(No Model.)

M. GIBBS.

SEED SOWER.

No. 275,633. Patented Apr. 10, 1883.

Fig. 3.

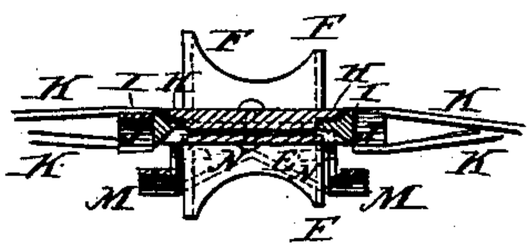


Fig. 1.

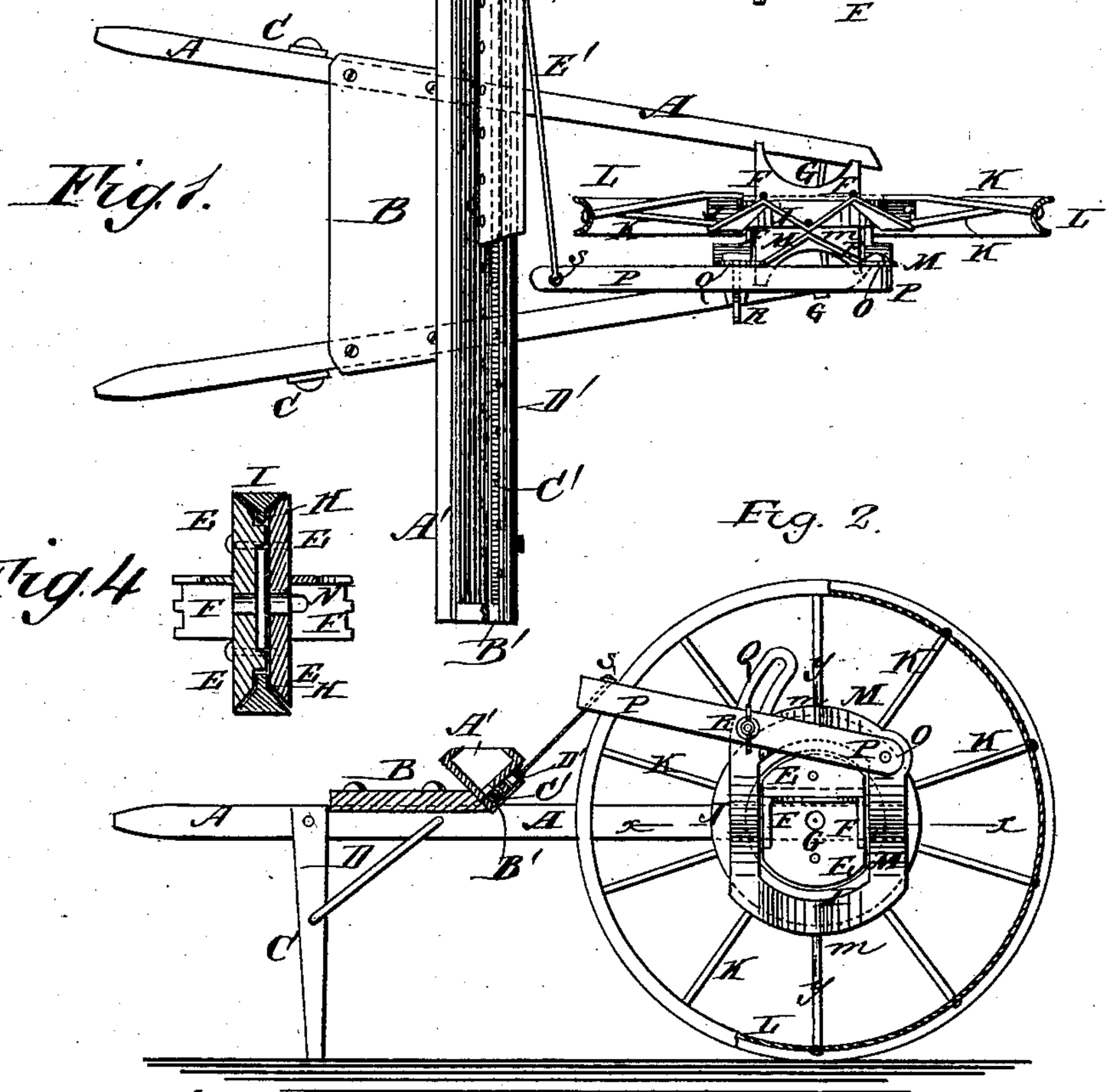
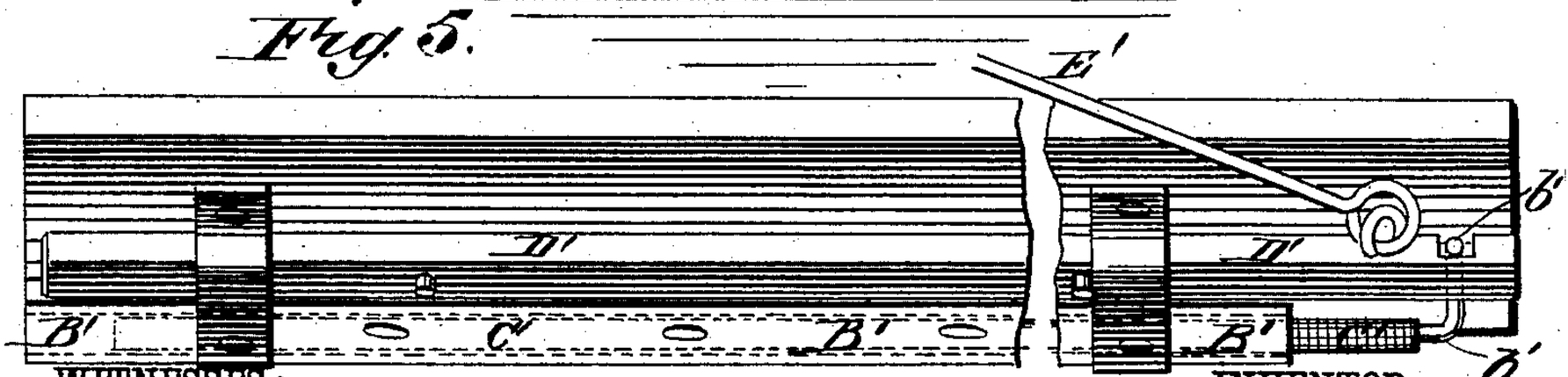


