

No. 684,059.

Patented Oct. 8, 1901.

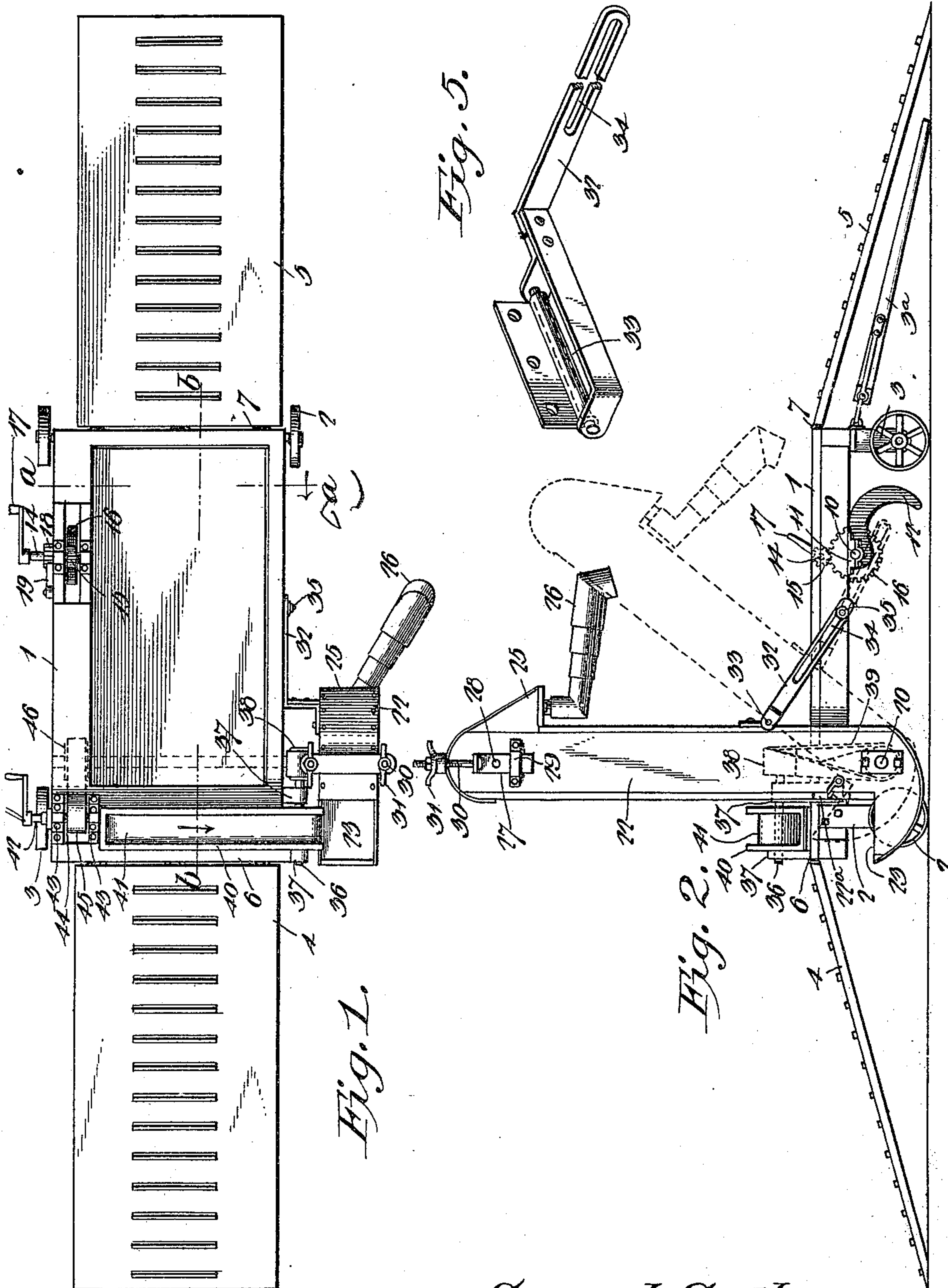
S. GUTH.

DEVICE FOR UNLOADING GRAIN FROM WAGONS.

(Application filed May 22, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

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Fig. 3.

