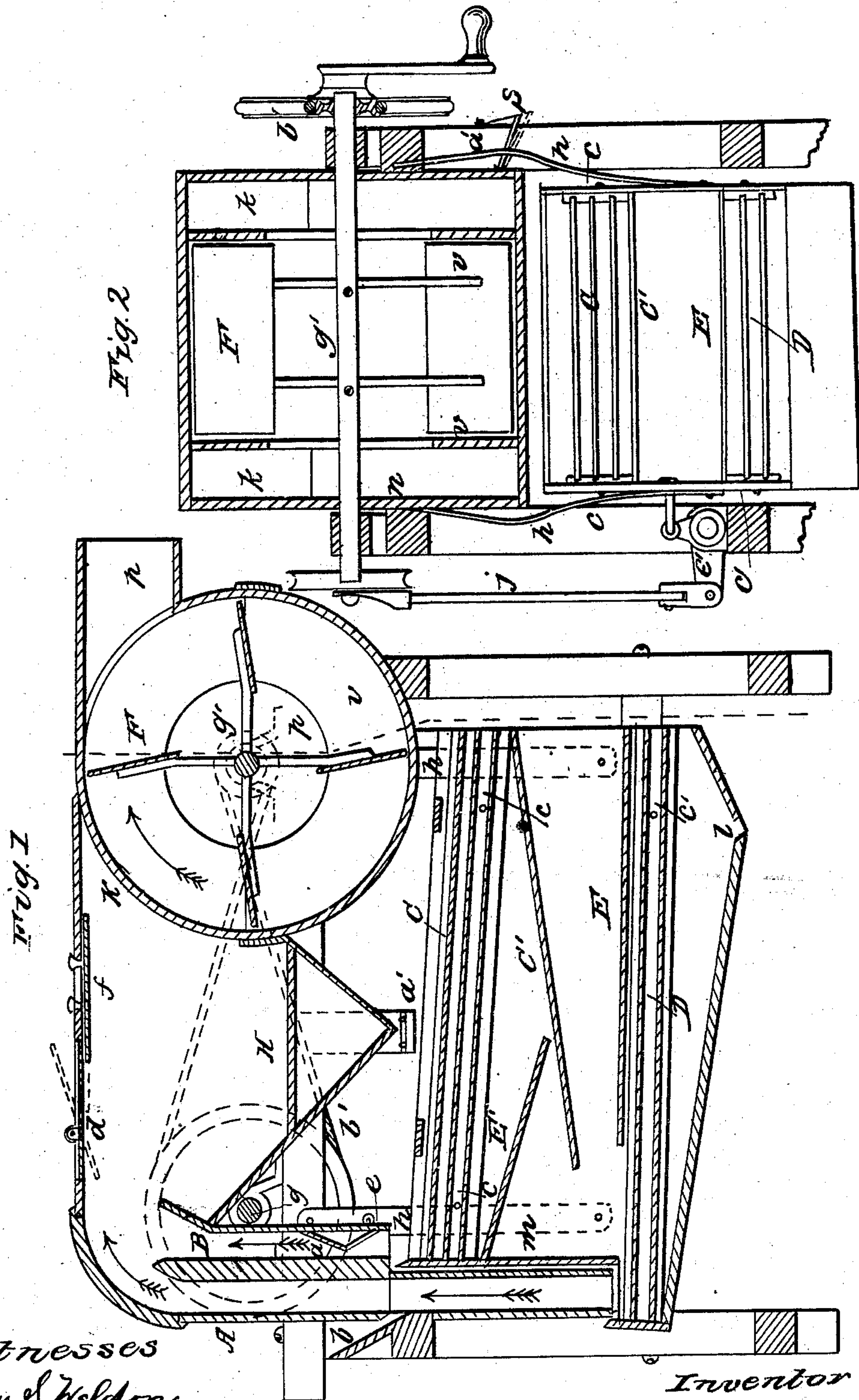


J. A. SCOTT.  
Grain Winnower.

No. 32,454.

Patented May 28, 1861.