Fig. 4

Fig. 2.

Fig. 5.



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MASON GIBBS, OF HOMER, MICHIGAN.

SEED-SOWER.

SPECIFICATION forming part of Letters Patent No. 275,633, dated April 10, 1883.

Application filed November 16, 1882. (No model.)

To all whom it may concern:

Be it known that I, MASON GIBBS, of Homer, in the county of Calhoun and State of Michigan, have invented certain new and useful Improvements in Seed-Sowers, of which the following is a full, clear, and exact description.

This invention is designed as an improvement upon the seed-sower for which Letters Patent No. 238,040 were granted me February 22, 1881, in which a seeder of wheelbarrow construction, for sowing clover-seed, timothy-seed, and other small seeds, was provided with a cord distributer incapable of being clogged with dry seed, and in which the seed was carried so low down that the wind would not affect it, as in seeders which are mounted "breast high" or carried upon a wagon.

My improvement in such machines consists in a combination, with the seed-box formed with a distributing-channel or lower strip on the one side of it, having a longitudinal groove on its inner side and a row of holes preferably intermediately arranged relatively to distributing-holes in the side of the seed-box, of a longitudinally-reciprocating rubber roll in the place of the distributing-cord heretofore used. This roll it is proposed to support and mount upon a wire for imparting the necessary reciprocating motion to it by means of an attached slide or otherwise; and the invention further consists in a combination, with the rubber-roll distributer, of mechanism used for operating the same, and the seed-box with its grooved strip, in which said roll works, substantially as hereinafter described. By the substitution of a rubber-roll distributer for a cord distributer many advantages are obtained. Thus a cord stretches when dry and shrinks when damp, and requires to be taken up or shortened or to be let out or lengthened to keep it of a uniform tension and cause it to sow alike at all times, while a rubber roll remains constantly of one length and diameter, and will sow the same amount of seed either in damp or dry weather. Said roll, too, can be made more uniform in diameter than a cord, and consequently will do more accurate work.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a plan of a seed-sower having my invention applied, and Fig. 2 a partly-sectional side view of the same. Fig. 3 is a horizontal section of the middle part of the drive-wheel and its supports, taken through the line *x x*, Fig. 2; and Fig. 4, a vertical section of the middle part of the drive-wheel and its supports, taken through the line *y y*, Fig. 2. Fig. 5 is a longitudinal partly broken view, upon a larger scale, of the rubber seed-distributing device with its operating-slide.

