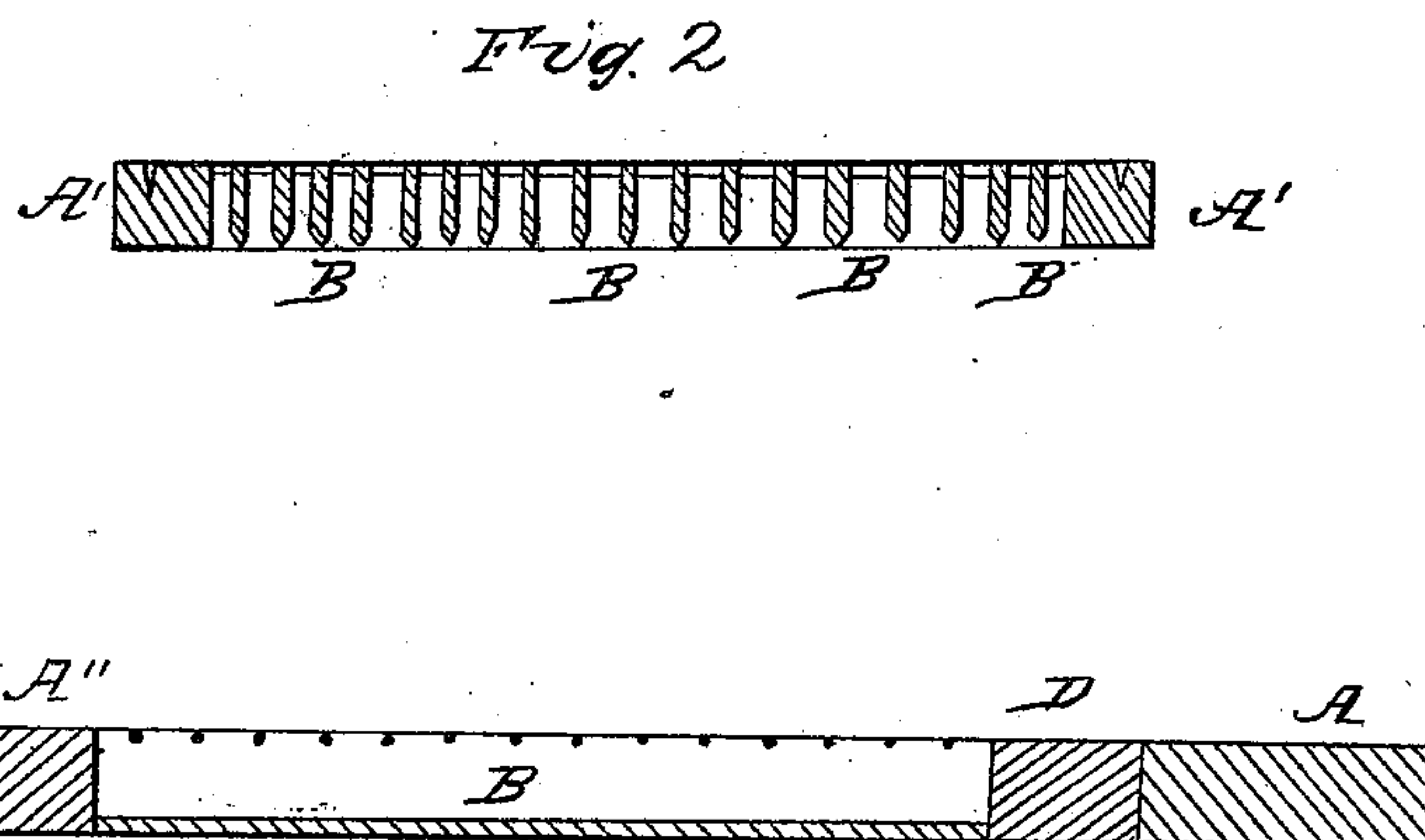
