

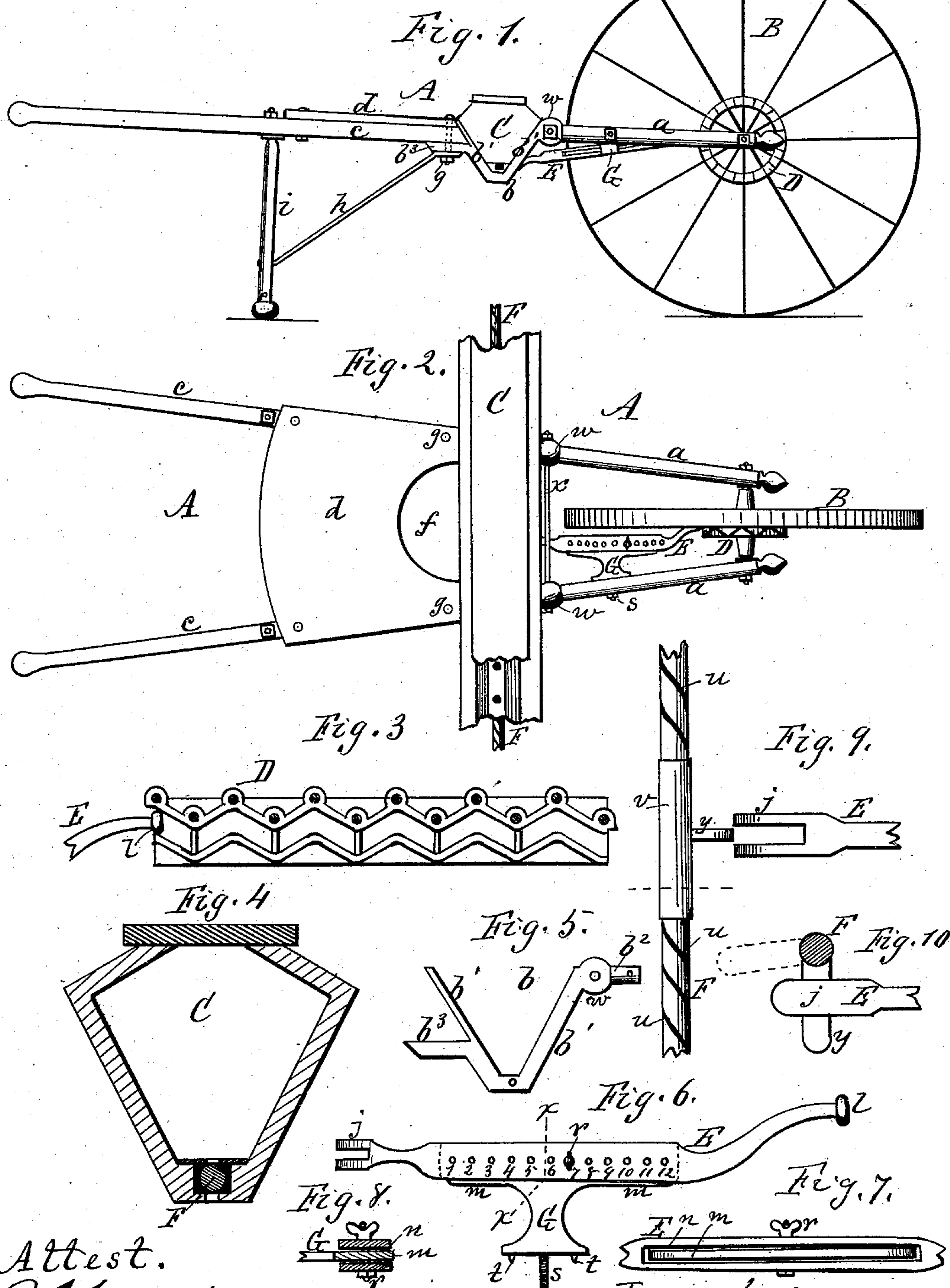
(No Model.)

G. V. H. WHITBECK.

WHEELBARROW GRASS SEED SOWER.

No. 373,162.

Patented Nov. 15, 1887.



Attest.
P. A. Westcott
F. D. Costich

Inventor.
Geo. V. H. Whitbeck
R. F. Osgood
att'y.

UNITED STATES PATENT OFFICE.

GEORGE V. H. WHITBECK, OF PHELPS, NEW YORK.

WHEELBARROW GRASS-SEED SOWER.

SPECIFICATION forming part of Letters Patent No. 373,162, dated November 15, 1887.

Application filed December 10, 1885. Serial No. 185,259. (No model.)

