No. 666,715. Patented Jan. 29, 1901.

J. C. TUNNICLIFF.

DEVICE FOR EXHIBITING OPERATION OF CORN PLANTERS.

(Application filed Sept. 27, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

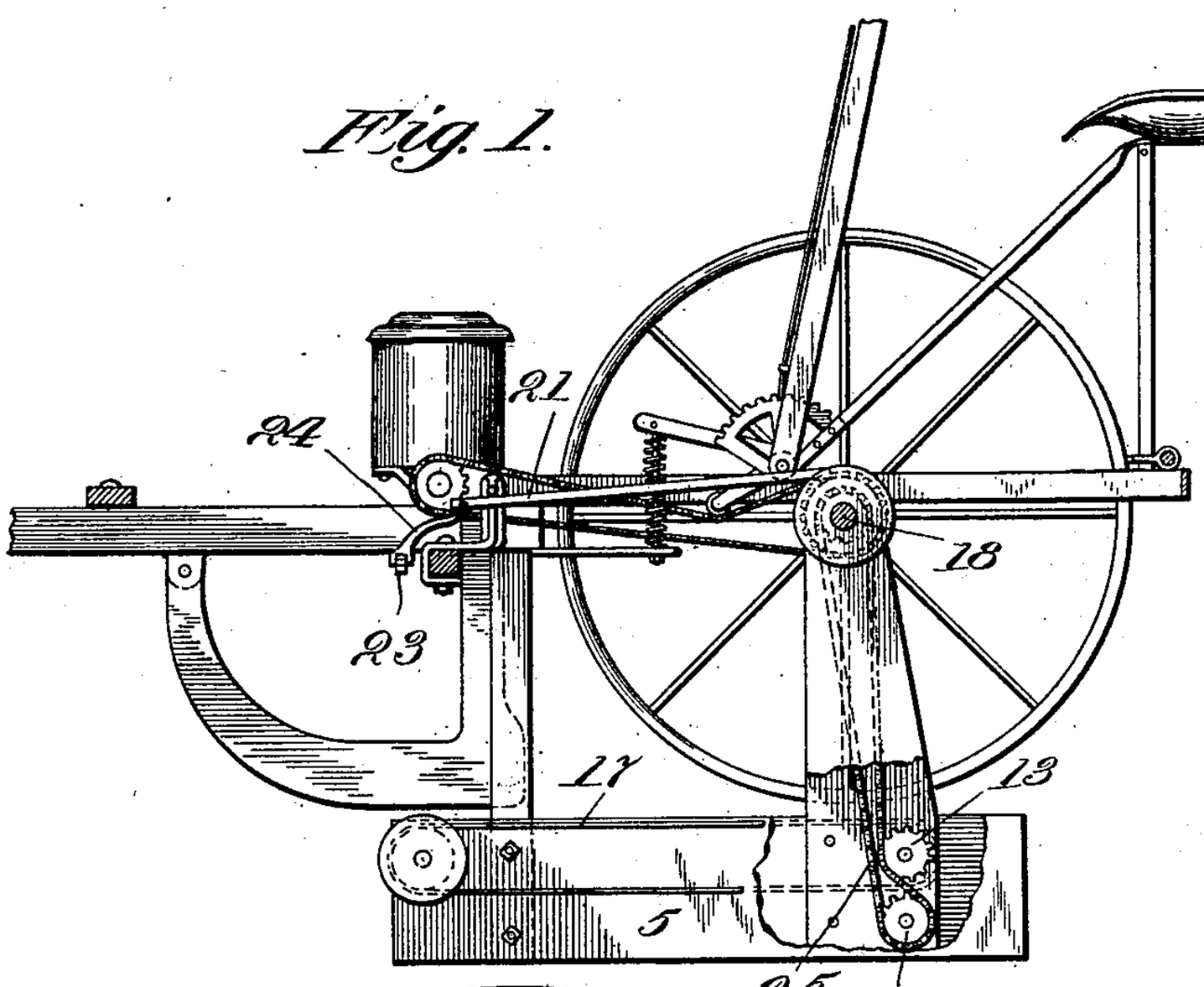
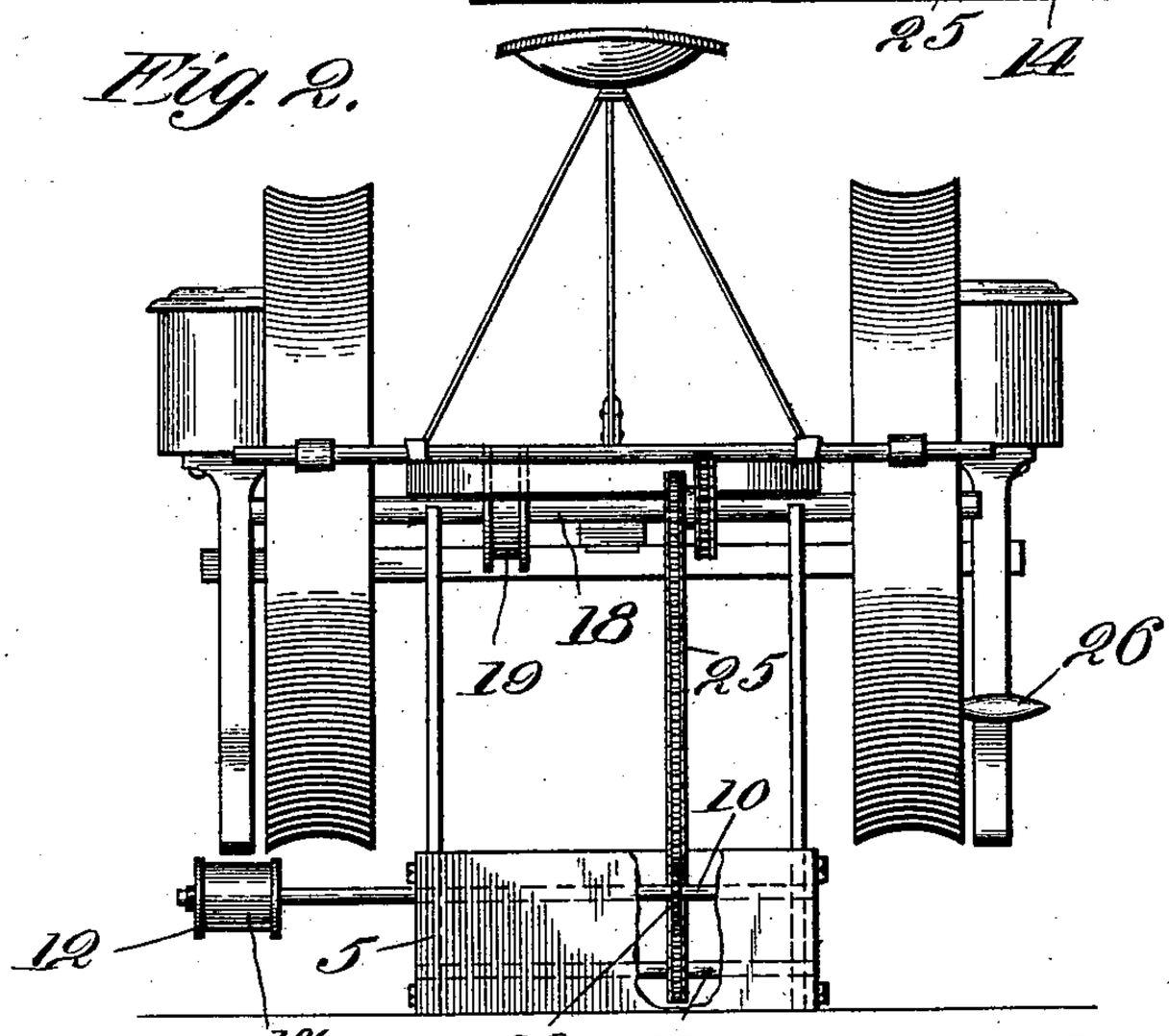


