

No. 644,169.

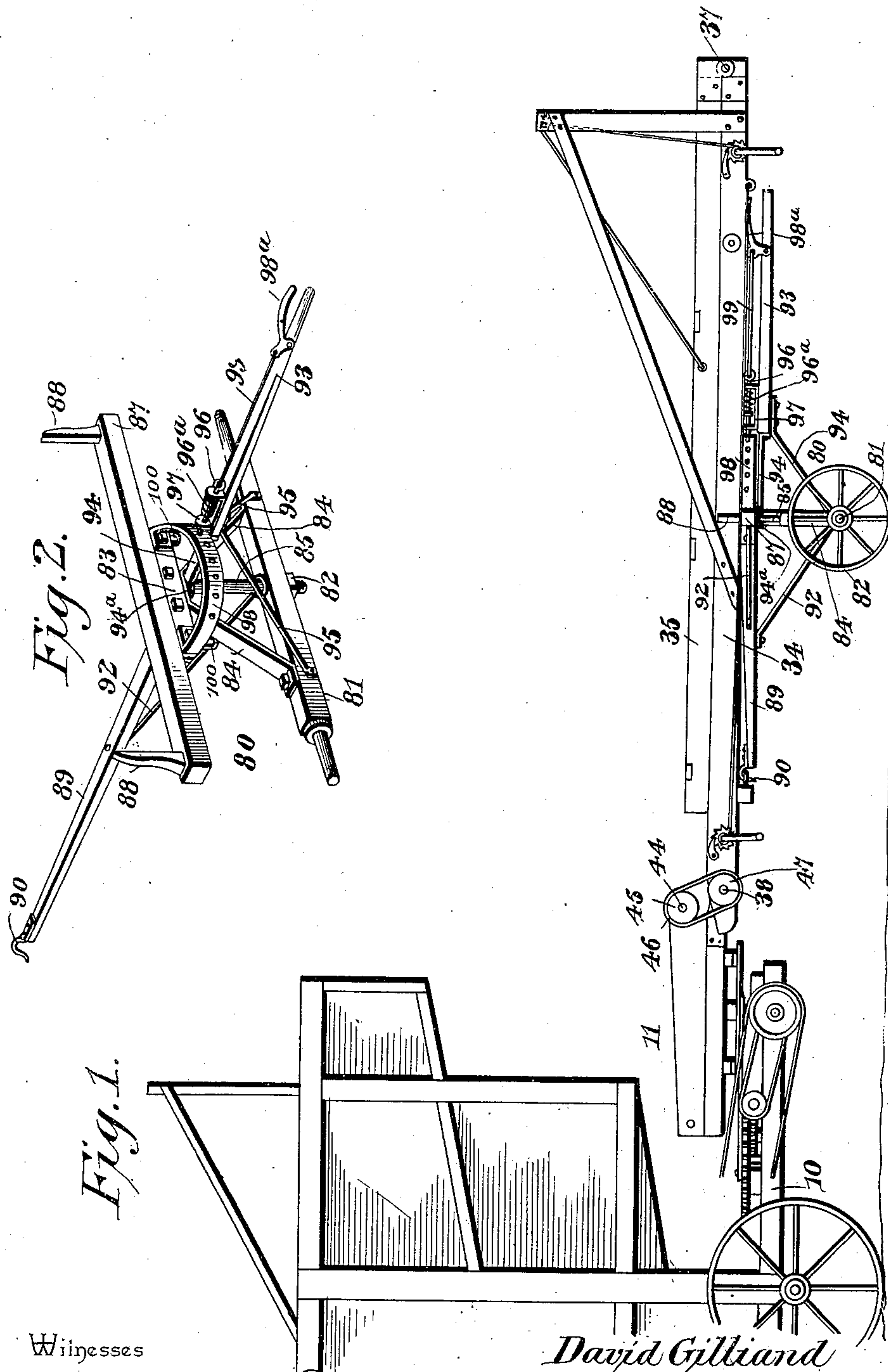
Patented Feb. 27. 1900.

