

(No Model.)

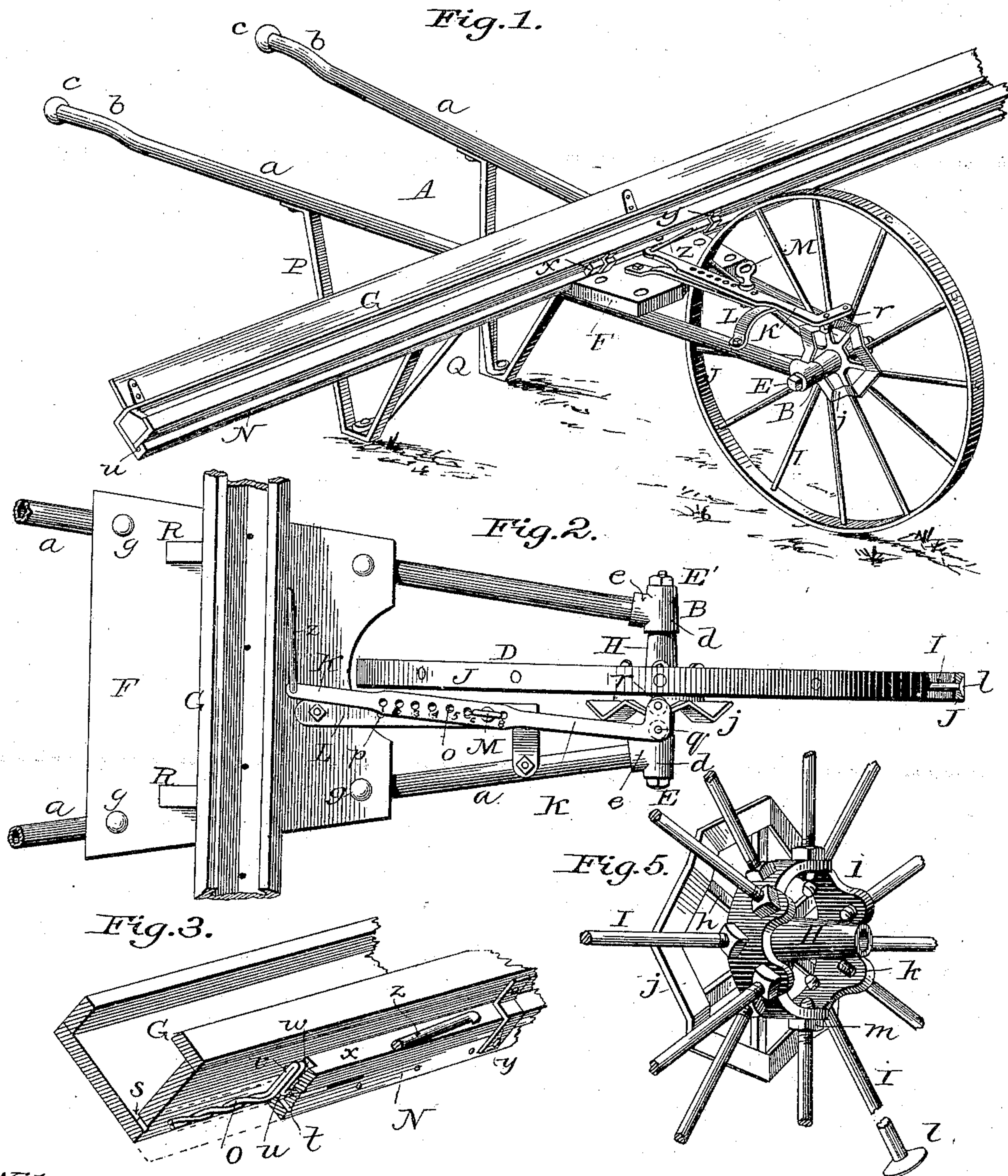
2 Sheets—Sheet 1.

R. B. SHELDON & J. V. PEACOCK.

SEEDING MACHINE.

No. 335,779.

Patented Feb. 9, 1886.



Witnesses:

Jas. F. Oufamel.  
Walter S. Dodge

Inventors:

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Fig. 4.

