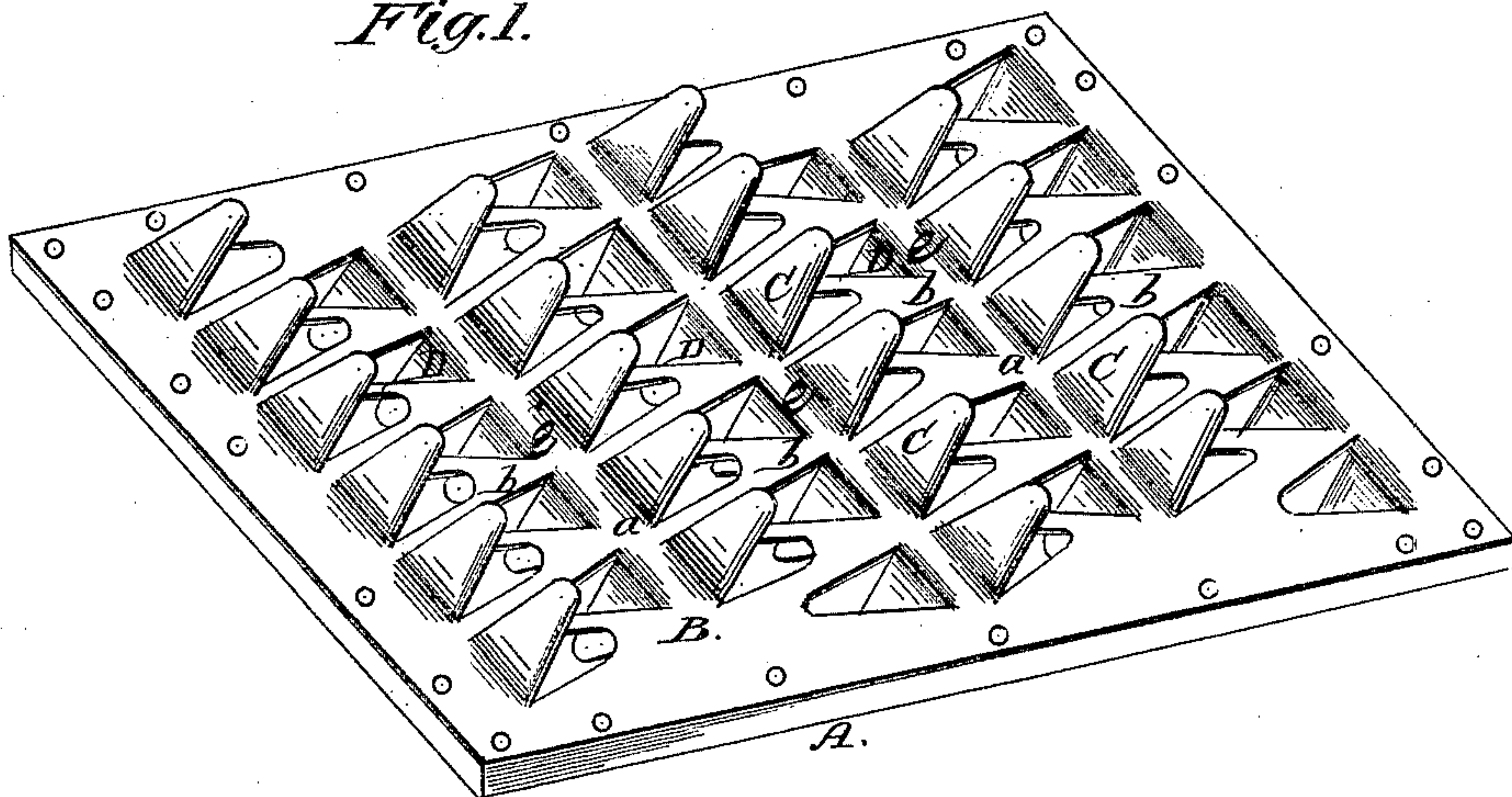


J. A. OLSON.  
Sieve for Grain Separators.

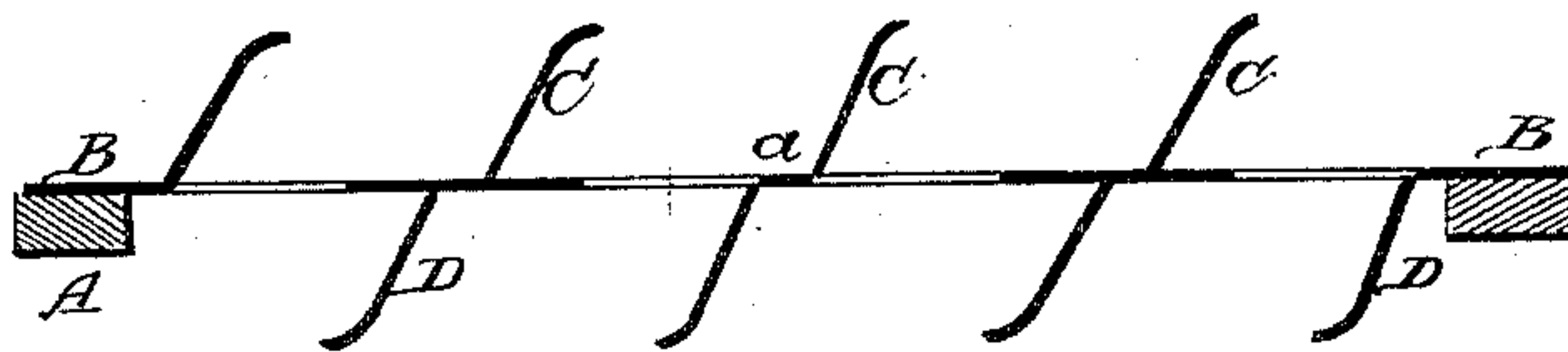
No. 232,751.

