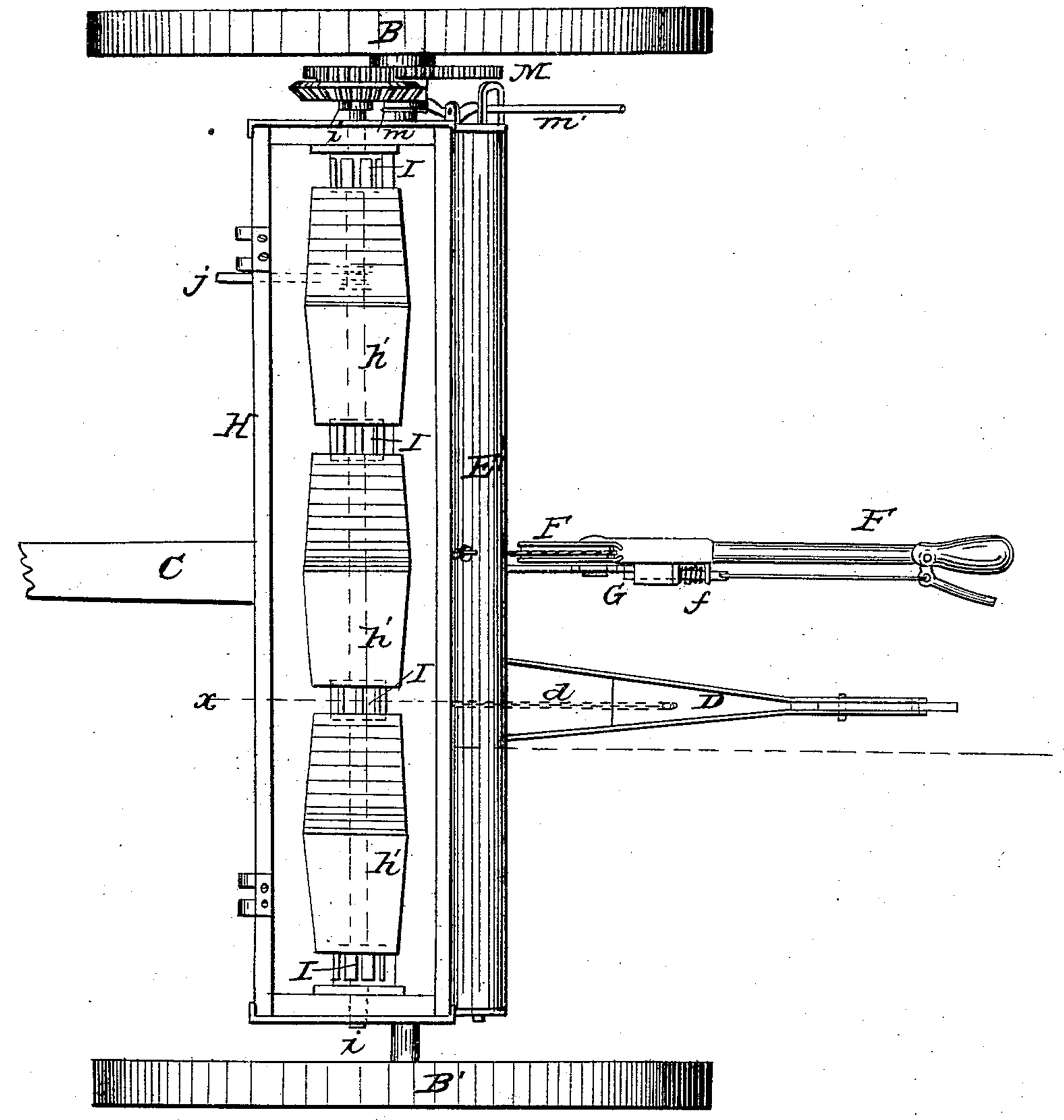
2 Sheets—Sheet 1.

EGGLESTON & SWAIN.

Seeding Machine.

No. 75,005. Patented March 3, 1868.

Fig. 1



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EGGLESTON & SWAIN.

Seeding Machine.

