(No Model.)

A. D. BAKER & W. H. OREN.

HAND SEEDING MACHINE.

No. 352,673. Patented Nov. 16, 1886.

Fig. 1.

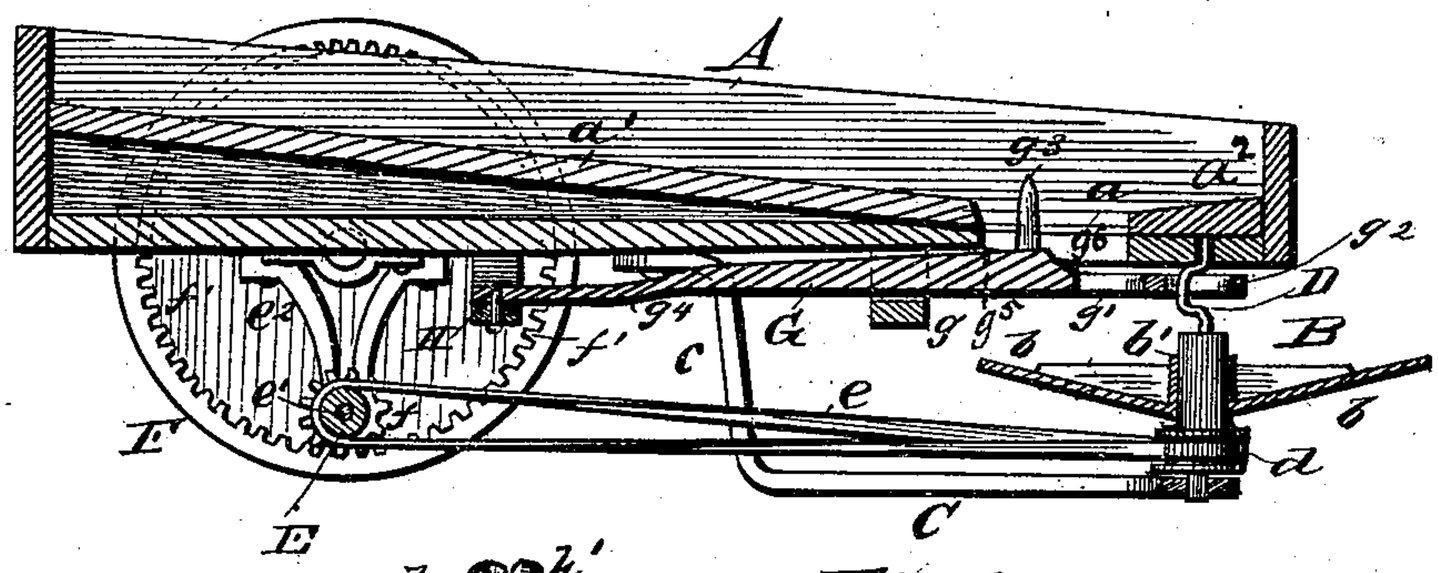


Fig. 2.