D. GILLIAND.
STRAW STACKER.

(No Model.)

(Application filed May 18, 1899.)

2 Sheets—Sheet 1.



Witnesses

Jas. E. McEachran
H. J. Bunker

By *his* Attorney

David Gilliland

Inventor

C. G. Siggers

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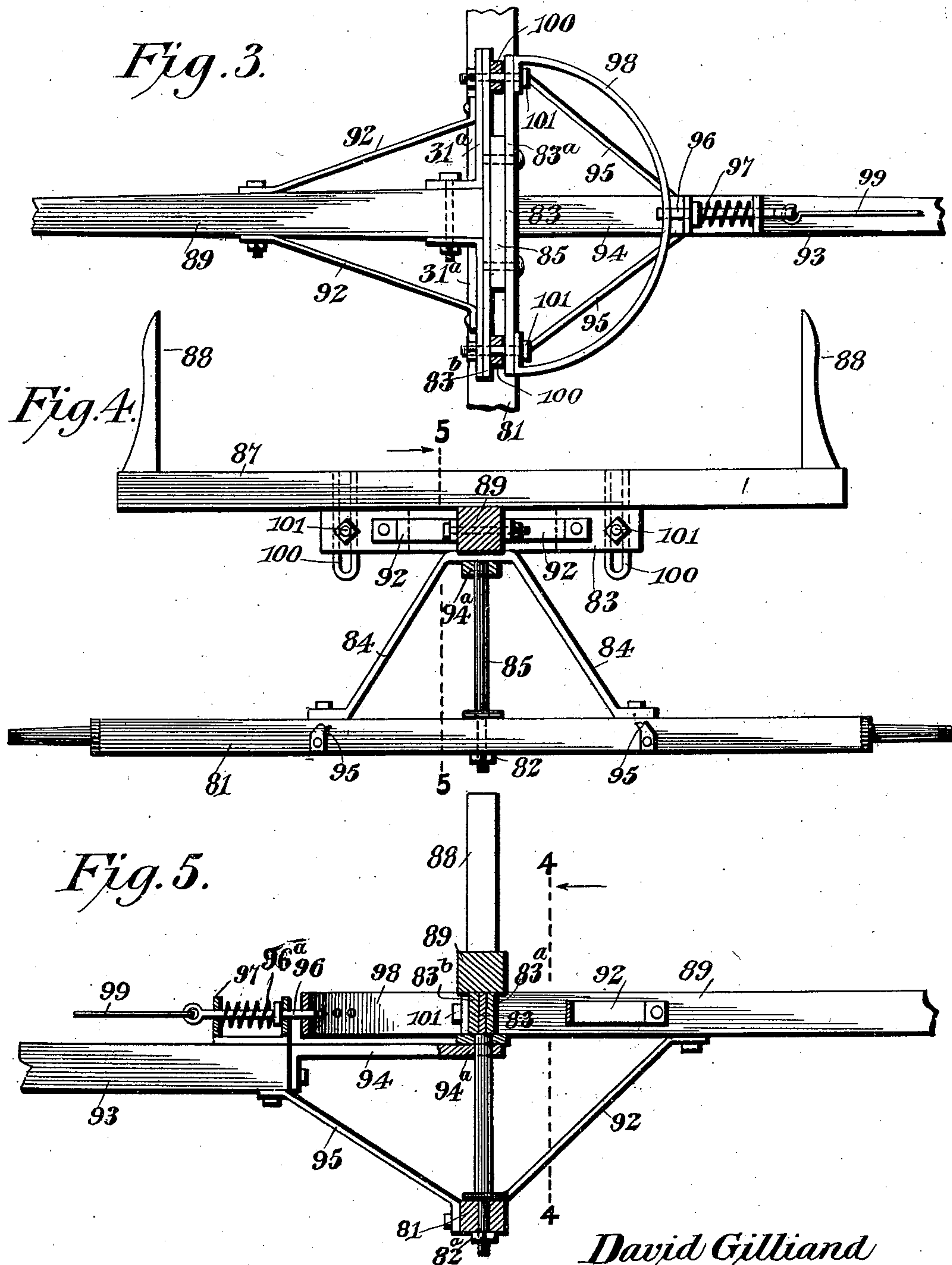
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Jas. E. McClathran
H. J. Benckhoff

