

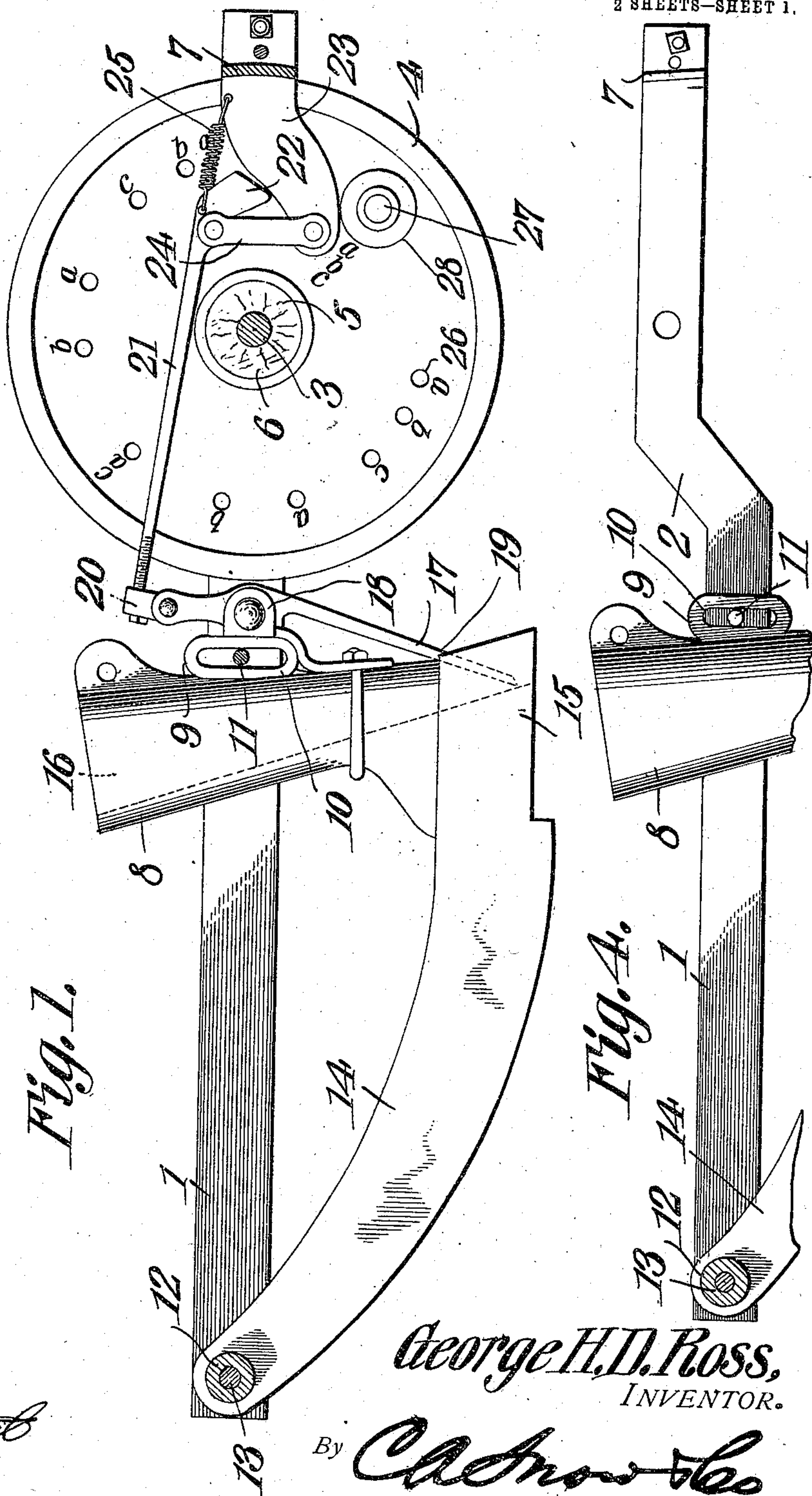
No. 840,713.

G. H. D. ROSS.  
BEET SEEDER.

PATENTED JAN. 8, 1907.

APPLICATION FILED AUG. 7, 1906.