To all whom it may concern:

Be it known that I, GEORGE V. H. WHITBECK, of Phelps, in the county of Ontario and State of New York, have invented a certain new and useful Improvement in Wheelbarrow Grass-Seed Sowers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this application.

My improvement relates to that class of grass-seed sowers in which the seed-box is mounted on a frame and wheeled forward like a wheelbarrow.

The invention consists in an improved construction of the rock-lever, by which the reciprocating motions are given to the distributing-rod, an improved construction of the devices for connecting and disconnecting the rod with and from the rock-lever, and an improved means for attaching the seed-box in place; also, an improved construction of the distributing-rod, all as hereinafter more fully described.

In the drawings, Figure 1 is a side elevation of the machine. Fig. 2 is a plan of the same. Fig. 3 is a diagram showing the cam spread out as a flat surface, illustrating the manner of driving the rock-lever. Fig. 4 is a cross-section of the seed-box enlarged. Fig. 5 is a side elevation of one of the angular sockets or elbows for supporting the seed-box. Fig. 6 is a plan of the rock-lever and its supporting-bracket enlarged. Fig. 7 is an edge view of the central portion of the same. Fig. 8 is a cross-section of the rock-lever and bracket in line *xx* of Fig. 6. Fig. 9 is a diagram showing a portion of the distributing-rod and the end of the rock-lever. Fig. 10 is a cross-section of same, showing the parts engaged.

A indicates the frame of the machine and B the wheel in front, the whole being in the shape of a wheelbarrow.

C is the seed-box, which is made of considerable length—say from twelve to sixteen feet—and lies crosswise of the machine just in the rear of the wheel.

D is the cam forming the hub of the wheel and cast with it; and E is the rock-lever, receiving vibratory motion by means of the cam,

and connecting at the rear end with the distributing-rod F, which latter reciprocates in the bottom of the seed-box.

The construction above described is similar to that described in my Letters Patent of March 10, 1885, No. 313,565.

The front portion of the frame consists of two lengths, *aa*, of gas-pipe, forming connectors, to the front end of which the wheel is journaled, while the rear ends extend back as far as the seed-box. At this point elbow-shaped sockets or bearings *bb* are attached, and to these bearings on the rear side are attached the wood side pieces, *cc*, that constitute the handles. On top of the handles and in rear of the seed-box is a board, *d*, cut out at *f* in its front edge to allow the hand to be inserted to connect and disconnect the distributing-rod and rock-lever.

Each of the sockets or elbows *b* is made in a single piece, consisting of the two angular sides *b'b'*, in which the body of the seed-box rests, a projecting round tenon, *b²*, at the top and in front, which fits in the tubular end of the gas-pipe *a* and is pinned therein, provided, also, with a ball, *w*, just at the point of connection with the gas-pipe, to receive a cross-rod, *x*, that unites the two sides of the frame, and a horizontal lug, *b³*, in the rear, on top of which the front end of the side piece, *c*, rests, and is bolted thereto by a bolt, *g*, that extends up through the lug, the side piece, and the top board, and also through the end of a brace, *h*, that connects with the leg *i*, attaching all of said parts together. The leg *i* is made of a piece of gas-pipe secured to the side piece, *cc*, by a bolt, and connected with the under side of the frame by the brace *h*, as before described.

The sockets *bb* are set down below the top of the frame and close behind the wheel, and the seed-box is set therein so as to lie low, as in my before-mentioned patent, so that the seed-box comes in convenient position to connect with the rock-lever and prevents top-heaviness and more evenly balances the machine than when placed high. By the construction of the socket in a single piece separate from the frame, provided on the front side with the tenon that enters the gas-pipe, and on the rear with the horizontal lug that

holds the handle, the machine is cheaper and more effective in use than in my first machine. The cam is of similar form to that described in my former patent, and the rock-lever has
5 a roller, *t*, of a similar form and for the same purpose.