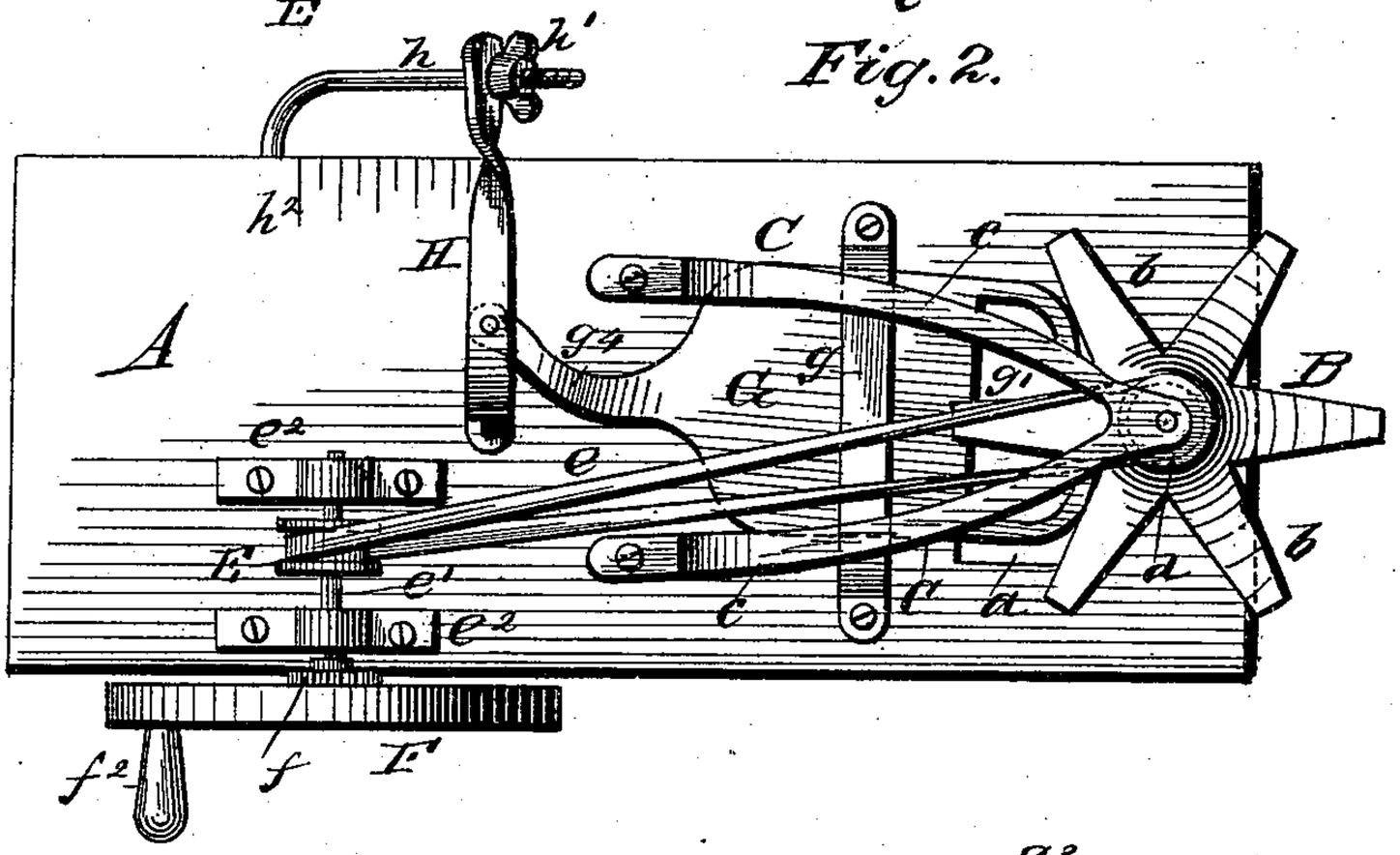


Fig. 3.

