

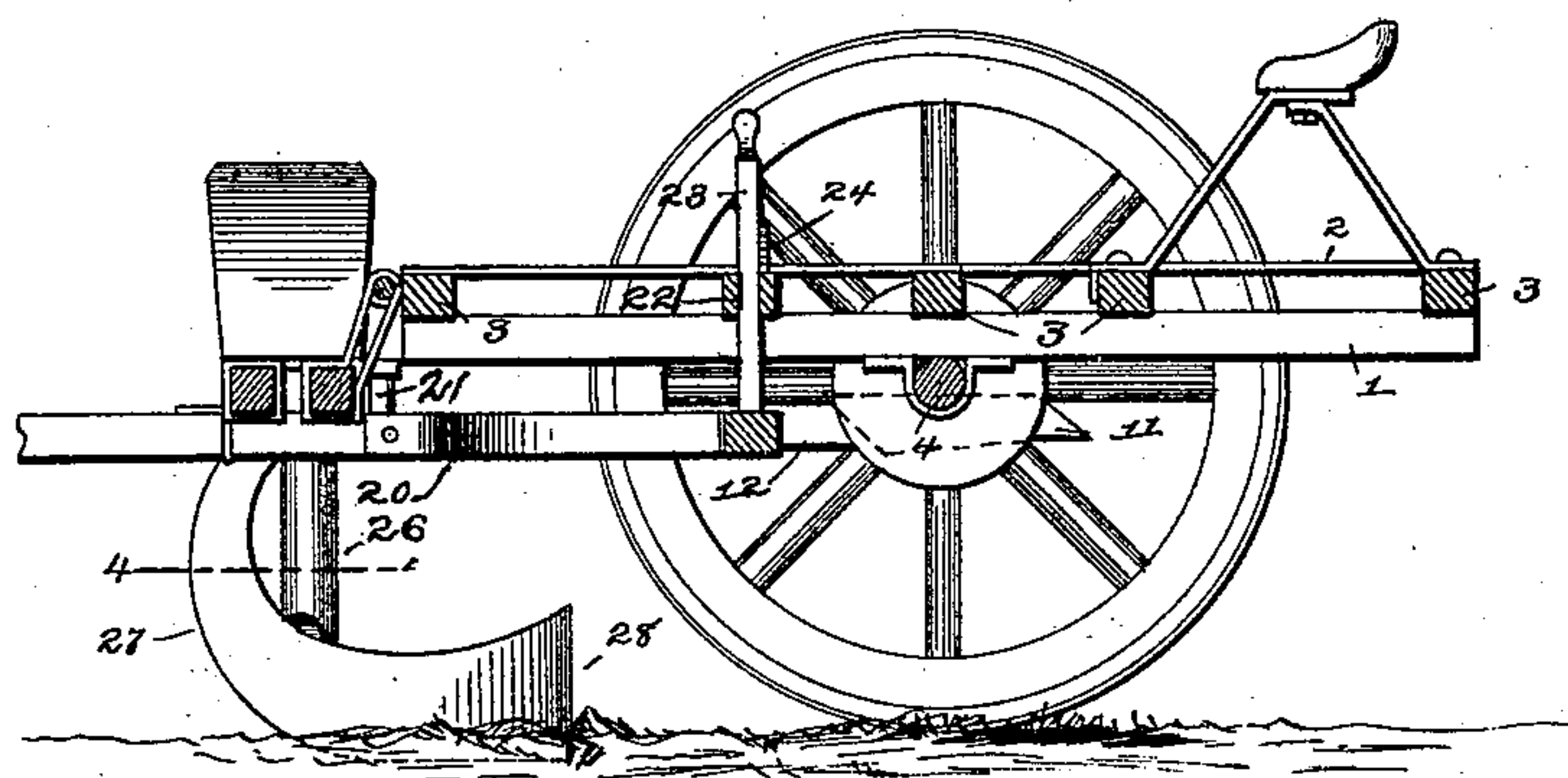
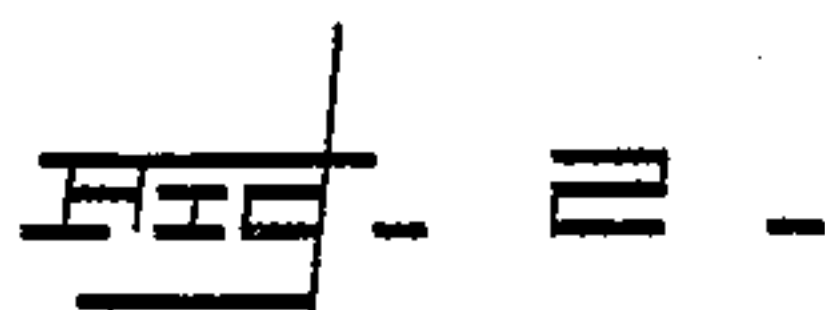
