2 Sheets—Sheet 1.

E. MYERS.

Grain-Drill.

No. 6,542. Patented June 19. 1849

Fig. 2.

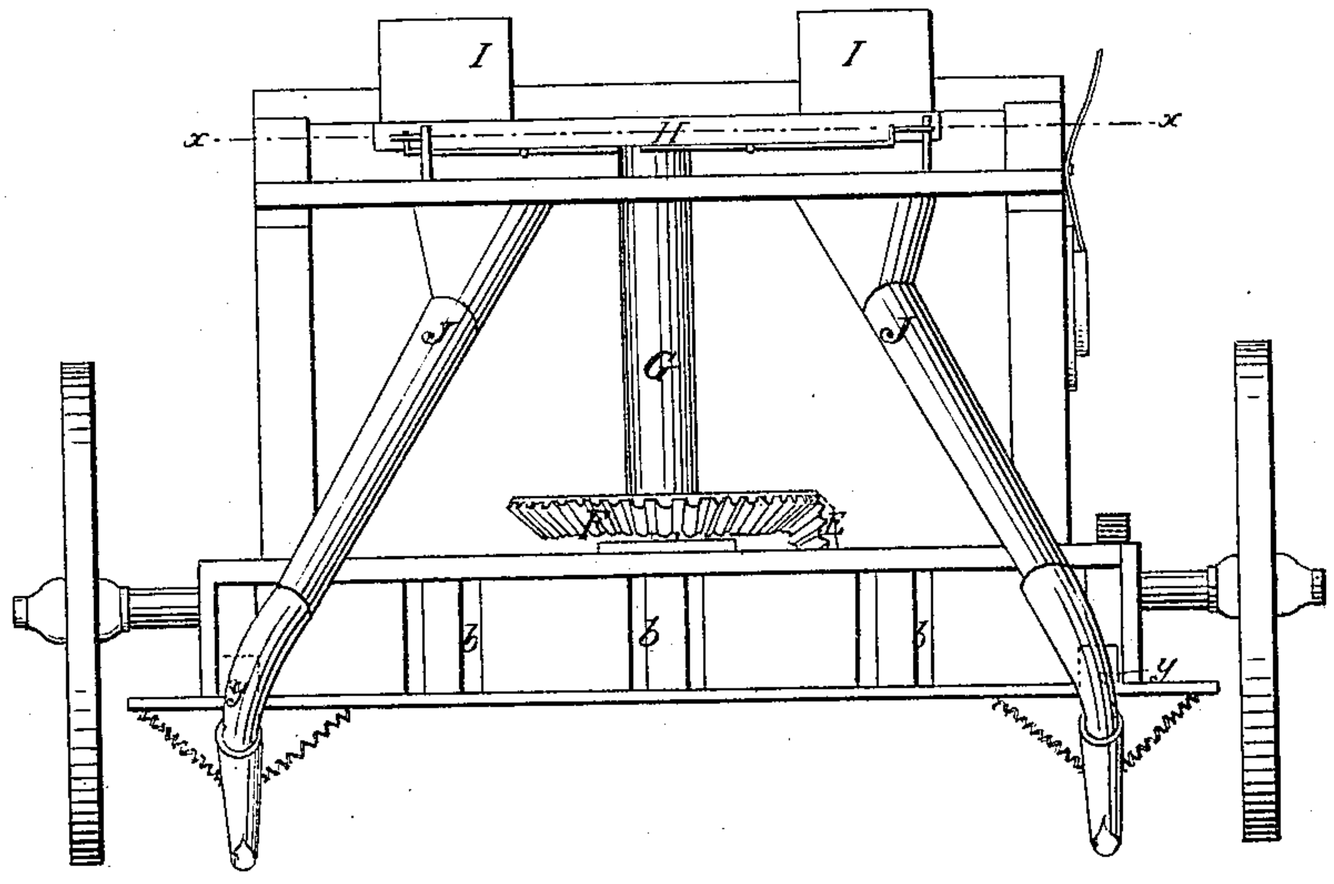

Fig. 1.

