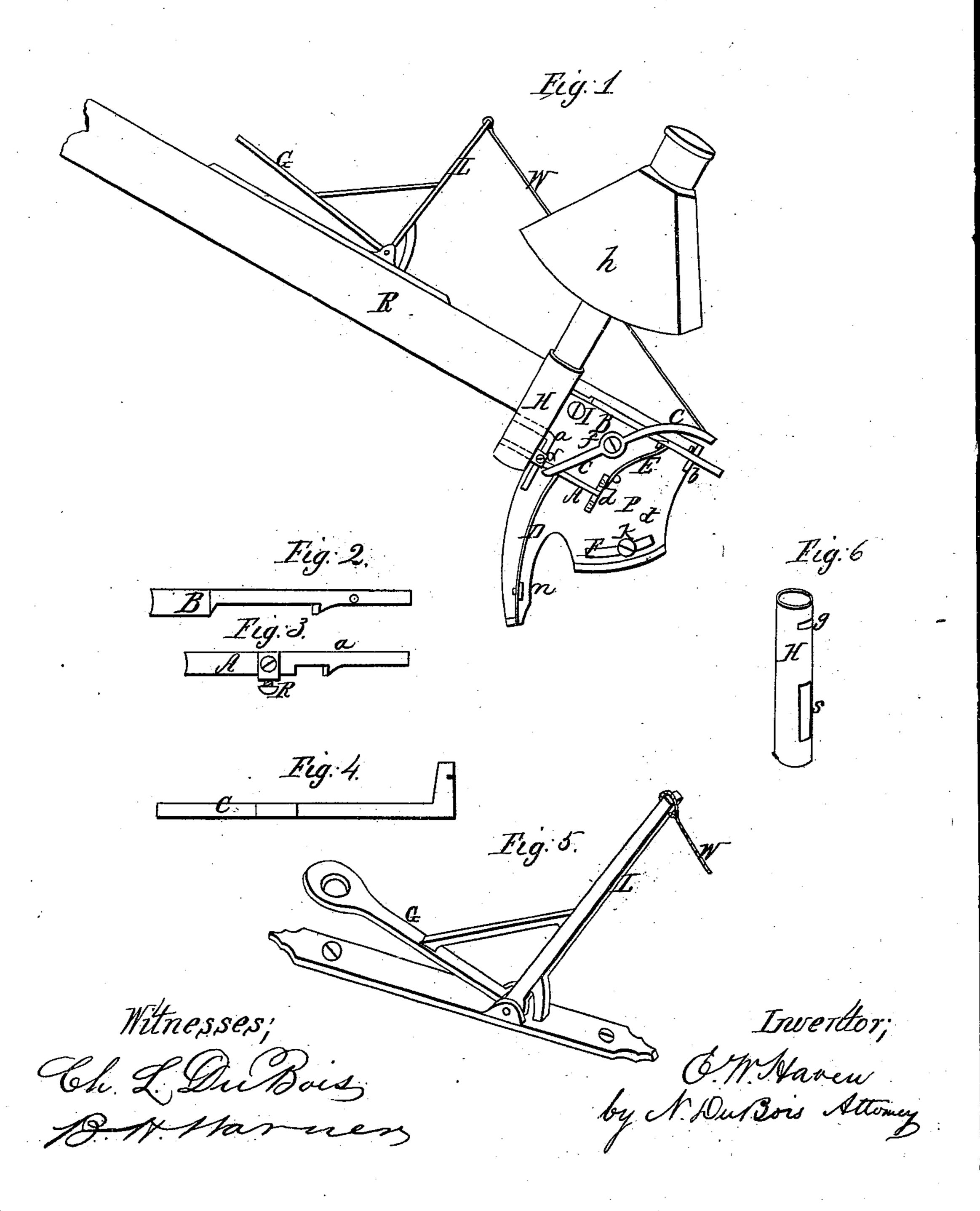
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# Anited States Patent Office.

### E. W. HAVEN, OF BRANDON, VERMONT.

Letters Patent No. 95,683, dated October 12, 1869.

#### IMPROVEMENT IN HAND CORN-PLANTERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, E. W. HAVEN, of Brandon, in the county of Rutland, in the State of Vermont, have invented a new and useful Improvement in Hand Corn-Planters; and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of all the parts connected. Figures 2, 3, 4, 5, and 6, separate views of the sev-

eral parts.

The same letter refers to the same part in each

figure.

My invention consists in an arrangement of hopper, tube, slide-valves, (which regulate the amount of corn dropped in each hill,) levers for operating the valves, and springs that hold the valves in place, the whole to be attached to the handle of a hoe, by which means the dropping and covering of the seed may be done simultaneously.

I construct the plate P as shown in fig. 1, having attached thereto the tube H, the whole to be fast-ened to the hoe-handle by means of the screws I and K. The tube H has the two slots g and s, in which

slide-valves A and B operate.

The two projections b and d, upon the face of the plate P, are notched in the middle for the slide-valves A and B to work back and forth in.

A small pin upon the upper side of slide B prevents the same from going too far back, and a small pin, t, upon the face of plate P, prevents A from going too

The bent lever O, pivoted at f, moves the slide-valves A and B back and forth, and is itself operated upon by the lever G L, being connected therewith by

The slide-valve B is also operated upon by the spring E, holding it in place when forced forward, so as to shut the tube H, and the spring D, operating upon the lower end of the lever C, holds the lower

slide-valve A in place when the same is closed.
To regulate the number of kernels to be dropped

at each operation, I add the gauge a, which is attached to the slide-valve A by means of the regulating-screw r, which screw will clamp it at any point which may be desired, to increase or decrease the number of kernels to be dropped.

The slot s, in the tube H, allows the gauge to move

up and down.

h is the hopper for holding the corn or seed, and is

placed in the top of the tube H.

To change the inclination of the hopper, tube, and plate P, a slot, F, is made in the lower edge of the plate, and the whole secured in position by the screw k.

The operation is as follows:

The corn or other seed is placed in the hopper h, and a portion falls upon the slide-valve B, when closed, by bearing down with the thumb upon the lever G

Upon releasing the lever G, the valve B opens, and at the same time, the lower valve A is closed, and the required number of kernels falls upon the gauge-valve a.

Now, by pressing upon the lever G again, the lower valve opens, and the seed drops, and can be readily

covered with the hoe.

The spring D, being fastened to the lower point of the plate P, and bearing upon the projection n, as a fulcrum, acts strongly upon the lever C, and holds the

valve A and gauge a firmly in place.

The lever G is to be placed upon the handle R, at such point as to be operated upon by one of the hands

grasping the handle.

Having thus described my improvement,

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The gauge a and screw r, in combination with

the slide-valve A, substantially as shown.

2. The arrangement and combination of the lever C, slide-valves A and B, springs D and E, gauge a, tube H, hopper h, and levers G L, substantially as and for the purposes set forth.

E. W. HAVEN.

Witnesses:

PETER NAYLOR, J. Q. HAWKINS.