Fig. 2.



Witnesses:
Ira D. Perry
G. A. Pauberschmidt

Inventor:
John C. Tunnicliff
by Bond Adams Pickard & Jacobs
Attys.

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Fig. 3.

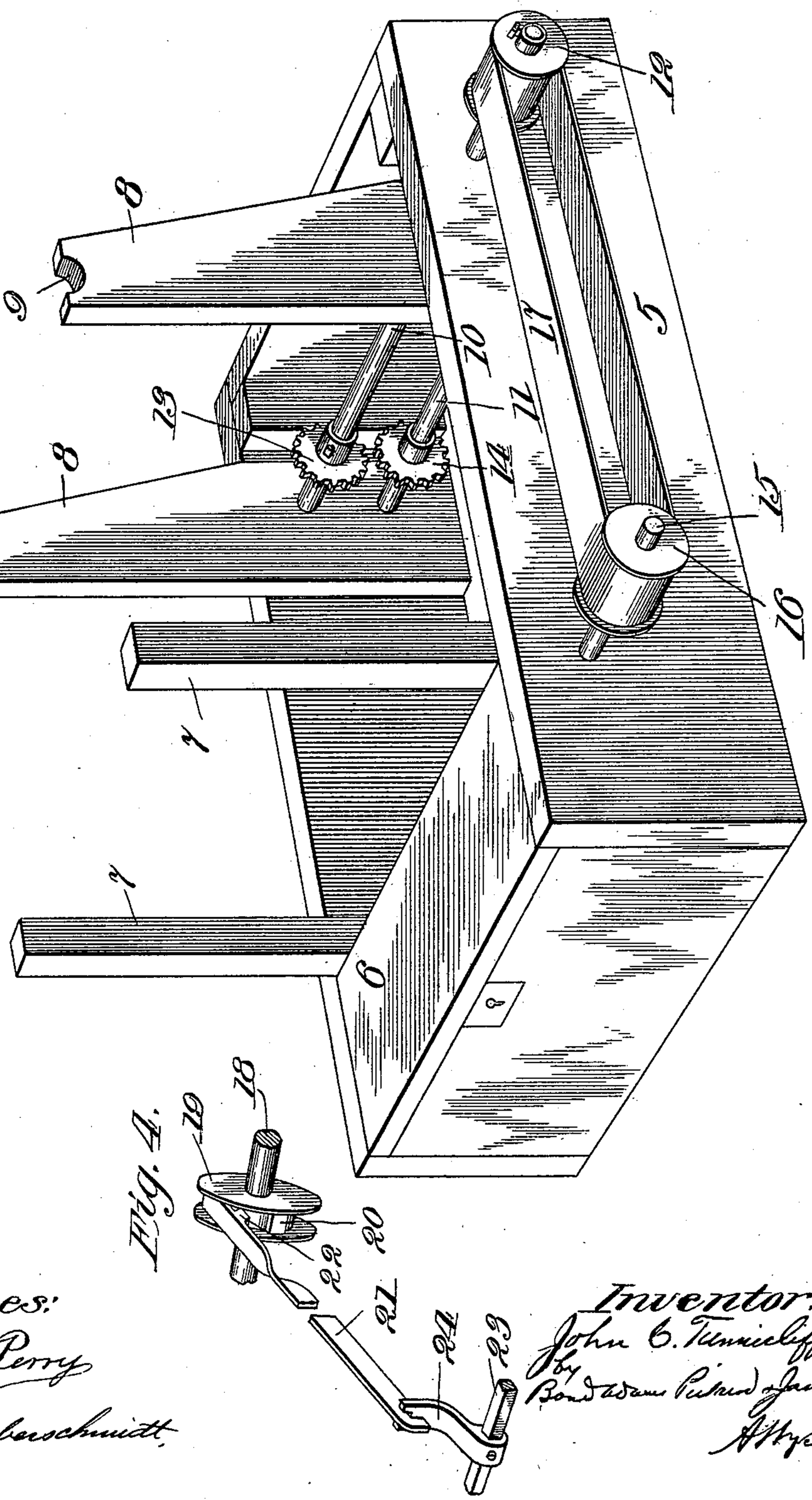

Fig. 4.

Witnesses:
Ira D. Perry
G. A. Taubenschmidt

Inventor:
John C. Tunnicliff
by Bond Adams Pickard & Lawton
Attys.

UNITED STATES PATENT OFFICE.

JOHN C. TUNNICLIFF, OF MOLINE, ILLINOIS, ASSIGNOR TO THE D. M. SECHLER CARRIAGE COMPANY, OF SAME PLACE.

DEVICE FOR EXHIBITING OPERATION OF CORN-PLANTERS.

SPECIFICATION forming part of Letters Patent No. 666,715, dated January 29, 1901.

Application filed September 27, 1900. Serial No. 31,298. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. TUNNICLIFF, a citizen of the United States, residing at Moline, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Devices for Exhibiting the Operation of Corn-Planters, of which the following is a specification, reference being had to the accompanying drawings.

It is highly desirable to be able at exhibitions in warerooms and other places to exhibit as fully and clearly as possible the operations of all of the parts of a corn-planter without moving the machine away from the place assigned to it. As such space is necessarily very limited, it has not heretofore been found practicable in such situations to satisfactorily exhibit the complete working of the machine.

The object of my invention is to provide means whereby such complete working can be exhibited without the machine having to be moved about. I accomplish this object by means of the devices shown in the accompanying drawings and hereinafter fully described.

That which I believe to be new will be pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a stand designed to support a corn-planter, showing also thereon a well-known type of corn-planter, one wheel of which is removed. Fig. 2 is a rear view of the same. Fig. 3 is a perspective view of the stand; and Fig. 4 is a perspective view of the means for operating the rock-shaft of the planter through the turning of the axle of the planter, whereby the usual valves are opened to drop the corn. In Figs. 1 and 2 the lower part of the stand is shown as broken away in order to illustrate some of the operating mechanism.

