

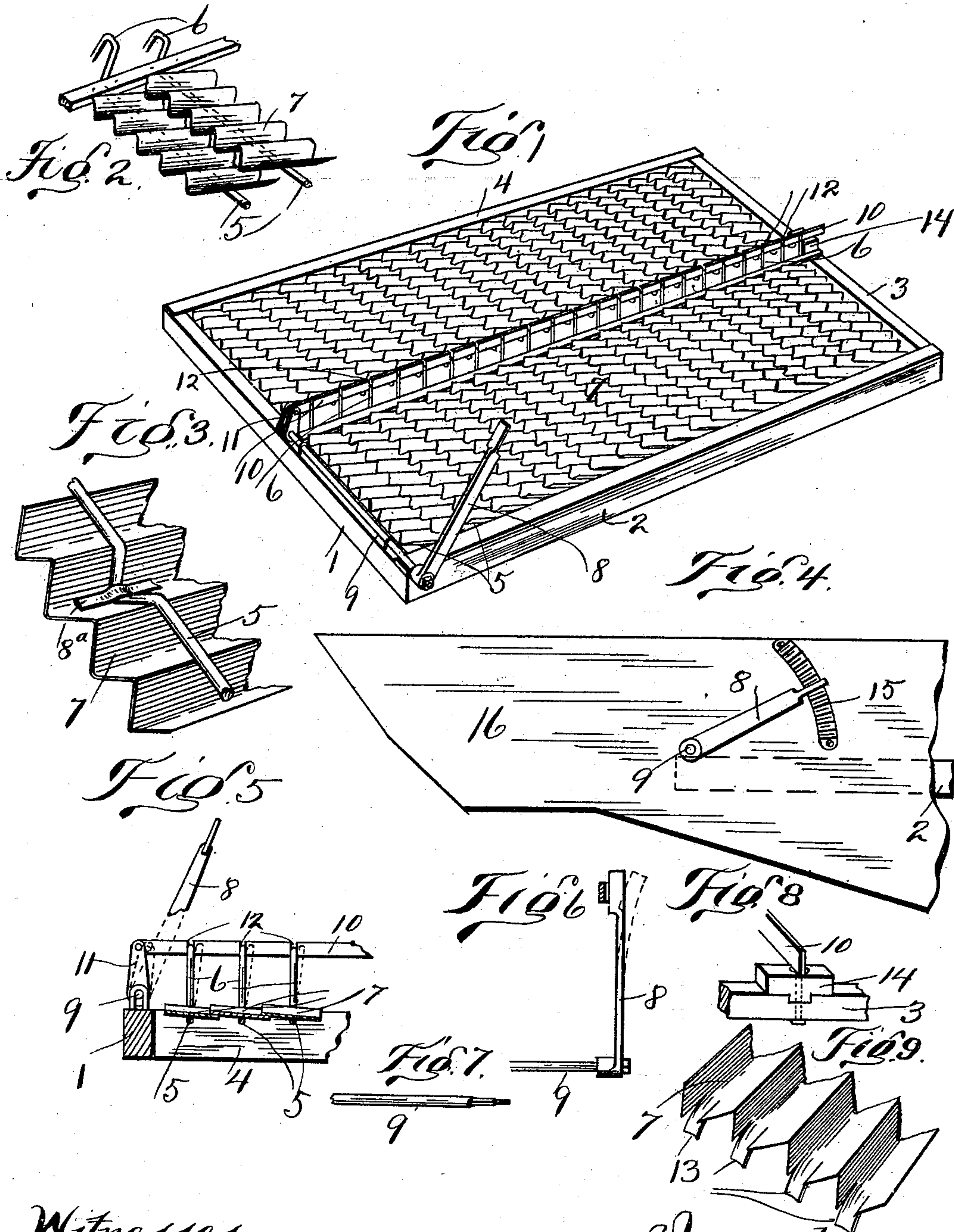
No. 624,333.

Patented May 2, 1899.

F. HIXSON.  
SEPARATOR.

(Application filed Jan. 12, 1899.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

FRANK HIXSON, OF ASHLAND, OHIO, ASSIGNOR OF ONE-HALF TO BENJAMIN F. MARTIEN, OF SAME PLACE.

## SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 624,333, dated May 2, 1899.

Application filed January 12, 1899, Serial No. 701,929. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK HIXSON, a citizen of the United States, residing at Ashland, in the county of Ashland and State of Ohio, have invented certain new and useful Improvements in Separators; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the figures of reference marked thereon, in which—

Figure 1 is a perspective view of the screen, showing the different parts belonging thereto properly connected. Fig. 2 shows a portion of two slats and the relative position thereof. Fig. 3 is a bottom or under side view of one of the slats, showing manner of connecting the shaft thereto. Fig. 4 is a side view showing a portion of the shoe, also showing the segmental tooth-bar and the slat-retaining lever. Fig. 5 is a view showing a portion of the slat-operating bar, also showing the position of the slats with reference to the frame, and showing a portion of the slat-retaining lever. Fig. 6 is a view showing the slat-retaining lever and a portion of the shaft connected thereto. Fig. 7 is a view showing a portion of the slat-operating shaft. Fig. 8 is a view showing a portion of one of the screen-bars, also showing the block for supporting the reciprocating bars. Fig. 9 is a detached view of one of the screen-slats, showing a slight modification.