2 SHEETS—SHEET 1.



WITNESSES:

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George H. D. Ross,  
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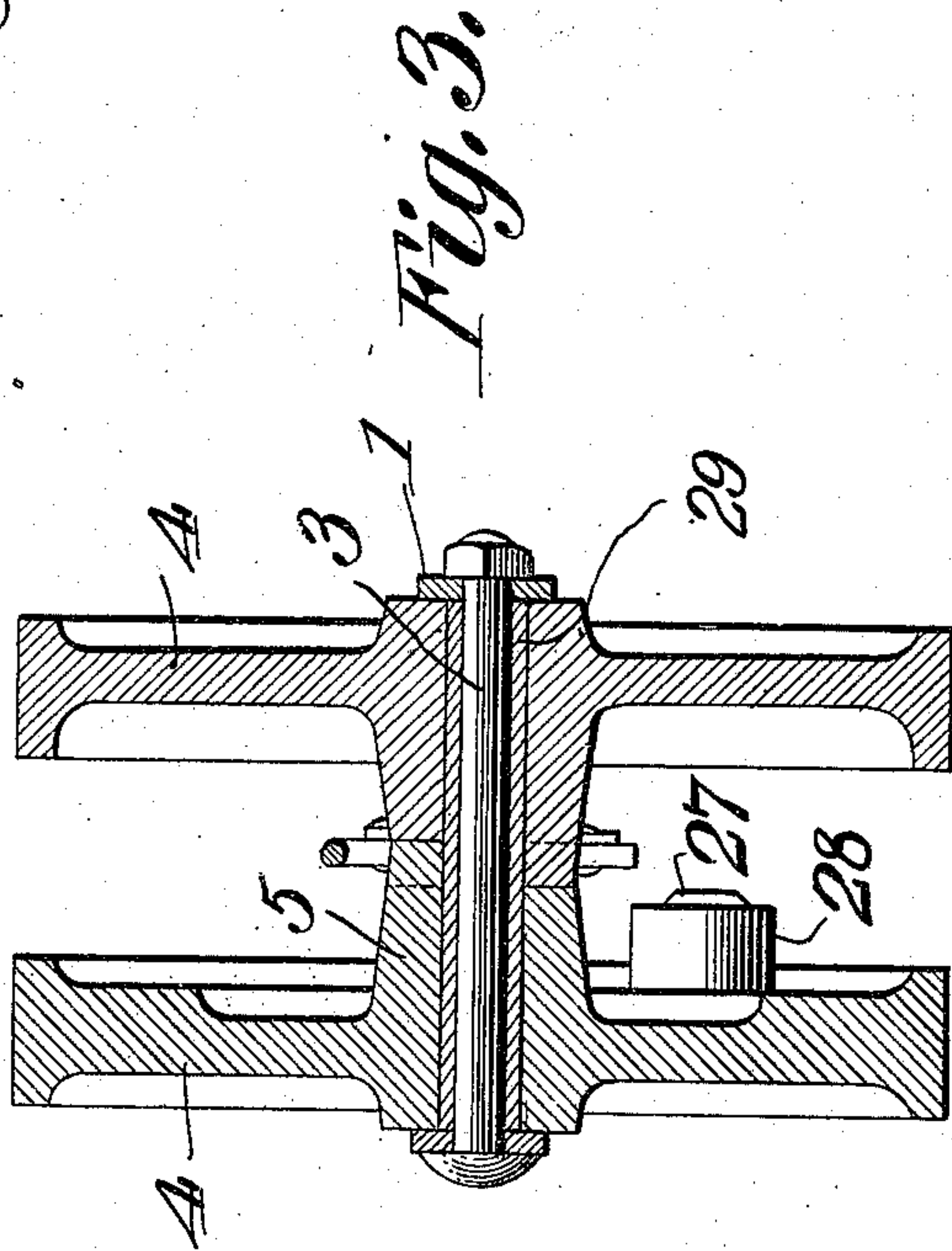
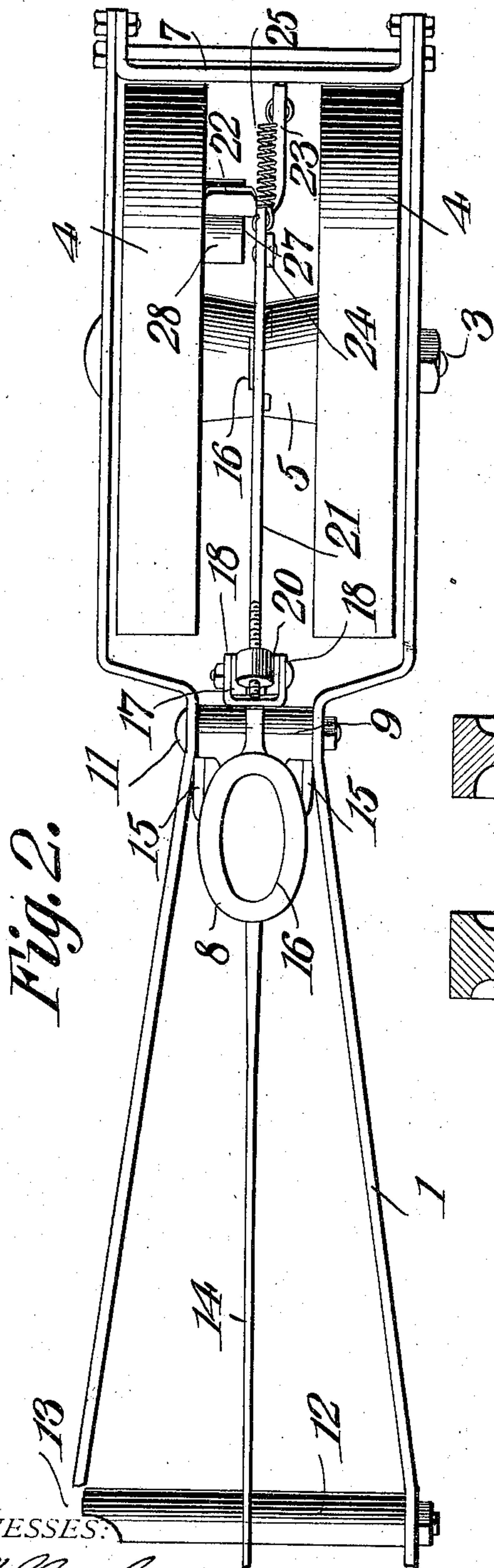
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WITNESSES:

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# UNITED STATES PATENT OFFICE.

GEORGE H. D. ROSS, OF LA JUNTA, COLORADO, ASSIGNOR OF ONE-HALF  
TO DAVID GARBER, OF LA JUNTA, COLORADO.

## BEET-SEEDER.

No. 840,713.

Specification of Letters Patent.

Patented Jan. 8, 1907.

Application filed August 7, 1906. Serial No. 329,587.

*To all whom it may concern:*

Be it known that I, GEORGE H. D. ROSS, a citizen of the United States, residing at La Junta, in the county of Otero and State of Colorado, have invented a new and useful Beet-Seeder, of which the following is a specification.

This invention has relation to beet-seeders; and it consists in the novel construction and arrangement of its parts, as hereinafter shown and described.

The object of the invention is to provide a seeder which automatically operates to drop the seed at intervals. Means is provided for regulating the distance between said intervals.

The seeder consists, primarily, of a tube having its lower end attached to the rear end of an opening-runner. A lever having its lower end formed as a valve normally closes the lower end of the said tube. The grain is deposited into the tube from a superimposed hopper. A knuckle-joint is provided at the upper end of said lever, and the forward end of a rod is screw-threaded into a collar carried by said knuckle. At the rear end of said rod a laterally-extending trip is provided. A link is pivoted at its upper end to said rod and at its lower end to a lug extending between the press-wheels. A spring is attached at one end to said lug and at its other end to said rod. The tension of the spring is adjusted to maintain said rod in a position to the rear as far as possible, and consequently maintain the valve of said lever against the outlet of the tube. Press-wheels of solid cast metal are journaled in the frame, the said frame in turn supporting the tube and its attachments and being adapted to be connected to the main or body portion of the seeder. The said press-wheels are without spokes, and one of the said wheels is provided with a series of perforations in which may be secured pins. The said pins may be spaced at suitable intervals apart, and each said pin is provided with a friction-roller which is adapted to come in contact with the trip aforesaid and operate the mechanism. The intervals of the opening of the valve at the lower end of the tube depends upon the distance at which the pins are spaced apart in the perforations of the said wheel. The wheels are provided at the inner ends of the hub with clutch members which

engage each other, so that the said wheels rotate in unison, even should one wheel be out of contact with the ground in passing over the same.