David Gilliland
By *E. J. Siggers* Attorney
Inventor

UNITED STATES PATENT OFFICE.

DAVID GILLIAND, OF HARPER'S FERRY, IOWA.

STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 644,169, dated February 27, 1900.

Application filed May 18, 1899. Serial No. 717,281. (No model.)

To all whom it may concern:

Be it known that I, DAVID GILLIAND, a citizen of the United States, residing at Harper's Ferry, in the county of Allamakee and State of Iowa, have invented a new and useful Straw-Stacker, of which the following is a specification.

This invention relates to straw-stacking machines, and more especially to that type of straw-stackers in which a foldable conveyer-frame is employed; and it has for its object to provide novel means for sustaining the stacker mechanism when the latter is folded into compact position for transportation. To this end the invention contemplates means which facilitate the compact folding of the stacker mechanism when not in use without loading the same upon the threshing-machine, while at the same time permitting of the easy and quick unfolding thereof into operative position.

With these ends in view the invention consists in the novel combination of elements and in the construction and arrangement of parts, which will be hereinafter fully described and claimed.

To enable others to understand the invention, I have illustrated the same in the accompanying drawings, and in which—

Figure 1 is a side view of the stacker in its folded condition and carried or supported by the portable truck of my invention. Fig. 2 is a detail perspective view of the portable truck removed from the stacker mechanism. Fig. 3 is a fragmentary detail view of a part of the foldable truck, showing the connection between the draft-tongue and the head-block of said truck. Fig. 4 is a detail sectional elevation through the portable truck on a plane in rear of the head-block and indicated by the dotted line 4 4 of Fig. 5. Fig. 5 is a detail longitudinal section through a part of the truck on the line 5 5 of Fig. 4.

The same numerals of reference are used to indicate like and corresponding parts in each of the several figures of the drawings.

The numeral 10 indicates a part of the sills forming the bed of an ordinary threshing-machine or grain-separator, and above this bed or the sillwork 10 is a horizontal oscillatory frame 11, which is disposed at the delivery end of the threshing or separating ma-

chine and is equipped with a short endless conveyer that is adapted to receive the straw as it is delivered from said machine previous to the delivery to the stacker mechanism. This frame 11 may be oscillated by any suitable mechanism having operative connections with one of the shafts of the threshing-machine; but as this mechanism constitutes no part of the present invention I have not considered it necessary to fully describe the construction and mode of operation thereof. As is usual in the art, the oscillatory frame 11 is designed to carry a short endless conveyer, (not shown,) which is adapted to deposit the straw upon a long endless slatted conveyer which is carried by the frame 34 35. (Shown in its folded position by Fig. 1 of the drawings.) This frame for the stacker-conveyer is of sectional construction, and its two members or sections 34 35 are connected pivotally, as at 37. The section or member 34 of the stacker-frame is connected with the oscillatory frame 11, as at 38, which pivot is afforded by a shaft having a pulley 47, around which passes a short endless belt 46, that also passes around a pulley 45 from one end of the shaft 34, that supports the short endless conveyer of the oscillatory frame. The frame of the stacker-conveyer may be braced, as shown by Fig. 1, and in operation it may be connected with an adjusting mechanism on the deck of the threshing-machine; but this is not a material part of the invention forming the subject-matter of the present invention.

