

C. A. WEED.
GRAIN AND SEED SEPARATOR.

No. 190,991.

Patented May 22, 1877.

Fig. 1.

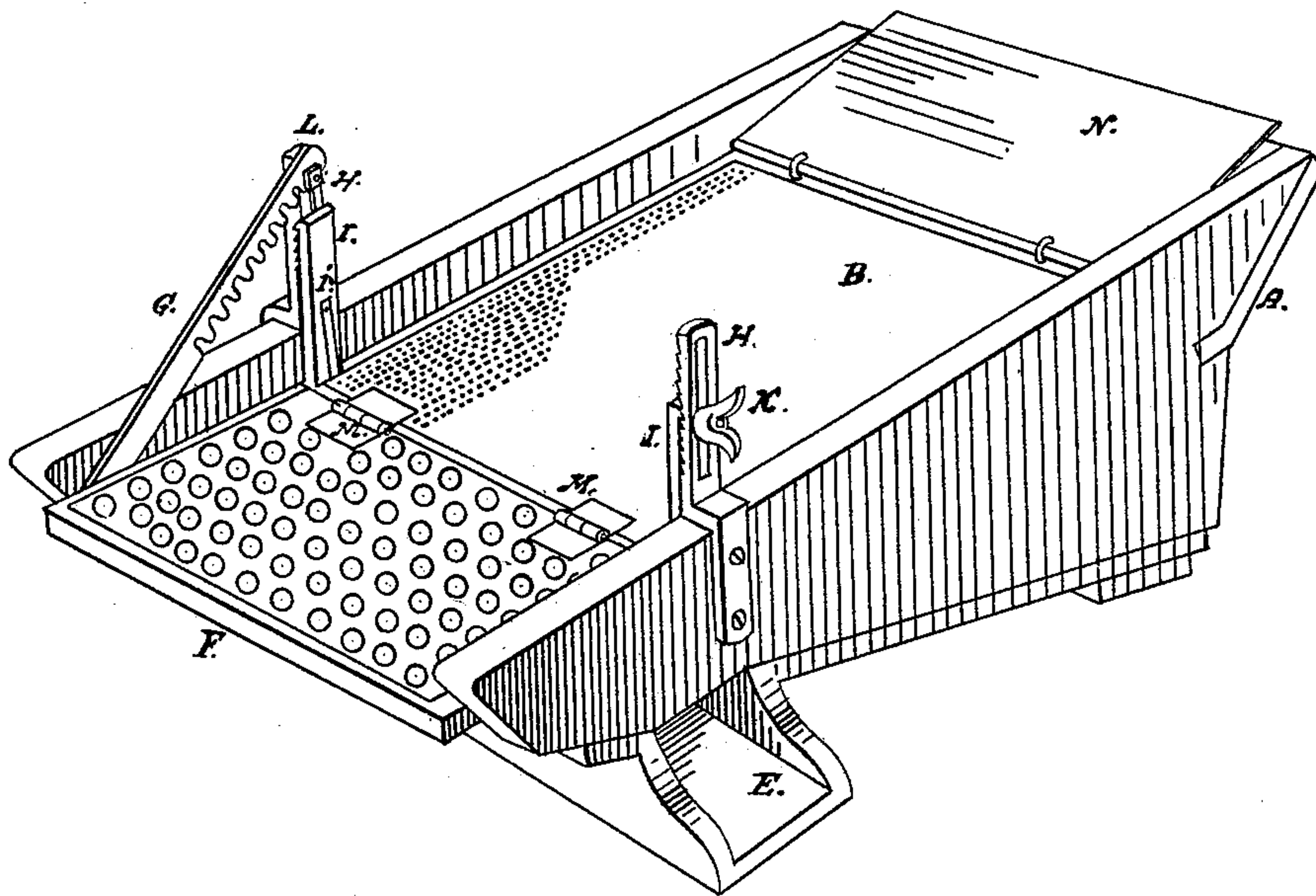
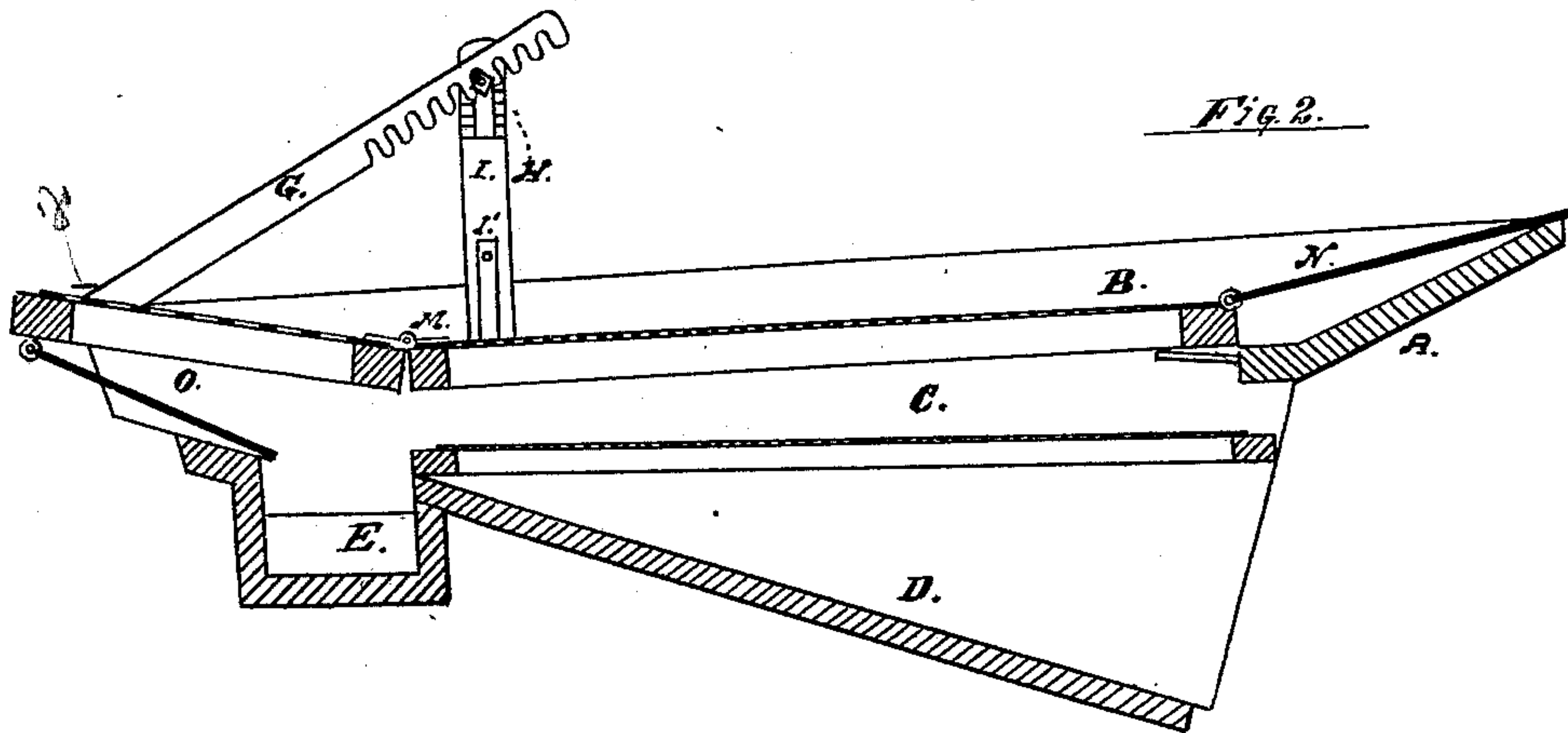