The rock-lever and its supporting-bracket are of peculiar construction, as follows: The bracket is of T form, being attached to one of
10 the gas-pipes *a*, and extending inward and downward, where it has a long flat bearing, *m*, extending longitudinally a considerable portion of the length of the rock-lever. The central enlarged portion of the rock-lever is provided with a long horizontal slot, *n*, that receives the flat bearing of the bracket. The
15 rock-lever and the bearing of the bracket have a series of holes, *p p*, made vertically through them, which holes lie in coincidence, and through any one of the holes a bolt, *r*, is
20 passed, which forms the pivot of the rock-lever. By changing this pivot from one to another of these holes, which can be done without changing the relative positions of the
25 rock-lever and the bracket, the stroke of the rock-lever can be lengthened or shortened, as necessity may require. This is of great advantage, as in making the changes the rock-lever is not changed at all. Therefore the roller
30 on its front end will always remain in the same engagement with the cam, and the fork at the rear end will remain in the same engagement with the distributing-rod. Another great advantage is that the long blade-shaped bearing
35 of the bracket that rests in the slot of the rock-lever sustains the rock-lever the greater portion of its length and prevents any twist or wobbling, and holds it in a perfectly level position during its vibrations. The lever
40 never loses its contact with the extremities of the bearing at the extreme of vibration. Therefore it always moves in the same plane and without strain on the pivot. The holes are preferably numbered in consecutive order,
45 to indicate adjustments corresponding with a prearranged formula for sowing different seeds, or greater or less quantities of seeds per acre. On the outer end of the bracket is a shoulder which fits against the gas-pipe, and this shoulder
50 is provided with a screw-shank, *s*, that extends through a hole in the gas-pipe, on the outer end of which shank screws a nut, and it is also provided with two nibs or points, *t t*, that enter holes in the sides of the gas-pipe
55 by which the bracket is kept from turning.

The distributing-rod *F*, which rests in the bottom of the seed-box and extends longitudinally of the same, lies between two sets of seed-holes, drawing the seed down through the
60 upper ones and discharging it through the lower ones. The rod is made of two sections or lengths of hard and perfectly smooth wood cut with spiral grooves *u u*, which extend from end to end. As the rod is reciprocated, the
65 seed falls into the spiral grooves and is gradually forced down in a continuous manner, so that when it reaches the holes at the bottom it

is discharged in a continuous and even line, and much more effectively than when the rod is simply ribbed, which would rapidly wear
70 off.

The distributor-rod is made of hard wood about a half-inch in size, being stiff and light and smooth, with the least possible friction or wear. By being made of hard wood and light it can
75 thereby be made of large size, to give it sufficient strength and also provide a covering to the discharge-openings to prevent the rattling or discharge of seed on rough or uneven ground, thereby destroying the adjustment of quantity,
80 as with the former small cord or wire-rod distributors. The rod has spiral grooves running its entire length cut to a certain depth and uniformity of run, so as to take a positive hold on the seed in the channel and force it by its
85 vibrations in regular and even flow and with the greatest accuracy.

The two sections of rod above described are connected in the center by a tubular socket-piece, *v*, of substantially the same diameter, from the bottom of which projects a flat arm,
90 *y*, that swings into an open fork, *j*, of the rock-lever *E*. By throwing this arm forward into the fork the parts are engaged and the rod will reciprocate with the lever, and by throwing it
95 back the parts will separate and the rod will be disconnected. This is done by simply inserting the hand down through the opening *f* in the top board. This also enables the seed-box to be put on and taken off without detach-
100 ing any fixtures.

Having described my invention, I do not claim, broadly, a rock-lever for operating the distributing-rod, nor a series of holes in said
105 rock-lever and its support for changing the fulcrum on which the lever turns, as such devices are shown in my patent of March 10, 1885, No. 313,565.

What I claim as new, and desire to secure by Letters Patent, is—
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1. In a wheelbarrow grass-seed sower, the combination, with the cam-wheel and distributing-rod, of the bracket *G*, constructed with the flat bearing-blade *m*, and the rock-lever *E*, constructed with a flat central portion having a long horizontal slot, *n*, therein, the blade entering the slot and furnishing the bearing for the rock-lever its whole length, said bearing-blade and rock-lever being provided with a set of coincident holes to receive the pivot-pin, as described.
115 120

2. In a wheelbarrow grass-seed sower, the combination, with the front side pieces, *a a*, and rear side pieces, *c c*, of the angular sockets or elbows *b b'*, for holding the seed-box, constructed with tenons *b²* and enlargements
125 *w* in front for entering the front side pieces, and with the lugs *b³* in the rear for attachment of the rear side pieces, as herein shown and described.
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3. In a wheelbarrow grass-seed sower, the combination, with the seed-box provided with a channel in its bottom, of the longitudinally-reciprocating wood-rod distributor provided

with grooves, said rod resting in the channel and substantially filling the same, and discharge-holes both above and below the rod, those above serving to receive the seed from
5 the seed-box and those below to discharge it by means of the reciprocating action of the rod, as described.

4. In a wheelbarrow grass-seed sower, the combination of the rock-lever provided with
10 an open fork at its rear end and a distributing-rod in the seed-box, provided with a

downwardly-projecting arm, which is capable of engaging with and disengaging from the fork by turning the distributing-rod axially, as herein shown and described.

In witness whereof I have hereunto signed
my name in the presence of two subscribing
witnesses.

GEORGE V. H. WHITBECK.

Witnesses:

R. F. OSGOOD,
P. A. COSTICH.