

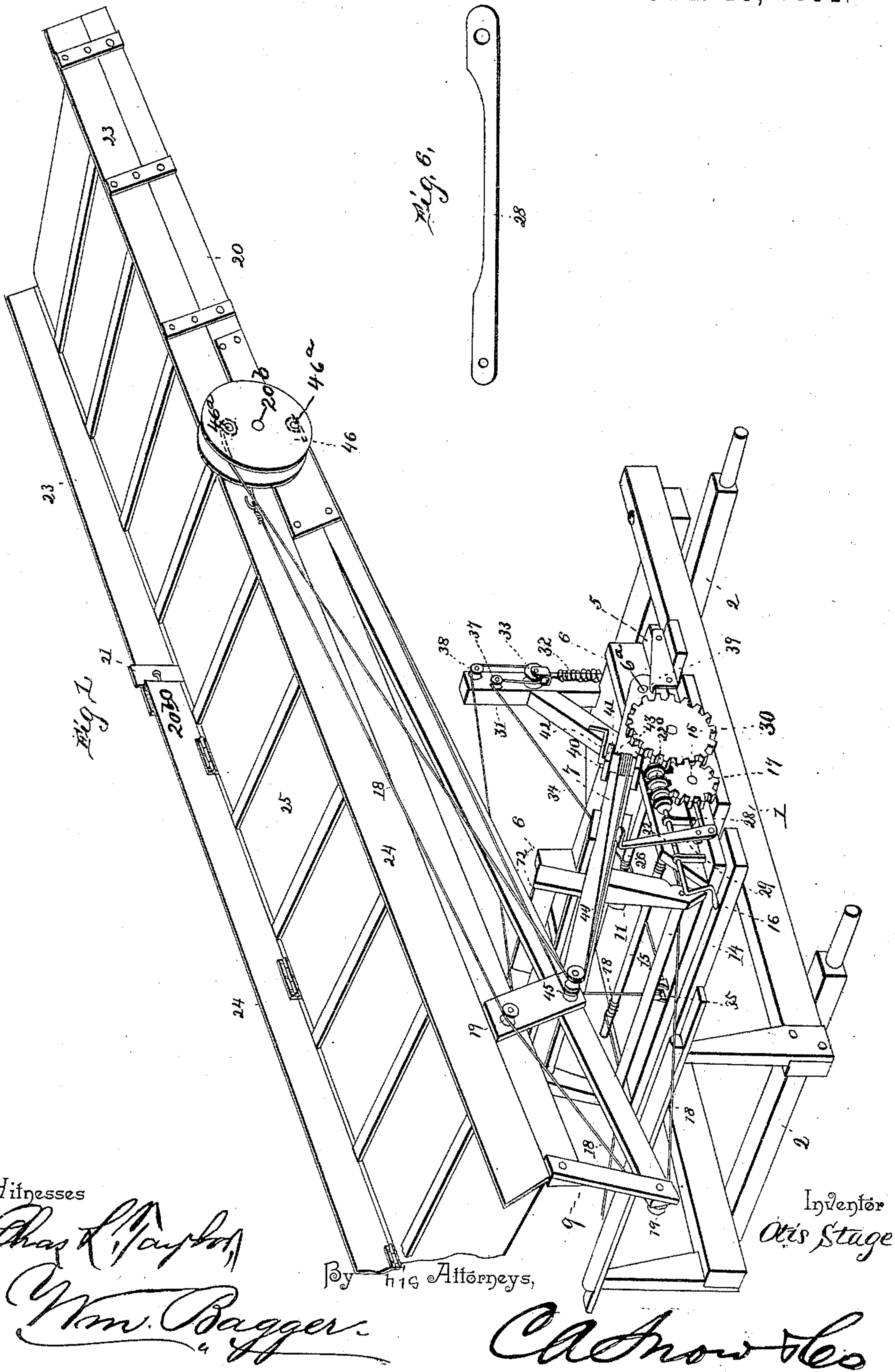
(No Model.)

4 Sheets—Sheet 1

O. STAGE.
STRAW STACKER.

No. 444,732.

Patented Jan. 13, 1891.



