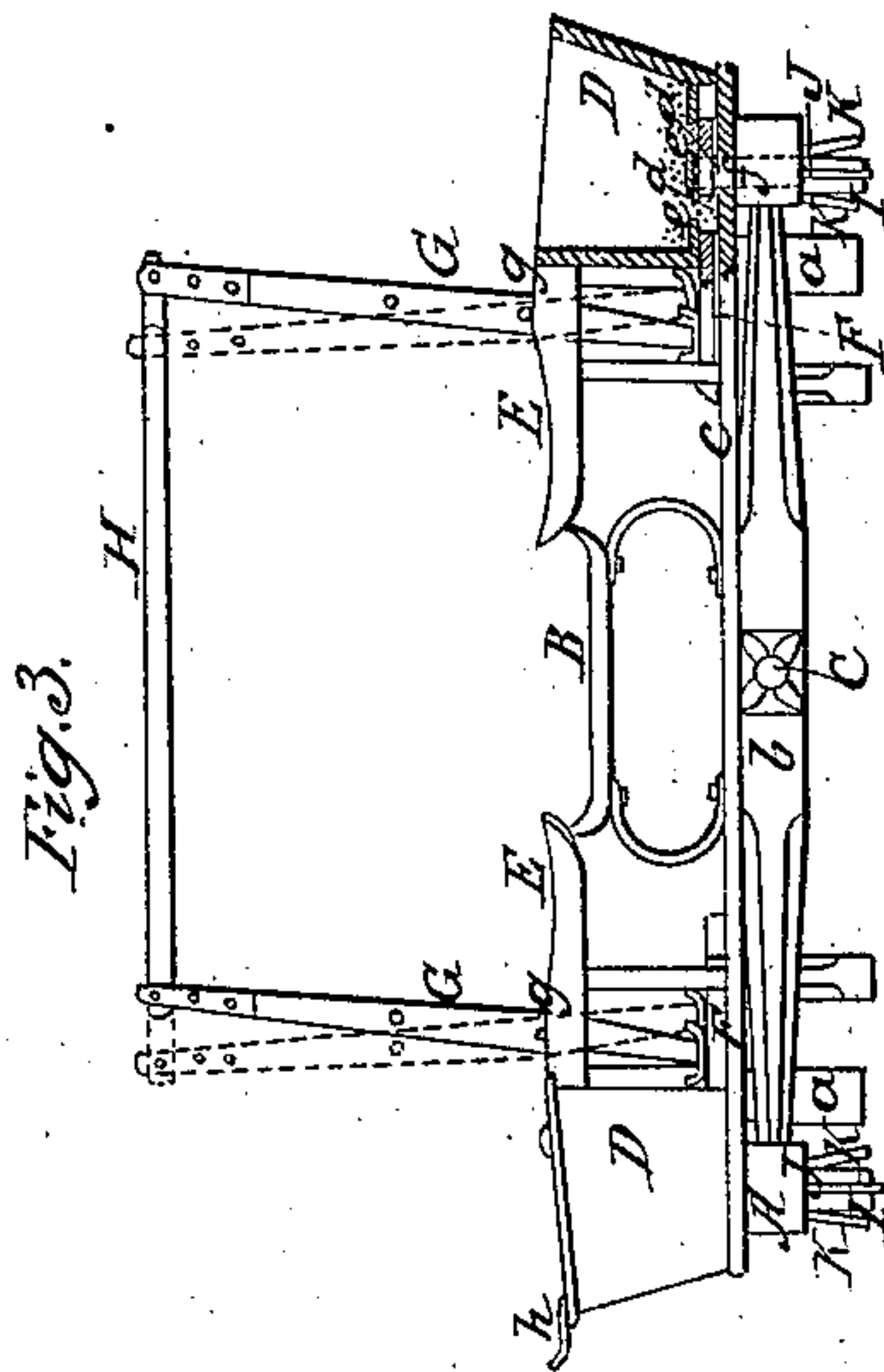