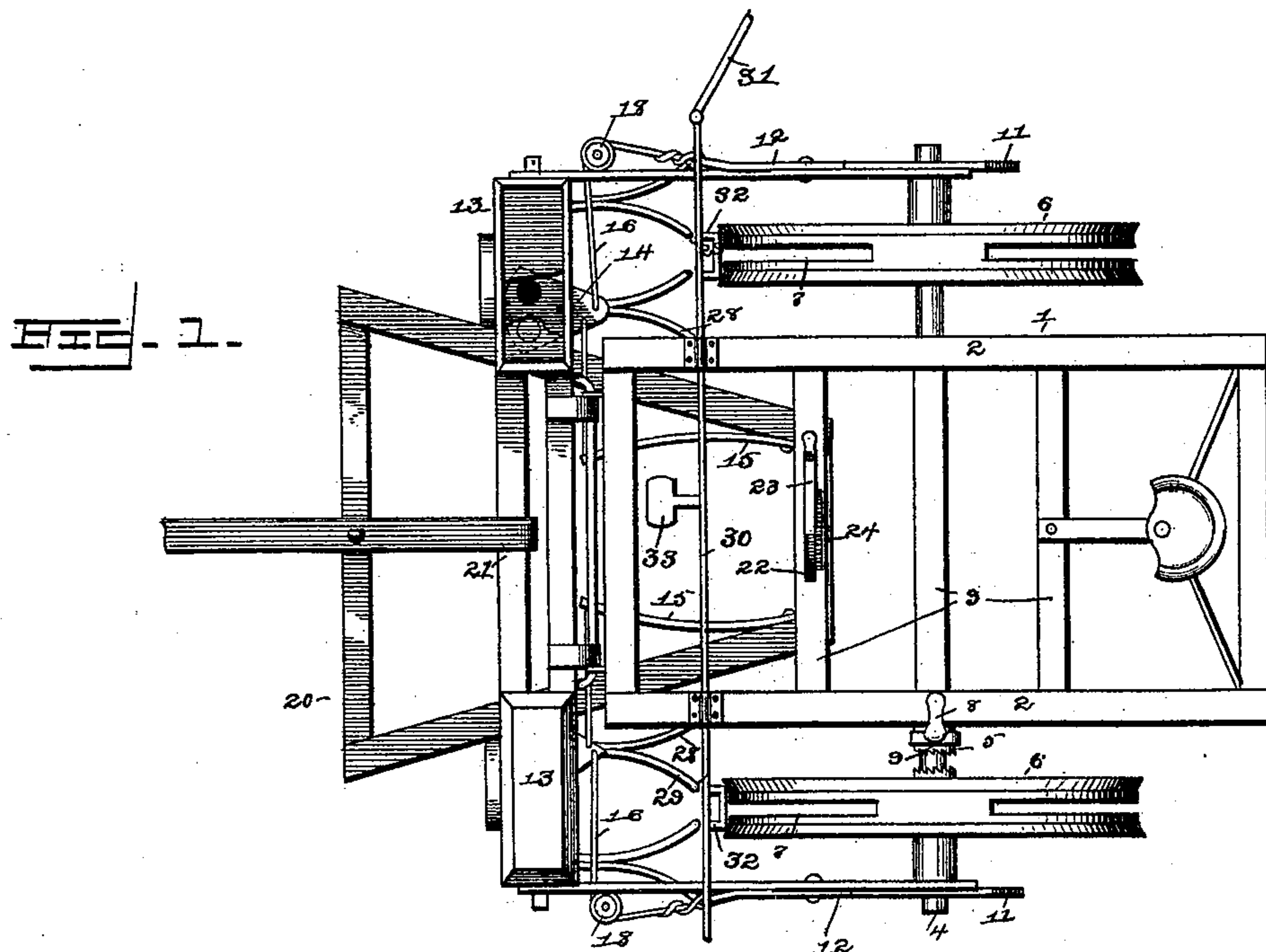
(No Model.)