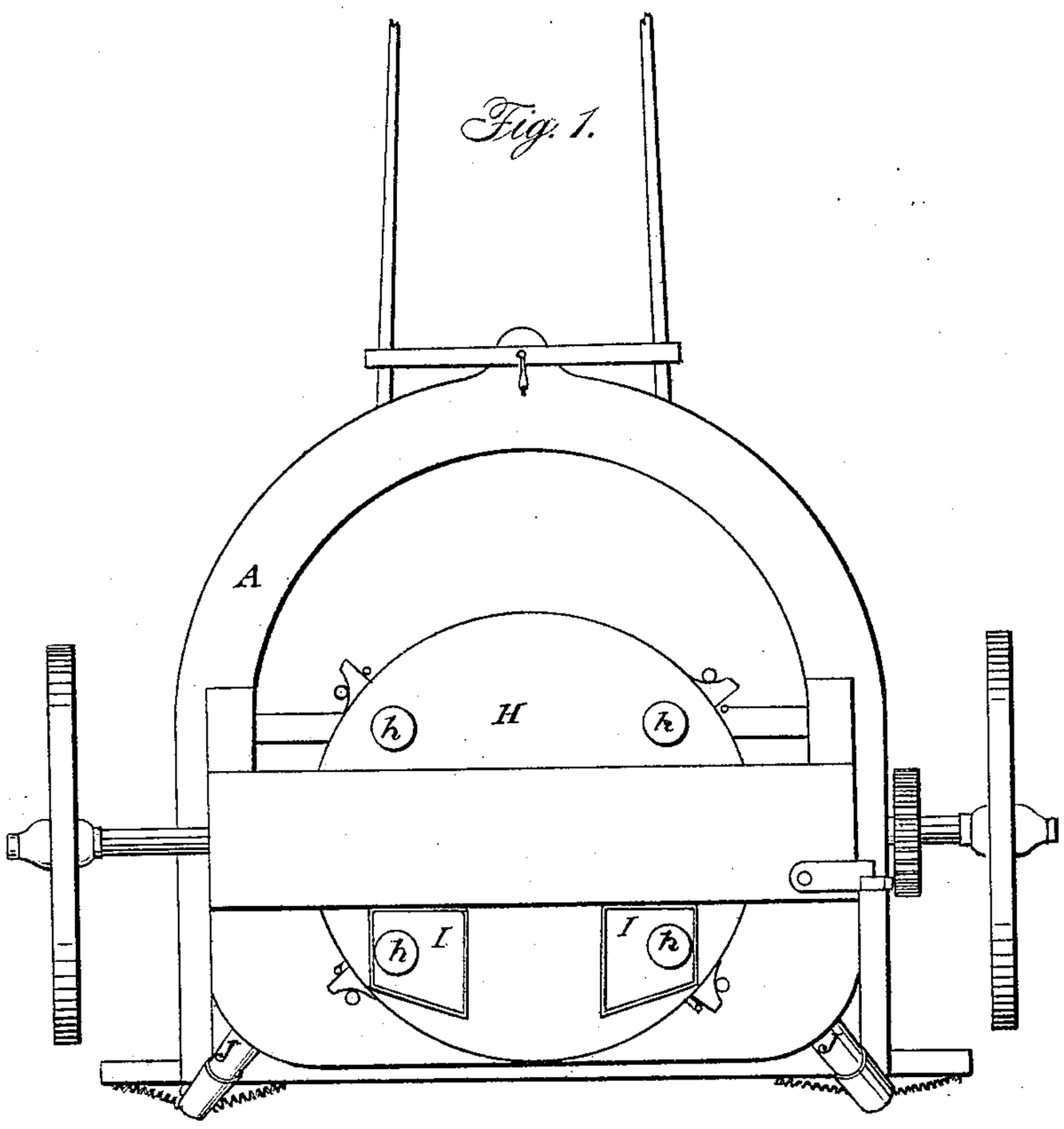

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Fig. 3.

