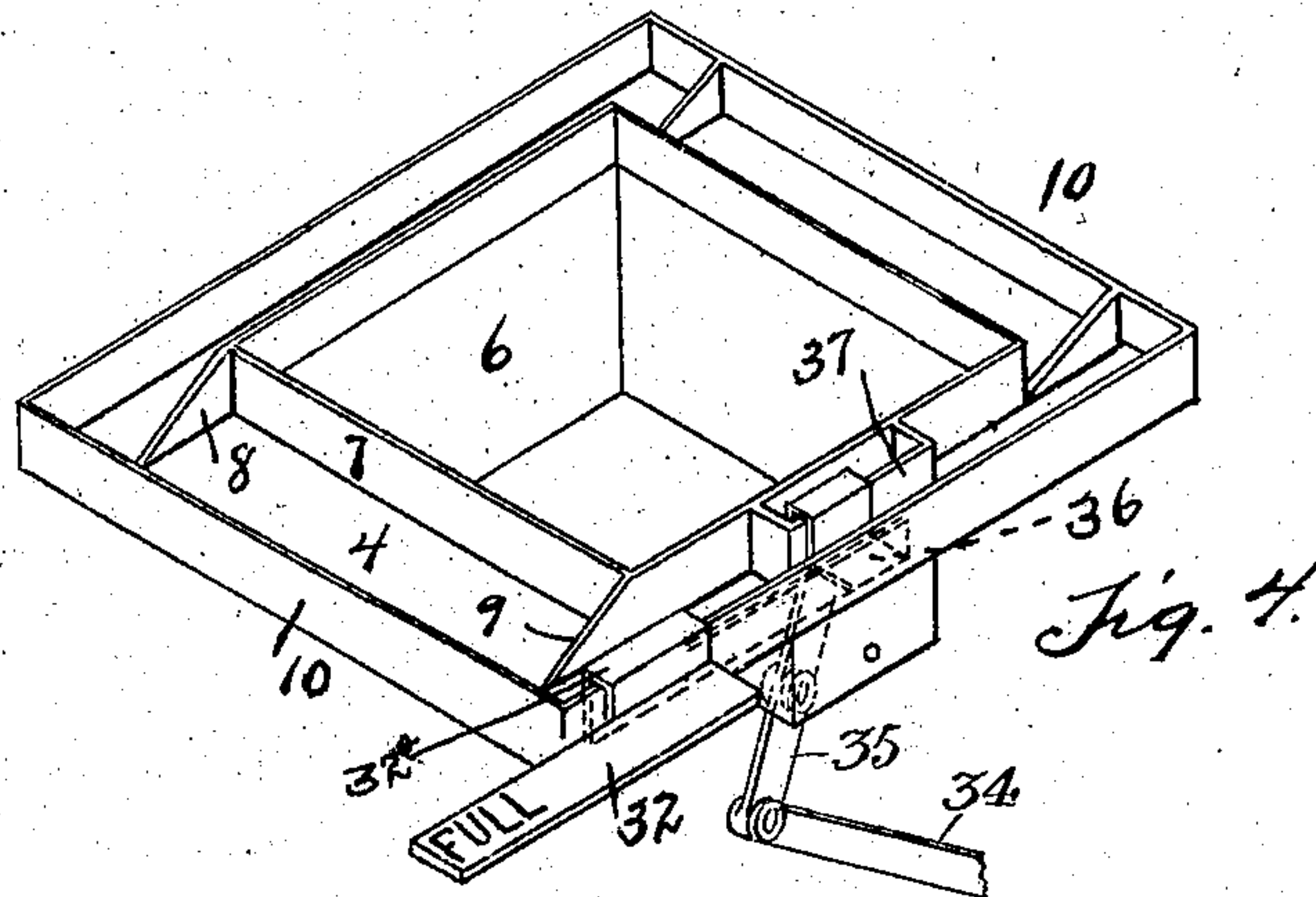
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