Patented Sept. 28, 1880.

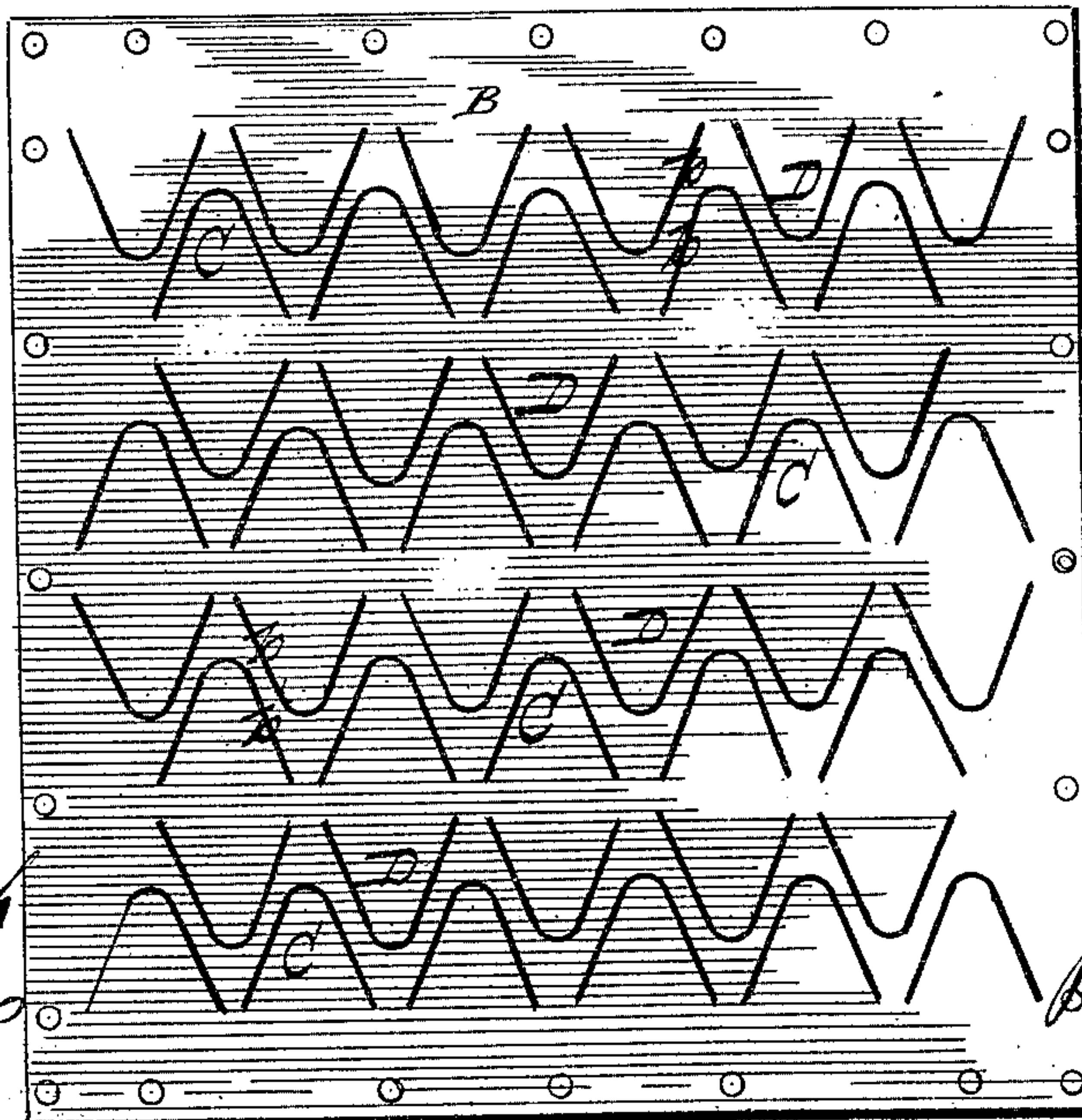
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses  
*Fred G. Dietrich*  
*John A. Madigan*