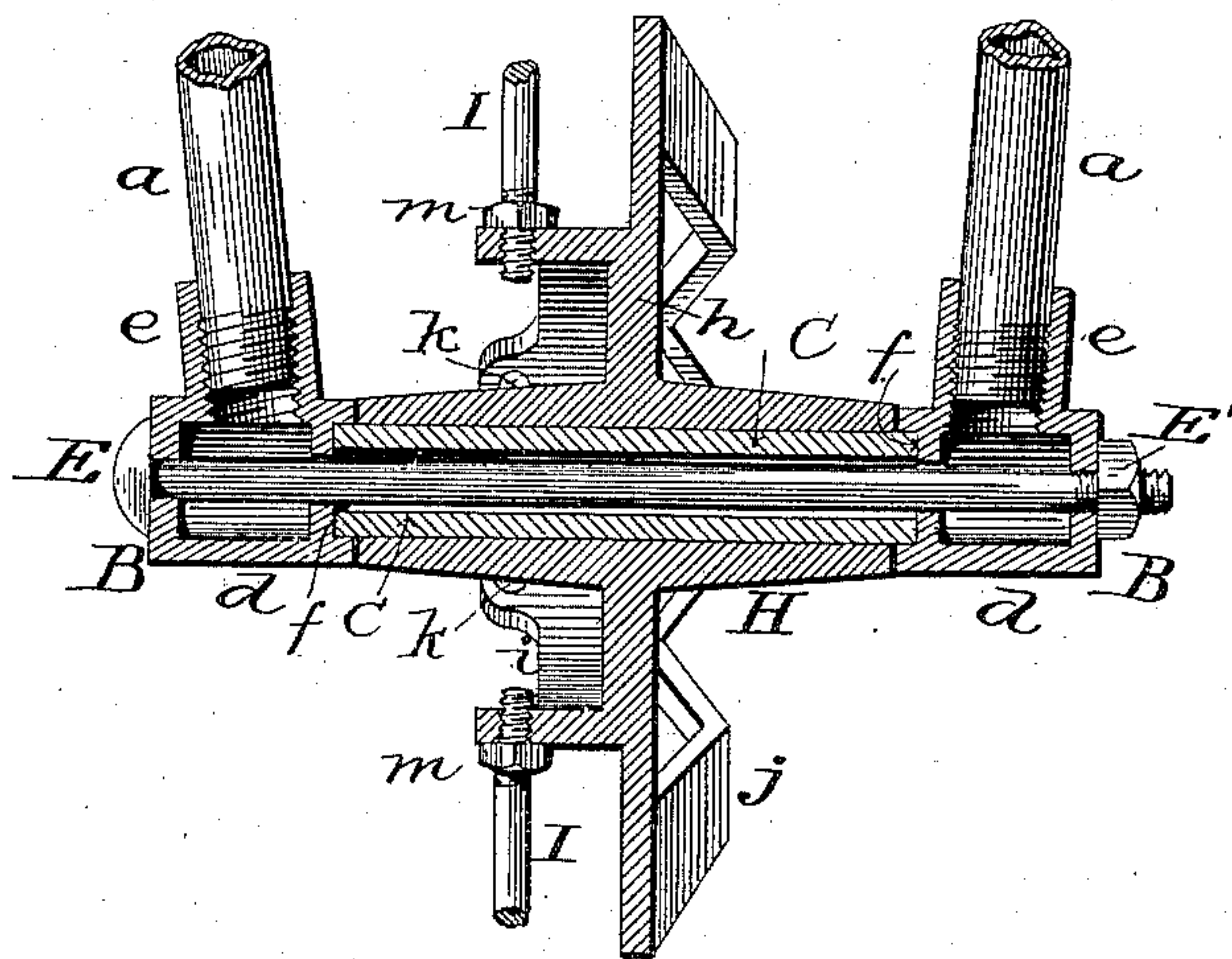
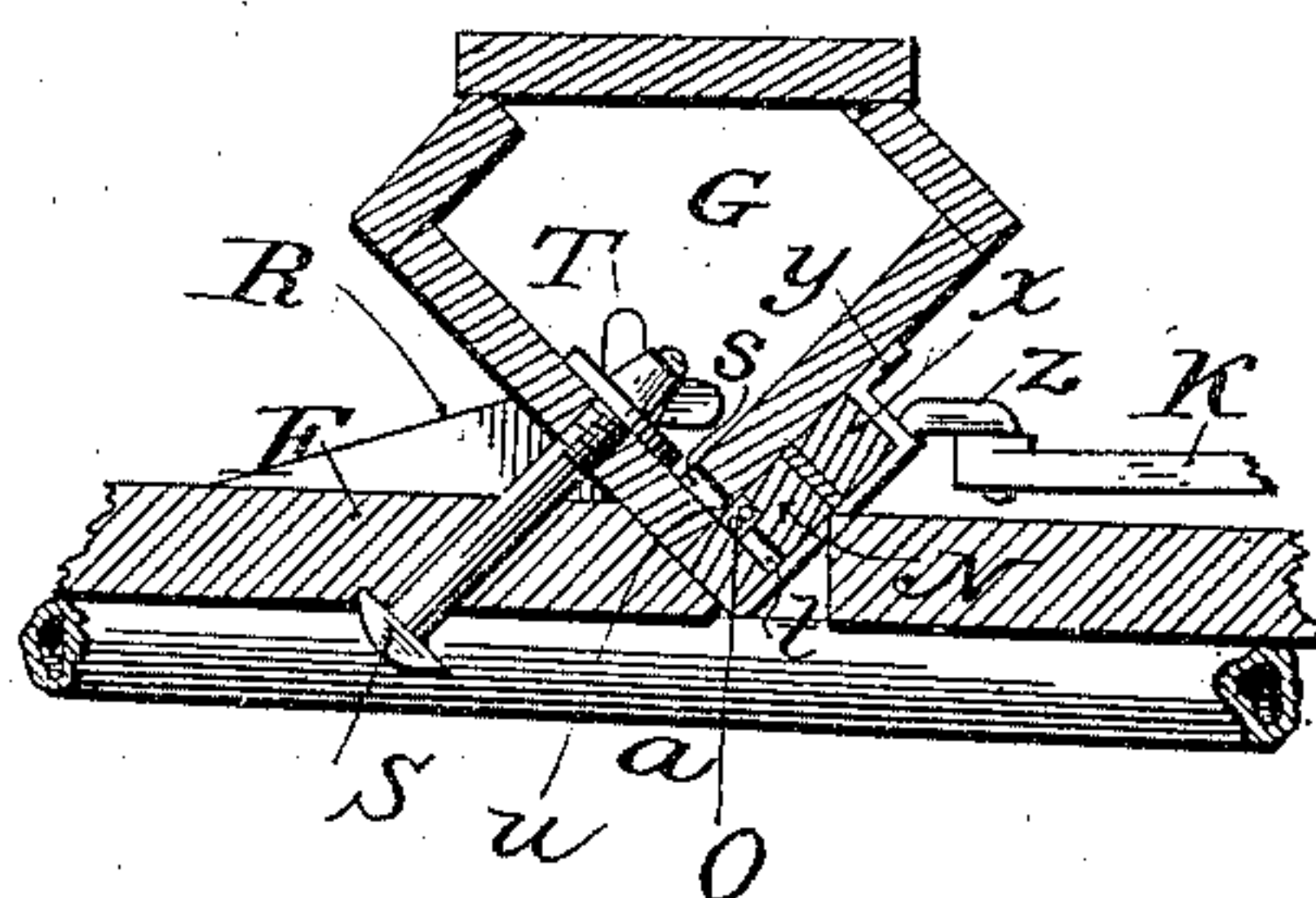