2 Sheets—Sheet 1.

A. WENZEL.
CORN PLANTER.

No. 465,402.

Patented Dec. 15, 1891.



Witnesses:

Inventor

Adam Wenzel.

E. S. Duwall Jr.
W. S. Duwall.

By *his* Attorneys,

CA Snow & Co

(No Model.)

2 Sheets—Sheet 2.

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FIG. 5.

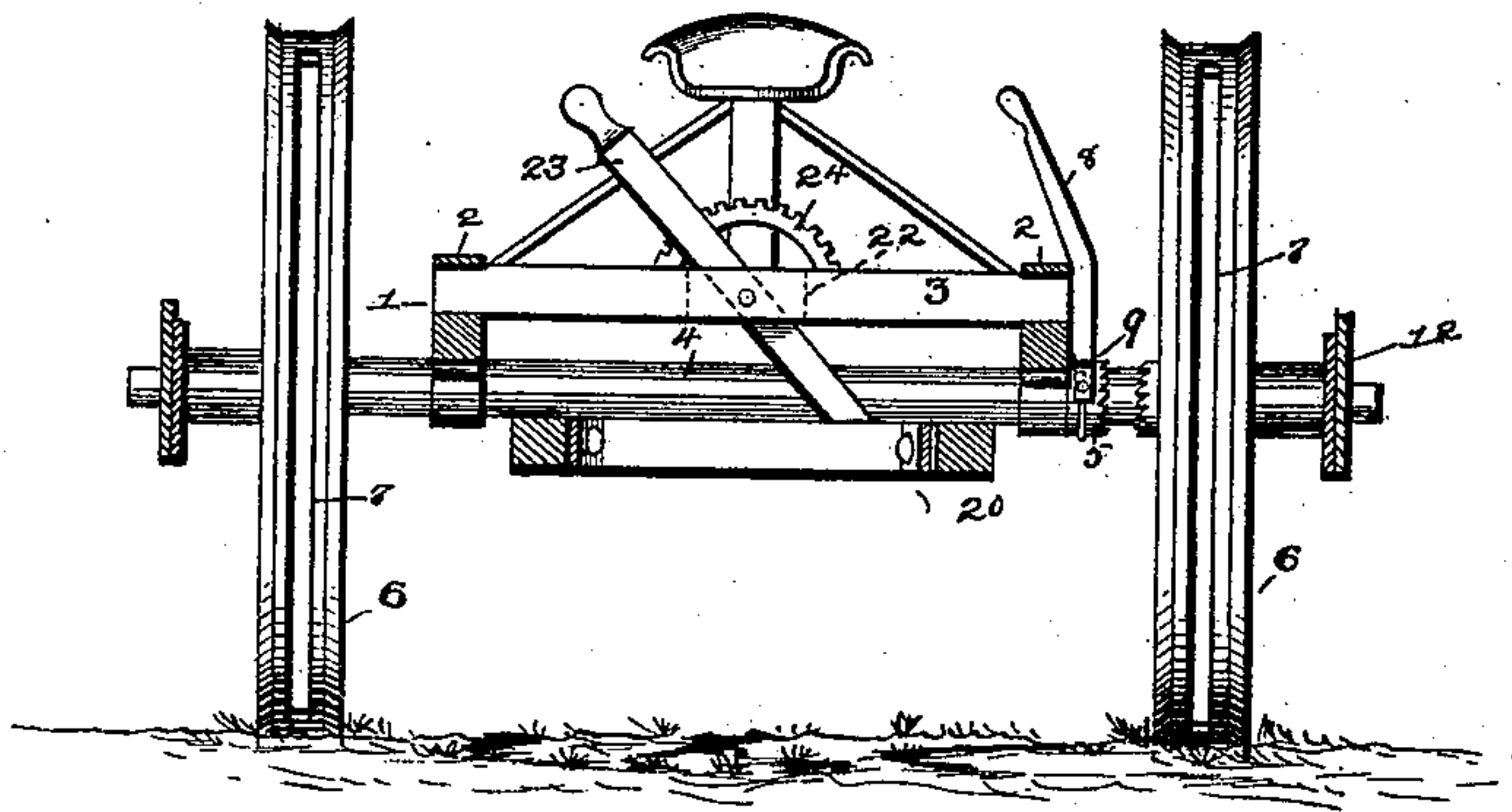


FIG. 3.

