J. N. OSBORN.

SCREEN OR SHOE FOR FANNING MILLS.

APPLICATION FILED JULY 25, 1907.

951,332.

Patented Mar. 8, 1910.

FIG. 1.

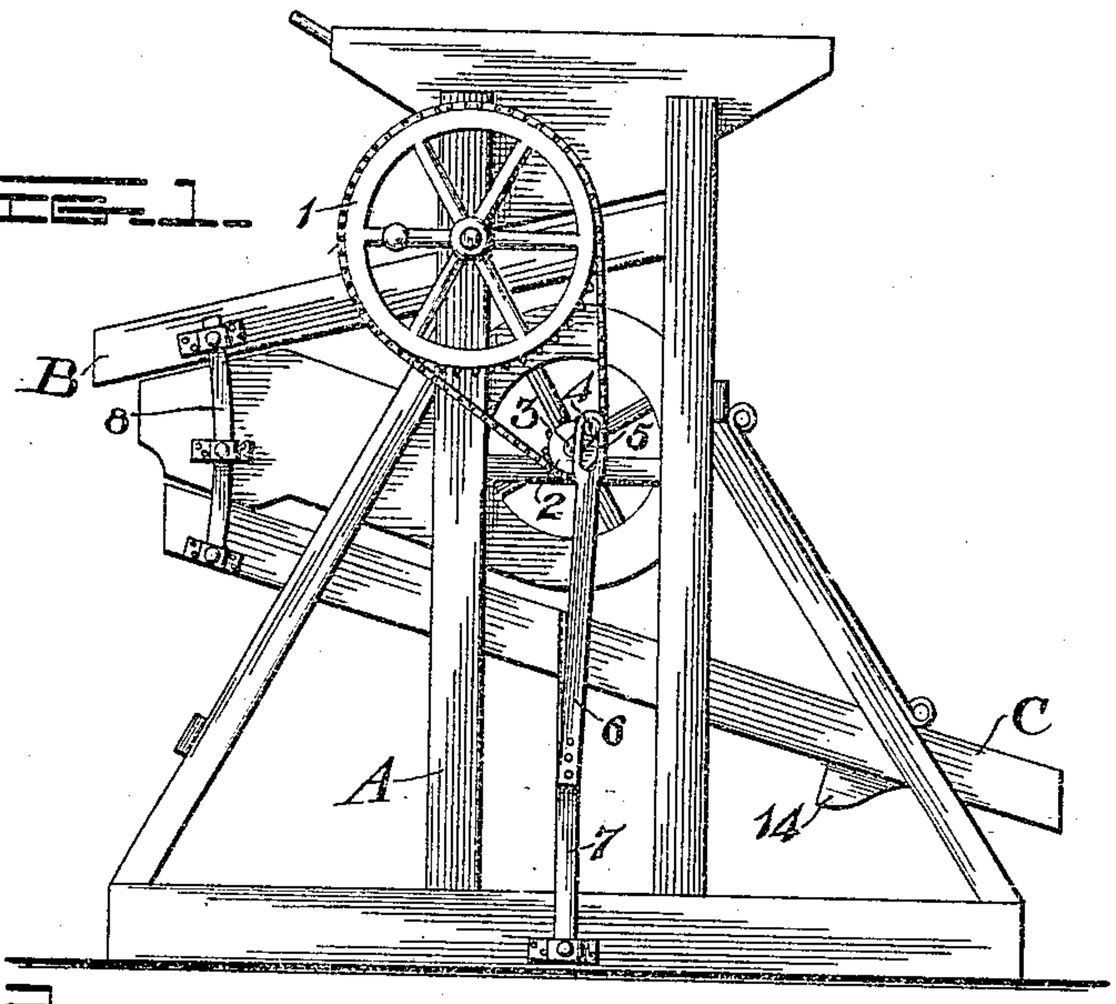


FIG. 2.