In the accompanying drawings, Figure 1 is a side elevation of the seeder with parts removed and parts in section. Fig. 2 is a top plan view of the seeder. Fig. 3 is a transverse sectional view of the press-wheels of the seeder. Fig. 4 shows a modified form of frame.

The frame consists of the side or draft bars 1 1, which in the form as shown in Fig. 4 are provided at intermediate points with the downwardly-extending portions 2. A shaft or axle 3 extends transversely from one of the rails 1 to the opposite rail, and upon the said shaft is journaled the presser-wheels 4 4. The inner ends of the hub 5 of said wheels 4 are provided with the clutch members 6, which engage each other. Thus the said wheels rotate in unison at all times. If when passing over rough ground one of the said wheels should be out of contact with the ground, the said wheel will be rotated by the other wheel which is in contact with the ground. The cross-piece 7 secures the rear ends of the side rails 1 1 together. Said cross-piece is retained by any suitable means. In advance of the downwardly-extending portions 2 of the side rails 1 1 is located a tube 8. Said tube is provided at its rear side with a transversely-extending projection 9, which is provided with the substantially vertically disposed elongated slot 10. The cross-bolt 11 passes through the side rails 1 and through the said slot 10. It is therefore obvious that the vertical position of the tube 8 with relation to the bars 1 1 may be adjusted. The forward ends of the rails 1 1 are spaced apart by means of the sleeves 12 12, which are located upon the cross-bolt 13. The forward end of the runner or furrow opener 14 is located between the inner ends of the sleeves 12 12, and the rear end of the said runner-opener is attached to the lower end of the tube 8. At its rear end the said runner-opener is bifurcated, as at 15, and a bifurcation extends along each side of the tube 8. The opening 16 extends substantially vertically through the tube 8 and terminates at its lower end in the heel of the tube and between the bifurcations 15 15 of the runner 14. The lever 17 is fulcrumed between the lugs



18 18, which in turn are formed upon the rear side of the projection 9. The lower end of said lever 17 is provided with a valve 19, which normally closes the lower end of the opening 16 of the tube 8 and normally seats itself against the lower end of said tube between the bifurcations 15 15 of the opener 14. The upper end of the lever 17 is provided with a pivoted knuckle 20. The forward end of the rod 21 is screw-threaded into said knuckle 20, and the rear of said rod 21 is provided with a laterally-extending trip 22. The lug 23 is fixed to the cross-piece 7 and extends between the wheels 4 4. The link 24 is pivoted at its lower end to the said lug 23 and at its upper end to the said rod 21, near the rear end thereof. The coil-spring 25 is fixed at one end to the said lug 23 and at its other end to the said rod 21. The tension of the said spring 25 is such as to have a tendency to hold the rod 21 in a rearward position and the valve 19 of the lever 17 against the lower outlet of the opening 16 of the tube 8.

One of the wheels 4 is provided with a number of perforations 26, each of which is adapted to receive a pin 27. Friction-rollers 28 are journaled upon the pins 27. The said pins and rollers are located upon the inner side of the wheel 4, and they may be spaced apart in the said perforations 26, so as to engage the trip 22 at such intervals as to cause the dropping of the seed to occur at points eight, ten, twelve, or more inches apart. Adjacent to each perforation 26, in which the pins would have to be inserted to cause the dropping of the seed at eight inches, is fixed a character, such as *a*, and adjacent those perforations in which the pins would have to be inserted to cause the dropping of the seed at intervals of ten inches is fixed a character—as, for instance, *b*—and likewise adjacent those perforations in which the pins must be inserted to cause the dropping of the seed at intervals of twelve inches apart is fixed a character—as, for instance, *c*. It will be observed that there is one perforation adjacent to which is fixed all of the characters *a*, *b*, and *c*. This is the initial perforation from which all measurements are taken.

The said wheels 4 4 are made of cast metal without spokes, the web connecting the hub of the wheels with the rims thereof being thin in transverse dimensions in order to reduce the metal and weight. By reason of the fact that the said wheels are closed they will not take up the trash and permit foreign bodies to interfere with the proper operation of the trip mechanism.