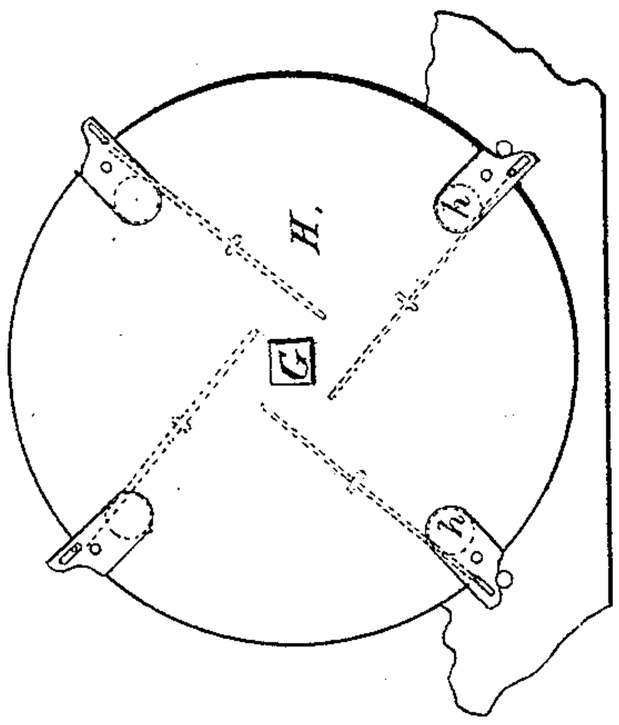


Fig. 4.

