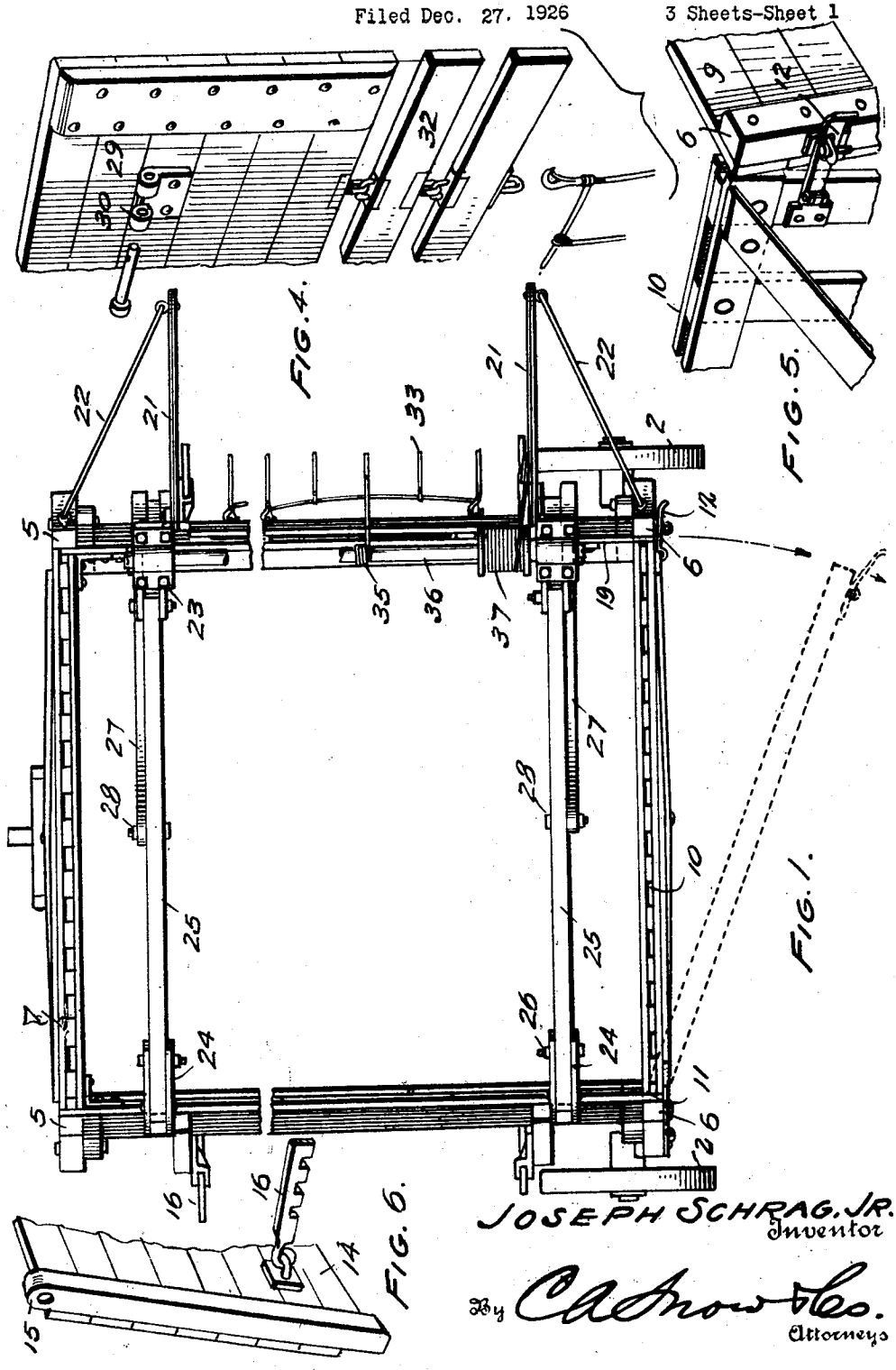
July 19, 1927. 1,636,650

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COMBINED GRAIN AND HAY STACKER

Filed Dec. 27, 1926 3 Sheets-Sheet 1



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FIG. 2.