Witnesses

Chas. L. Taylor

Wm. Bagger

By his Attorneys,

C. A. Snow & Co.

Inventor
Otis Stage

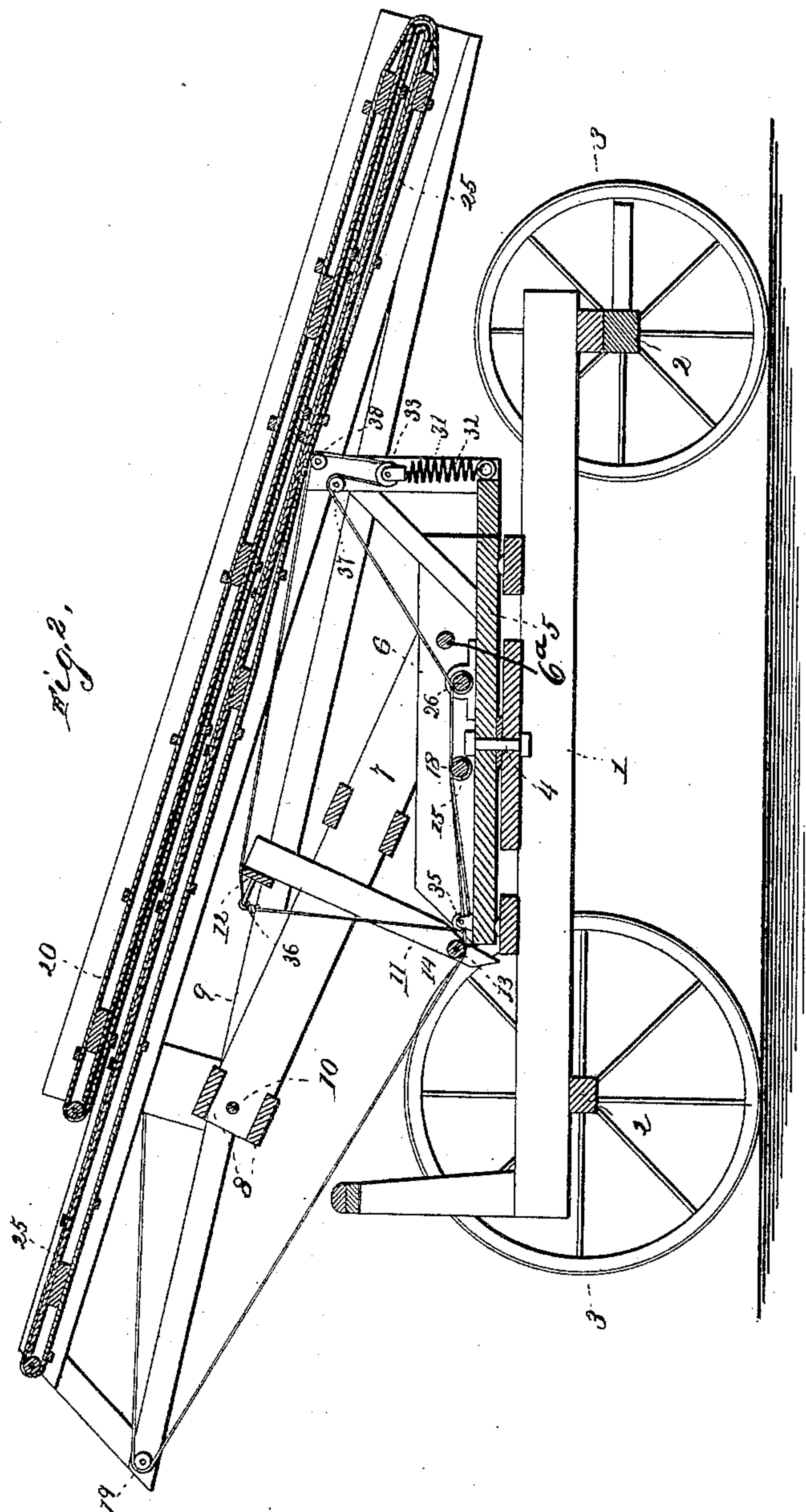
(No Model.)

4 Sheets—Sheet 2.

O. STAGE.
STRAW STACKER.

No. 444,732.

Patented Jan. 13, 1891.