The present invention has special reference to an improved truck associated with the foldable stacker mechanism to provide convenient means for transporting the same, and to provide for carrying out the invention to the best possible advantage the same is preferably associated with the sectional construction of straw-stacker illustrated in the drawings. A description of the truck device forming the subject-matter of the application will now be given.

In carrying out the invention there is employed a portable truck 80, which is adapted to sustain the stacker mechanism when the latter is folded into compact position for transportation. This truck is designed to be hitched to a part of the threshing-machine or to the

member 34 of the stacker-frame, and it is employed only when the apparatus is folded, so that it will sustain the entire weight of the stacker mechanism, thus obviating the necessity for folding the stacker mechanism upon the deck of the threshing-machine. In the preferred embodiment of this truck I employ an axle 81, which is equipped with the carrying-wheels 82. The head-block 83 is arranged in horizontal position above the axle, and said head-block is sustained in its elevated horizontal position by means of a braced stand 84, which is fastened firmly to the axle 81. A king-bolt 85 is fastened to the head-block and passes loosely through the braced stand and the axle 81, and on the lower end of this king-bolt is screwed a nut 82^a, which is adapted to bear against the under side of the axle and prevent accidental separation of the king-bolt and head-block from said axle. The head-block is thus connected to the axle by a bolt which permits the axle and head-block to turn relatively one to the other on a vertical axis, and said head-block carries a bolster 87, which is connected loosely thereto. The length of this bolster exceeds the width of the stacker-frame, and at its ends the bolster is equipped with the posts 88, whereby the truck is positioned properly beneath a conveyer-frame, the member 34 of which conveyer-frame is adapted to rest upon the bolster between the posts 88. The posts prevent the conveyer-frame from displacement laterally upon the bolster, and the truck is equipped with means by which it may be hitched or connected detachably either to the grain-separator or to the member 34 of the stacker-frame. The draft-tongue 89 of the portable truck 80 is provided at its front end with a draft-hook 90, which, as shown by the drawings, is adapted to be connected detachably to one of the cross-bars of the member 34 of the stacker-frame. Said draft-tongue has its rear end provided with plates 31^a, which are bolted firmly to the head-block 83 of the portable truck, and the draft-tongue and the head-block are braced by the diagonal struts 92, which are disposed on opposite sides of the tongue and have their ends fastened respectively to the head-block and the tongue.

When the truck is hitched to the machine and the stacker mechanism is loaded on the truck, it is important that the axle 81 be held against movement on the vertical king-bolt 85; but in turning sharp corners—as, for instance, in passing from one road to another or in turning the corner-posts of gates or the like—the axle should turn on the king-bolt for the convenient transportation of the stacker mechanism. To control the position of the axle, I have provided a lever 93, which is disposed at the rear part of the truck, and this lever is provided with braces 94 95. The brace 94 is furnished at its front end with an eye 94^a, that is fitted loosely on the king-bolt 85; but the braces 95 are fastened firmly to the axle 81, so that the lever is connected fast

to the axle and is disposed in a horizontal position in rear of the head-block 83. This lever is provided on its upper side with a locking-bolt 96, which is fitted slidably in a keeper-plate 97, that is fastened to said lever, and said bolt is impelled by a spring 96^a normally into engagement with a perforated or notched segment 98. The segment is fastened securely to the head-block 83 of the portable truck, and said segment and the locking-bolt cooperate in holding the lever and the axle in proper relation to the head-block and bolster of the truck. The locking-bolt may be conveniently retracted by depressing a grip-lever 98^a, which is fulcrumed on the operating-lever 93, near the free end thereof, and said grip-lever has a link 99, connected to the locking-bolt 96.