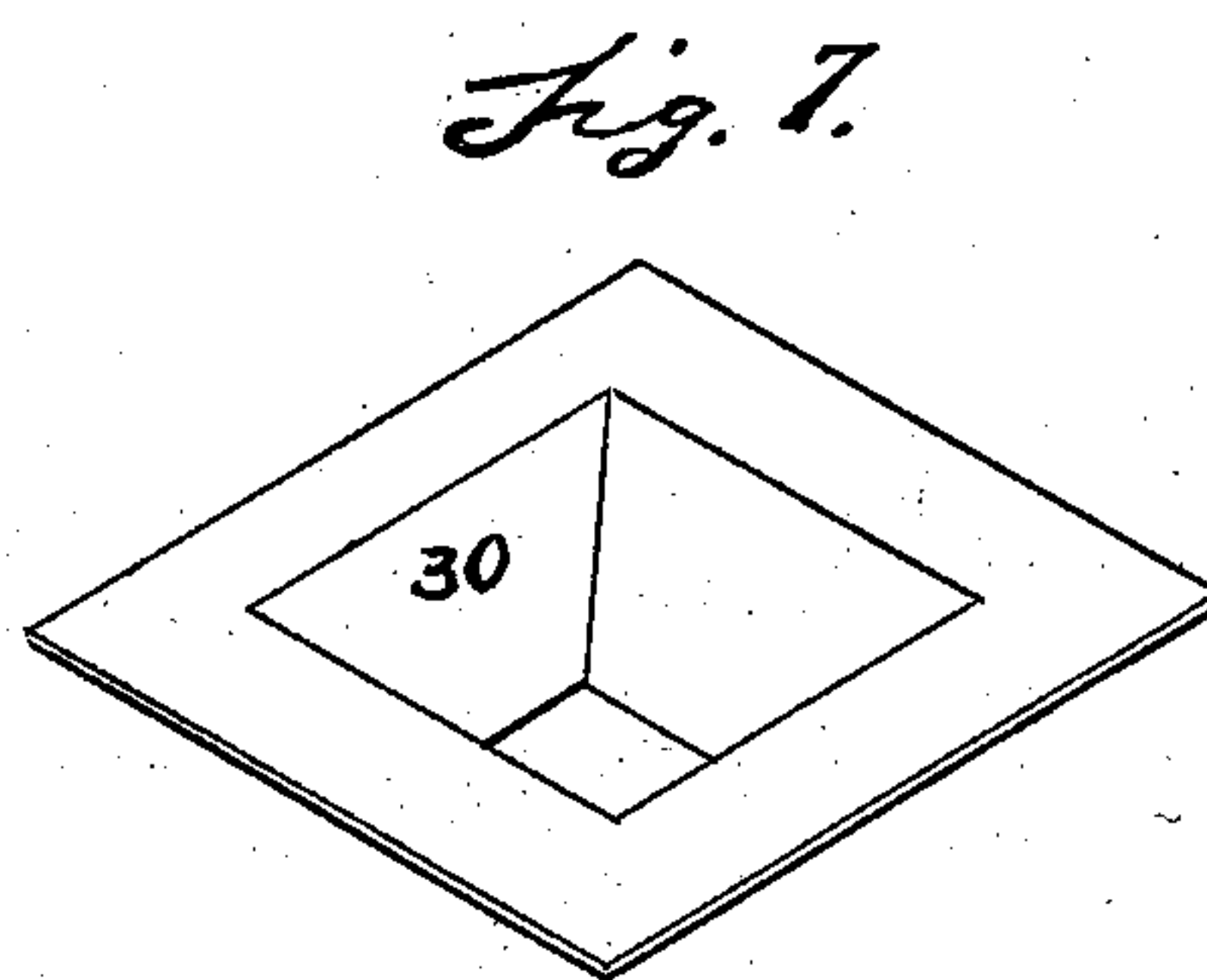
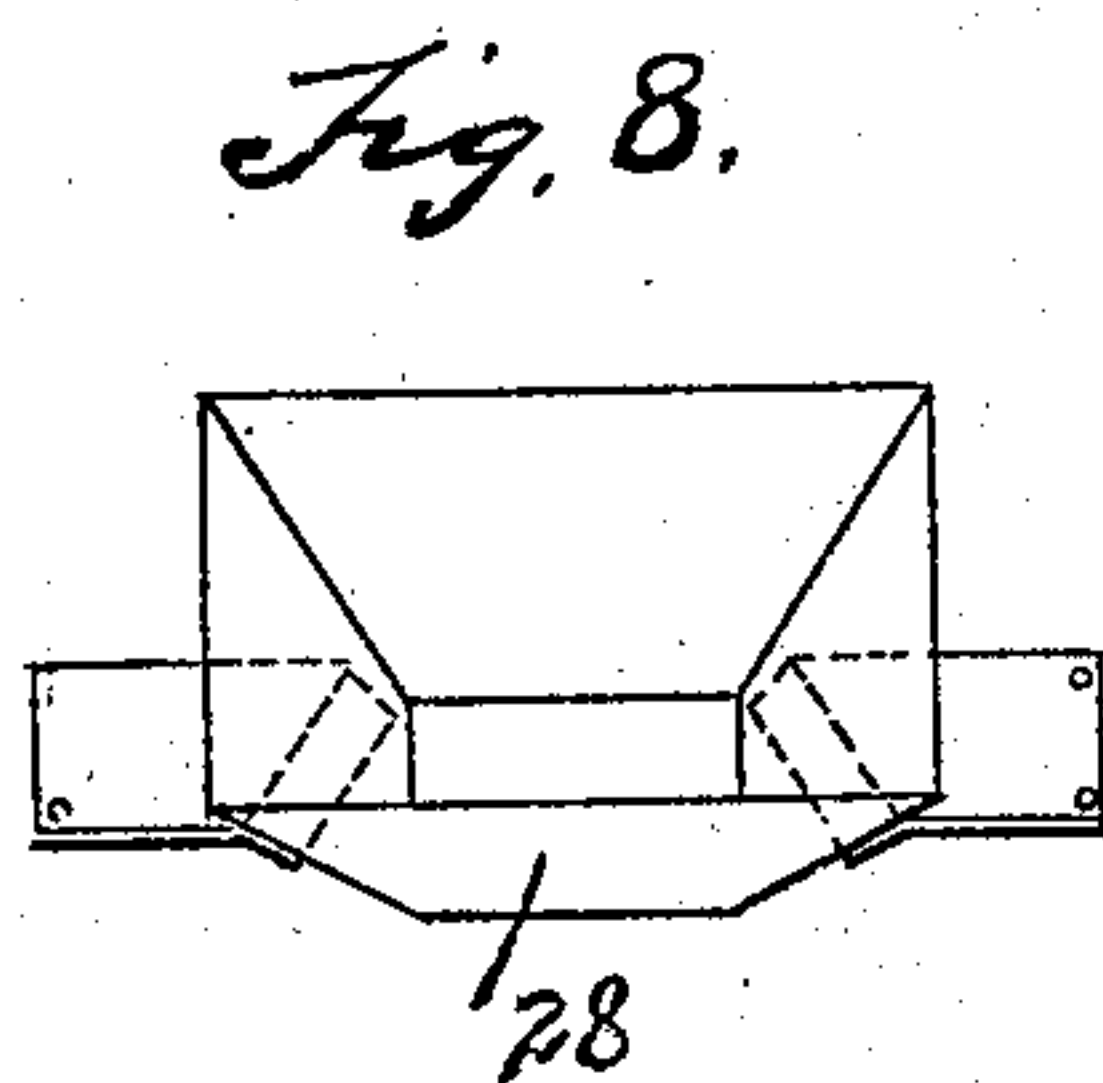