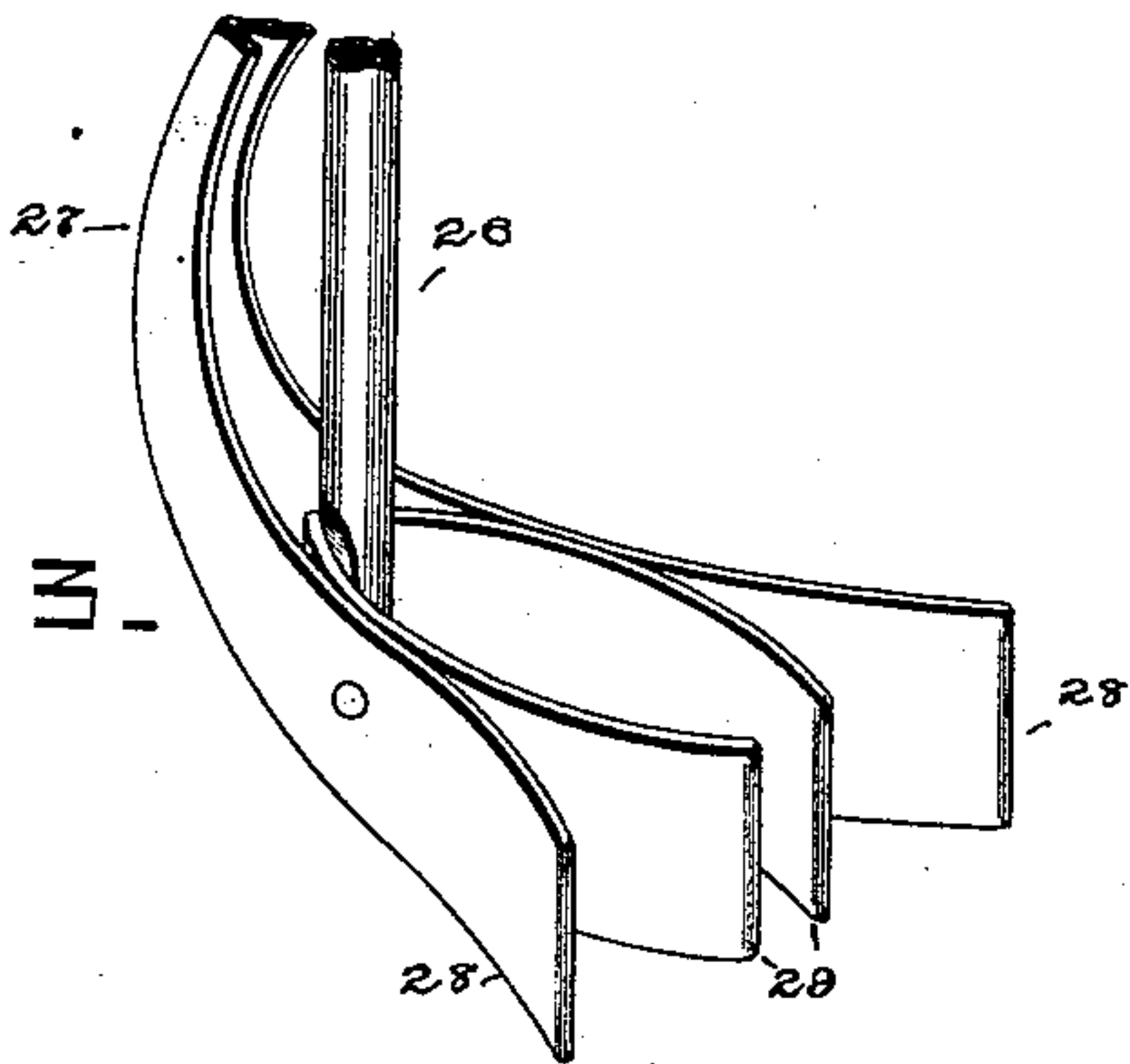