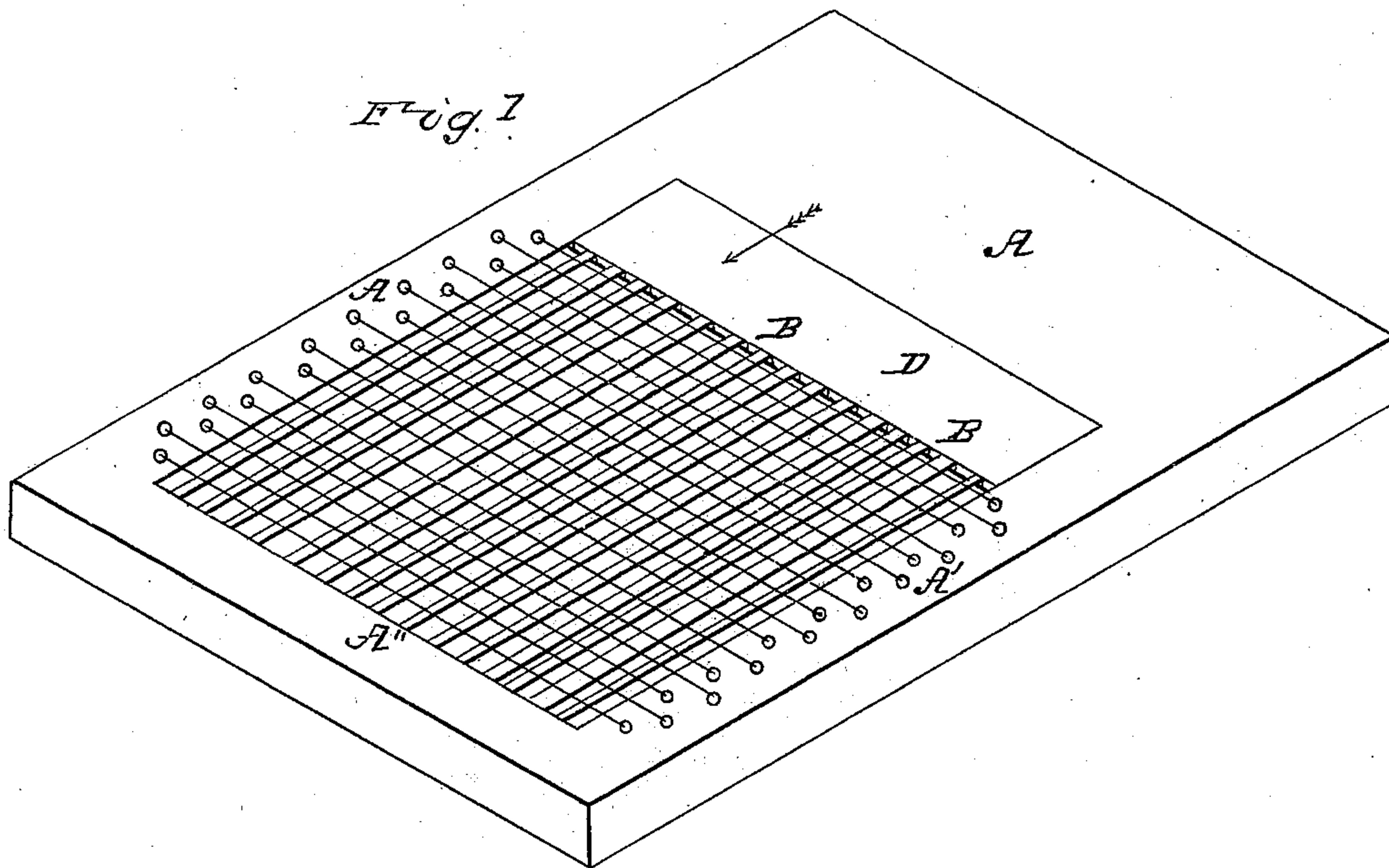