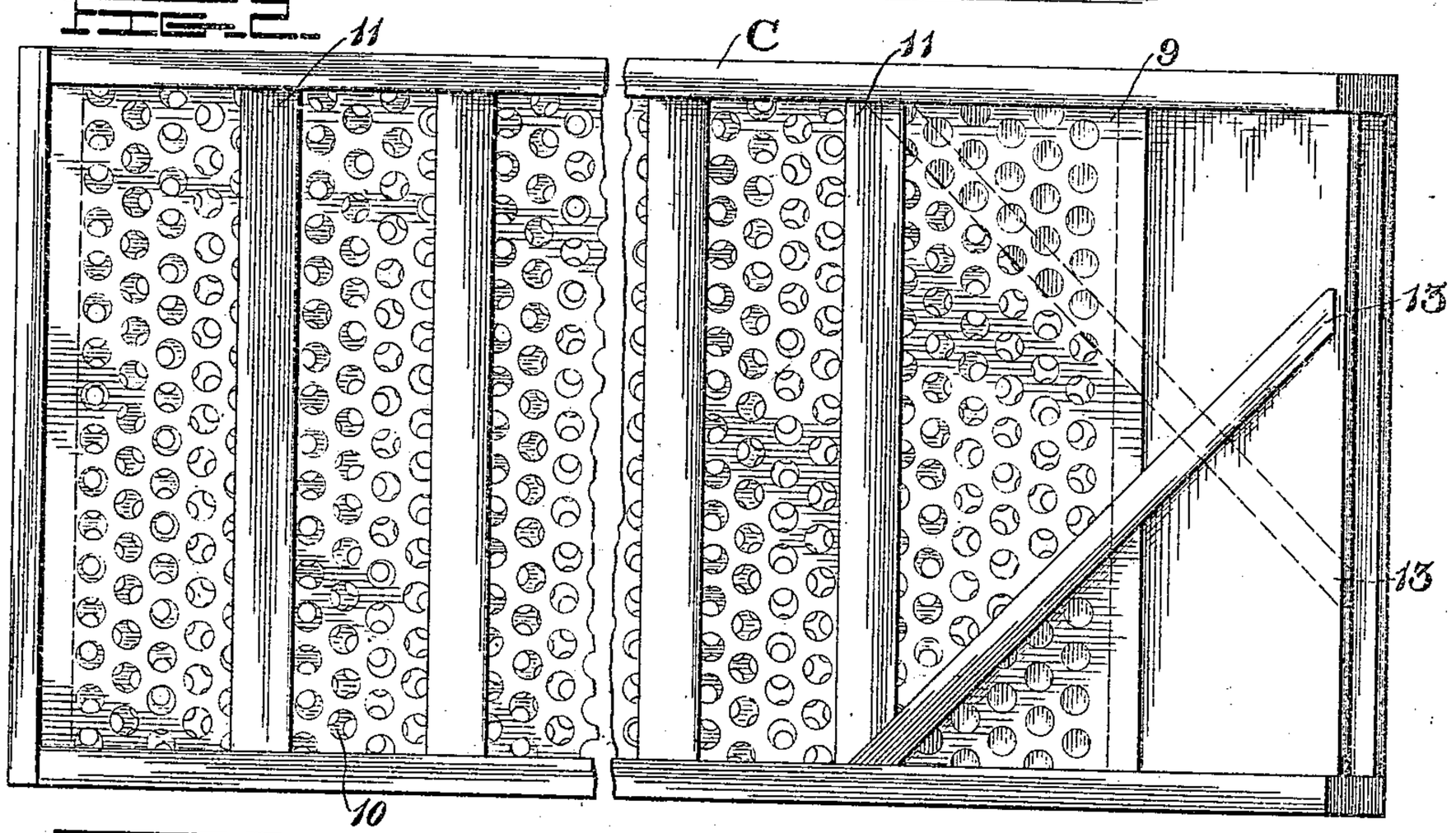
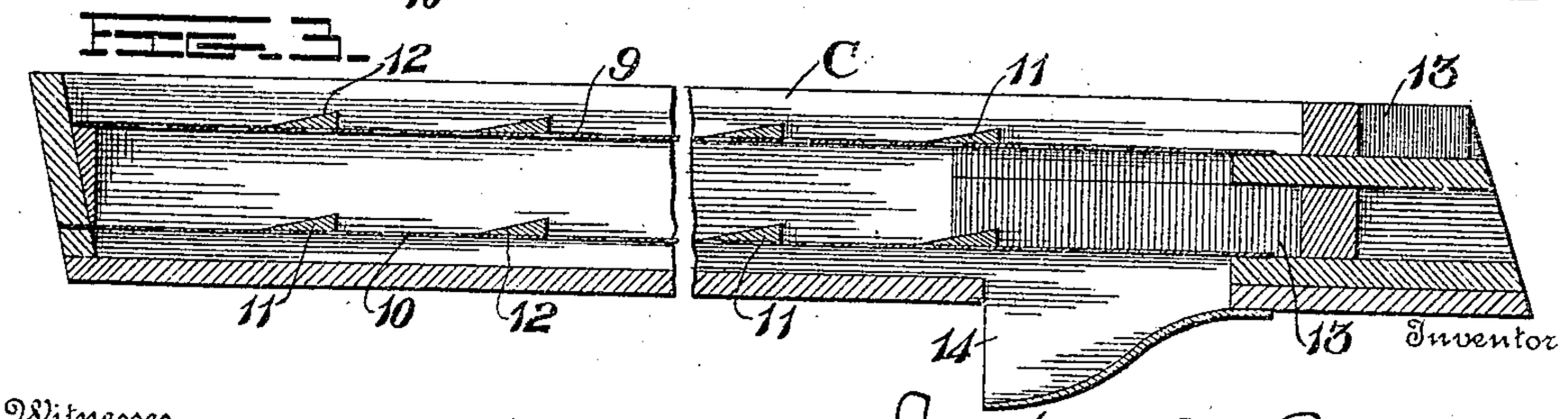