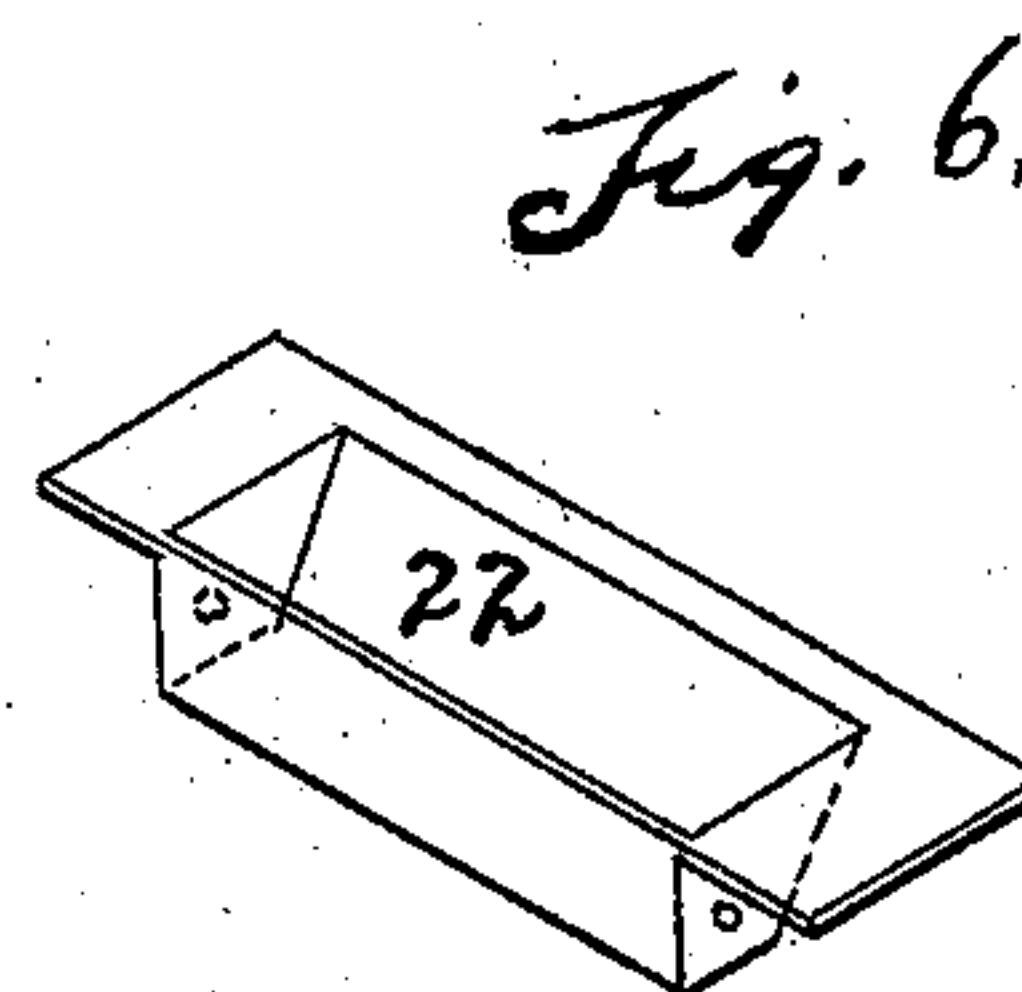
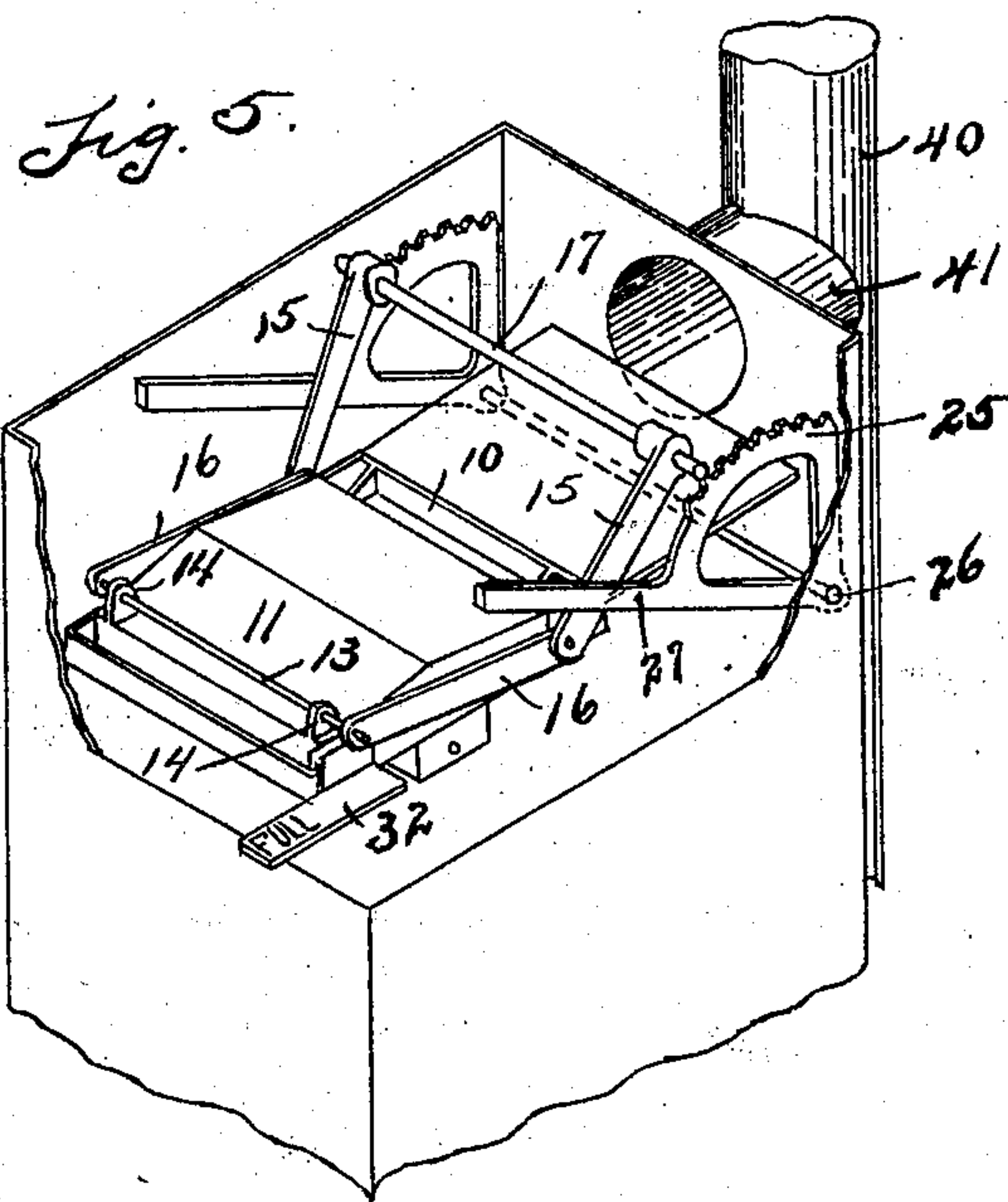
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3 SHEETS—SHEET 3.