The present invention has relation to separators or screens designed especially for use for threshing-machines; and it consists in the different parts and combination of parts hereinafter described.

Similar numerals represent corresponding parts in all the figures of the drawings.

In the accompanying drawings, 1, 2, 3, and 4 represent the bars composing the screen-frame and are connected together in any convenient and well-known manner and are arranged to form a rectangular frame or casing. To the side members 2 and 4 are journaled the ends of the shafts 5, which shafts are provided with the inverted-U-shaped portions 6, said U-shaped portions being preferably located about midway between the side members 2 and 4; but this is not absolutely nec-

essary in order to carry out the objects and purposes of the invention, as it will be understood that the objects and purposes herein-after described can be carried out without any reference to the particular location of the U-shaped portions 6.

Upon the slat-shafts 5 are attached the slats 7, which slats are corrugated, as illustrated in the drawings, and for the purpose of providing a means for better connecting said corrugated slats to their shafts the shafts are bent at intervals to correspond with the bend of the slats, and straps, such as 8<sup>a</sup>, may be connected, as illustrated in Fig. 3.

The slats 7 are corrugated in such a manner that when they are placed in the position illustrated in Fig. 1 the convex portions of said slats will come directly over the concave portions of the next adjacent slat, by which arrangement the corrugations are extended or formed longitudinally with the screen proper—that is to say, said corrugations will extend from the front end of the sieve to the rear end thereof, and ridges will be provided by which arrangement the grain will find its way to the lower portions of the concave sides of the corrugations. By this arrangement the straw falling upon the sieve or screen will be held on the ridges, thereby allowing the blast to better move or carry the straw along the screen.

When it is desired to change the mesh of the screen, the lever 8 is moved downward, which in turn rocks the shaft 9 and moves the shafts 5 by means of their inverted-U-shaped portions 6, the bar 10, and the arm 11.

For the purpose of moving all of the slats in unison the inverted-U-shaped portions 6 are set into the notches 12, which notches are formed in the bar 10, as illustrated in the drawings.

It will be understood that moving the lever 8 up or down will change the inclination of the corrugated slats 7, and when said slats are brought into nearly a vertical position the screen will be opened to its full capacity, and when they are brought into a position so that they will set or lap upon each other the screen will be in a closed or substantially a closed position, by which arrangement the mesh of the screen will be easily regulated. By this



arrangement the mesh of the screen can be adjusted without stopping the machine proper, this feature being of great advantage, inasmuch as the amount of grain contained in the straw varies at different times, owing to the location of the straw contained in the stack or mow. For instance, much more grain is contained in the bottom or lower portion of the stack or mow than is contained in the upper portion, and by a slight movement of the lever 8 during the time the machine is in motion will adjust the screen to correspond with the amount of grain passing through or being threshed. Another advantage is the screen can be regulated quickly for different kinds of grain, such as changing the screen from wheat to oats or barley, and at the same time can be adjusted so as to regulate it to different degrees of dampness of straw.

For the purpose of providing a means for stopping the slats at a point where there will be a slight space between the lapped portions of said slats the under edges of the slats are provided with the tangs 13, which tangs are cut from the lower portions of the concave sections of the corrugations. This feature is not shown in Figs. 1, 2, and 3; but it will be understood they are to be located as shown in Fig. 9; but these tangs may be dispensed with without departing from the nature of my invention, inasmuch as they are not absolutely necessary except in the separation of flaxseed and other fine seeds and are for the purpose of retarding the grain or seed, so that a better separation from the chaff and straw can be had. For the purpose of providing a means for removing the bar 10 for any cause the block 14 is removably connected to one of the members of the screen-frame, and when said block is removed the bar 10 is free to be dropped down, so as to disengage the U-shaped portions 6, it being understood that said bar must be detached from the arm 11 before it can be removed.

The object and purpose for removing the bar 10 is to provide an easy way to adjust a new bar in case the one in use should become broken. For the purpose of holding the slats at the desired point of adjustment the toothed bar 15 is provided, which toothed bar is connected to the side of the shoe 16. The lever 8 should be formed of spring material, so that it may be withdrawn from the teeth when it is desired to adjust said lever.

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

1. The combination, with a rectangular frame, of a series of shafts journaled transversely therein and having U-shaped portions, corrugated slats connected to said shafts, a bar arranged longitudinally of the frame, and having notches in its upper edge with which the U-shaped portions of the shafts engage, a rock-shaft, an arm connecting said rock-shaft and said bar, and a lever for operating the rock-shaft, substantially as and for the purpose set forth.

2. The combination, with a rectangular frame, of a series of shafts journaled transversely therein and having U-shaped portions, corrugated slats connected to said shafts, a bar arranged longitudinally of the frame and having notches in its upper edge with which the U-shaped portions of the shafts engage, a rock-shaft, an arm connected to the rock-shaft and to the longitudinal bar, an operating-lever, and a removable block connected to the rectangular frame and supporting one end of the longitudinal bar, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

FRANK HIXSON.

Witnesses:

W. W. MYKRUNTZ,  
C. W. MYKRUNTZ.