Fig. 2.



WITNESSES:

C. H. Schattenberg
Wm. Martin

INVENTORS:

Clinton A. Weed
By J. B. Smith
Attorney

UNITED STATES PATENT OFFICE.

CLINTON A. WEED, OF RACINE, WISCONSIN, ASSIGNOR TO J. I. CASE & CO.,
OF SAME PLACE.

IMPROVEMENT IN GRAIN AND SEED SEPARATORS.

Specification forming part of Letters Patent No. **190,991**, dated May 22, 1877; application filed
March 12, 1877.

To all whom it may concern:

Be it known that I, CLINTON A. WEED, of Racine, in the county of Racine, in the State of Wisconsin, have invented certain Improvements in Grain and Seed Sieves, of which the following is a specification:

My invention has for its object the improvement of machines especially designed for the cleaning of grain and seeds. It consists, essentially, of means for adjusting certain sieves arranged in a shoe, adapted for attachment to and use in thrashing-machines and other separators, and is so arranged and applied that the upper sieve may be adjusted to have more or less pitch, as also the tail-sieve hinged to it at the lower end, which can, moreover, be raised or lowered independently of the said upper sieve. A ratchet or rack-bar, attached pivotally to the outer end of the tail-sieve, hooks over a bolt in a standard at the side of the shoe, at the hinge or joint, so that the outer end of the tail-sieve may be raised or lowered, and the ratchet will hold it firmly in place at any point of adjustment; and the main upper sieve has an attachment at the point where the tail-sieve is hinged to it, by which it also may be raised or lowered at either side, and thus open the throat, unevenly or evenly, as may be desired, between the upper and lower sieves, getting greater or less space for the wind from the fan to pass through between the sieves.

Referring to the drawing forming part of this specification, Figure 1 is a perspective view of my separator-shoe, exhibiting my invention. Fig. 2 is a longitudinal sectional view of the same.

In the drawing, A is the shoe in which the sieves are placed. B is the upper sieve; C, the lower sieve; D, the inclined bottom of the shoe, on which the seeds or grain fall; E, a "tailings-spout," from which the unthrashed heads which fall through the tail-sieve are conveyed to an elevator, and from thence again to the thrashing-cylinder to be re-thrashed. F is a tail-sieve, attached by hinges M to the rear edge of the upper sieve; and through the large holes in the same the unthrashed heads fall. G is a ratchet or rack-bar, pivoted to the sides near the outer end

of the tail-sieve F, to hold the tail-sieve in any position in which it may be placed. H H are standards, secured on the side of the shoe, in each of which standards is a slot, through which pass bolts on which tightening-nuts are attached. I I are standards, with hooks or bends on the lower ends projecting under the sieve B, and supporting it, to raise and lower the same, and with teeth on their upper ends, which hook into the teeth of racks formed on standards H. I' are springs, which hold the sieve down onto the hooks on standard I. K is a nut on a bolt attached to the upper end of standard I, and which passes through slots in standard H. By screwing up this nut the toothed upper end of the standard I will be held firmly in the rack at whatever place it is set. L is a bolt in the top of one of the standards H, on which ratchet G is hooked. Said bolt is provided, as shown, with a nut, by tightening which the rack-bar resting on the bolt may be secured from displacement by the shaking of the shoe. M M are hinges, fastening tail-sieve F to the upper sieve B. N is a slide-board, secured to the front end of sieve B, being attached to the same by hinges, so that the slide-board N can be raised or lowered at the outer edge of the same, so as to give more or less slant to the same to carry the grain or seeds onto the sieve B and accommodate itself to the adjustments of the same; O, a sliding board, attached by hinges under the outer end of tail-sieve F, so that unthrashed heads falling through the tail-sieve will slide down said board into spout E.

The operation of the sieve is as follows: The seed falls onto the slide-board N and slides over the same onto sieve B, and falls through the same onto sieve C, and through sieve C onto the bottom of shoe A, the unthrashed heads falling through the holes in the tail-sieve F onto slide-board O, and from thence to spout E. This tail-sieve F can be elevated, as desired, and held by ratchet G. The standard I can be raised or lowered, thus regulating the size of the throat between sieves B and C; or the draft of wind from the fan can be thrown to the one side or to the other, as desired, by raising or lowering one of the

standards I, and thus making the throat larger or smaller on either side, as may be desired.

I do not lay claim in the present case to the particular and relative adjustability of the slide or feed board, the upper sieve, the tail-sieve, and the tail-board, this constituting the matter of my application filed complete July 5, 1876; but what I do claim is the particular construction and means employed to effect the desired adjustment.

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

1. Sieve B, with tail-sieve F, rack-bar G, standards H and I, and pin L, all in combina-

tion, substantially as and for the purpose described.

2. Shoe A, sieve B, standards H and I, and nut K, all in combination, substantially as described.

3. The combination of sieves B and C, tail-sieve F, ratchet G, shoe A, standards H H and I I, and side-board N, substantially as and for the purpose described.

CLINTON A. WEED.

Witnesses:

A. BATES,

H. C. AKERS.