WITNESSES.
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UNITED STATES PATENT OFFICE.

SAMUEL C. LAITNER, OF DETROIT, MICHIGAN.

SEALED MAGAZINE FOR STOVES.

No. 815,716.

Specification of Letters Patent.

Patented March 20, 1906.

Application filed August 8, 1903. Serial No. 168,768.

To all whom it may concern:

Be it known that I, SAMUEL C. LAITNER, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Sealed Magazines for Stoves; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to fuel-magazines for stoves, (and I intend to include under this term any device for burning fuel,) and has for its object an improved magazine for the storage of fuel preparatory to its introduction to the fire-pot, in which it is burned with regular feed, also forcing all products of combustion through a portion of the fire and making a practically smokeless combustion.

In the drawings, Figure 1 is a perspective showing (and indicating by dotted lines) the general location of the several parts of the structure. Fig. 2 is a section of the upper chamber of the magazine. Fig. 3 is a similar section with the operative parts in a different position. Fig. 4 is a perspective of the diaphragm and collar around the neck of the opening into the lower chamber of the magazine. Fig. 5 is a perspective of the gate used to close the neck-opening and the mechanism by which it is actuated. Fig. 6 is a detail of a guard around the shaft on which the cover to the opening through the upper wall swings. Fig. 7 is a perspective of the fixed hopper. Fig. 8 is a perspective of the extension-hopper. Fig. 9 is a view showing the device in elevation with the wall removed.