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*John A. Olson*  
by *Louis Bagger*  
Attorneys



# UNITED STATES PATENT OFFICE.

JOHN A. OLSON, OF VASA, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO  
LUCIUS F. HUBBARD, OF RED WING, MINNESOTA.

## SIEVE FOR GRAIN-SEPARATORS.

SPECIFICATION forming part of Letters Patent No. 232,751, dated September 28, 1880.

Application filed January 24, 1880.

*To all whom it may concern:*

Be it known that I, JOHN A. OLSON, of Vasa, in the county of Goodhue and State of Minnesota, have invented certain new and  
5 useful Improvements in Sieves for Grain-Separators; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and  
10 use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention contemplates improvements in grain sieves or riddles; and it consists of a  
15 sheet-metal plate having transverse rows of substantially V-formed cuts, with their apices turned alternately in opposite directions and interjacent, the rows of tongues formed by said cuts being alternately bent upward and  
20 downward to form teeth or deflectors, substantially as hereinafter more fully set forth.

In the drawings, Figure 1 is a perspective top view of my improved sieve or riddle. Fig. 2 is a longitudinal vertical section, and Fig. 3  
25 is a top view of a blank punched to form one of my improved riddles.

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

30 A is the frame, which is of the usual shape and construction, and may be of any suitable size.

B is the sieve or riddle, of sheet metal, through which are punched or cut several transverse rows of V-shaped cuts. These cuts are  
35 so arranged with reference to each other as to form parallel sides *b b*, leaving a narrow strip of metal, *a*, between, so that a continuation of these strips will form a zigzag line reaching from one side of the frame to the other, as shown. The points of these rows of V-shaped cuts are turned alternately in opposite directions and arranged interjacently. The tongues D of one series or row of cuts are bent downward, while the tongues or teeth  
40 C, formed by the other row of cuts, are bent upward and alternate with the tongues D, thus forming teeth or deflectors.

The advantages of this construction and

arrangement of cuts and tongues will be pointed out hereinafter.

If any of the grain, as it is received upon the sieve, should slip between any two of the raised points C it will strike against the pointed inclined plate or part next behind, which will force it down through the triangular opening, where it meets an upward current of air caused by the points D on the under side of the plate catching the air and forcing it up through the perforations in the sieve from the under side.

Thus it will be observed that the grain is subjected to the action of two several air-currents—an upper current, which blows in the direction of the arrow denoted by *x*, and another upward current, (indicated by the arrows  
65 marked *y*,) which cuts the sheet of grain at an angle from the under side.

It is obvious that the triangular holes of my improved sieve may be made of any suitable size to suit different kinds of grain and grass-seed.

The advantages of the foregoing structure are, first, an increased amount of perforation is obtained; second, the perforations so formed break joint with one another in the line or  
75 flow of the grain; and, third, the upwardly bent lips form teeth to operate on the material, and at the same time form prolongations to the downwardly-bent blast-deflecting lips.

I am aware that it is old to provide a series  
80 of upwardly-inclined wings upon one side of the sieve and a series of downwardly-inclined wings upon the under side of the sieve, either alternating or otherwise arranged with relation to the upper series of wings.

I am also aware that it is old to provide the sieve with a series of double-inclined slats, each consisting in forming a horizontal portion of the slat with an upwardly-inclined surface at one edge and a downwardly-inclined  
90 surface or wing at its opposite edge.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

A grain sieve or riddle consisting of a sheet-  
95 metal plate having transverse rows of sub-

stantially V-formed cuts with their apices  
turned alternately in opposite directions and  
interjacent, the rows of tongues formed by  
said cuts being alternately bent upward and  
5 downward to form teeth or deflectors, sub-  
stantially as described.

In testimony that I claim the foregoing as

my own I have hereto affixed my signature in  
presence of two witnesses.

JOHN ANTHONY OLSON.

Witnesses:

CHRISTEE PHILLIPS,  
LEOPOLD BARELL.