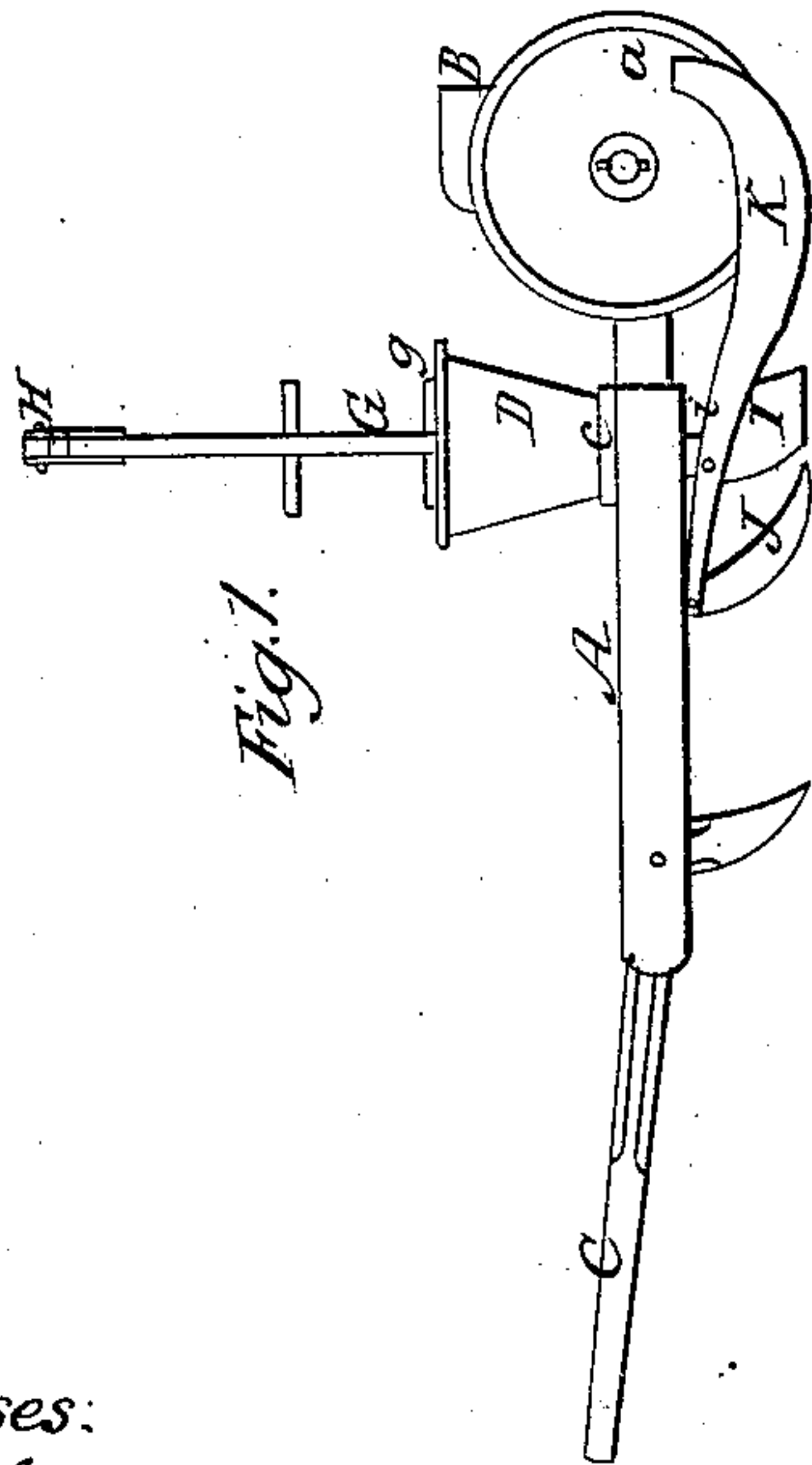
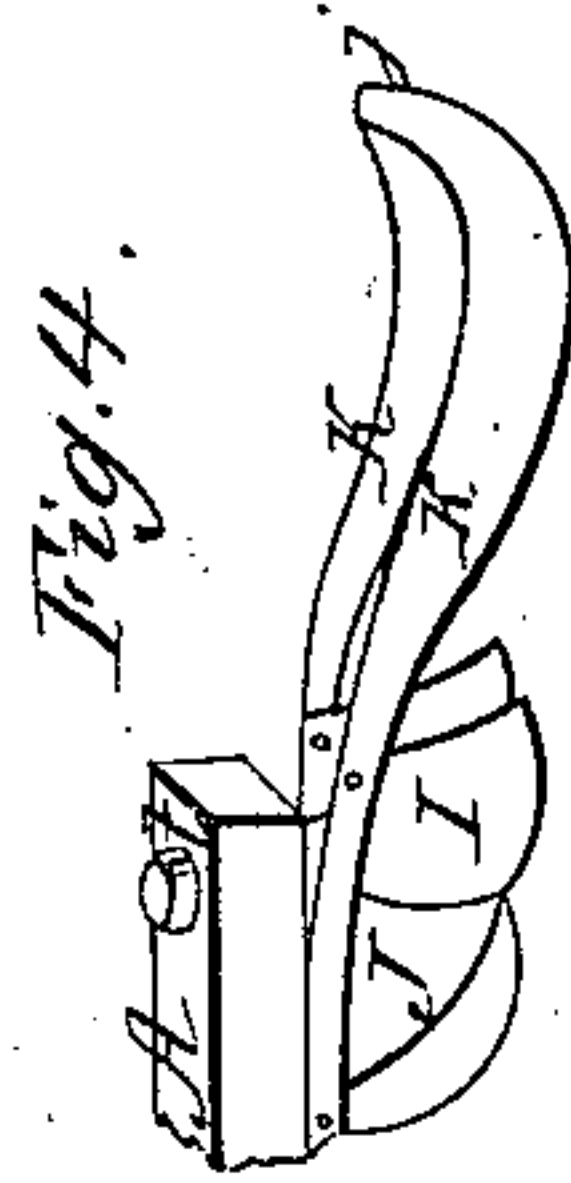