The magazine may be used with any approved form of stove and fire-pot. For illustrative purposes a square box-like stove with a rectangular fire-pot is shown, and into this leads a rectangular conduit 1 from the magazine 2. The magazine is externally of any approved shape, with a hopper-bottom 3 leading into the conduit 1. The space within the magazine is divided by a horizontal diaphragm or partition into two chambers. The chamber below the partition is used for storage purposes, and the chamber above contains the mechanism for completely closing the throat-opening into the storage-chamber. The throat-opening 6 is surrounded by a collar 7 and is provided on the

side that lies toward the front of the stove with slanting tracks 8 and 9, that lead from the top of the throat-flange to the partition-floor 4. At the rear of the throat-opening similar tracks lead from the partition 4 to the top of a flange 10 equal in height to the flange and surrounding and spaced from said flange 7.

A cover 11 engages over the flange 7 and rests in the trough between the flanges 7 and 10. The trough is preferably partly filled with some sealing material—as, for example, oil. The cover 11 is provided with a bail 13 through ears 14, and the bail is held by links 15 and 16 to a rock-shaft 17, actuated by a handle 18, that projects to the outside of the casing.

Through the top plate 19 is an opening closed by cover 20, which has arms 21 extending into a cavity 22 and keyed to a shaft 23, on the ends of which are spur-gears 24, that engage a quadrant-rack 25. The quadrant-rack 25 is pivoted to rod 26, and radial arms 27 projecting beyond the rack support at their extremities an extension-hopper 28, which swings from the position shown in Fig. 2 to the position shown in Fig. 3. When in the position shown in Fig. 2, the extension-hopper is lifted to allow the cap 11 to occupy its position of closure over the opening into the lower magazine. The extension-hopper 28 assumes the position shown in Fig. 3 whenever the cover 20 is lifted and the quadrant-rack 25 actuated. In this position it forms a continuation of the fixed hopper 30 and a substantially closed conduit leading into the storage-chamber and prevents the accidental escape of small particles of coal into the chamber which contains the operative mechanism and the sealing fluid.

The discharge-pipe 40 for the products of combustion leads from the stove and has an inlet connection 41 from the upper chamber of the magazine, which carries off smoke coming through the throat-opening 6 when cover 11 is shoved back and prevents its escape into the room.

An indicator 32 is actuated to move horizontally by lever 33, that hangs into the lower chamber or magazine proper and forms the rear abutment against which the coal in the magazine rests. The lower end of this lever 33 is forced backward by the coal as it accumulates in the magazine, and the position of the indicator 32 indicates the quantity of the coal that has been fed into the magazine.

This indicator 32 is supported in part by the hooked portion 32^a, which engages over the flange 10, and in part by the edges of the slot in the wall of the magazine 2, through which it engages.

The connections between the lever 33 and the indicator 32 are made by a link 34 and a lever 35 and a curved bar 36, to which the indicator 32 and hooked portion 32^a are connected and which curves over a guard 37 down along the bottom of the trough 4, and over the outer flange 10 of the trough.

What I claim is—

1. In combination with a magazine for stoves, a plurality of covers lying in different planes, a sealing-trough in which the flanges of one cover engage, and means connected with one of said covers whereby upon the actuation thereof the inadvertent seating of the other is prevented, substantially as described.

2. In combination with a magazine for stoves, a cover, a sealing-trough in which the flanges of the cover engage when the same is closed, an extension-hopper, and mechanism whereby the cover may be moved and the extension-hopper dropped into position contemporaneously, substantially as described.

3. In combination with a magazine for stoves, an inlet-conduit, a cover for said inlet-conduit, means for shifting the cover to open the conduit, an extension-conduit, and means for placing the extension-conduit in position to form a continuation of the conduit, substantially as described.

4. In combination with a magazine for stoves, a chamber located thereabove containing a cover to said magazine and mechanism for moving said cover, and an extension-hopper and mechanism for moving the extension-hopper, substantially as described.

5. In combination with the magazine of a stove, a sealing-chamber, a sealing-cover in said chamber, means for operating said sealing-cover, a covered hopper leading into said sealing-chamber, and an extension-hopper forming a continuation of the first-mentioned hopper, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

SAMUEL C. LAITNER.

Witnesses:

CHARLES F. BURTON,
CHARLES E. WISNER.