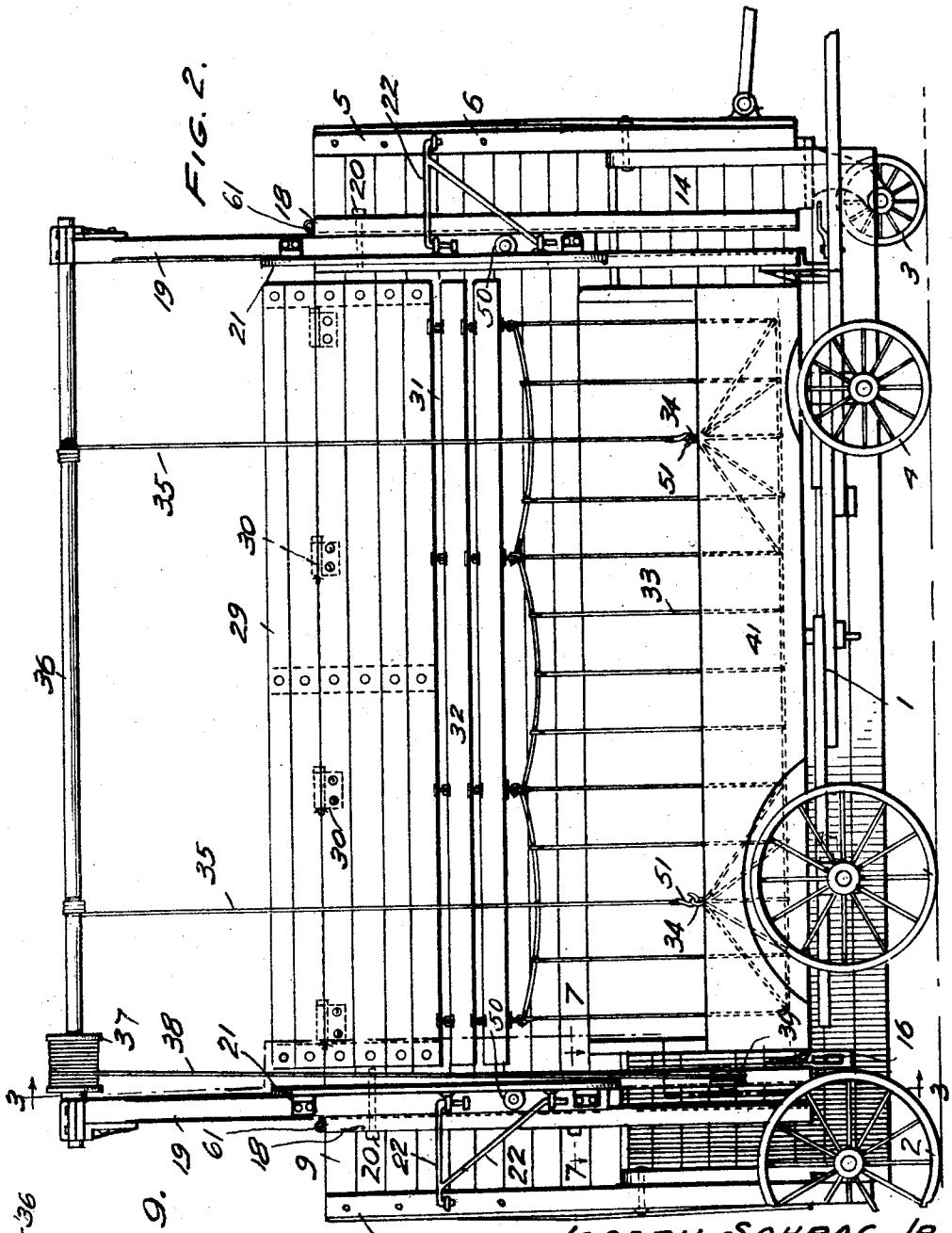
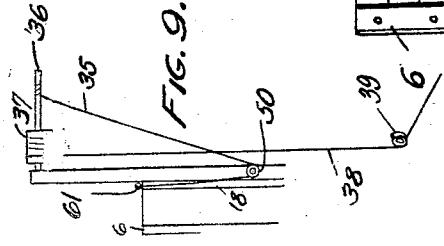


FIG. 9.