2 Sheets—Sheet 2.

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Fig. 2

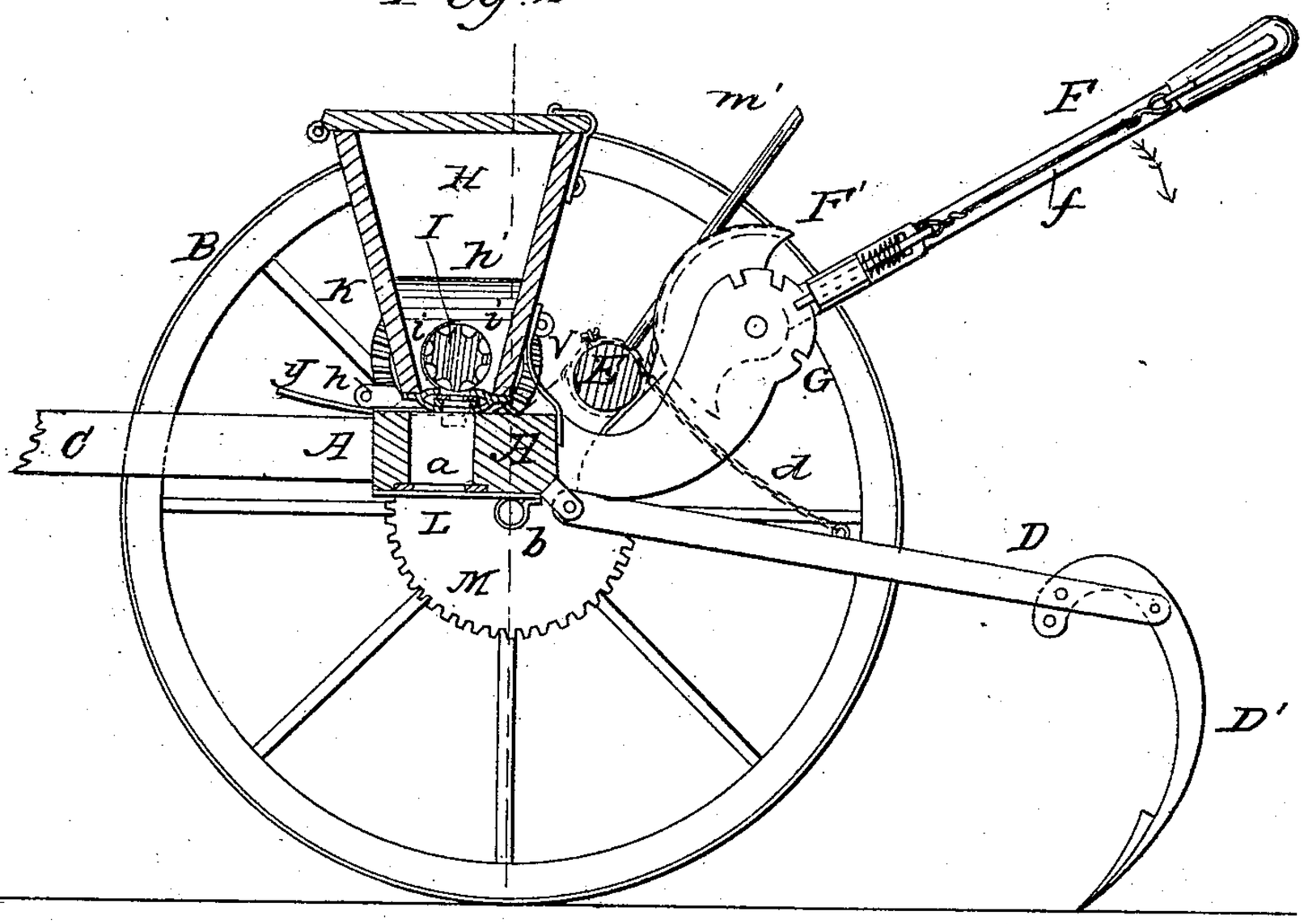


Fig. 3.