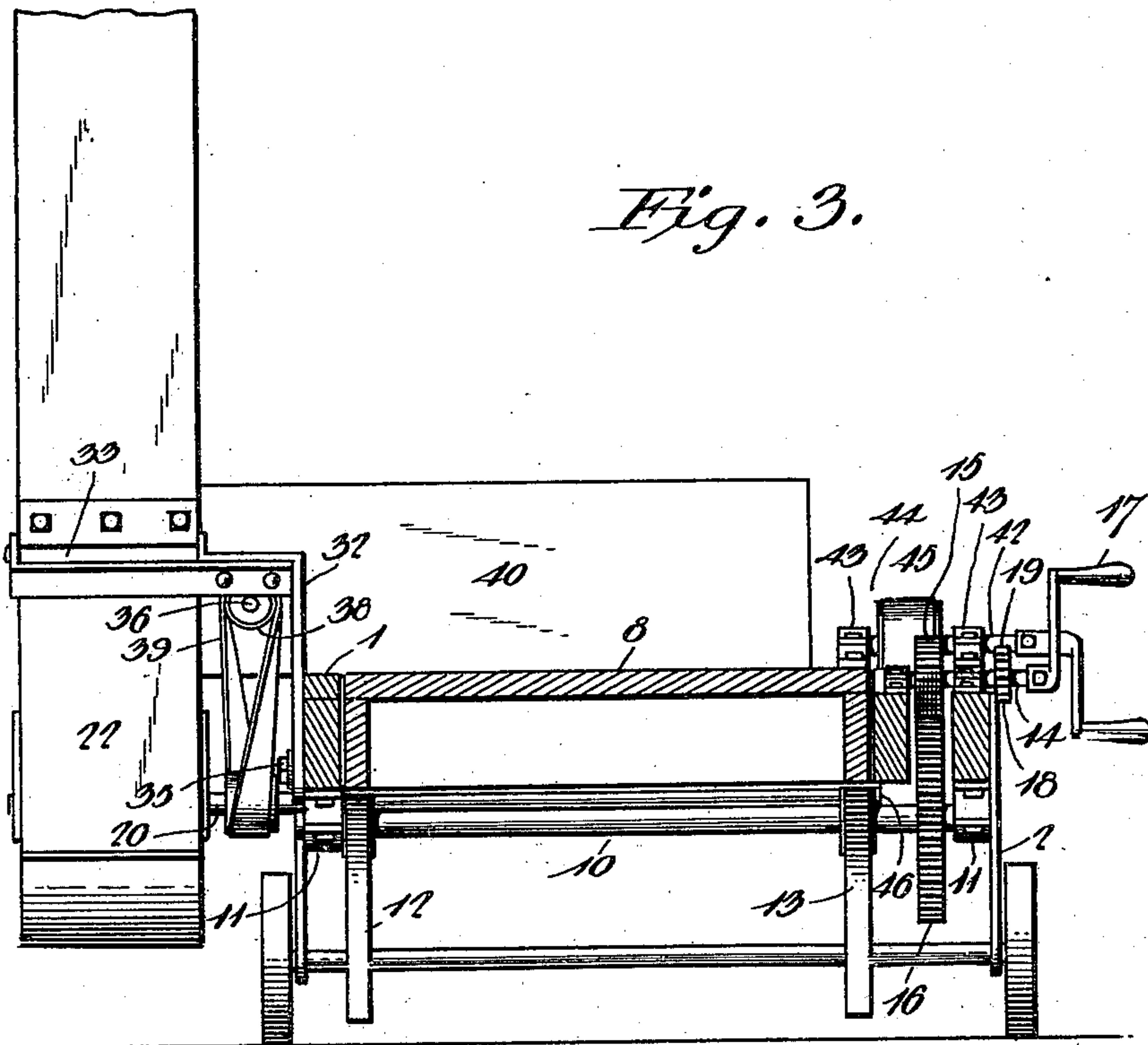