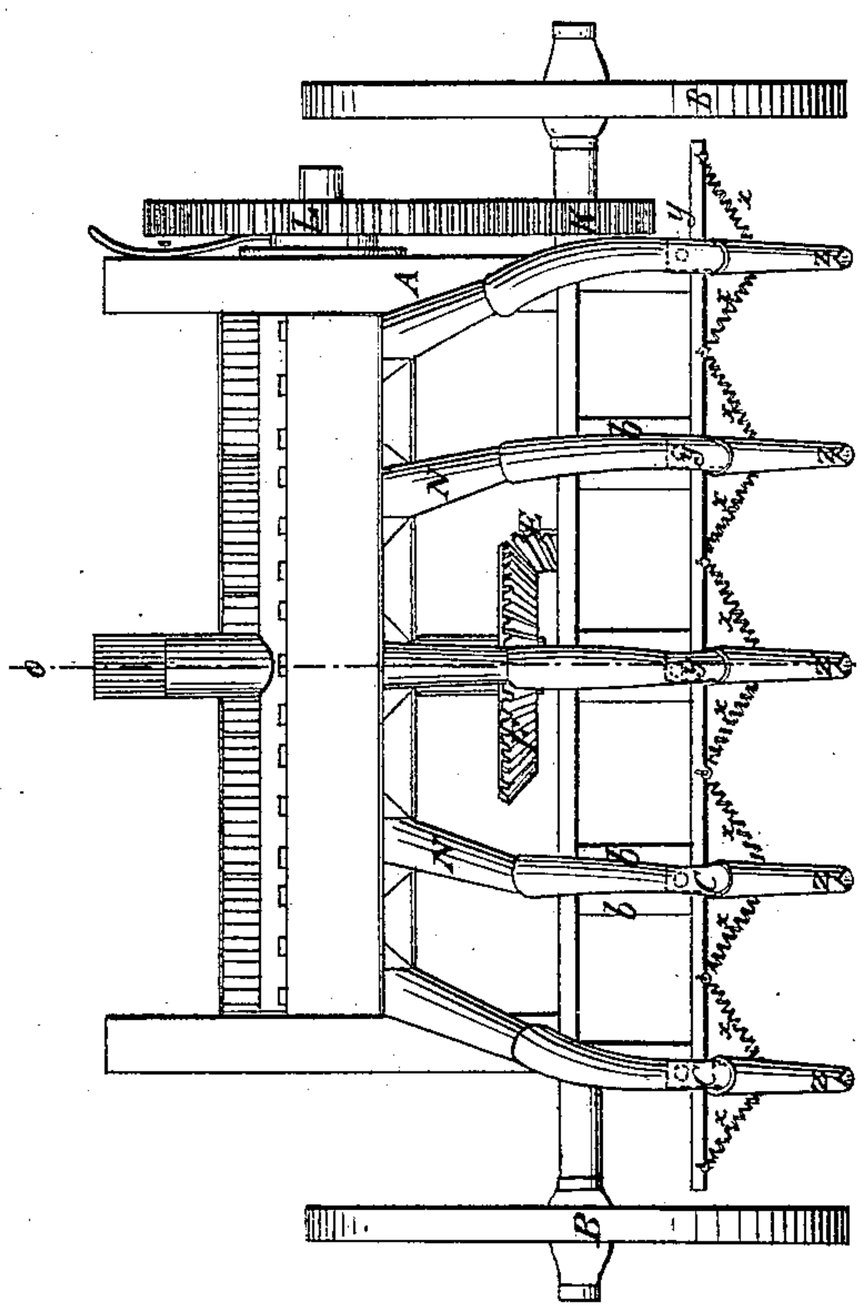


Fig. 6.