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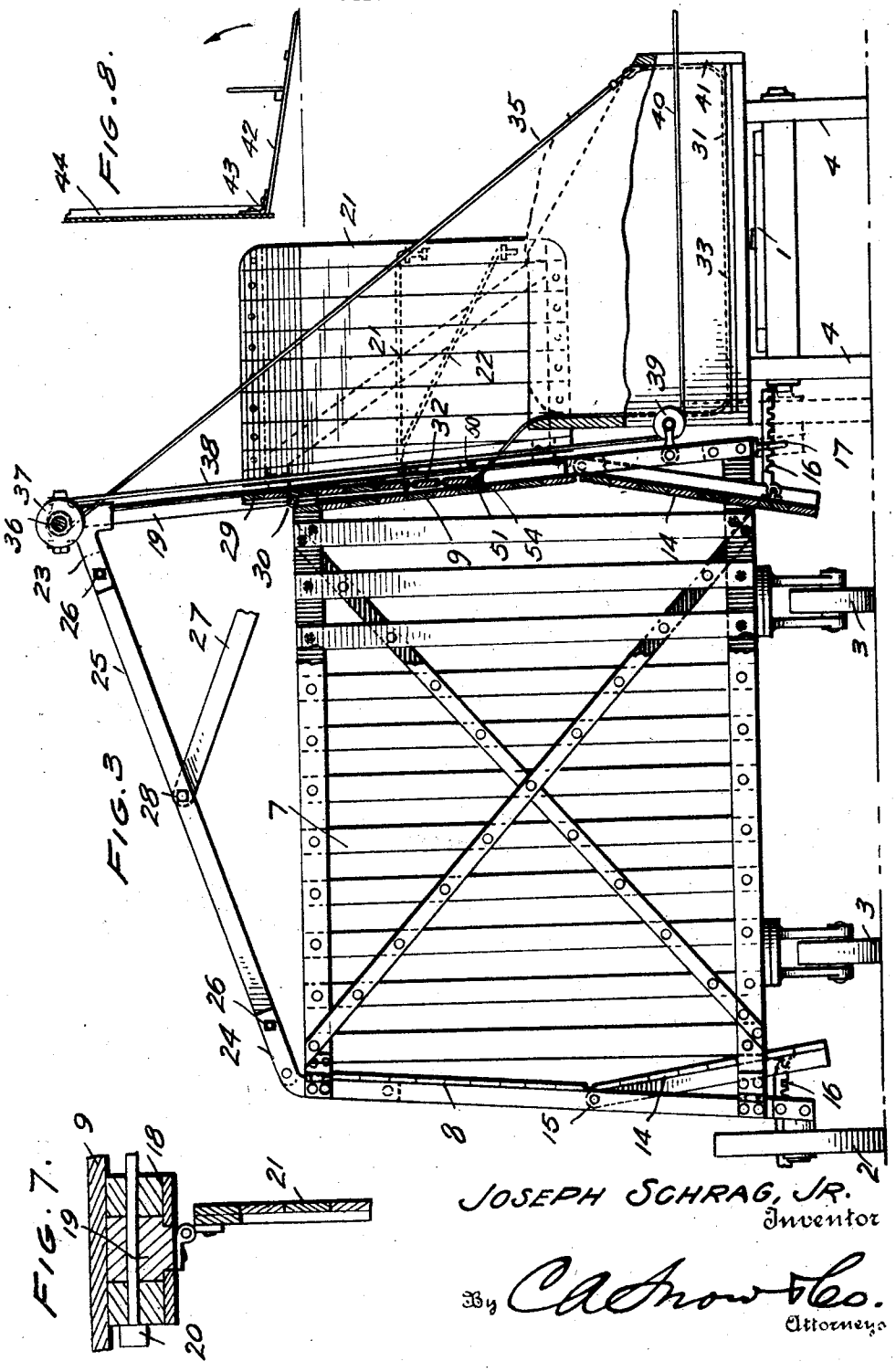


FIG. 8.