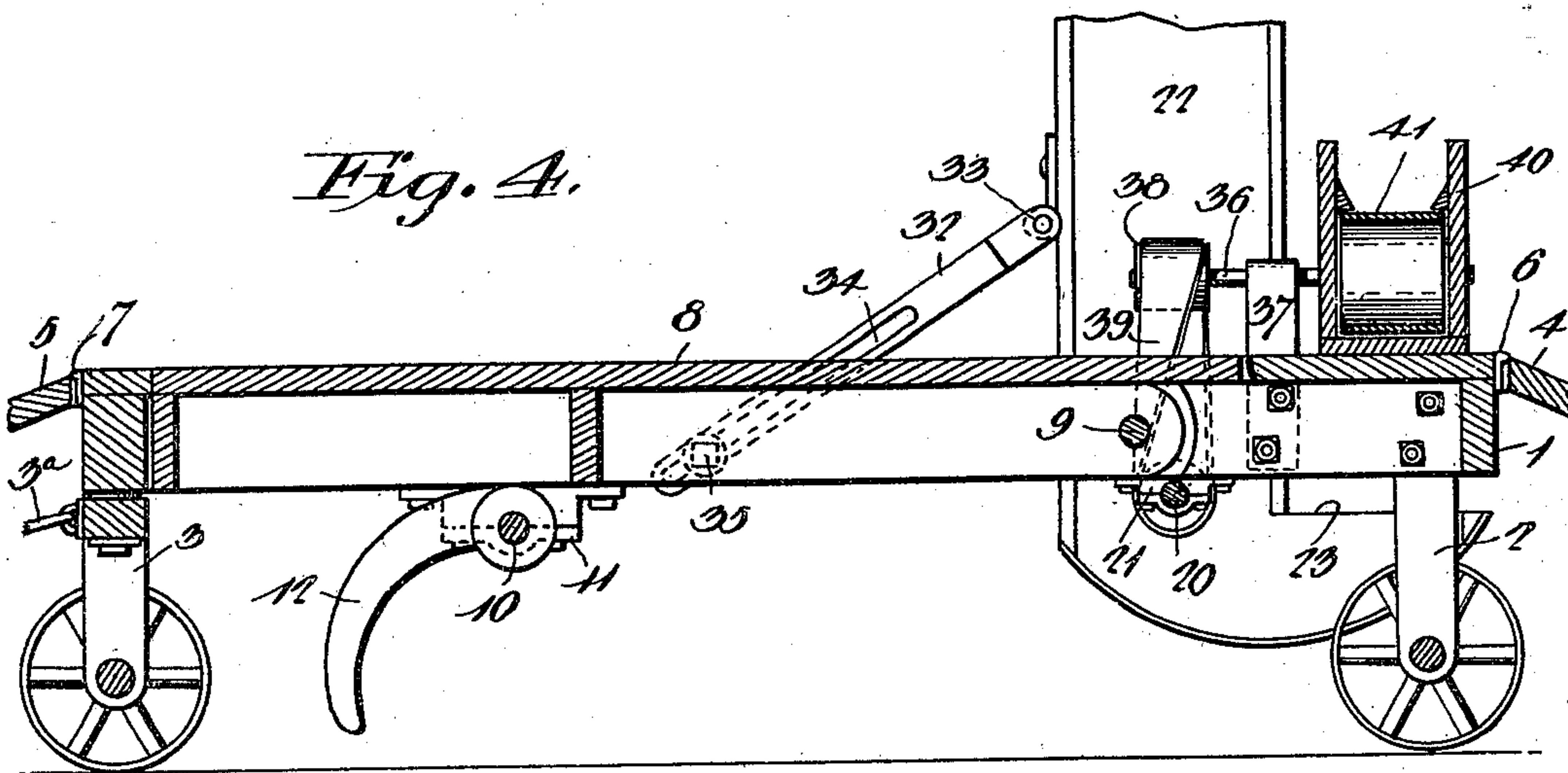