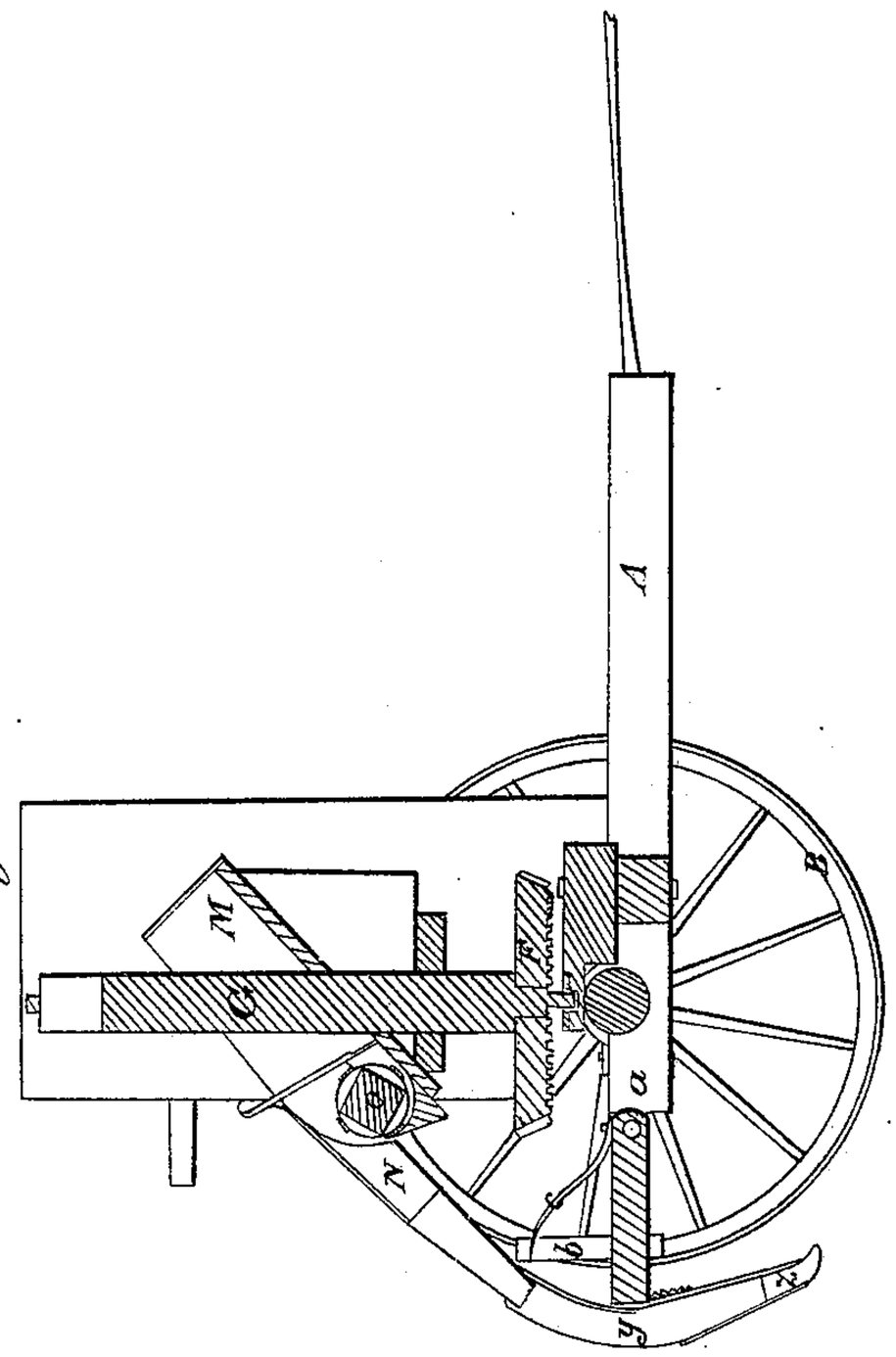
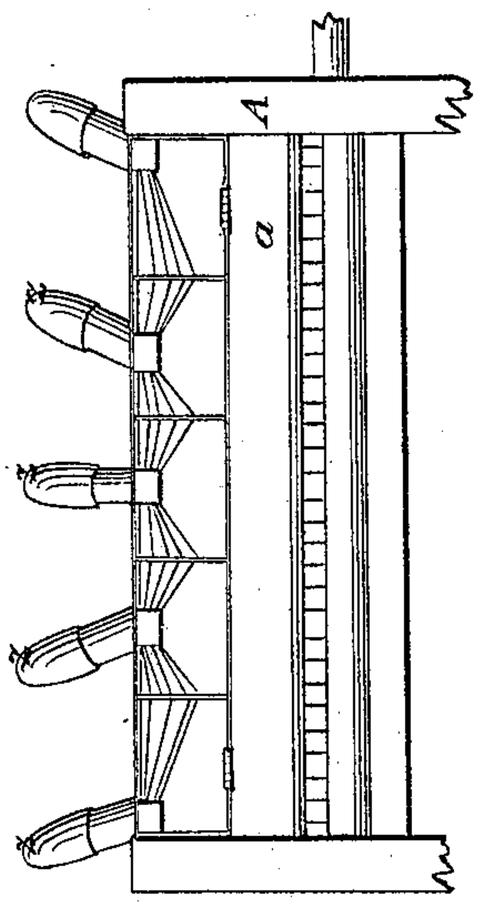


Fig. 5.



UNITED STATES PATENT OFFICE.

EMANUEL MYERS, OF UNION MILLS, MARYLAND.

IMPROVEMENT IN SEED-PLANTERS.

Specification forming part of Letters Patent No. **6,542**, dated June 19, 1849.

To all whom it may concern:

Be it known that I, EMANUEL MYERS, of Union Mills, in the county of Carroll and State of Maryland, have invented certain new and useful Improvements in Corn-Planters and Seed-Drills, of which the following is a full and exact description, reference being had to the annexed drawings of the same, making part of this specification, in which—

Figure 1 is a top view of the apparatus used as a corn-planter, the hopper and distributer for small seeds, with their appendages, being detached. Fig. 2 is an end elevation of the same, viewed from behind. Fig. 3 is a horizontal section taken through the line *x x* of Fig. 2. Fig. 4 is an elevation of the rear end of the apparatus properly adjusted for sowing grain in drills, the corn-planting apparatus being detached. Fig. 5 is the same view as the last, but with the hinged conducting-tubes turned up. Fig. 6 is a vertical longitudinal section through the line *o o* of Fig. 4.