Fig. 6.



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# UNITED STATES PATENT OFFICE.

RICHARD B. SHELDON AND JOSEPH V. PEACOCK, OF SHORTSVILLE, ASSIGN-  
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## SEEDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 335,779, dated February 9, 1886.

Application filed March 6, 1885. Serial No. 157,898. (No model.)

*To all whom it may concern:*

Be it known that we, RICHARD B. SHELDON and JOSEPH V. PEACOCK, of Shortsville, in the county of Ontario and State of New York, have invented certain new and useful Improvements in Seeding-Machines, of which the following is a specification.

This invention relates to that class of machines commonly designated "walking-seed-ers," in which the machine is propelled by the attendant.

The improvements consist in various features and details of construction hereinafter fully set forth, whereby the machine is simplified and cheapened and its action improved.

In the annexed drawings, Figure 1 is a perspective view of the improved seeder complete, the seed-hopper being shown shorter in proportion than it appears in practice, owing to lack of space on the sheet; Fig. 2, a top plan view with the hopper and handles broken away; Fig. 3, a sectional perspective view of the seed-delivery mechanism; Fig. 4, a sectional view of the hub, axle, and fastenings; Fig. 5, a perspective view of the wheel-hub and cam; Fig. 6, a sectional view showing the attachment of the hopper.

The machine to which the present invention relates is designed more particularly for sowing grass-seed, though many of its features are applicable to other seeding-machines, and the improvements are designed with special reference to lightness, simplicity, and cheapness of construction, ease, and accuracy of operation.

The machine may be described in general terms as consisting of a metal frame formed of gas-pipe and carried by an iron wheel at the forward end, the whole bearing a strong resemblance to the metal wheelbarrow now in common use, a seed-hopper being mounted upon and across the frame, and provided with a discharging-slide moved by a horizontal vibrating lever actuated by a cam formed upon the hub of the wheel.