A A in the drawings indicate the wheelbarrow-like conveying-arms of the sower, with their cross-board B, legs C, and braces D.

L is the rim of the drive or running wheel, and K its spokes, which are attached at their inner ends to a band, I, provided with a zigzag flange, J, having an uneven number of angles. This band I has formed upon the center of its inner surface a ring-flange, H, which has its seat upon rabbeted inner sides of fixed circular plates E, having flanges F, uniting them with the frame or arms A A of the machine. The edges of the plate E are beveled upon their inner sides to form a seat for the beveled edges of the band I, so that said band and flange can revolve freely upon the plates E and be kept in place thereon.

M is a frame or skeleton plate, upon the upper and lower portions of which are formed inwardly-projecting angles *m*, to correspond with the angles of the zigzag flange J. This frame M has pivots N, which work in sockets in the flange F or plate E, as shown in Figs. 3 and 4. By this construction the frame M will be rocked upon its pivots N by the revolution of the drive-wheel, the upper angle *m* of the frame M entering an angle of the zigzag flange J as the lower angle *m* of said frame passes up a salient angle of the zigzag flange J.

P is a lever pivoted to the forward upper corner of the rocking frame M, and made adjustable up or down by a thumb or set screw, R, and slotted arm Q on the rear upper corner of the frame M, to vary the throw of the rear end of the lever for the purpose of changing the amount of seed distributed to the acre. This construction so far of the machine and the con-

struction of the seed-box hereinafter described are or may be substantially the same as in the seed-sower already patented to me, and hereinbefore referred to; but the seed-distributing device and the immediate means for operating it are different.

A′ is the seed-box, arranged upon and across the arms A A at the front edge of the cross-board B, and provided with a strip, B′, on its one side, within which is a longitudinal groove that receives the reciprocating distributing device. This longitudinally-grooved strip B′ has a row of perforations in it for the distribution of the seed, which are preferably intermediate of a row of perforations in the distributing side of the seed-box.

The reciprocating seed-distributing device, arranged within the longitudinal groove of the strip B′, consists of a rubber roll, C′, which is made by covering a straight wire, *b′*, with rubber by drawing over the wire a rubber tube, made to closely fit the wire, and of slightly less exterior diameter than the groove in the strip B′. Said rubber is or may be cemented to the wire to prevent its slipping thereon, and may be made either plain or roughened on its exterior surface. The wire or rigid core *b′* serves to stiffen and support the rubber. One end of the wire *b′* is bent and takes into a notch in the end of a slide or slide-bar, D′, fitted to reciprocate within or through guides in the side of the seed-box, so that any longitudinal motion of the slide-bar will give a corresponding motion to the rubber roll, which virtually is supported and held in line by the slide-bar. Said slide-bar is reciprocated longitudinally by means of a pitman, E′, loosely jointed at its one end to the slide-bar and connected at its opposite end with a pivot or pin, *s*, on the rear end of the lever P. The motion thus imparted to the rubber roll C′ causes it to force out the seeds in the holes in the grooved strip B′ of the seed-box.

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

1. The combination of the reciprocating slide D′ and rod or wire *b′* with the rubber distributing-roll C′ and the perforated seed-box A′, with its attached perforated distributing-channel or grooved strip B′, essentially as described.

2. The combination, in a seed-sower, of the longitudinally-reciprocating rubber distributing-roll C′, mounted upon a rod or wire, *b′*, the seed-box A′ and its perforated distributing-channel or grooved strip B′, the rocking plate M, having a curved slotted arm, Q, the lever P, the adjusting-screw R, the pivot *s*, the pitman E′, and the slide D′, substantially as specified.

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