(No Model.)

R. GOSMAN, Jr.

SEEDING MACHINE.

No. 327,253. Patented Sept. 29, 1885.

Fig. 1.

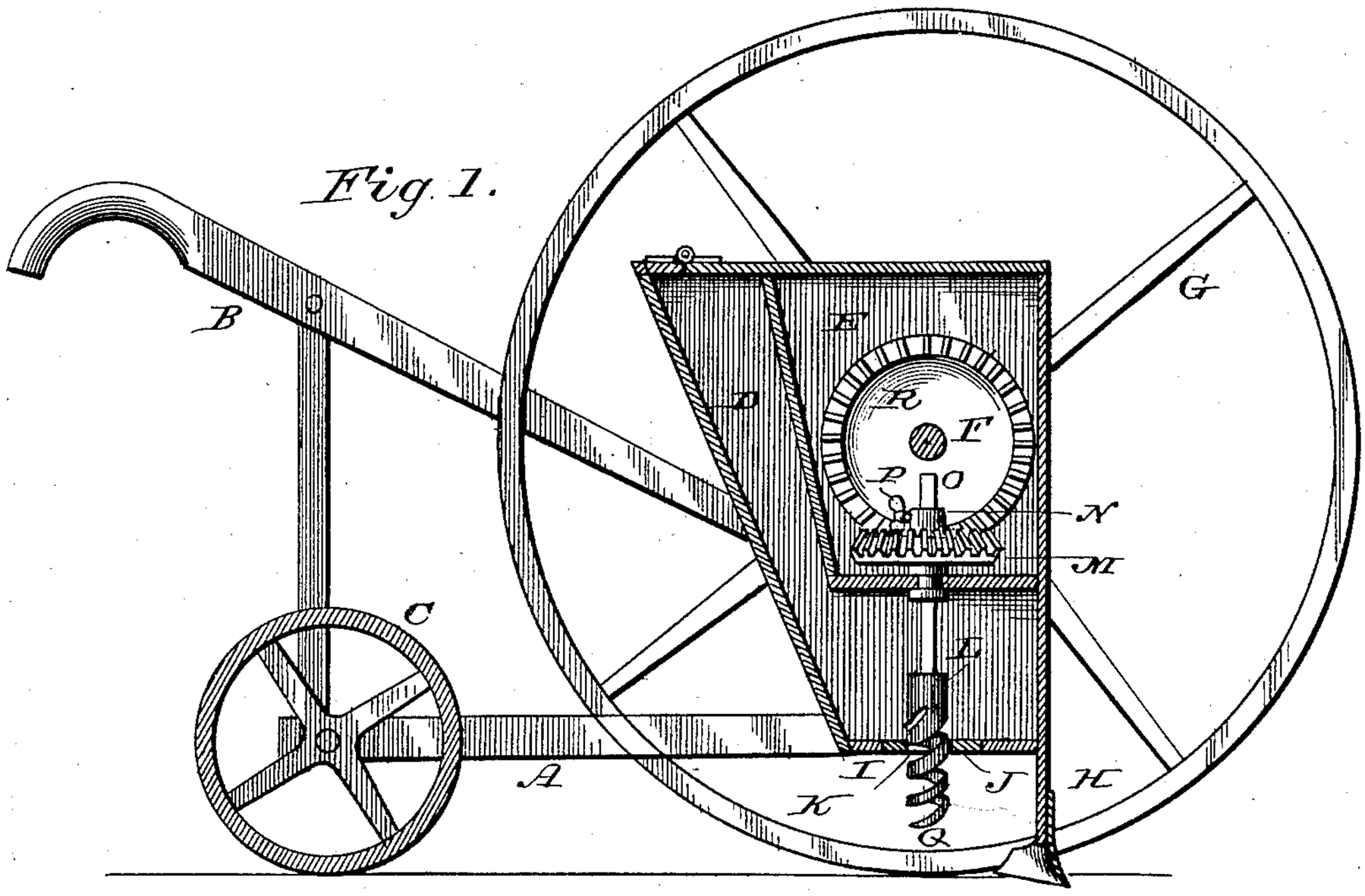


Fig. 2.