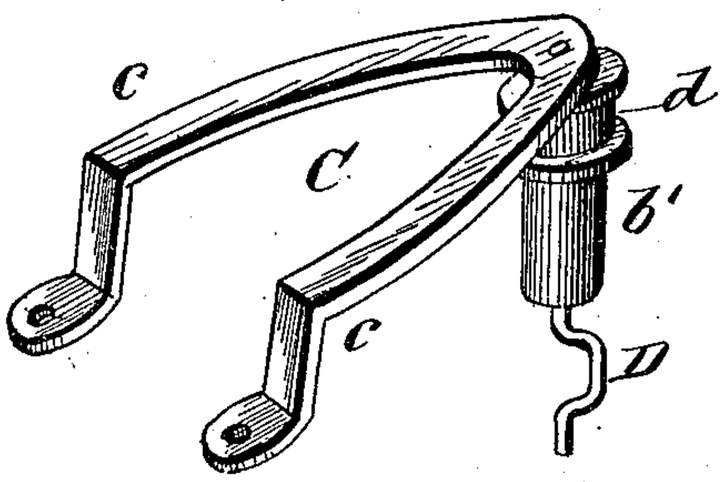
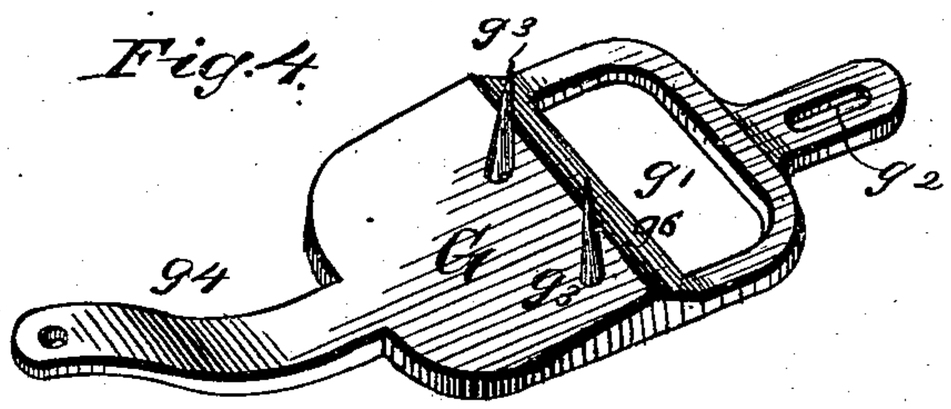


Fig. 4.



Witnesses:
Phil C. Dieterich.
A. E. Dowell.

Inventors.
Arthur D. Baker.
Wm. H. Oren
by
W. Alexander
Attorney.

UNITED STATES PATENT OFFICE.

ARTHUR D. BAKER AND WILLIAM H. OREN, OF SOUTH BEND, INDIANA.

HAND SEEDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 352,673, dated November 16, 1886.

Application filed January 2, 1886. Serial No. 187,423. (No model.)

To all whom it may concern:

Be it known that we, ARTHUR D. BAKER and WILLIAM H. OREN, of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Hand Seeding-Machines; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a central vertical section through the seeder. Fig. 2 is a bottom plan view of the same. Fig. 3 is a detail of the bracket. Fig. 4 is a detail view in perspective of the cut-off plate, showing its fingers.

This invention relates to improvements in seeding-machines designed to be used by hand; and it consists in the construction and novel arrangements of parts hereinafter described, and pointed out in the appended claim.

Referring to the accompanying drawings by letter, A designates the seed-box of the machine, provided in its floor, near its outer end, with a transverse opening or slot, *a*, for the discharge of the seed or grain.

a' is an inclined plane running downward within the box A, from the rear side of the same, toward the slot *a*, for the easy descent of the grain thereto, and a^2 is a narrow transverse piece in front of the slot *a*, the upper surface of which is beveled so as to incline toward said slot. This piece a^2 prevents the banking up of the seed at the front end of the slot in box A, and it also affords the upper bearing for a crank-shaft, D, hereinafter again referred to.

B is the grain-distributing wheel, composed of the cup-shaped arms *b*, open above, and with their bottoms inclining downward from their points toward the shaft *b'*, on which the wheel B is secured. The said shaft is journaled at its lower end in the outer end or bend of a frame, C, the legs *c c* of which diverge slightly and have their ends bent upward and provided with feet, as shown, which are securely fastened to the outer side of the floor of the seed-box.