From the foregoing description it is obvious that as the seeder passes over the ground the runner 14 opens a furrow, the lower end of the tube 8 moves in said furrow, and at intervals the valve 19 opens and permits the seed to flow from the tube 8 into the furrow. The presser-wheels 4 4 press the earth about

the furrow, which may be closed by any suitable form of furrow-closer. (Not shown.) The presser-wheels form suitable gutters in the soil for the purpose of constituting shallow irrigation-ditches, by means of which water may be led to the seed and subsequently to the plant.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A seeder consisting of a tube having an opening extending therethrough and terminating at its heel, a furrow-opener attached to said tube, a lever fulcrumed to the tube and having a valve which normally lies over the lower end of the opening thereof, presser-wheels following the tube, a rod attached at its forward end to said lever, a spring attached to the said rod and having a tendency to maintain the same in a rearward position, and a pin carried by a presser-wheel and adapted to trip said rod to operate said lever-valve and frame member connecting the parts together in proper relation.

2. A seeder consisting of a tube, means for adjusting the vertical position of said tube, said tube having an opening extending therethrough and terminating at its heel, an opener attached to said tube, a lever fulcrumed to said tube and having a valve which normally lies over the opening in the tube, a rod attached at its forward end to said lever, a spring engaging said rod and having a tendency to maintain the same in a rearward position, presser-wheels located behind the tube, a pin carried by said presser-wheel and adapted to engage said rod to move the same longitudinally in a forward direction, and suitable frame members for retaining the part in proper position with relation to each other.

3. A seeder consisting of a tube having an opening extending therethrough and terminating at the heel thereof, a furrow-opener attached to the lower end of said tube and having bifurcations which pass along the side of the tube and terminate at the heel thereof, a lever fulcrumed to the tube and having at its lower end a valve which normally lies between said bifurcations and closes the lower end of the tube-opening, a rod attached to the upper end of said lever, a spring engaging said rod and having a tendency to maintain the same in a rearward position, presser-wheels located behind the tube, a pin carried by one of said presser-wheels and adapted to engage said rod to move the same longitudinally in a forward direction, and frame members for retaining the parts in proper position with relation to each other.

4. A seeder consisting of a tube, an opener attached to the lower end of said tube, said tube having an opening extending therethrough and terminating at the heel thereof, a lever fulcrumed to said tube and having at



its end a valve which normally closes the tube-opening, a knuckle-joint pivoted to the upper end of said lever, a rod screw-threaded in said joint, a spring attached to said rod and retaining the same normally in a rearward position, presser-wheels located behind the tube, a pin carried by one of the wheels and adapted to engage said rod to move the same longitudinally in a forward direction, and frame members for retaining the parts in proper positions with relation to each other.

5. A seeder consisting of a tube, an opener attached to the lower end of said tube, the said tube having an opening extending there-through and terminating at the heel thereof, a lever fulcrumed to the tube and having a valved end which normally closes the tube-opening, a rod attached to said lever, a spring connected to said rod and normally maintaining the same in a forward position, a trip located at the rear end of said rod, presser-wheels located behind the tube, a trip attached to the rear end of said rod, a pin carried by the presser-wheel and adapted to engage the trip to move the rod longitudinally in a forward direction, and frame members for retaining the parts in proper positions with relation to each other.

6. In combination with a frame, wheels supporting the same, a vertically-adjustable tube having a projection provided with a vertically-disposed elongated opening, a pin extending through said opening and being located at its ends in the frame, said tube having an opening, and a valve-lever suitably operated by the wheels and normally closing the opening of said tube.

7. The combination with a frame, wheels

supporting the same, a vertically-adjustable tube attached to the frame, said tube having an opening located therein which terminates at the heel thereof, lugs attached to said tube and a lever fulcrumed to said lugs and normally closing the tube-opening, and operating means between the wheels of said lever.

8. In combination with a frame, a tube attached thereto, said tube having an outlet, a valve normally closing said outlet, wheels journaled to the frame, and having at their hubs clutch members which engage each other, and means connecting said valve and operated by the wheels for opening the valve at intervals.

9. In combination with a frame, a tube having an outlet, a valve controlling said outlet-wheels journaled to the frame, said wheels having at their hubs clutch members which intermesh with each other, one of said wheels having means for operating said valve.

10. In combination with a frame, a tube located thereon and having an outlet, a valve normally closing said outlet, wheels journaled to the frame, one of said wheels having a number of perforations spaced apart at predetermined intervals, pins adapted to be placed in said perforations, and means connected with the valve and adapted to be operated by said pins for unseating the valve.

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

GEORGE H. D. ROSS.

Witnesses:

J. A. BOSTWICK,  
JAMES D. GRAY.