Witnesses

Chas. L. Taylor

Wm. Bagger

By his Attorneys,

C. A. Snow & Co.

Inventor

Otis Stage

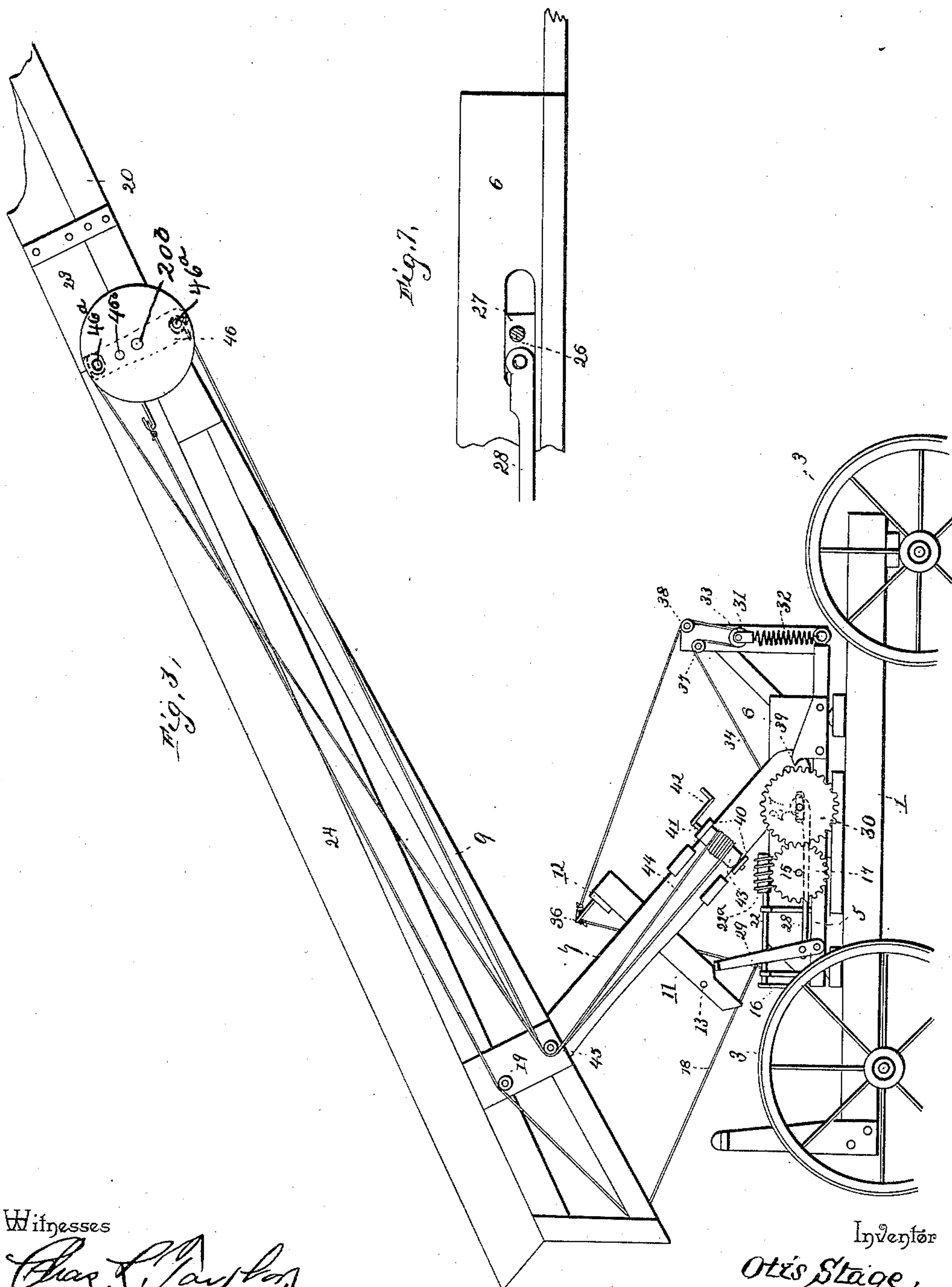
(No Model.)

4 Sheets—Sheet 3.

O. STAGE.
STRAW STACKER.

No. 444,732.

Patented Jan. 13, 1891.