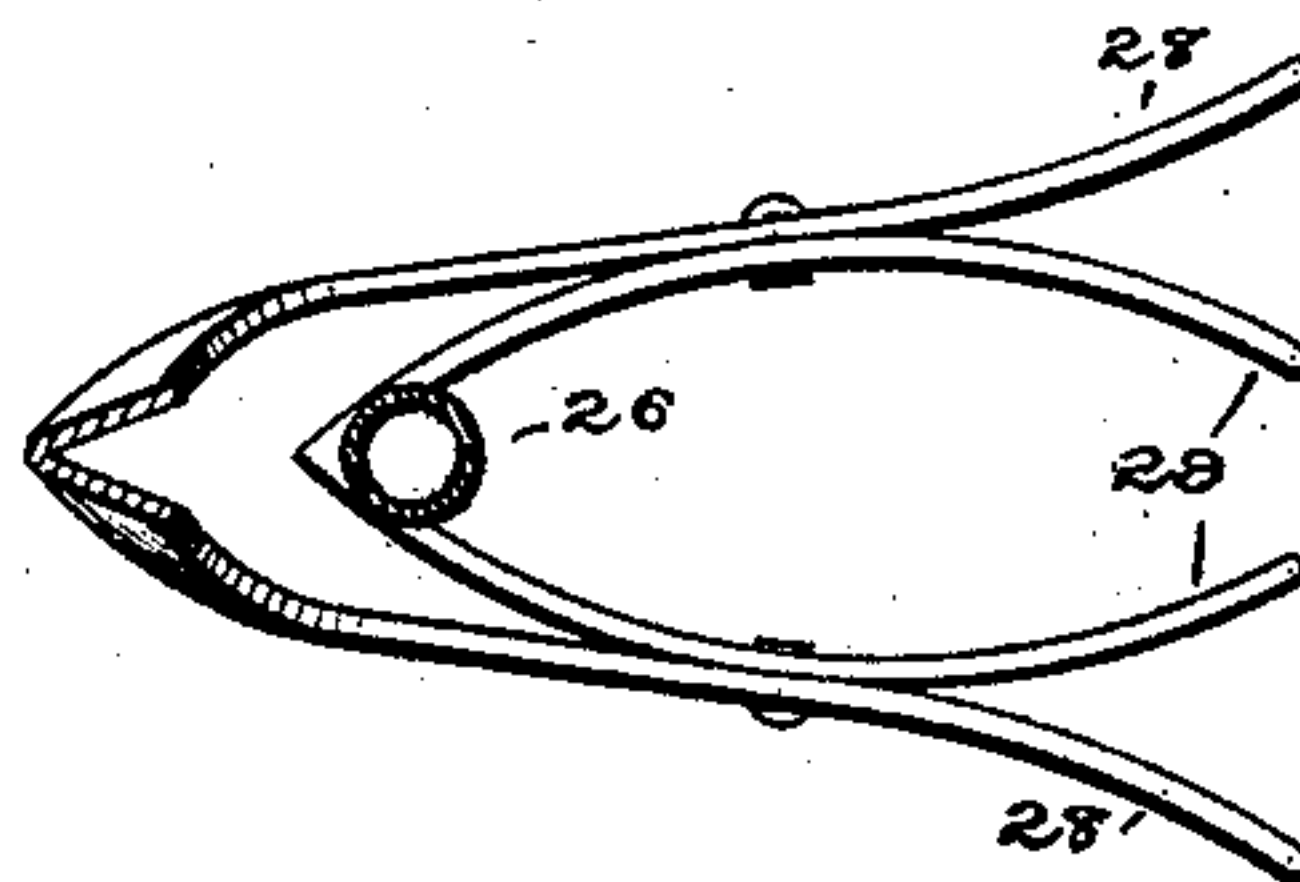


