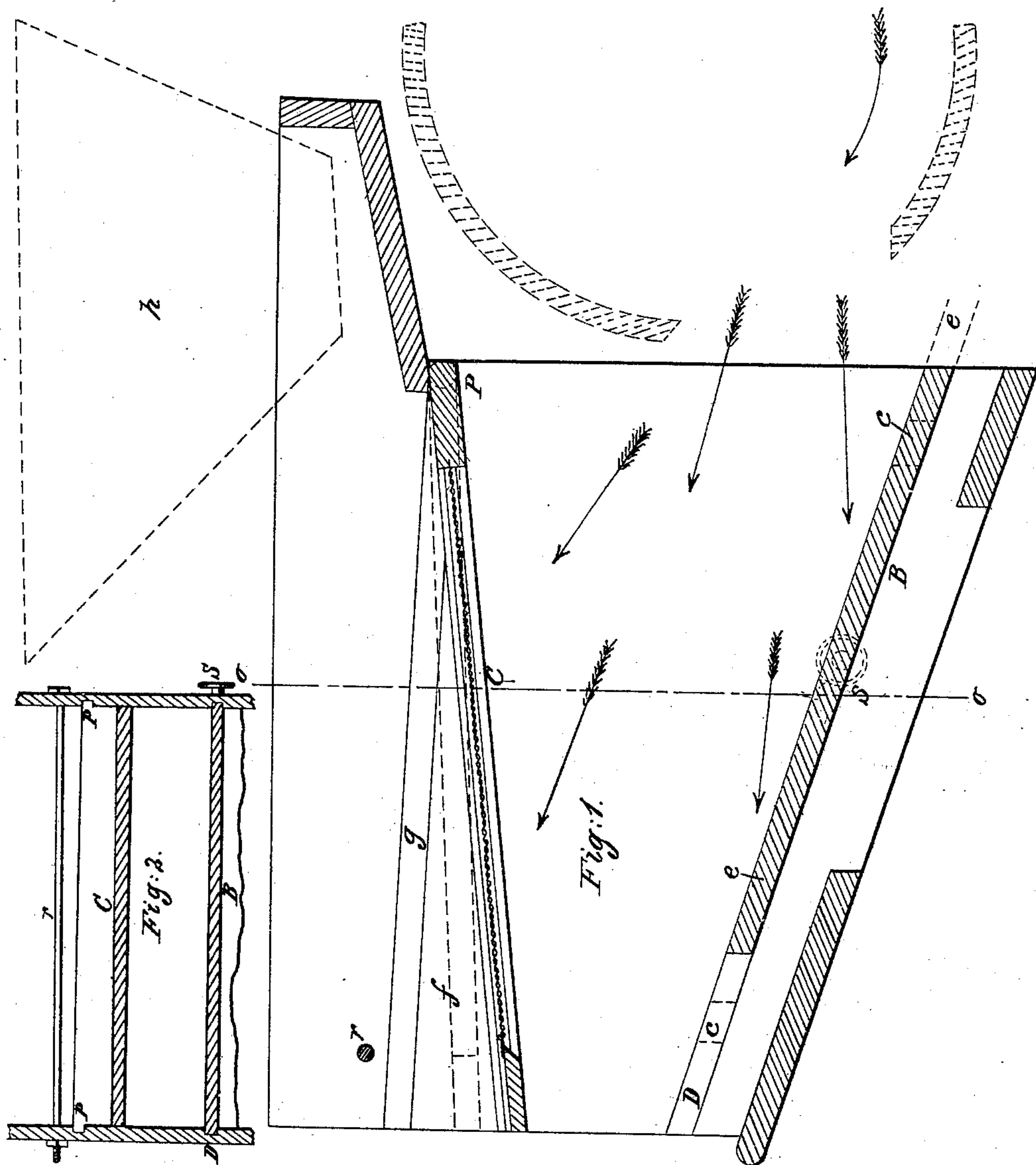


J. B. BARCALO.
Grain Separator.

No. 37,082.