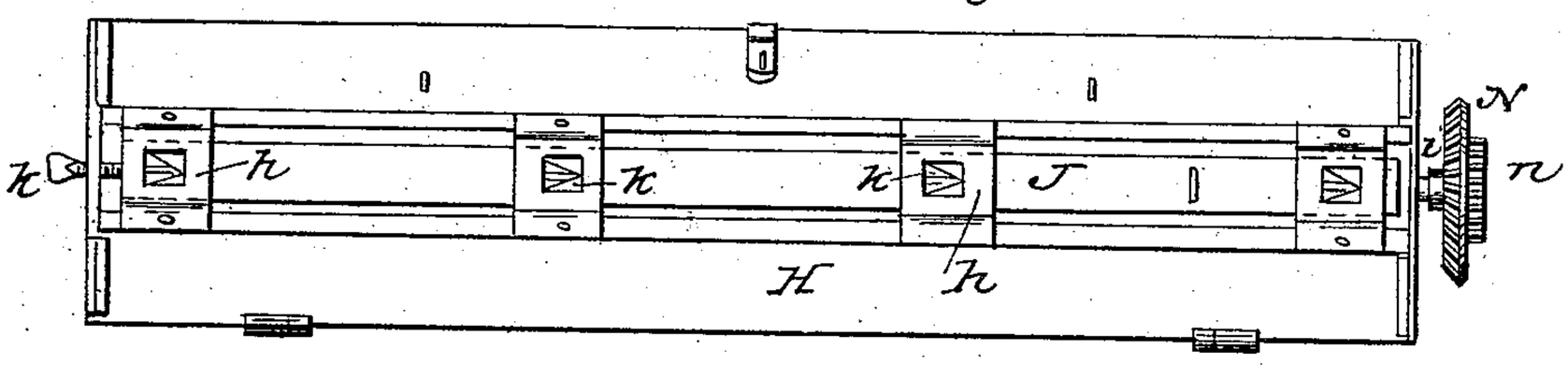
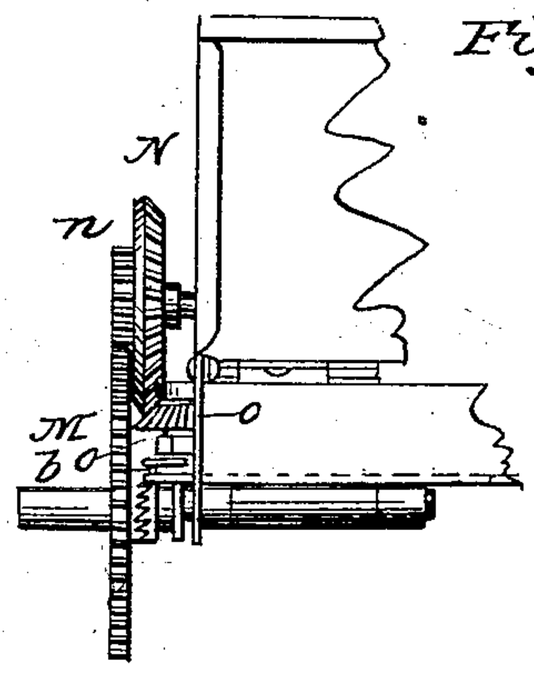


Fig. 4



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ANDREW R. EGGLESTON AND CHARLES F. SWAIN, OF MILWAUKEE, WISCONSIN.

Letters Patent No. 75,005, *dated March* 3, 1868.

IMPROVEMENT IN SEEDING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, ANDREW R. EGGLESTON and CHARLES F. SWAIN, both formerly of Ripon, in the county of Fond du Lac, and State of Wisconsin, but now of the city and county of Milwaukee, and State aforesaid, have invented certain new and useful Improvements in Seeding-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which make a part of this specification, and in which—

Figure 1 represents a plan or top view of so much of our improved machine as is necessary to illustrate the invention herein claimed.

Figure 2 represents a vertical transverse section through the same, at the line *x x* of fig. 1.

Figure 3 represents a plan view of the under side of the seeding-trough.

Figure 4 represents a front elevation of the gearing.

The invention herein claimed consists in certain new and useful improvements, hereinafter set forth, on a seeding-machine, for which Letters Patent of the United States were granted to us, numbered 62,259, and dated February 19, 1867.