Fig. 4.



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# UNITED STATES PATENT OFFICE.

SAMUEL GUTH, OF JASPER COUNTY, INDIANA.

## DEVICE FOR UNLOADING GRAIN FROM WAGONS.

SPECIFICATION forming part of Letters Patent No. 684,059, dated October 8, 1901.

Application filed May 22, 1901. Serial No. 61,413. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL GUTH, a citizen of the United States, residing in the county of Jasper and State of Indiana, have invented  
5 a new and useful Device for Unloading Grain from Wagons, of which the following is a specification.

This invention relates to that class of devices employed for unloading grain from  
10 wagons in which a platform is employed to receive the loaded wagon and adapted to be tilted, together with the wagon, to unload the contents of the latter into an elevating apparatus.

15 The invention consists in the construction, combination, and arrangement of parts, as hereinafter shown and described and specifically pointed out in the claims.

In the drawings illustrative of the invention, Figure 1 is a plan view, and Fig. 2 is a side  
20 elevation, of the apparatus complete. Fig. 3 is a transverse section, enlarged, on the line *a a* of Fig. 1. Fig. 4 is a longitudinal section on the line *b b* of Fig. 1. Fig. 5 is an enlarged detail perspective view of the adjustable elevator-supporting bracket detached.

In the drawings illustrative of the invention, 1 represents a platform or body mounted upon carrier-trucks 2 3, the truck 3 preferably pivotally arranged and adapted to be  
30 provided with a removable tongue 3<sup>a</sup> to enable the platform and its attachments to be transported from place to place to adapt the apparatus to be conveyed to the location where the load is to be dumped. At each  
35 end of the platform are arranged inclined runways 4 5, connected by hinged joints 6 7 to the platform, so that they can be folded upon the platform when not in use, and when the  
40 apparatus is being transported the runways affording means for enabling the wagon to be driven upon and removed from the platform.

8 is the tilting table, upon which the wagon will rest and will be provided with any suitable means, such as chocks, to retain the  
45 wagon in place while being unloaded. The table 8 is pivotally connected at one end to the platform 1, as at 9.

10 is a transverse shaft suitably supported  
50 in bearings 11 upon the lower side of the platform 1 and carrying two cams 12 13, adapted to engage the table 8 when the shaft is revolved to elevate or tilt the table upon its pivotal connections 9.

14 is a short shaft journaled in suitable  
55 bearings on the platform 1 and provided with a pinion 15, engaging a gear-wheel 16 on the shaft 10, so that the latter may be revolved to actuate the cams 12 13 by power applied to the shaft 14. The power necessary to actu-  
60 ate the shaft 14 is thus reduced by employing the small pinion 15, engaging the larger gear 16, so that a manually-operated crank 17 will be sufficient to actuate the tilting mechanism. A ratchet 18 and pawl 19 will be arranged in  
65 connection with the shaft 14 to hold the cams and the table supported thereby at any desired point of elevation for obvious reasons.

20 is a transverse shaft mounted in suitable bearings 21 beneath the rear or discharge  
70 end of the apparatus and extended at one end and forming the lower or drive shaft of the elevator 22, as shown. The elevator is constructed with inlet 23, the usual endless belt of buckets, (not shown,) and outlet 25 and is  
75 provided with a swivel discharge-spout 26, by which the grain may be conducted to any desired point of discharge laterally. The upper or feed side of the elevator-casing will be provided with a hinged door 22<sup>a</sup>, by which  
80 access may be had to the elevator-belt, if required. Means for regulating the tension of the belt are shown at the discharge end of the elevator, consisting of plates 27, in which the  
85 ends of the journal 28 of the upper end of the elevator-belt are mounted, the plates slidably mounted in keepers 29 on the sides of the elevator-casing and adapted to be adjusted by screws 30 and nuts 31, as shown.

Attached to one of the faces of the eleva-  
90 tor-casing is a supporting-arm 32, the arm being connected by its upper end to the elevator by a hinged joint 33 and with its lower end connected removably and adjustably to the platform 1, so that the elevator may be  
95 supported in its upright position when in operation or lowered, as shown by dotted lines in Fig. 2, when not in use or when the apparatus is to be transported from place to place or  
100 when it is to be carried through contracted passage-ways, such as the doors of granaries or barns or the sheds connected with elevators or storage-warehouses. This ability to lower the elevator when required is a very important one and adds greatly to the efficiency  
105 of the apparatus, as it provides for the use of the apparatus in localities which are inaccessible to the ordinary dumping apparatus



of this character, owing to the contracted entrances and exits of many of the buildings containing the grain-bins and other storage-receptacles. For instance, it is frequently  
 5 desirable to discharge the grain into bins which are a part of or erected in barns, sheds, or warehouses, access to which is obtainable only through contracted doorways. With my device, however, by lowering the elevator the  
 10 apparatus can be driven through any aperture through which any ordinary vehicle can pass and the elevator again elevated when the interior is reached and the load discharged in the manner provided for in the apparatus.  
 15 Thus in barns and warehouses the grain-storage bins are accessible only from inside the barns, and in such localities the dumping apparatus can be employed only when means are provided whereby the apparatus can be  
 20 conducted into proper position with relation to the receiving-bins. This perfect adaptability of the apparatus to the peculiar conditions and location and surroundings of the receiving-bins is therefore an important fea-  
 25 ture and advantage of my improvement and is novel, so far as I am aware.