Referring to said drawings, 5 indicates the base of the stand, which in the construction shown is made rectangular in shape and box-like in appearance. At its forward end is formed a chest for the reception of tools, repairs, &c., and which is closed by a cover 6. Near the forward end of the base 5 and in the construction shown immediately in rear of the chest mentioned are two oppositely-located uprights 7 7, securely fastened in place and adapted to support the usual main frame of a planter. Near the rear end of the base are secured two other oppositely-located uprights 8 8, upon which the axle of a planter is adapted to be supported. A suitable bearing 9 is shown as formed in the end of each upright 8 for said axle to rest in.

10 11 indicate shafts extending across the base near the rear end thereof, one located above the other and the upper one, 10, projecting through one wall of the base and having secured to such projecting end a small drum 12.

13 and 14 are sprocket-wheels secured, respectively, to the shafts 10 and 11.

15 indicates a short shaft secured to and projecting from the side of the base 5 near the forward end thereof and in substantially the same horizontal plane with the projecting shaft 10.

16 indicates a small drum similar to the drum 12, but instead of being secured to its shaft, as is the drum 12, is free to turn thereon.

17 indicates an endless belt passing over the two drums 12 and 16.

When a corn-planter is to be exhibited and its manner of working demonstrated, it is placed on the stand with its axle resting in the bearings 9 of the upright 8 and the side bars of its main frame resting upon the ends of the uprights 7. When so supported, its carrying-wheels and runners will be clear of the floor or ground.

Referring now to the operation of the corn-planter when in position on the stand, it will be sufficient to refer by reference-numerals only to those parts of the machine directly concerned in the operation, for, as stated, the machine shown is a well-known type.

18 indicates the axle, from which through suitable mechanism the seed-plates in the usual seedboxes are rotated. Secured upon such axle is a grooved wheel 19, in the groove of which is formed a projection 20. (See Fig. 4.)

21 indicates a bar of a width to adapt it to rest within the groove of the wheel 19 and having upon its face, near the end that lies in the grooved wheel, a lug 22. The forward end of this bar 21 is connected with the rock-shaft that extends across the machine and operates the valves that control the discharge of corn through the usual seed-tubes, such

rock-shaft (indicated by 23) being ordinarily operated by the check-rower wire. As shown, the connection of the bar 21 with the said rock-shaft is made through a short lever 24, securely fastened to the rock-shaft, the bar 21 having a notch near its end that fits over the short lever 24.

25 indicates a sprocket-chain that passes over a sprocket-wheel on the axle 18 of the planter and over the sprocket-wheel 14 in the base 5 of the stand. This chain also engages the other sprocket-wheel 13 and so drives the shaft 10 and the small drum 12 on its projecting end as to cause the belt 17 to move in the proper direction, such proper direction of course being opposite to that of the carrying-wheels when such wheels are turned as they would turn if the planter were moving forward. In the construction shown for accomplishing this the lower sprocket-wheel 14 is simply used as an idler in order to bring the proper side of the chain 25 into contact with the sprocket-wheel 13, that is fast on its shaft 10. In order to better operate the machine when on the stand, I removably clamp to one of the wheels of the planter a handle, such as 26.

With the parts in position as shown in Figs. 1 and 2 upon turning the wheels in the same direction as if the machine were being drawn along the ground the projection 20 in the grooved wheel 19 will strike against the lug 22 on the bar 21, thereby forcing said bar forward and through the short lever 24 causing the rock-shaft 23 to turn and opening the valves in the seed-tube, thereby illustrating the dropping of the corn as it is performed in actual use by means of the usual check-rower wires, for it is to be understood that the grooved wheel 19 is to be of such size as to cause the rock-shaft to be operated at the same intervals of time as when operated in a field in the usual way, and, if required, more than one lug, such as 20, can be provided on the wheel 19. After the limit of the forward movement of the bar 21 has been reached the projection 20 will as the wheel continues to turn disengage itself from the lug 22 and the usual springs for that purpose will reversely rock the rock-shaft 23, forcing back also, of course, the bar 21, the end of which will, however, remain in the groove of the wheel, so that its lug can be again engaged by the projection 20 on the next revolution of the wheel. The length of the forward movement of the bar 21 will be regulated by the height or thickness of the lug 22, for as the wheel 19 continues to turn after its projection 20 has engaged the lug 22 the rear end of the bar 21 of course contacts with the rear portion of the projection 20, causing the bar to be lifted and disengaging its lug 22 from the projection 20.