Referring again to the drawings, this construction will be more fully explained.

A indicates the frame of the machine, and *a a* the side bars thereof, formed of wrought-iron pipe, the rear ends or handle portions of

which bars are bent or curved upward, as in Fig. 1, to bring them to a convenient height without unduly elevating the rest of the machine. The handles *b b* thus formed are furnished with wooden knobs or plugs *c*, to give them a finish and prevent the rough ends from wearing or hurting the hands, and to preclude the entrance of moisture, which would cause the iron to rust on the inside. The bars *a a* converge or approach each other toward the forward end of the machine, as shown in Fig. 1, being separated a distance of about twenty-four inches at the rear end and about six inches at the forward end. Each bar *a* screws into a thimble, B, at its forward end, which thimble is of the form shown in Figs. 1, 2, and 4—that is to say, consisting of a body portion, *d*, at right angles to the line of travel of the machine, and a neck, *e*, joining the body at an angle corresponding to the inclination or the divergence of the side bar, *a*. This construction permits the side bars, *a a*, to be screwed into their respective thimbles and to assure their required positions without bending, hence cheapening and facilitating the construction of the machine, and avoids the weakening of the side bars consequent upon bending thereof, as has hitherto been customary. Each thimble B has its inner end formed with a countersink or recess, *f*, of a size and shape to receive one end of a short piece of iron pipe or tubing, C, which forms the axle for the carrying-wheel D, which axle, with the wheel upon it, is put in place before the frame A is finally put together. The tubing C is enough longer than the hub of the wheel D to extend into the countersinks or recesses *f* and still hold the thimbles B far enough apart to prevent their binding upon or exerting any pressure against the ends of said hub, though not long enough to permit any appreciable side-play of the wheel. When the wheel and axle are thus put in place, a headed bolt, E, is passed through the thimbles B and tubular axle C, and a nut, E', is applied to the threaded end of the bolt, as best shown in Fig. 4. The axle C thus forms a spacing-piece to limit the approach of side bars, *a a*, and the bolt draws and holds the parts firmly together, prevents spreading, and precludes



tipping or displacement of the thimbles B B. The firm and rigid construction thus secured is of great importance in machines subjected to such usage as seeding-machines receive, and especially where the distributing mechanism is actuated in the manner hereinafter explained. The bars *a a* are connected in rear of wheel D by a board or platform, F, secured thereto by bolts *g*, passing through the board and bars, as shown in Figs. 1 and 2. This platform serves to maintain the proper relative positions of the side bars and give rigidity to the frame, and also to receive and support the seed-hopper G, which will be presently described.

Referring, now, to Figs. 1, 2, 4, and 5, the wheel D will be seen to consist of a tubular hub, H, of proper length to fit and fill the space between the thimbles B, from which hub project a series of radial arms, *h*, (or it may be a continuous web,) bearing an annular band, *i*, and a radial cam plate or ring, *j*, the band *i* being turned outward laterally in a plane concentric with the axis of the hub. This band *i* is provided with a series of threaded holes, *k*, at regular distances apart, and offset or arranged in two lines circumferentially around the band, to receive the threaded ends of and give the requisite spread to metal spokes I, formed of heavy wire or light rod-iron. The spokes have their outer ends formed with large flat heads *l*, and these are countersunk in the rim of felly J, which is preferably made of flat bar-iron of suitable weight. The threaded ends of the spokes are furnished with nuts *m* at the outer side of band *i*, which form lock or jam nuts to prevent the accidental unscrewing or loosening of the spokes.

The cam ring or plate *j* will, by referring to Figs. 1, 2, and 5, be seen to consist of a single radial plate or flange of zigzag or wave shape, and is designed to be straddled by the forked end of a vibratory lever, K, through which motion is imparted to the slide of the seeding mechanism. This lever K is mounted in a substantially horizontal position upon a support, L, bolted to one of the side bars, *a*, and to the board or platform F, as shown in Figs. 1 and 2, and is designed to swing laterally about a pivot-pin, M, passing through one of a series of holes, *o*, in the lever, and through the corresponding one of a series of holes, *p*, in the support L. By providing the two series of corresponding holes, *o* and *p*, the pin M may be set nearer to or farther from the respective ends of the lever K, and thus the throw of its ends, and the consequent movement of the feed slide or rod, can be regulated quickly and with accuracy, the holes *o* being numbered to indicate the quantity of seed per acre sown under such adjustment. The forward end of lever K is forked, or provided with two depending arms or studs, *q*, which pass down on opposite sides of the cam plate or ring *j*, and are preferably furnished with anti-friction rollers *r*, to reduce the friction and insure an easy movement of the lever without liability of cramping or bind-