The same letters indicate the same parts in all the figures.

In the accompanying drawings, A represents the frame and B the wheels, of a cultivator or drill, which may be made and arranged as represented or in any of the usual modes.

To the beam *a* the front ends of the beam C are attached, each by an independent hinge, which admits of its rear end moving up and down within the limits of the slot or opening in the rack *b*, in which it is placed. Upon the upper side of each beam a spring, *c*, is placed for the purpose of forcing it down quickly after being raised by any obstruction which the teeth may encounter. In this way the furrows are made very uniform in their depth, and are but little broken. To the rear end of the beams the teeth are suspended on joint-pins, which leave their lower ends free to move laterally. The teeth are strengthened by brace-rods, which extend from about the middle of their front side to the under side of the beams, to which they are jointed, in order that they may accommodate themselves to the movements of the teeth. Each side of the teeth is braced to the beam by helical or other springs, *x*, arranged as in Fig. 4. These springs hold the teeth in a vertical position while performing their ordinary duty; but if the path of any of them should be obstructed by a stone or stump, the springs would yield and let it pass to one side, but, when past, would immediately draw it again into the proper position. In this manner the teeth would pass obstructions without detriment when a fixed tooth would get broken. The throwing out of place of the whole machine, which, with the ordinary drill, is a common occurrence, and, indeed, always happens when any of the teeth strike a rock or stump obliquely at such an angle as will cause them to glance off, is also avoided by this arrangement.

Upon the revolving axis of the wheels a pinion, E, is mounted, which gears into the horizontal wheel F, hanging on the vertical shaft G, on the top of which is placed a revolving disk, H, for dropping the corn at intervals suitable to form hills. This disk is perforated by a suitable number of holes, *h*, each of which is provided with a hinged spring-bottom for closing it, having a projecting arm, which at suitable intervals during its revolution catches against a stop and opens it to drop out its charge of corn, and this is immediately closed again by the action of the spring.

I I are hoppers to contain a supply of corn, and are so arranged above the disk that the apertures *h* in the same will as they revolve pass beneath them and receive a charge of corn, which at the proper time is discharged into the tubes J and passes through the teeth into the drill.

The pinion K is mounted upon the axle between the frame A and wheel B, and gears into the wheel L, which hangs on the end of the axis of the cupped cylinder O, which discharges small seeds from the hopper M into the tubes N, which conduct it through the teeth into the drills. The hopper is subdivided into several compartments in order that an equal distribution of the seed may be more easily maintained. The rear or side of the hopper next the distributing-cylinder is provided with a series of sliding registers to regulate the discharge of grain.

The discharging-pipes are all connected together and hinged to the hopper, so that they may be raised up and turned over on their hinges until out of the way. This arrangement enables the attendant at all times to obtain free access to the cylinder to remove any obstruction that may by accident be lodged therein, and the cover on its upper side serves to

keep out rain and dew, which by dampening it might cause it to rust and become clogged.

When the apparatus for sowing grain is used the hoppers I, disk H, and tubes J are removed, and vice versa when the corn-planter is in operation.

This machine may be used as a cultivator, either with or without the apparatus for sowing.

The general arrangement may be such as is herein set forth, or any other substantially similar and that may, in the opinion of the constructer, be more suitable.

Having thus described the construction and operation of my improved seed-drill and planting-machine, what I claim therein as new, and desire to secure by Letters Patent, is— .

The combination of the teeth *z*, hinged at *y* on joint-pins, with the beams C and springs *x*, substantially as described, whereby any of the teeth may turn aside or rise over stones and other common obstructions which they may meet, thus greatly diminishing the danger of being broken and of throwing the machine out of its track.

In testimony whereof I have hereunto subscribed my name this 30th day of September, 1848.

EMANUEL MYERS.

Witnesses:

S. M. WOOD,

P. H. WATSON.