FIG. 4.



Witnesses

E. S. Duwall Jr. By his Attorneys,
W. S. Duwall.

Inventor

Adam Wenzel.

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

ADAM WENZEL, OF DAKOTA, NEBRASKA.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 465,402, dated December 15, 1891.

Application filed August 8, 1891. Serial No. 402,110. (No model.)

To all whom it may concern:

Be it known that I, ADAM WENZEL, a citizen of the United States, residing at Dakota, in the county of Dakota and State of Nebraska, have invented a new and useful Corn-Planter, of which the following is a specification.

This invention relates to improvements in corn-planters, and has particular reference to an improvement upon United States Patent granted me January 21, 1890, and bearing No. 419,807.

The objects of my invention are to improve the shoe of the planter, so as to avoid the necessity of employing the fenders located at the front ends of the shoes in the patent above referred to; to adapt the shoe to pass over cornstalk-roots and other obstructions and to cover the corn as planted; to provide for the raising and lowering of the planting mechanism carrying the shoes; to provide means for throwing the planting mechanism into and out of operative connection with the driving mechanism; to provide a convenient means for marking the rows, and, withal, to provide a cheap and simple construction and easily-operated planter.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a plan of a corn-planter constructed in accordance with my invention. Fig. 2 is a vertical longitudinal section. Fig. 3 is a detail in perspective of one of the shoes. Fig. 4 is a cross-section on the line 4 4 of Fig. 2. Fig. 5 is a transverse section taken at one side of the axle.

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

1 designates a rectangular frame comprising opposite side bars 2 and a series of transverse bars 3. Bearings formed upon the under side of the frame loosely receive the journal or axle 4, and the latter outside of the frame and near its ends has loosely mounted thereon ground-wheels 6. The peripheries of the ground-wheels are provided with slots or openings 7, each of which is nearly equal in length to half the circumference of the wheel. These openings constitute markers, and will

leave hills at intervals, indicating the points of planting. The hub of one of the wheels, or it may be both, is provided with teeth, and the same are designed to be engaged by the toothed collar or sleeve 5, that is mounted for loose reciprocation upon the axle between the wheel and frame-work.

8 designates a lever bifurcated at its lower end, as at 9, to embrace the sleeve 5, and having its bifurcations pivoted at diametrically-opposite sides to the sleeve. By manipulating the lever 8 it will be seen that the sleeve may be thrown into and out of engagement with the teeth of the hub of the wheel, and by reason of the fact that said sleeve is non-rotatable upon the axle, but simply adapted to slide thereon, said axle will be caused, when such engagement is effected, to rotate with the wheel. In turning at the ends of rows, however, the sleeve is thrown out of engagement, and hence the seeding mechanism remains non-operative during such period.