A. ROWE.  
Grain Riddle.

No. 30,840.

Patented Dec. 4, 1860.



witnesses  
H. E. Beach  
W. W. Guen

Inventor  
Anderson Rowe  
By *William H. Allen*  
att'y



# UNITED STATES PATENT OFFICE.

ANSON ROWE, OF ATALISSA, IOWA.

## GRAIN-RIDDLE.

Specification of Letters Patent No. 30,840, dated December 4, 1860.

*To all whom it may concern:*

Be it known that I, ANSON ROWE, of Atalissa, in the county of Muscatine and in the State of Iowa, have invented a new and  
5 Improved Mode of Constructing Riddles, or Sieves; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to letters of reference  
10 marked thereon, making a part of the specification, in which—

Figure 1 is a perspective view of my improvement, and Figs. 2 and 3 are sectional elevations.

15 Similar letters of reference indicate the same parts in both figures.

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

20 I construct the frame of the riddle A A' A'' A''' in any of the known forms for such articles. I then cross said frame on the inside with partitions or rests B, wooden or metallic; in a direction parallel  
25 with the sides A'' A'' of the riddle when in use, or parallel with direction the grain would take in passing over the riddle. The arrow indicates the course of the grain. The rests B are arranged at a greater or less  
30 interval and are made of a width and thickness suited to the purpose of their use, the upper surface of all of the rests being brought up to a level with upper side of the frame. I then cross the supports or rests B  
35 with wires at right angles to the rests, the wires being placed at a distance apart suited to the use intended, sinking the wires into said supports or rests, which are notched out for that purpose at the intersections of  
40 the wires. The wires are sunk far enough into the rests so as to be level with their upper edges. I then secure or fasten the ends in any known manner, the wires being also sunk into the frame pieces A' A'. I  
45 next leave a portion of the rests B unoccupied by wire and in their place put a piece of thin metal or thin board D as shown, so as to allow the air from a fan to have direct and immediate action upon the grain and  
50 at a proper angle. The grain first passes over the board D and is then delivered upon the riddle.

55 The riddle thus constructed presents an entirely smooth surface upon its upper side, the wires being sunk into the edges of the rests B and into the side pieces, and the

receiving board D being also sunk into the frame so that its surface will be on a level with the edges of the rests and frame.

This riddle is intended for use in place of  
60 the common sieves or riddles employed in the ordinary winnowing machines. No description of such machines is here necessary because they form no part of my invention.

Among the advantages which result from  
65 the use of my improved riddle are these: The surface of the riddle being entirely level and smooth, no obstruction is presented to the free descent of the grain, but it flows down in an evenly spread sheet, and is thus  
70 uniformly acted upon by the blast of air from the fan, which is applied below the riddle in the usual manner. In the ordinary riddles, owing to the unevenness of the wire surface, the grain is continually checked in  
75 its descent, in some places more than others, and thus it collects more thickly at one part of the surface of the riddle than at others. At those points where the grain is thus collected it is of course impossible for the air  
80 to penetrate and the separation is consequently defective.

Another advantage of the even surface is that the broken seeds, chaff and light substances contained in the grain are caused to  
85 slide freely off from the riddle; but in the common riddles these substances are apt to catch upon the elevations of the meshes and lodge upon or fill up the apertures thereof.

Another advantage of my improvement  
90 arises from having the rests arranged at right angles to the sunken wires, and also by having a sufficient number of these rests to divide up the area of the under part of the riddle into frequent longitudinal chan-  
95 nels. The rests serve to stiffen the whole riddle, and render the screening surface when the wires are sunk therein, perfectly level.

The channels serve to direct the air in separate streams against the grain as it descends, so that each portion of grain that covers the space between two rests, receives an independent current of air.

The upper surface of the thin receiving  
105 board D serves to conduct the grain evenly to the open spaces of the riddle, and the under surface of said board serves to conduct the air close up to the under surface of the riddle and cause it to pass or divide  
110 evenly between the several rests.

Having thus described my invention, what

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

5 The construction of the riddle with a receiving board D and rests B arranged longitudinally with the course of the grain, and the wires sunk into the edges of said rests and into the face of the frame, and other-

wise made as herein shown and described for the purposes set forth.

ANSON ROWE.

Witnesses:

E. HALL COVEL,

H. B. DICKINSON.