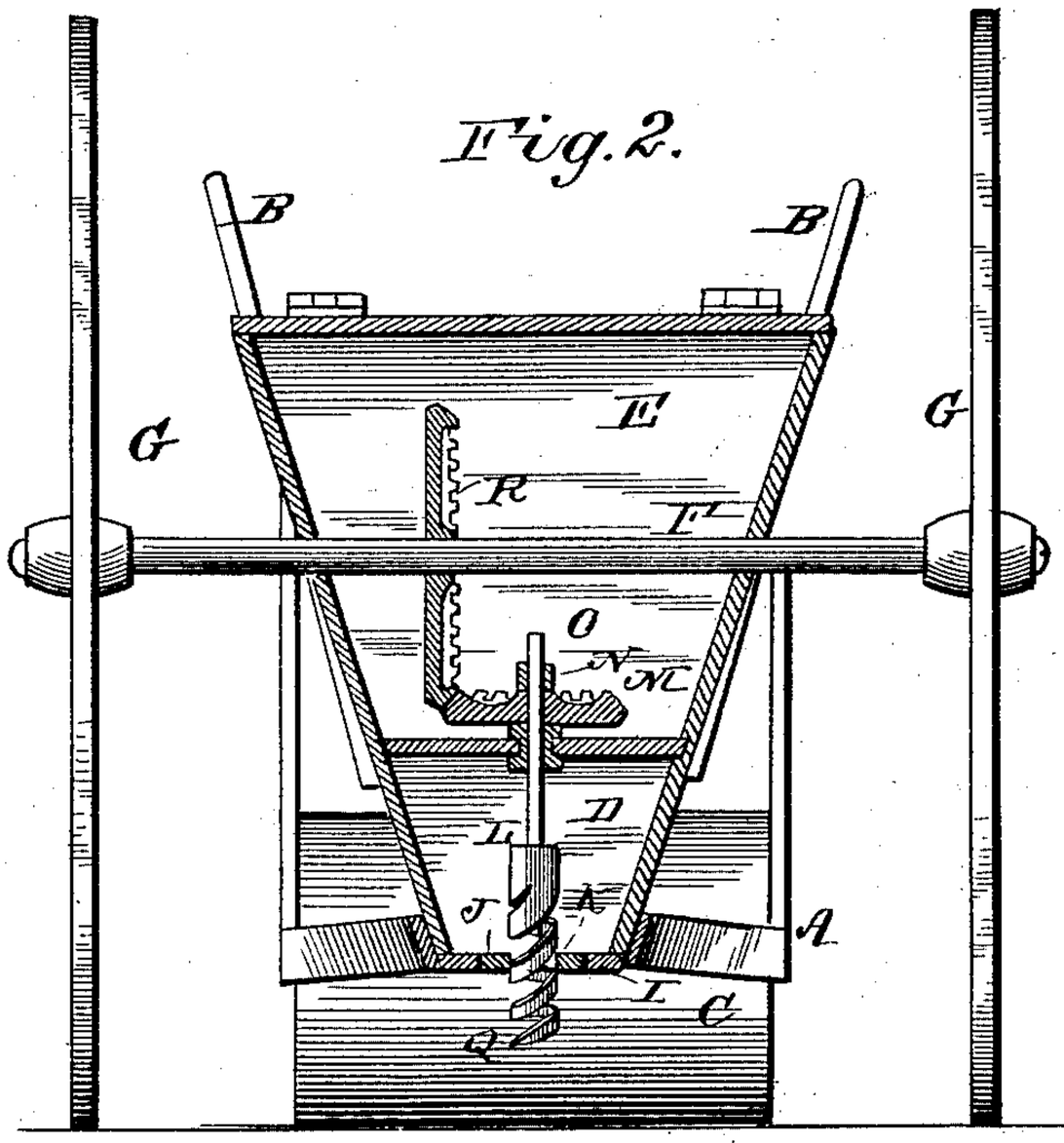
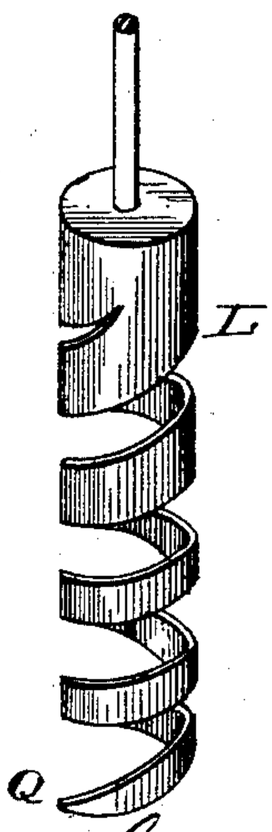


Fig. 3



WITNESSES:

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ROBERT GOSMAN, JR., OF WADING RIVER, NEW YORK.

SEEDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 327,253, dated September 29, 1885.

Application filed September 30, 1884. (No model.)