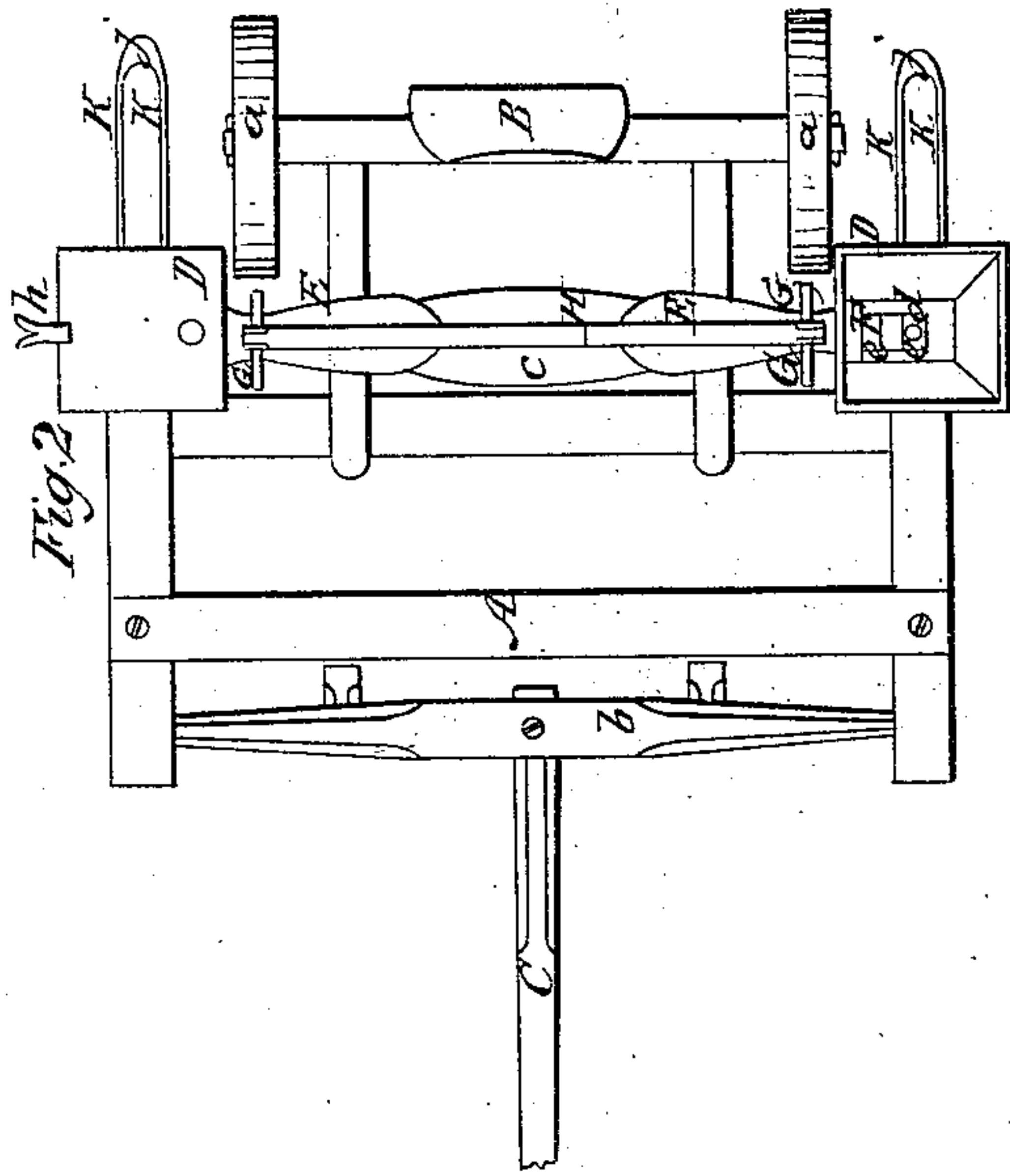