Witnesses

Chas. L. Payton

Wm. Baggett

By his Attorneys,

C. A. Snow & Co.

Inventor

Otis Stage,

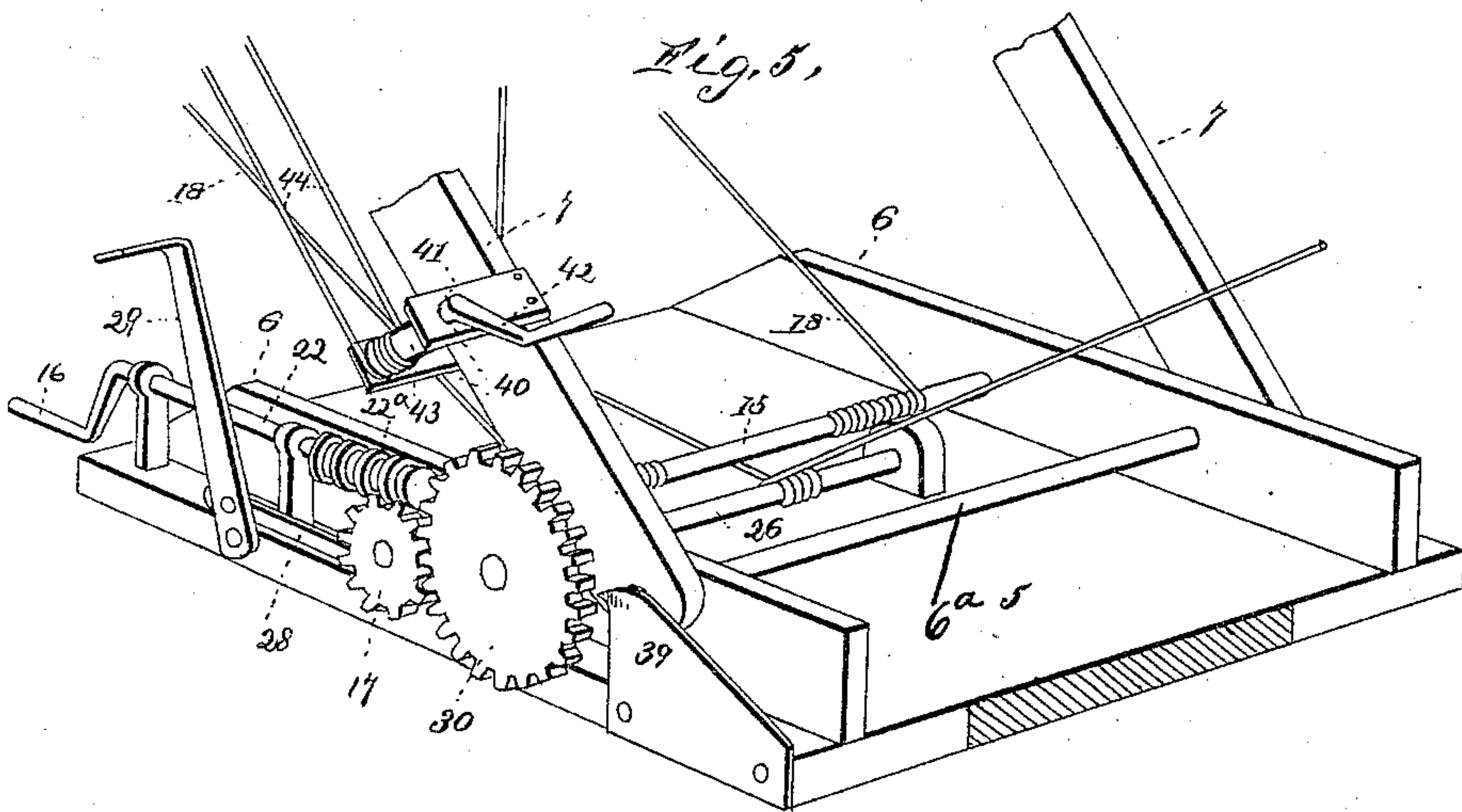
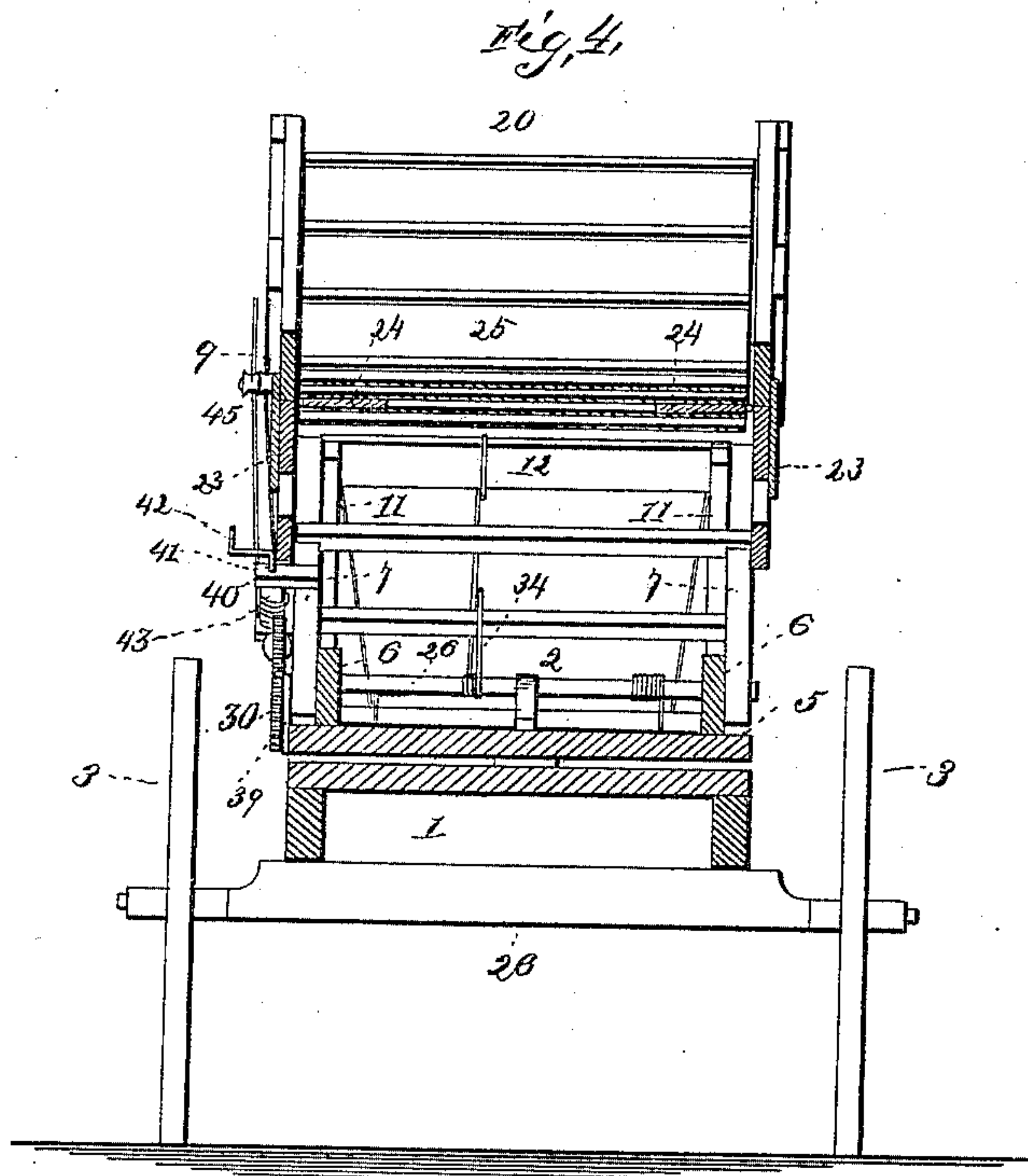
(No Model.)