To all whom it may concern:

Be it known that I, ROBERT GOSMAN, Jr., of Wading River, in the county of Suffolk and State of New York, have invented certain new and useful Improvements in Seeding-Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a longitudinal vertical sectional view of a seed-planter embodying my improvement. Fig. 2 is a transverse vertical sectional view taken on the line *x x* in Fig. 1, and Fig. 3 is a detail view, in perspective, of the spiral by means of which the seed is fed and the amount dropped is regulated.

The same letters refer to the same parts in all the figures.

My invention has relation to that class of seeding-machines in which a vertical spiral is revolved in an aperture in the bottom of the seed-hopper, forcing the seed out through the said aperture; and it consists in the improved construction and combination of parts of such a machine, as hereinafter more fully described and claimed.

In the drawings hereto annexed, A designates a suitably-constructed frame, provided with handles B B, and the rear end of which is supported upon a roller, C.

D is a hopper mounted upon the front end of the frame, and constructed with a casing, E, at its upper front end, the sides of which casing have bearings for the revolving axle F, carrying the driving-wheels G G.

Suitably secured to the lower front end of the hopper, in such a manner as to be vertically adjustable, is a plow or furrow-opener, H. Coverers of any approved construction are also to be provided.

The hopper D is provided at some distance above the ground with a bottom, I, below which it is contracted, as shown, in such a manner as to convey the seed to a point in rear of the furrow-opener.

J is a metallic plate or die, seated in the said bottom and having a circular opening, K, through which passes the seeding-spiral L, which will be presently more fully described.

M is a pinion having an annularly-flanged collar, N, by means of which it is journaled horizontally in the bottom of the casing E, which forms a portion of the top of the hopper or seed-box proper. The said pinion and collar are provided with a square or polygonal opening to receive a stem, O, which is vertically adjustable, and which may be retained securely in any position to which it may be adjusted, by means of a thumb-screw or set-screw, P, inserted transversely into the upper end of the collar, and bearing against the said stem. The lower end of the latter carries the seeding-spiral L, which may be formed by twisting into a spiral shape a strip of sheet metal of suitable dimensions, widest at its upper end and tapering to a point, Q. The said spiral is so constructed that the distance between its coils gradually increases from its upper to its lower end, at which point the said coils are the greatest distance apart. The spiral L extends through the metallic plate or die J, the opening K in which is of exactly the same diameter as the spiral coil, which, however, may revolve freely in the bearing thus formed. The upper end of the seeding-spiral is securely attached in any suitable manner to the stem O, by means of which it may be raised or lowered, as occasion shall demand, and to which a rotary motion is imparted through the pinion M, by means of a spur-wheel, R, mounted upon the axle F, and meshing with the said pinion.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of this invention will be readily understood.

When the feeding-spiral revolves, the seed from the hopper will enter the spaces between the coils above the bottom of the hopper, and be forced in a downward direction by the rotary motion of the said spiral. On reaching the lower end of the latter, the seed will drop out into the furrow. By raising the feed-spiral, the larger openings of the same will be placed above the bottom of the hopper, thus permitting larger grain or larger quantities of grain to enter. By lowering the spiral, a reverse result is secured.

It will also be seen that by having the spiral constructed of a spirally-twisted strip of sheet metal the seed passing between the spirals will

drop down through the tubular space within the spiral, and consequently avoid being scattered outside of the furrow made by the plow in front.

I am aware that it is not broadly new to construct seeding-machines with a vertical screw-feed, and I am also aware that horizontal feeding screws or spirals have been made adjustable within cylindrical feed-cups in seeding-machines, and I do not wish to make broad claims for such constructions; but I am not aware that such feed-spirals have been of strips of sheet metal wrapped spirally, nor with increasing distances between their spirals; and I therefore claim—

1. In a seed-planter, a feed-spiral constructed of a strip of sheet metal wrapped to form a hollow spiral, as and for the purpose shown and set forth.

2. In a seed-planter, a feed-spiral consisting of a strip of sheet metal tapering from one end to the other, and wrapped to form a hollow spiral, having the spaces between its coils gradually increasing with the taper of the strip, as and for the purpose shown and set forth.

3. In a seeding-machine having a vertical screw-feed, the combination of the hopper having a vertical aperture at its bottom, a pinion journaled to revolve horizontally in a bearing in the hopper and receiving rotary motion, and a feed-spiral consisting of an upper portion secured vertically adjustable in the pinion, and of a lower portion constructed of a tapering strip of sheet metal wrapped to form a hollow spiral having the distance between the coils increasing with the taper of the strip and fitting in the aperture in the bottom of the hopper, as and for the purpose shown and set forth.

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

ROBERT GOSMAN, JR.

Witnesses:
F. S. WOODHULL,
WILLIAM H. GOSMAN.