D. J. VAIL.
Corn Planter.

No. 29,420.

Patented July 31, 1860.



Witnesses:
J. Coombs.
C. S. Spencer.

Inventor
David J. Vail.
per Wm. C. Atty.

UNITED STATES PATENT OFFICE.

DAVID J. VAIL, OF INDUSTRY, ILLINOIS.

IMPROVEMENT IN SEEDING-MACHINES.

Specification forming part of Letters Patent No. 29,420, dated July 31, 1860.

To all whom it may concern:

Be it known that I, DAVID J. VAIL, of Industry, in the county of McDonough and State of Illinois, have invented a new and Improved Seeding-Machine; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side view of my invention; Fig. 2, a plan or top view of the same; Fig. 3, a front view of the same with one of the seed-boxes bisected vertically; Fig. 4, a detached perspective view of the colter, furrow-share, and coverer.

Similar letters of reference indicate corresponding parts in the several figures.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a rectangular frame, on the back part of which the driver's seat B is placed. The back part of the frame A is supported by wheels *a a*.

In the front part of the frame a bar, *b*, is fitted transversely, said bar being allowed to turn freely in the frame, and having the draft-pole C attached to it at its center.

On the frame A, just in front of the wheels *a a*, there is a board, *c*, placed transversely, and on this board, at each end, there is secured a seed-box, D, and at the inner side of each seed-box there is attached a seat, E, both of which are shown in Figs. 2 and 3.

Underneath the bottom of each seed-box D there is a seed-slide, F. These seed-slides are allowed to move freely back and forth underneath the seed-boxes, and each is provided with two seed-cells, D. The bottom of each hopper has two openings, *e*, made in it, and one opening, *f*, of a similar size, is made in the board *c*, the latter opening, *f*, being between the openings *e*, as shown clearly in Fig. 3.

G G represent two upright bars, the lower ends of which are fitted in recesses in the outer parts of the slides F. These bars G have holes made in them, through which pins *g* pass, said pins, when the bars G are in working order, resting on the front parts of the seats E, through which the bars pass, and serving as fulcrums for the bars. The upper ends of the bars G G are connected by pivots to a bar, H.

To the covers of the seed-boxes D D bars *h*

are attached, one to each. These bars have forked ends, and they are in line with the bars G G.

I I are furrow-shares, which have tubes *i* attached, one tube to each share. These tubes pass through the side pieces of the frame A and into the holes *f* of the board *c*. The furrow-shares are formed each of two flaring plates projecting from the tubes *i*, and having their front edges in contact, and rounded vertically and brought to an edge, so as to readily open the furrow. Directly in front of each furrow-share there is a colter, J. These colters are simply inclined knives, which project downward and backward from the frame, so that their lower ends are nearly in contact with the fronts of the shares I, as shown clearly in Figs. 1 and 4.

K K are covering-shares, the front ends of which are attached to the upper parts of the colters J, said shares extending back, one at each side of the furrow-shares, and curving upward at their back ends, the covering-share of each furrow-share being connected at their back ends, as shown at *j*, and formed of a single piece of metal, as shown clearly in Figs. 2 and 4.

The operation is as follows: As the machine is drawn along, the driver on seat B controls the movement of the machine by properly guiding the draft-animals, and an attendant is seated astride one of the seats E, and causes the seed to be dropped by operating the bars G. The bars G actuate the slides F, the seed being discharged from the seed-boxes in the same way as the usual perforated seed-slide devices. The attendant in dropping the seed ranges or takes sight over the ends of the bar *h* in front of him, said bar having forked terminals, the seed being dropped when the sight or bar *h*, bar G, and the rows of previously-planted hills come in line. By this arrangement the seed will be dropped accurately in check-rows. Two hills may be dropped simultaneously, or one only. If only one is required to be dropped, one of the bars G is elevated free from its slide F, and retained in such position by placing its pin *g* through one of the lower holes. At every bout of the machine at the ends of rows the attendant changes from one seat E to the other, so as always to face the previously-planted hills. The colters J divide all trash, weeds, &c., that may be in their path. The shares I

part the earth at each side to form furrows to receive the seed which is dropped through tubes *i*, and the shares K K level it, the back connected ends, *j*, serving to level the ground and leave it in a smooth state, so that the seed will be covered with an equal thickness of earth.

I do not claim as new the reciprocating slides F, for they are in common use; but

I do claim as new and desire to secure by Letters Patent—

The arrangement of the curved connected covering-shares K K, furrow-shares I I, tube *i*, colters J, frame A, seed-box D, wheels *a a*, seat B, uprights G G, slides F, pins *g*, seats E, and bar H, as and for the purpose herein shown and described.

DAVID J. VAIL.

Witnesses:

N. H. PEARCE,

EDWARD A. FLOYD.