FIG. 3

FIG. 7.

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UNITED STATES PATENT OFFICE.

JOSEPH SCHRAG, JR., OF MOUND RIDGE, KANSAS.

COMBINED GRAIN AND HAY STACKER.

Application filed December 27, 1926. Serial No. 157,156.

This invention aims to provide novel means whereby hay, straw, grain or the like may be elevated out of a barge and formed into a stack.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the invention appertains.

With the above and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

In the drawings—

Figure 1 shows in top plan, a device constructed in accordance with the invention, parts being broken away;

Figure 2 is a side elevation;

Figure 3 is a section taken about on the line 3—3 of Figure 2;

Figure 4 is a fragmental perspective showing the tiltable table and attendant parts;

Figure 5 is a fragmental perspective showing a portion of the rear gate;

Figure 6 is a perspective showing a part of the movable sides;

Figure 7 is a sectional view taken about on the line 7—7 of Figure 2;

Figure 8 is a fragmental view illustrating a slight modication; and

Figure 9 is a diagrammatic view showing the arrangement of parts whereby the standards and parts carried thereby may be raised.

In carrying out the invention there is provided a vehicle which need not be discussed much in detail, because it may be made as desired. Let it suffice to say that the vehicle includes a frame 1 carrying two pairs of rear wheels 2, forward castor wheels 3, and a tongue truck 4. The frame of the vehicle carries front corner posts and rear corner posts 6. The front corner posts 5 are connected by a front wall 7, which is fixed. A fixed side wall 8 extends between the posts 5 and 6 at one side of the frame, and a similar fixed wall 9 extends between the posts 5 and 6 at the other side of the vehicle. A rear gate 10 is hinged at 11 to one of the rear posts 6 and is held closed against the other rear post 6 by a latch 12 that is shown in Figure 5 of the drawings.

Movable sides 14 are located below the fixed sides 8 and 9, the movable sides 14 being pivoted at their upper ends, as shown at 15, to the posts 5 and 6, so that the lower edges of the sides 14 can swing inwardly and outwardly. In order to hold the sides 14 in any position to which they may have been adjusted, props 16, preferably in the form of rack bars, are pivoted to the movable sides 14, as shown in Figure 6, the rack bars 16 being adapted to cooperate with keepers 17, on the frame work of the machine.

At one side of the vehicle, guides 18—18 are secured to the fixed side members 9. Standards 19 are mounted for vertical adjustment in the guides 18. In the operation of the machine, the standards 19 do not reciprocate in the guides 18 but are held at a fixed elevation, and in the position shown in Figure 2 of the drawings. Any suitable means may be provided for holding the standards 19 against downward movement in the guides 18. For instance, keeper pins 20, as shown in detail in Figure 7, may be inserted through the guides 18 and the standards 19. Pulleys 50 are mounted on the standards 19. Outstanding wings 21 are hinged to the standards 19 and are maintained in outstanding position by means of detachable braces 22 extended between the wings 21 and the posts 6 and 5 at one side of the machine. There are brackets 23 on the upper ends of the standards 19, and there are brackets 24, on the fixed member 8. Braces 25 are provided, and are detachably connected at 26 by bolts or the like, with the brackets 24 and 23, the standards 19 thus being reinforced against flexure or strain, transversely of the vehicle. Reinforcing bars 27 are provided, the upper ends of the bars 27 being detachably connected by means of bolts 28, with the intermediate portions of the braces 25, the lower ends of the reinforcing bars 27 being connected pivotally with the side member 9.