FIG. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

JASPER N. OSBORN, OF WINFIELD, IOWA.

SCREEN OR SHOE FOR FANNING-MILLS.

951,332. Specification of Letters Patent. Patented Mar. 8, 1910.

Application filed July 25, 1907. Serial No. 385,553.

To all whom it may concern:

Be it known that I, JASPER N. OSBORN, a citizen of the United States, residing at Winfield, in the county of Henry and State of Iowa, have invented certain new and useful Improvements in Screens or Shoes for Fanning-Mills, of which the following is a specification.

My invention relates to an improvement in screens or shoes for fanning mills, and the like, and more particularly to that class of screens known as the double or lower screen, and the object is to provide a screen or shoe having openings or perforations larger in the top screen than in the bottom, and running transversely of these screens I place slats which hold back the grain during the oscillating motion of the screen, whereby the smaller kernels pass through the perforations and the larger kernels pass over the ends of the screens.

The invention relates to certain other novel features of construction and combinations of parts which will be hereinafter described and pointed out in the claims.

In the accompanying drawing, Figure 1 is a view in side elevation showing the screen applied to the fanning mill, Fig. 2 is a top plan view, and Fig. 3 is a view in longitudinal cross-section, taken through the center of Fig. 2.

A is the frame of a fanning mill, B is the upper screen, and C, the lower or double screen or shoe. A sprocket wheel 1 is journaled on the frame and a sprocket chain transmits motion from this sprocket wheel to a gear wheel 2 on the fan shaft 3. This fan shaft is provided with a crank 4 which moves in an elongated slot 5 formed in the lever 6, and an arm 7 connects the double screen C with the lever 6. A rod 8 connects the upper and lower screens together whereby they are given a vibratory and oscillatory movement.

The screen or shoe C is preferably supported in the frame on an incline, and the upper metal screen 9, is provided with perforations which are larger than the perforations in the lower metal screen 10. Extending transversely of both the screens, slats 11, 11 are secured, which are beveled on their upper side as at 12, and at the bottom of the screen guides 13, 13 are provided, which extend in an opposite direction from each other whereby the grain passing from the upper screen will pass one way and on the lower screen in another direction, and the grain passing through the lower screen will be carried through the spout 14. The grain as it comes onto the double screen C, is first received on the screen 9, and as the slats 11, 11 during the oscillatory movement tend to keep back the grain, the small kernels are permitted to pass through the perforations onto the lower screen, where the same operation is repeated, and the kernels which are too large to pass through either screen will pass thereover and go in the direction of the slant of the guides 13, and the grain that passes through the lower screen 10 passes off through the trough or spout 14.

By having the transverse slats 11, 11 on the screens 9 and 10, they hold back the grain during the motion of the screen or shoe, causing the separation and also keeping the grain edging or ending up as it passes from one slat to another so it will pass through the perforations as is necessary to separate uniform sizes of seed grain.

It is evident that many slight changes might be made in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the exact construction herein set forth; but:—

Having fully described my invention what I claim as new and desire to secure by Letters Patent, is:—

1. A shoe for fanning mills comprising a suitable frame, and screens of different mesh secured thereto, said screens each having separate interposed low, and relatively wide transverse slats forming abrupt obstructions on one edge and gradually tapering to nothing at their opposite edges, and means for deflecting the grain upon the two screens toward opposite sides of the shoe frame.

2. A shoe for fanning machines comprising a frame, two screens of different mesh secured therein, slats extending transversely over the surface of these screens, the slats on

one screen located directly above those on the other, and their upper surfaces inclining transversely in one direction, guides secured on these screens and extending diagonally in different directions, and a spout located beneath the lower screens.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JASPER N. OSBORN.

Witnesses:
W. B. RIDGEWAY,
ED. P. ANDERSON.