Upon the ends of the axle are located diamond-shaped cams 11, and the same have their opposite ends successively brought into contact with and oscillate a pivoted lever 12, one of which is located at each side of the frame. The seed boxes or hoppers 13 are provided with oscillating cut-offs or feed-valves 14, which are drawn inwardly or to a closed position by means of springs 15. Wires 16 lead from the ends of the oscillating levers or arms 12, pass around the guide-pulleys 18, and are secured each to the rear end of a vibrating seed-valve heretofore mentioned, so that as the machine moves the vibrations of the levers 12 will serve to draw the seed-valves in one direction, and after their release the springs 15 serve to draw them in the opposite direction, thus cutting off the supply. Hence the planter, as in the patent above referred to, drops the corn at intervals.

20 designates a front substantially V-shaped runner-frame, the same being loosely supported at its center, as indicated at 21, to the front end of the wheel-frame or frame-work 1. A slot 22, formed in one of the transverse bars 3, directly over the rear end of the frame 20, has pivoted therein a lever 23, the lower end of which depends below the slot and bears upon the rear end of the frame 20. By manipulating the lever the rear end, and

consequently the front end, of the frame 20 may be raised or lowered, all for a purpose hereinafter apparent. A toothed sector 24, located upon the bar 3, serves to lock the lever in any of its adjusted positions. Such lever takes the place of the thumb-screw shown in the patent referred to, and, while serving the same function, will be found much more convenient.

10 The seed-hoppers 13 are supported upon the runner-frame 20, and from the same depends the seed-tubes 26. The shoes 27 at the lower ends of the tubes comprise each a pair of rearwardly-diverging side plates 28, and have their front ends converged and upwardly and rearwardly disposed and joined to the tubes 26 at their intersection with the frame 20. Such divergence upon the part of the side plates 28 permits cornstalk-roots and other obstacles with which the planter is liable to meet to pass freely between the same, and I am enabled to omit the fenders shown in the patent above referred to and located in front of the shoe. Between the rear diverging ends of the plates 28 I locate a pair of curved converging plates 29, the same extending slightly in rear of the plates 28, and by their formation and location are designed to cover the seed dropped.

30 From the foregoing description it will be seen that I have made the following improvements upon my previous patent, namely: the provision of a shoe adapted to pass obstructions and to cover the corn as planted, the provision of a suitable raising and lowering means for the front frame that carries the seed mechanism, whereby the shoes may be set to run shallow or deep, and have also provided a convenient means for accurately marking the ground, all of which construc-

tion is intended to supersede corresponding mechanisms comprised in the construction shown and described in the patent above referred to. A rod 30 is mounted transversely in the frame-work in front of the wheels and at one end carries a marker-bar 31 and opposite the wheels scrapers 32, said rod being adapted to be rocked by the foot of the driver, applied to a lever 33, which movement applies the said scrapers to the wheels.

Having described my invention, what I claim is--

1. In a corn-planter, the shoe comprising the opposite diverging side plates and between the same the opposite converging covering-plates, combined with the seed-tube, substantially as specified.

2. The combination, with the corn-planter frame, of the hopper, the depending seed-tube, and the shoe consisting of the opposite side plates converged at their front ends and upwardly disposed and connected with the seed-tube at its intersection with the frame-work, substantially as specified.

3. In a corn-planter, the combination, with the wheel-frame comprising cross-bars, of a front runner-frame pivoted thereto and carrying the planter mechanism, a lever pivoted in a slot in the cross-bar of the wheel-frame and at its lower end bearing on the rear end of the runner-frame, and a notched locking-bar mounted adjacent to the slot and adapted to engage the lever, substantially as specified.

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

ADAM WENZEL.

Witnesses:

J. L. DENHAM,
HENRY NIEBUHR.