4 Sheets—Sheet 4.

O. STAGE.
STRAW STACKER.

No. 444,732.

Patented Jan. 13, 1891.



Witnesses

Chas. L. Taylor

Wm. Baggett

By his Attorneys,

Chas. Snow & Co.

Inventor

Otis Stage

UNITED STATES PATENT OFFICE.

OTIS STAGE, OF LIGONIER, INDIANA.

STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 444,732, dated January 13, 1891.

Application filed August 6, 1890. Serial No. 361,169. (No model.)

To all whom it may concern:

Be it known that I, OTIS STAGE, a citizen of the United States, residing at Ligonier, in the county of Noble and State of Indiana, have
5 invented a new and useful Straw-Stacker, of which the following is a specification.

This invention relates to straw-stackers; and it has for its object to provide a machine of this class which shall be simple in construction, durable and easily operated, and
10 which may be readily adjusted to deliver the straw and chaff from a thrashing-machine to either side of the machine and at different points of elevation.

15 The invention consists in certain improvements in the construction and arrangement of parts of the invention, which will be hereinafter fully described, and particularly pointed out in the claims.

20 In the drawings, Figure 1 is a perspective view of a straw-stacker embodying my improvements. Fig. 2 is a longitudinal vertical sectional view of the same folded. Fig. 3 is a side elevation showing the machine extended and in position for use. Fig. 4 is a
25 transverse vertical sectional view. Fig. 5 is a detail view of parts of the operating mechanism. Fig. 6 is a detail view of the connecting-rod 28. Fig. 7 is a detail view showing
30 the sliding box 27 and adjacent parts.

Like numerals of reference indicate like parts in all the figures.

My improved straw-stacker is supported upon a truck, the frame of which 1 is mounted upon the axles 2 2, having the transporting-wheels 3. The frame 1 is provided with a vertical pivot or spindle 4 for the turn-table 5, upon which the stacker-frame is mounted. The turn-table 5 is provided at its side
40 edges with the flanges 6, to which are pivotally connected by a transverse shaft 6^a the side pieces 7, which are connected by cross-bars 8 to form a frame, at the upper or outer end of which the main stacker-frame 9 is
45 mounted pivotally upon a transverse shaft 10. The side pieces 7 are provided with transverse bars 11, the upper ends of which are connected by a cross-bar 12. The lower ends of the bars 11 have bearings, in which
50 is journaled the shaft 13 of the sleeve 14.

The side flanges 6 of the turn-table 5 are

provided with bearings for a shaft 15, one end of which has a worm-wheel or spur-wheel 17. Upon the shaft 15, or upon a drum on the latter, are wound the ropes 18, which
55 pass under the sleeve 14 and through eyes or guide-pulleys 19 upon the stacker-frame 9. At the outer or upper end of the latter is hinged by means of hinged pins 20^b the extension-frame 20, the sides of which are provided with uprights 21, to which the ends of
60 the ropes 18 are attached. It will be seen that by rotating the shaft 15 to wind the ropes 18 upon the latter the stacker-frame 9, as well as its extension, will be caused to swing
65 in an upward direction and to assume the position shown in Fig. 3 of the drawings.

22 designates a shaft journaled in suitable bearings above the wheel 17 and having a worm 22^a meshing with the latter. The front
70 end of shaft 22 has a crank 16, by means of which it may be manipulated to operate the shaft 15, upon the end of which the wheel 17 is mounted. The worm-gear, as will be readily understood, causes the shaft 15 and the parts
75 connected therewith to remain in any position to which they may be adjusted.

The extension-frame 20 of the stacker is provided with side boards 23. The stacker-frame 9 is likewise provided with side boards
80 24, which are hinged to the body of the frame or trough, so as to enable the frame to be folded down to the position shown in Fig. 4 of the drawings. It will be seen that when the side boards 24 are in this position they will
85 serve to form stops by which the endless carrier 25, passing over the frames 9 and 20, will be retained in a taut position when the frame 20 is folded back upon the frame 9.

In suitable bearings upon the turn-table 5
90 is journaled a shaft 26. The outer end of said shaft is journaled in a sliding box 27, to which is attached a connecting-rod 28, connecting it with the lever 29. The outer end of the shaft 26 carries a spur-wheel 30, which by
95 manipulating the lever 29 may be placed into or out of engagement with the pinion 17 upon the end upon the shaft 15.

At the front end of the turn-table 5 is mounted an upright 31, adjacent to which is
100 arranged a traction-spring 32, the lower end of which may be attached in any suitable

manner to the turn-table or to the said upright. To the upper end of the spring 32 is attached a pulley 33.

34 designates a rope, a portion of which is wound upon the shaft 26. One end of said rope passes under a sheave 35 at the rear end of the turn-table 5, and from thence to the cross-bar 12, to which it is attached at the point 36. The other end of the rope 34 is passed over a sheave 37 at the upper end of the post 31, thence under the pulley 33, thence over a sheave 38 at the upper end of the post 31, and thence to the point 36 upon the cross-bar 12, to which it is securely attached. It will thus be seen that the spring 32 serves to keep the rope 34 taut, and that by rotating the shaft or windlass 26 in opposite directions the frame composed of the side pieces 7 and their attachments may be raised or lowered, according to the direction in which the shaft 26 is rotated. The shaft 26 is operated by manipulating the lever 29, so as to throw the spur-wheel 30 into engagement with the pinion 17 upon the shaft 15. When the shaft 26 is moved to a point at which the spur-wheel 30 does not mesh with the pinion 15, the teeth of the said spur-wheel will engage a pawl or stop 39, which is attached to the side of the turn-table, and the shaft 26 will thus be prevented from rotating.