The numeral 29 marks a table which is hingedly mounted at 30 intermediate its ends on the upper edge of the fixed wall 9. To the lower end of the table 29 is connected a sling which is denoted generally by the numeral 31, the sling being flexible. The sling 31 includes slats 32 that are pivotally connect-

ed together, the uppermost slat being pivotally connected with the lower edge of the table 29, as shown in Figure 2. To the lowermost slat 32 is connected a flexible net 33 provided at its outer edge with eyes 34 adapted to be engaged releasably by hooks 51 on flexible elements 35, the flexible elements 35 being wound about a shaft 36 which is journaled at its ends on the upper ends of the standards 19. The shaft 36 carries a drum 37 which may be located wherever desired, along the shaft 36. About the drum 37 is wound a flexible element 38 which is carried downwardly and outwardly, as shown at 40, about a sheave 39 journaled on one of the guides 18, or located elsewhere.

In practical operation, the net 33 is detached from the slats 32 and is placed in a wagon or barge 41, the wagon then being loaded and being driven along the side of the stacker. The net 33 is connected at one side with the slats 32, and at the other side with the flexible elements 35. Then, when pull is imparted to the flexible element 38, in its horizontal portion 40, rotation will be imparted to the shaft 36, and the net 33 will be raised and carried upwardly between the wings 21, the wings preventing the load in the sling from being spilled out. As the net 33, along with the slats 32 is carried upwardly, the load ultimately is deposited on the platform or table 29 which moves over into a horizontal position, and then swings further on its hinged mounting 30, the load being dumped into a rectangular rack which is formed by the sides 8 and 9, the sides 14, the front wall 7, and the rear gate 10. When the desired amount of material has been stacked up as aforesaid, the latch mechanism 12 in Figure 5 may be cast loose, and the rear gate 10 may be opened, whereupon the stacker may be pulled away from the stack, leaving the stack standing on the ground.

The movable sides 14 may be inclined inwardly, more or less, to determine the shape of the stack at the bottom, the sides 14 being held in any position to which they may have been adjusted, through the instrumentality of the rack bars 16 and the keepers 17.

During the transportation of the machine, the bolts 26 may be detached from the brackets 23, and the bolts 28 may be detached from the reinforcing bars 27, the bars 27 being swung downwardly, and the braces 25 being swung downwardly. Then, if the keeper pins 20 be withdrawn from the guides 18, the standards 19 and all parts carried thereby, may be lowered. When the standards and the parts associated therewith, as aforesaid, the machine may be rolled into places of restricted height, such as beneath bridges, or into barns.

Figure 4 shows that the table 29 is detachably pivoted or hinged at 30 to the upper edge of the fixed side 9, and, consequently, the table 29 may be removed upon occasion. If desired, as shown in Figure 8, an inclined rack 42 may be hinged at 43 to any accessible part 44 of the stacker, at the side thereof. Then, the flexible elements 35 may be connected to the rack 42. The material may be dragged by a horse rake on the inclined rack 42, and by operating the flexible elements 35, the rack 42 may be swung as indicated by the arrow to dump the load into the stack. The sling 31, however, is, of course, the preferred instrumentality for charging or loading the stacker.

When it is desired to raise the standards 19, and parts carried thereby, into the position shown in Figure 2 of the drawings, then the flexible elements 35 are unhooked at 51 from the eyes 34 on the net 33, the flexible elements being rove upwardly over the pulleys 52 on the standards 19, as shown in Figure 9, the hooks 51 on the flexible elements 35 being engaged with eyes 61 on the frame. If, now, the flexible element 38 is pulled upon, rotation will be imparted to the shaft 36, the flexible elements 35 will be reeled upon the shaft, and the standards 19 and parts carried thereby will be raised into the position shown in Figure 2.

What is claimed is:—

1. In a device of the class described, a vehicle provided with a box-like rack open at the top and bottom, the rack comprising fixed sides, a front wall, a movable rear gate, movable sides mounted for swinging movement below the fixed sides, means for holding the gate releasably in closed position, means for holding the movable sides in adjusted positions, and means for dumping material within the box-like rack, over one of the fixed sides.

2. In a device of the class described, a vehicle provided with a box-like rack, standards mounted on the rack for raising and lowering, means for holding the standards in adjusted positions, wings carried by the standards and projecting outwardly from the standards, a sling mounted to move between the wings, means for connecting the inner edge of the sling with the vehicle, and means mounted on the standards and connected with the sling for operating the sling.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

JOSEPH SCHRAG, JR.