Patented Dec. 9, 1862.



Witnesses:

Jay. Densmore
John Tann.

Inventor:

J. B. Barcalo
Per H. J. Loughborough

UNITED STATES PATENT OFFICE.

J. B. BARCALO, OF MOUNT MORRIS, NEW YORK.

IMPROVEMENT IN GRAIN-SEPARATORS.

Specification forming part of Letters Patent No. 37,082, dated December 9, 1862.

To all whom it may concern:

Be it known that I, J. B. BARCALO, of Mount Morris, in the county of Livingston 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 invention. Fig. 2 is a reduced transverse section of a portion of the shoe through the plane indicated by the dotted line *o* of Fig. 1.

This invention consists in the arrangement, in the shoe of ordinary grain-separators, of an "oat-board" having an adjustment longitudinally, and a screen or sieve having a variable inclination; and it produces a perfectly simple and effectual device, whereby the smallest kernels of oats, barley, or chess may all be separated from wheat, which is so very desirable, especially in the preparation of seed-wheat, but which cannot be wholly accomplished by the mills as heretofore constructed.

To enable others skilled in the business to make and use my invention, I will proceed to describe its construction and operation.

The shoe is constructed in the usual manner. The sieve *C* is made of a proper width to move freely between the sides of the shoe when the nut on the end of the rod *r* is loosened, and it is provided on both sides, at the upper end, with a projecting pivot, *p*, which rests in the groove *g*, and the other end is held at any desired point by tightening the nut above mentioned on the rod *r*, which clamps the sides of the shoe against the edges of the said sieve *C*. The oat-board *B* is made to fit in the groove *D* in the sides of the shoe, where it is held by the set-screw *s*, (shown by dotted lines,) which screws through the side of the shoe and against the edge of the board.

By means of the variable inclination of the sieve *C* the operator is enabled to exactly suit its position to the strength of the blast and to the condition of the grain which he wishes to separate. For instance, if the oats, &c., which are to be taken from the wheat are light, the sieve should be elevated, as shown by the dotted lines at *f*, more or less, making the descent of the grain over the sieve less rapid and the action of the blast upon it less direct,

which should be so regulated as to cause the blast to barely lift the oats over the meshes of the sieve, while the wheat shall drop through, the oats passing along over the end of the sieve; but if the oats are heavy it should be dropped to or, if desirable, even below its present position. This process takes out a large percentage of the oats, (and chess or barley, if present;) but if the adjustment of the sieve and blast be ever so perfect many of the small kernels will unavoidably work through with the wheat, and they are just as objectionable in seed-wheat as the larger ones. It is to effect the entire separation of these small kernels that the adjustable inclined board *B* is employed. If when it is placed in the position indicated by the dotted lines *e* it is found to gather so much of the grain falling from the sieve as will cover the board so thickly as to prevent the effectual action of the blast upon the kernels of oats, &c., which are lighter than the wheat, and allow them to pass down with it, the board *B* should be moved down until it only catches so much grain as when thinly spread over its surface will leave each kernel so exposed to the blast that the latter shall cause every kernel of oats or chess to pass up over the upper edge of the board *B*, while the wheat shall descend and pass off the lower edge. It will be seen that when the board *B* is placed in the lower adjustment there will some wheat drop above the upper edge of it and pass through with the oats. This should be returned in small quantities to the hopper (shown by the dotted lines at *h*) and run through the separator again.

I am aware that it is not new to use an adjustable board or a system of adjustable screens; but

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

The arrangement, in grain-separators, of the oat-board *B*, having a longitudinal adjustment, in combination with the sieve *C*, having an adjustable inclination, as described, and both operating conjointly with the blast, in the manner and for the purpose specified.

J. B. BARCALO. [L. s.]

Witnesses:

B. GALLENTINE,
HENRY HAGADORN.