To one of the side frame-bars 7 are secured bearings 40 for a shaft 41, having a crank 42 and a drum 43.

44 designates a rope, which is wound upon the drum 43, and the ends of which pass over a suitable guide-pulley 45 and to a wheel or disk 46, which is securely attached at 46^b to one of the uprights 21 of the folding extension-frame 20. The ends of the rope 44 are suitably connected and attached to the said disk 46 on diametrically-opposite sides of the latter by means of transverse pins 46^a. It will be seen that by manipulating the crank 42 to rotate the shaft 41 the extension-frame 20 may be extended from or folded upon the main frame 19, according to the direction in which the shaft 41 is rotated, the disk 46 being secured to said extension-frame axially on one of the hinge-pins 20^b, as will be seen by reference to Figs. 1 and 3 of the drawings.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of my invention will be readily understood. The machine is to be backed up to a thrashing-machine, from which motion may be transmitted in any suitable well-known manner to the endless carrier of my improved stacker, onto which the straw and chaff are delivered from the discharge end of the thrashing-machine. It will be seen that by means of the turn-table my improved stacker may be adjusted to deliver the straw to either side of the thrashing-machine. By manipulating the shafts 15 and 26 the stacker may be adjusted to deliver the straw at different elevations from the ma-

chine to suit the stack as it grows in size. The general construction of the device is very simple and inexpensive, and it may be easily manipulated and adjusted in the desired manner. The spring-tension device, comprising the spring 32, with its attachments, will serve at all times to keep the rope 34 taut, and it will impart to the entire machine a degree of flexibility which is held to be very desirable in this class of devices.

While I have in the foregoing described what I consider to be the preferred form of my invention, I desire it to be understood that I do not limit myself to the precise construction of details herein described, but reserve the right to any such changes and modifications as may be resorted to without departing from the spirit of my invention.

Having thus described my invention, what I claim is—

1. The combination of the carrying-truck, the turn-table, the supporting-frame hinged to the latter, the stacker-frame hinged to said supporting-frame, the extension-frame having uprights 21, a shaft 15, journaled upon the turn-table and having ropes 18 passing through suitable guides and to the uprights 21 upon the extension-frame, and a shaft 26, journaled independently upon the turn-table and having a rope, the ends of which pass through suitable guides and are attached to a cross-bar of the hinged supporting-frame, substantially as set forth.

2. The combination of the stacker-frame, the extension-frame hinged to the latter and having uprights at its lower end, the hinged supporting-frame, a windlass journaled upon the latter, a wheel or disk secured to one of the uprights of the extension-frame, and a rope wound upon the windlass and passing through suitable guides to the said wheel or disk, to which the ends of the said rope are attached, substantially as set forth.

3. The combination of the hinged supporting-frame, the side bars 11, having cross-bar 12 and shaft 13, carrying the sleeve 14, the stacker-frame hinged to the supporting-frame, mechanism for adjusting the supporting-frame, and a shaft journaled to the turn-table or base to which the supporting-frame is hinged and having ropes passing under the roller 14 and through suitable guides to uprights upon the sides of the stacker-frame, substantially as set forth.

4. The combination of the turn-table, the hinged supporting-frame, the stacker-frame hinged to the latter, a windlass-shaft journaled upon the turn-table, an upright having guide-pulleys at its upper end, a spring secured at the lower end of said upright and having a guide-pulley at its upper end, and a rope wound upon the windlass-shaft and having its ends passed through suitable guide-pulleys and attached to the hinged supporting-frame, one end of said rope being passed through the guide-pulleys at the upper end

of the post or upright and at the upper end of the spring mounted near the lower end of said upright, substantially as set forth.

5 5. The combination of the turn-table, the hinged supporting-frame, the stacker-frame hinged to said supporting-frame, the shaft 15, having spur-wheels 17, the shaft 26, having one end journaled in a sliding box 27 and provided with a spur-wheel 30, the connect-
10 ing-rod 28, the lever 29, the stop or detent 39,

and the ropes 18 and 34, and suitable guide-pulleys, all arranged and operating substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in 15 presence of two witnesses.

OTIS STAGE.

Witnesses:

P. A. JORAY,

WM. A. PEARCE.