By reference to Fig. 2 it will be seen that the belt 17 comes directly under the runner, and hence corn dropping through the tube at the rear of such runner will fall directly upon the belt and be carried back. This construction permits an observer to see how much corn is dropped, the regularity of the dropping, &c. The belt is shown at but one side of the machine, which is sufficient for ordinary exhibiting purposes; but one can be used on each side, if so desired.

When the machine is removed from the stand, the removal of the grooved pulley 19, bar 21, and chain 25 can be very quickly effected, when the machine will be ready for use in the usual way.

That which I claim as my invention, and desire to secure by Letters Patent, is—

1. In a seeding-machine, the combination with a machine frame having carrying-wheels, of seed-dropping mechanism, means actuated by the rotation of one of the wheels for operating the seed-dropping mechanism, and a supporting-stand adapted to support the machine-frame in an elevated position with the wheels clear of the ground, substantially as described.

2. In a seeding-machine, the combination with a machine-frame having carrying-wheels, of check-rower seed-dropping mechanism, means actuated by the rotation of one of the wheels for operating the seed-dropping mechanism, and a supporting-stand adapted to support the machine-frame in an elevated position with the wheels clear of the ground, substantially as described.

3. The combination with a check-row corn-planter provided with a rock-shaft for operating seed-delivering valves, of a bar connected with said rock-shaft, means on the axle of the machine for intermittently moving said bar, and means for supporting the planter in a raised position, substantially as and for the purpose specified.

4. The combination with a check-row corn-planter provided with a rock-shaft for operating seed-delivering valves, of a bar connected with said rock-shaft, a grooved wheel on the axle of the machine into the groove of which the said bar is adapted to rest, a projection in said groove adapted to engage said bar to intermittently operate said bar and rock-shaft, and means for supporting the planter in a raised position, substantially as and for the purpose specified.

5. The combination with a check-row corn-planter provided with a rock-shaft for operating seed-delivering valves, of a lever secured to said rock-shaft, a bar removably attached to said lever, a grooved wheel on the axle of the machine into the groove of which the said bar is adapted to rest, a projection in said groove adapted to engage said bar to intermittently operate said bar and rock-shaft, and means for supporting the planter in a raised position, substantially as and for the purpose specified.

6. The combination with a stand adapted to support a seeding-machine so that the wheels thereof are clear of the ground, of an endless carrier located at one side of the stand, and

means for moving said carrier, substantially as and for the purpose specified.

7. The combination with a stand adapted to support a seeding-machine so that the wheels thereof are clear of the ground, of a carrier located at one side of the stand and adapted to receive seed from a seeding-machine on the stand, and means adapted to be connected to a seeding-machine supported with the wheels clear of the ground, for moving said carrier, substantially as and for the purpose specified.

8. A stand for exhibiting the working of a seeding-machine, comprising a platform, uprights thereon having bearings on their upper ends adapted to receive the axle of the machine, a pair of uprights forward of the said axle-supporting uprights and adapted to receive and hold the forward portion of the machine, an endless carrier at one side of the machine, and means adapted to be operated from the machine for moving said carrier, substantially as described.

9. As an improvement in means for exhibiting the operation of corn-planters, the combination with a corn-planter provided with a rock-shaft for operating the seed-delivering valves, of a bar connected with said rock-shaft, a grooved wheel on the axle of the machine, into the groove of which the said bar is adapted to rest, and a projection in said groove adapted to engage said bar to intermittently operate said bar and rock-shaft as the said axle is turned, substantially as and for the purpose specified.

10. As an improvement in means for exhibiting the operation of corn-planters, the combination with a corn-planter provided with a rock-shaft for operating the seed-delivering devices, of a bar connected with said rock-shaft, a wheel on the axle of the machine, with which wheel said bar is adapted to engage, and a projection carried by said wheel and adapted to engage said bar to intermittently operate said bar and rock-shaft as the said axle is turned, substantially as and for the purpose specified.

11. The combination of a stand adapted to support a seeding-machine, a carrier, means for moving said carrier, seed-dropping mechanism mounted on said stand in position to discharge upon said carrier, and means for operating said seed-dropping mechanism, substantially as described.

12. The combination of a stand adapted to support a seeding-machine, a carrier, seed-dropping mechanism mounted on said stand in position to discharge upon said carrier, and interdependent means for simultaneously operating said seed-dropping mechanism and said carrier, substantially as described.

JOHN C. TUNNICLIFF.

Witnesses:
J. H. SAMUEL,
MORRIS GEISMAN.