In the accompanying drawings, which show a convenient arrangement of devices for carrying out the objects of our invention, two wheels, B B′, are shown, as secured on short independent shafts or stub axles, *b*, turning in suitable boxes underneath the frame A, which consists of a trough, having parallel sides, open at top and bottom, and divided by vertical transverse partitions into a series of cells, *a*, as shown in our former patent, above mentioned. A tongue, C, projects from the front of this frame. The drag-bars D, which carry the ploughs D′, are hinged to the rear under side of the frame, in the usual way, so as to play freely vertically, and are raised, lowered, or held in any desired position by chains *d*, attached to a rock-shaft or windlass, E, operated by a hand-lever, F, and sector, F′, provided with a spring-detent, *f*, taking into a sector-rack, G, on the frame. It will be observed that the lifting-chains *d* pass over the back of the roller, while the sector-cord *f′* passes around the front of the roller. By this means the windlass revolves in the direction shown by the arrow, when the lever F is pushed back, and thus lifts the ploughs. This arrangement we have found to be very advantageous in practice, as by it the driver can throw his whole weight on the lever in lifting the ploughs. The attendant can also by this arrangement lift the ploughs when walking behind the machine. In the drawings, the chains *d* are too long, for when the ploughs are in the ground the catch *f* should be in the forward notch of the sector-rack. A seed-trough or hopper, H, is pivoted to the frame at the lower forward edge, by hinges *h*, so that it may be thrown forward when necessary for access to the under side. The trough has openings in its bottom, over the cells *a*. Toothed or grooved feeding-cylinders, I, mounted on a shaft, *i*, rotate in these openings. The bottom of the hopper is composed of inclined surfaces *h′*, sloping towards the feed-cups I. In our former patent these feed-cups were shown as made narrower than the openings in which they revolved. We have found, by experience, that the grain was apt to get into the spaces thus left between the feed-cups and the sides of the openings, and be bruised or broken. To obviate this difficulty, we make the cups broader across their faces than the openings in which they revolve, and cover their ends with flanged shields or caps *i′*, fig. 2, which keep the grain within the cells of the cup, and thus prevent it from being injured. To regulate the feed, a gauge-plate, K, is arranged to slide endwise in suitable guides, underneath the hopper, and is provided with triangular openings *k*, directly underneath the feed-cups I. The plate is moved endwise by a set-screw, *k′*, and regulates the quantity of grain sown by increasing or diminishing the area of the openings *k*. A shut-off slide, J, moves endwise underneath the gauge-plate, and has holes in it corresponding with those in the gauge-plate, and is moved by a foot-lever, *j*, pivoted on the frame. The gauge-plate and slide-plate move in guides *h*, attached to the bottom of the trough, in such manner that the shrinking or swelling of the wood does not affect their working properly. A reciprocating scattering-plate, L, (similar to that shown in our former patent,) is arranged underneath the frame. A spur-wheel, M, revolves loosely on the axle *b*, with which it is locked, when desired, by a sliding clutch, *m*, moved by a lever, *m′*, and drives a corresponding pinion, *n*, on the shaft *i*, which carries the feed-cups I. A bevel-wheel, N, on this same shaft, drives a corresponding pinion, *o*, on a vertical crank-

shaft, O, on the end of the frame A. A crank-pin on this shaft plays in a slot in the scattering-plate L, and thus reciprocates it. It will be observed that the bevel-wheel N and pinion *n* are both attached to the hopper. The latter can be lifted without removing the gears, which are disengaged from the driving-gear by being so lifted, and again thrown into gear when the hopper resumes its normal position.

The operation is as follows: The seed are placed in the hopper. As the machine advances, the gearing rotates the feed-cups I, into which the grain falls, and is carried round and dropped through the openings *k* in the gauge-plate, into the cells *a*, from which it escapes through the scattering-plate, which distributes it uniformly over the ground, when it is covered by the cultivator-teeth.

Unless otherwise described, the construction of our machine is similar to that described in our former patent.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination, with the rotating feed-cups, of the overlapping stationary sockets or shields, substantially as set forth for the purpose described.

2. The combination of the feed-cups, the gauge-plate, and the shut-off slide, substantially as set forth.

3. The combination of the windlass, the hand-lever, and drag-bars, with lifting-chains, arranged as described, whereby the ploughs are lifted by the backward movement of the lever, as set forth.

In testimony whereof we have hereunto subscribed our names.

A. R. EGGLESTON,
C. F. SWAIN.

Witnesses:

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GEO. W. LUKIN.