It will be noted that the elevator is arranged to be raised and lowered in lines parallel to the sides of the platform 1, so that the trans-  
 30 verse width of the apparatus is not increased by the adjustment of the elevator upon its drive-shaft, so that the apparatus will pass through a comparatively narrow opening whether the elevator is elevated or depressed.  
 35 Any suitable means may be employed for securing the support 32 to the platform 1; but a slot 34 and clamp-bolt 35, as shown, will fully meet all the requirements and is a very simple and efficient means for accom-  
 40 plishing the desired results. By means of this clamp-bolt 35 working in the slot 34 the support 32 may be adjusted to any desired extent to set and hold the elevator at any de-  
 45 sired point of elevation.

36 is a short shaft longitudinally mounted by standards 37 upon the platform 1 at its  
 50 discharge end and carrying a pulley or wheel 38 in alinement with a similar pulley or wheel on the shaft 20, whereby the shaft 36 may be driven by a quarter-turn belt 39, as shown. Mounted pivotally upon the shaft 36 is a  
 55 frame 40, carrying a conveyer-belt 41 and adapted to receive the grain as it is discharged from the wagon and convey it into the inlet 23 of the elevator 22. This small  
 60 transverse conveyer will extend across the platform 1 for a distance equal to the width of the wagon upon the tilt-table and may be tilted upward upon its drive-shaft 36 to re-  
 65 move it out of the way of the wagon and horses when they are being driven upon and removed from the platform and table.

42 is the shaft by which the power is applied to the moving parts of the apparatus and  
 65 is mounted by bearings 43 upon the platform 1 and is provided with a pulley or wheel 44,

connected by belt 45 to a similar pulley or wheel 46 upon the main drive-shaft 20, whereby the motion of the shaft 42 may be  
 70 transmitted to the shaft 20 and thence to all the elevators and the conveyer, as before described. Any suitable power may be employed to actuate the shaft 42—either horses, steam, or other power.

By this arrangement a very compact and  
 75 simple apparatus is produced, which may be easily and readily adapted to any locality where such devices are required and may also be readily adapted for use in localities  
 80 where other devices for the same purpose cannot be employed.

What I claim as new is—

1. In a grain dump and elevator, a plat-  
 85 form onto which a wagon may be driven and dumped, a conveyer disposed transversely of the said platform above the same, a shaft 36 forming the pivot and the power element of  
 90 said conveyer, and whereby the latter may be raised or lowered at its free end, said shaft 36 being suitably mounted, a transverse power-shaft 20, bearings therefor, an eleva-  
 95 tor pivoted on said shaft 20, on one side of said platform, whereby said elevator is adapted to be swung vertically in a plane parallel to one side of the platform, the latter being  
 100 the driving-shaft for the movable-carrier element of said elevator, and power-conveying connections between said shafts 20, 36, substantially as described.

2. In a machine of the class described an  
 105 elevating apparatus, a platform, a tilting table pivotally mounted within said platform and adapted to support the wagon to be unloaded, an elevator pivotally connected to  
 110 said platform, and adapted to receive the contents of said wagon and be raised and lowered by its free upper end, a supporting-bar pivotally connected by one end to said  
 115 elevator and adjustably connected by its other end to said platform, whereby said elevator may be raised or lowered and supported at any inclination, to enable the apparatus  
 120 to be moved into otherwise inaccessible localities, substantially as shown and described.

3. In a machine of the class described, a  
 125 platform for supporting the wagon to be unloaded, an elevator pivotally connected at one end to said platform, a supporting-bar pivotally connected by one end to said eleva-  
 130 tor, and having a longitudinal slot, and a clamp-bolt connected into said platform through said slot, whereby said elevator may be supported at any point of elevation, with  
 135 relation to said platform, substantially as shown and described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

SAMUEL GUTH.

Witnesses:

THOMAS E. HARTLEY,  
 JAMES W. OSWALD.