ing. The arms or studs *q* are arranged to straddle the cam-ring *j* at a point directly over the axis of the wheel, the lever K occupying a position longitudinal to the cam, as clearly shown in Fig. 1. This arrangement prevents the cam from exercising any twisting or bending force upon the lever, as is the case where the lever occupies a radial position, and causes the only strain brought upon the lever to be applied to the vibration thereof, or received by the pivot M as a direct longitudinal pull upon the lever. This latter strain is very light, owing to the freedom of movement about the pivot and the ease with which the rollers *r* ride upon the faces of the cam ring or plate.

Referring, now, to Figs. 1 and 3, the seeding mechanism will be seen to consist of a V-shaped hopper, G, having holes or outlets *s* at suitable intervals through the bottom or side—preferably through the front side—as seen in Fig. 3, a grooved strip, N, secured to the hopper and provided with holes *t*, alternating with the holes *s*, and a reciprocating slide, O, seated in the groove *u* of strip N and formed of a twisted wire or wires, as shown in said Fig. 3. At or about its mid-length the slide O is formed into a loop or loops, *v*, projecting laterally from the body of the slide and extending into a notch or seat, *w*, in a sliding block or box, *x*, resting upon the strip N, and guided in its movement by guides *y*. The block or bar *x* is connected with the rear end of lever K by link or rod *z*, as shown in Figs. 1 and 2, and thus receives a reciprocating motion, which is directly imparted to the feed O. Legs P and braces Q are bolted to the bars *a a* and platform F, as shown in Fig. 1. The hopper G rests upon blocks or supports R, against which it is drawn and held by a bolt, S, and thumb-nut T, as shown in Fig. 6.

With the parts constructed and arranged as above explained, it is only necessary to supply the hopper with seed, adjust the pivot-pin H to such point in the length of the lever as will cause the proper movement of the feed-slide for feeding a given quantity of seed per acre, and then push the machine forward over the land, the hopper being usually from ten to fifteen feet in length, and the machine consequently planting that width of space at one time.

The slide O may obviously be of corrugated instead of twisted wire.

Having thus described our invention, what we claim is—

1. In a seeding-machine of the character herein described, the combination of a wheel having a tubular hub, a tubular axle passing through said hub, thimbles recessed to receive the ends of the axle and provided with oblique tubular necks, side bars inserted and secured in said oblique necks, and a bolt passing through the axle and thimbles and binding the parts together, substantially as shown and described.

2. The herein-described frame for a seeding-



machine, consisting of side bars, *aa*, thimbles B, tubular axle C, seated at its ends in the thimbles, and tie-bolt E, passing through the thimbles and axle and serving to bind the parts together, as shown and described.

3. In combination with wheel D and recessed thimbles B B, tubular axle C, passing through the hub of said wheel and seated at its ends in the thimbles, and tie-bolt E, passing through the thimbles and axle, all substantially as described and shown, whereby the axle C is caused to prevent the thimbles from being drawn against the ends of the hub.

4. In a seeding-machine substantially such as described and shown, the wheel D, consisting of hub H, provided with perforated overhanging band *i* and radial cam-plate *j*, rim or felly J, and spokes I, headed in the rim and screwed into the band *i*, all substantially as shown and described.

5. The combination, substantially as described and shown, of frame A, carrying-wheel D, provided with cam-plate *j*, hopper G, wire feed-slide O, and vibrating lever K, connected at one end with the slide O and straddling the cam-plate *j* at its opposite end, as set forth.

6. In combination with wheeled frame A, having supporting-blocks P, hopper G, bolt S, and nut T.

7. In a seeding-machine substantially such as described and shown, a seed-discharging slide composed of wire twisted or corrugated, substantially as described and shown.

8. In combination with frame A, wheel D, having cam *j*, hopper G, grooved strip N, wire slide O, provided with loop *v*, sliding block *x*, lever K, straddling the cam *j* at its forward end, and link *y*, connecting the rear end of the lever and the slide *x*, all substantially as shown and described.

9. In a seeding-machine, the combination of a feed or discharge device, a cam-wheel, an intermediate vibratory lever, and a support for said lever, the lever and support being both provided with a series of holes to receive an adjustable pivot-pin, and one of said series of holes being numbered, substantially as explained, to indicate the quantity of seed that will be sown under each adjustment of the pivot-pin.

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