Witnesses  
Henry S. Weldon  
Martin Dudermerf

Inventor  
John A. Scott



# UNITED STATES PATENT OFFICE.

JOHN A. SCOTT, OF ROCHESTER, NEW YORK, ASSIGNOR TO HIMSELF AND S. P. ROBINS,  
OF SAME PLACE.

## GRAIN-SEPARATOR.

Specification of Letters Patent No. 32,454, dated May 28, 1861.

*To all whom it may concern:*

Be it known that I, JOHN A. SCOTT, of Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Grain-Separators; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1, is a vertical longitudinal section of the machine. Fig. 2, is a transverse vertical section taken in the direction of the red line in Fig. 1.

Similar letters refer to corresponding parts in both figures.

My invention consists in the arrangement of two flues, in grain separators, in combination with two sets of screens, one above the other, and having a cockle screen, and two chute boards arranged between them, as hereinafter described.

I construct a suitable frame, in which the shoe, containing the screens, is suspended by means of the hangers *h*, as seen in the drawings. This shoe is constructed similar to the shoes in other grain separators, and is provided with two sets of screens *C*, and *D*, (which are adjustable vertically, by means of the set screws *c*, and *c'*, so as to change the pitch of the screens to suit them to damp or dry grain,) between which is placed the chute board *E'*, (extending from the end board *m*, about one third of the length of the shoe, as seen in Fig. 1,) the cockle screen *C'*, and the chute board *E*.

The fan *F*, is inclosed in a drum having a discharge spout *p*. The flue *B*, is provided with an adjustable valve *a*, which is composed of two leaves, hinged together, and one of them being hinged to the side of the flue. The object of this valve, is to decrease the strength of the suction through this flue, by closing the valve, and thereby increase the strength of the current in the other flue *A*, and vice versa, as circumstances may require. The shoe is vibrated by means of the rock shaft *e'* and connecting rod *j*, from the driving shaft *g*.

The automatic valve *d*, is hung eccentrically the heavy end closing upon the end of the slide *f*, which is set as indicated by the dotted lines, to render the valve sensitive. This position of the slide, it will be seen, protects nearly all of the heavy end of the valve from the influence of the suction from the fan *F*, and consequently any increased irregularity in the motion of the fan, would suck the opposite end of the valve open, receiving the extra amount of air at that point, and without disturbing the suction through the flues *A*, and *B*, said suction being established and supported by the fan *F*, the air being received at the bottom of said flues *A*, and *B*, and passing up in the direction of the arrows, entering the chambers *n*, and *r*, through the opening *k*, whence it passes into the fan chamber through the open heads *v*, and is forced out, (together with all the refuse stuff and impurities it has collected,) through the spout *p*.

The grain is fed into the machine through the spout *b*, all the heavy wheat falling upon the lower screen *D*, (whence it is at once "stored,") and the light wheat and refuse stuff is carried up by the suction, and the heaviest of which falls through the flue *B*, upon the upper screen *C*, the chaff and other lighter particles being carried off and discharged through the spout *p*. All foreign substances which are too light to drop into the flue *B*, and are too heavy to be carried through the fan *F*, are deposited into the hopper *H*, from which they are discharged through the spring clapper *a'*, which is kept closed by the spring *s*, (to prevent the fan from taking suction at this point instead of through the flues *A*, and *B*,) until it becomes sufficiently loaded to cause the spring to yield and allow the clapper to open and discharge so much of the said deposit, as will restore equilibrium to the spring when the valve again becomes closed.

Should there be any fine foreign seeds, such as cockle, for instance, or particles of sand, &c., deposited upon the upper screens *C*, they will be conveyed onto the cockle screen *C'*, by the chute board *E'*, and after

passing through the said screen, will fall upon the chute board E, and are discharged from the open end of the shoe; seen in Fig. 2.

The cleaned grain is discharged through  
5 the opening I, in the bottom of the shoe.

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

The arrangement of the flues A, and B,

the two sets of screens C, and D, (the one 10 above the other,) the chute board E', cockle screen C', chute board E, hopper H, and fan F, when constructed and operating as, and for the purpose shown and described.

JOHN A. SCOTT.

Witnesses:

HENRY S. WELDON,  
MARTIN VANDERWERF.