After the two-part stacker-frame has been folded for the member 35 to rest upon the member 34 the truck 80 is moved into position below the stacker-frame member 34, so that the latter will rest upon the bolster 87, between the posts 88 thereof, while the draft-hook 90 on the tongue is connected to a part of the frame member 34. The truck is thus arranged to trail in rear of the threshing-machine and separator, and it supports the entire weight of the folded stacker-frame. When the machine is hauled along the road, the axle 81 of the truck should be locked by the lever, the bolt, and the segment for said axle to occupy a position at right angles to the longitudinal axis of the stacker and the threshing-machine in order that the truck may trail directly in rear of said machine; but when the apparatus is moving around a curve or bend in the road or passing through a gateway the operator should retract the latch from engagement with the segment, and the lever may then be manipulated to turn the axle on the king-bolt in order that the apparatus may make a short turn to pass safely through the gateway or around the bend in the road.

The bolster 87 is connected to the head-block of the truck by devices which permit the bolster to remain in a substantially horizontal position and in engagement with the stacker-frame should one wheel of the truck-axle drop into a rut of the road. This connection is effected by means of loops or slotted plates 100, which are fastened securely to the under side of the bolster, and the head-block is made of two plates 83^a 83^b, (see Fig. 5,) said plates being joined together by bolts 101. The plates are spaced by suitable washers or blocks, and the bolts draw the head-block plates firmly together, so that the loops or slotted connecting-plates 100 may be fitted loosely on the bolts and properly confined in slidable relation to the two-part head-block. It is understood that the head-block has the tongue and segment fixed thereto, while the axle is pivoted to said head-block on the king-bolt; but the bolster has slidable connection to the head-block to remain in en-

gagement with the stacker-frame should the axle, the stand, and the head-block assume an inclined or angular relation to the bolster.

Changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described the invention, what I claim is—

1. As a means for carrying a foldable straw-stacker mechanism, a portable truck having a draft-tongue provided with a hitching device adapted to detachably connect with a stacker mechanism, a pivotal axle on said truck, means for shifting the position of said axle independently of the draft-tongue and changing relation of the axle to the draft-tongue and the stacker mechanism, and a locking device for holding the adjusting means and the axle in their adjusted relations to the stacker mechanism, substantially as set forth.

2. As a means for carrying a straw-stacker mechanism for a threshing-machine, a portable truck comprising a head-block, an independent bolster seated on and slidably connected to said head-block, an axle connected pivotally to said head-block, a draft-tongue attached to the head-block, and a lever fastened to the axle and having interlocking adjustable engagement with the head-block for maintaining the axle in variable positions relative to said head-block, for the purpose described, substantially as set forth.

3. As a means for carrying a foldable straw-stacker mechanism of a threshing-machine, a portable truck comprising a head-block, an independent bolster seated on and slidably connected to said head-block, a wheeled axle connected pivotally to said head-block, a lever fast with the axle, locking devices between the head-block and said lever, and a draft appliance connected to said truck and having

means for detachably connecting the latter to a part of the stacker mechanism, substantially as and for the purposes described.

4. As a means for carrying a foldable stacker mechanism of a threshing-machine, a portable truck comprising a head-block having the bolster, and a locking-segment, a wheeled axle below said head-block, a braced stand fast with the axle and fitted loosely to the head-block, a king-bolt which connects the axle and the stand to the head-block, a lever fast with the axle to be shiftable there-with and provided with a locking contrivance arranged to connect with the segment of said head-block, and a draft-tongue attached to the head-block and having means by which it may be hitched to the stacker mechanism, substantially as and for the purposes described.

5. As a means for carrying a foldable straw-stacker, a portable truck provided with a head-block, a bolster confined slidably on said head-block, an axle connected pivotally with the head-block and independently of said bolster, and an adjusting and locking contrivance for holding the axle in proper relation to the head-block, substantially as described.

6. As a means for carrying a foldable straw-stacker, a portable truck comprising an axle, a two-part head-block having the fastening-bolts and connected by a king-bolt to said axle, a bolster seated on the head-block and provided with loops or plates which are slidably fitted to the bolts of said head-block, a lever, and locking contrivances therefor, substantially as described.

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

DAVID GILLIAND.

Witnesses:

N. A. NELSON,
B. T. THOMAS.