D is a short crank-shaft, the lower end of which is secured centrally in the top of the shaft *b'* and the upper end journaled in the floor of the seed-box to the outer side of the slot *a*, so that the latter is to the inner side of the shaft *b'*. The crank-shaft D serves a purpose hereinafter explained.

d is a small pulley on the shaft *b'* below the distributing-wheel B, as shown. The said pulley is driven by a belt, *e*, from a pulley, E, the shaft *e'* of which is journaled in a bracket, e^2, depending from the floor of the seed-box. On the outer end of the shaft *e'* is a small pinion, *f*, which meshes with the inside teeth or gearing, *f'*, of the wheel F, the shaft of which is journaled in the top of the bracket e^2, just below the floor of the said box. The said wheel has a handle, f^2, on the side near its rim, by which it is turned, and the distributing-wheel rotated by means of the pinion *f*, pulleys E *d*, and belt *e*. The said wheel has thus a constant rotation in one direction only, and not a vibratory or reciprocatory motion, as when a bow and string are used. By this means a more constant and even distribution of the grain is obtained.

G is a plate which lies upon the bottom of the seed-box and is retained in place by the guide-bar *g*, which holds it up, and the ends of which are secured in the bottom of the seed-box on each side of the plate.

g' is a broad transverse slot in the plate G, lying under the slot *a* in the bottom of the seed-box. By moving the plate longitudinally on the bottom the discharge of the seed will be varied as the slots *g'* and *a* more or less correspond in position, as is evident from the description.

In consequence of the plate G contacting with the bottom of the box A at the point a^3, provision must be made for allowing it to clear itself of sticks, straws, and other foreign matter mixed with the seed. This we effectually accomplish by inclining the upper surface of plate G backward from the slot *g'*, thus preventing it from clogging. The front slotted extension of plate G is made sufficiently thin as not to touch the bottom of the seed-box, as shown in Fig. 1.

g^2 is a small longitudinal slot in an extension from the center of the outer edge of the plate G and having the crank of the shaft D within it. The purpose of this construction is hereinafter explained.

g^3 g^3 are fingers standing upward from the

surface of the plate G near the inner edge of the slot g'. The said fingers enter the slot a in the bottom of the seed-box and perform a function hereinafter explained. It will be seen that the rear edge of the plate G, bounding the slot g', is beveled at g^6. This is for the purpose of directing the seed downward and forward toward the center of the distributing-wheel B.

g^4 is an arm or extension from the inner end of the plate B. The said arm has its end pivoted upon a bar, H, which stands transversely in relation to the seed-box and has its inner end pivoted upon the bottom of the same. Its outer free end lies upon a threaded rod, h, which has one end secured to the seed box, and a nut, h', traveling upon its outer portion. When the said nut is turned inward it will impinge against the bar H and move the free end of the same inward, so that the plate G will be drawn inward on the bottom of the seed-box and the discharge of grain increased. By moving the plate G outward the said discharge is decreased, as the slot g' will be made to more or less partially cover the slot a.

h^2 is a scale on the edge of the bottom of the seed-box for the purpose of properly graduating the movement of the bar H outward or inward.

As the shaft b' and crank-shaft D rotate, the engagement of the latter in the slot g^2 will cause the plate G to vibrate on its pivot-point on the bar H, and so deliver the grain to the distributing-wheel; but as the grain or seed will sometimes bridge over the discharge-opening in the ordinary construction, the fingers g^3 are added to stir the grain within the seed-box and prevent such bridging.

It must be observed that the seed or grain is delivered to the wheel B in rear of the axle b', and near the center of the wheel, so that the centrifugal force does not throw it off the wheel till it has reached nearly the opposite side to that on which it was received.

Having described our invention, we claim—

The laterally-vibrating spurred plate G, having a thin rear curved extension, g^4, a front slotted extension, a backwardly-inclined plane, and a forwardly-inclined plane, g^6, terminating at the rear of a slot, g', in combination with the seed-box A, having a double-inclined bottom, a' a^2, terminating in a discharge-passage, a, and the rotative distributing-wheel B, applied on a shaft, D, the crank of which passes through the forward extension of the plate G, all constructed and adapted to operate substantially as and for the purposes described.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

ARTHUR D. BAKER.
WILLIAM H. OREN.

Witnesses:
JAMES DUSHANE,
JEANIE ANDERSON.