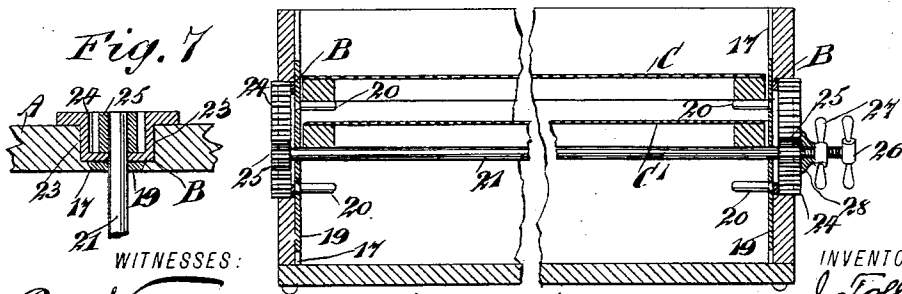
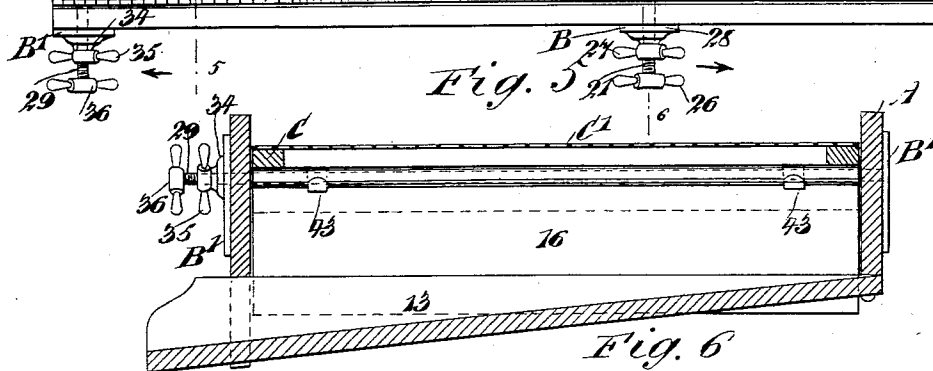
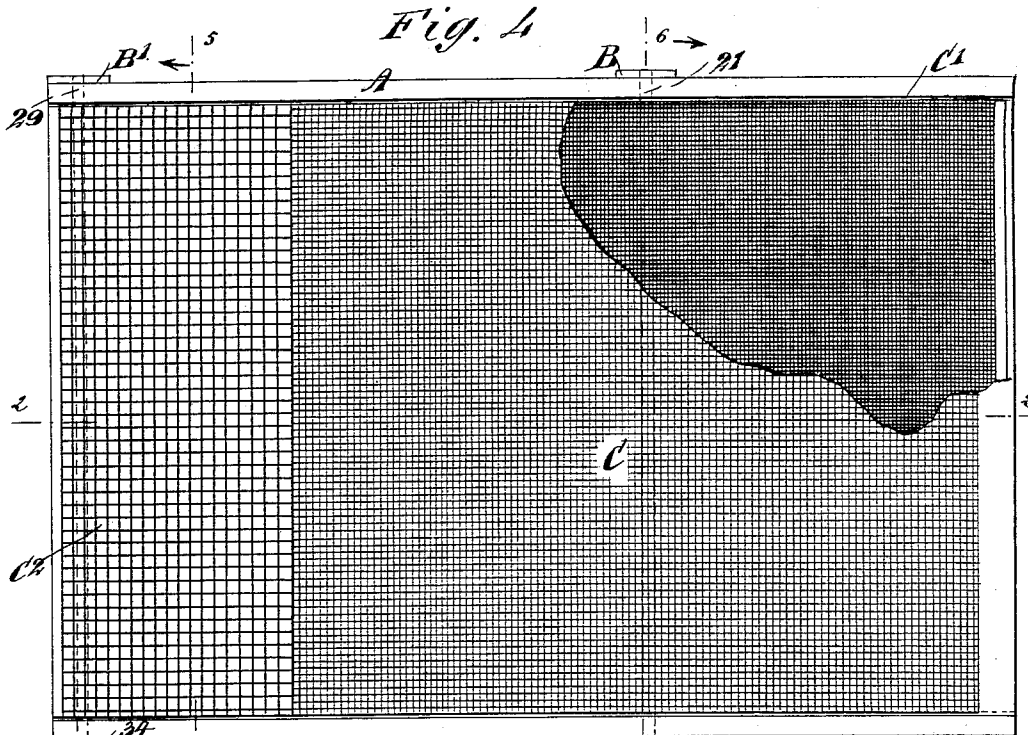


J. TOLLEFSON.
SIEVE HOLDER.

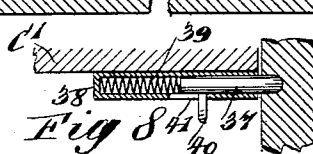
No. 564,855.

Patented July 28, 1896.



WITNESSES:

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INVENTOR

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UNITED STATES PATENT OFFICE.

JEFFERSON TOLLEFSON, OF ST. ANSGAR, IOWA.

SIEVE-HOLDER.

SPECIFICATION forming part of Letters Patent No. 564,855, dated July 28, 1896.

Application filed February 26, 1896. Serial No. 580,777. (No model.)

To all whom it may concern:

Be it known that I, JEFFERSON TOLLEFSON, of St. Ansgar, in the county of Mitchell and State of Iowa, have invented a new and Improved Sieve-Holder, of which the following is a full, clear, and exact description.

The object of my invention is to so pivot the sieves in a sieve-holder and to provide adjusting devices so connected with the said sieves that the upper and under sieves will be operated from different centers, the upper sieve being adjustable independent of the undersieves, and whereby also all of the sieves may be simultaneously adjusted, different sieves moving during such adjustment to different planes.

Another object of the invention is to so construct the sieve-holder and its sieves, adapted for threshing-machines and like usages, that the tail-board will be adjustable with the top sieve, and wherein the tailings-sieve forms a part of the top separating-sieve, being adjustable in combination therewith, and whereby, further, the combined upper sieve will be adjustable with the tail-board, thus dispensing with the loose tail-board and tail-rack ordinarily used and which require separate adjustment.

Another object of the invention is to provide a sieve-holder and sieves for the same so constructed and arranged that much time will be saved in changing the sieves, and whereby either end of the sieves can be adjusted while the holder is in motion, it being always possible to properly adjust and firmly hold the sieves in their intended places.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improved holder. Fig. 2 is a longitudinal vertical section through the same. Fig. 3 is a transverse section through the holder and sieves, taken practically on the line 3 3 of Fig. 1. Fig. 4 is a plan view of the improved holder and sieves, a portion of the top sieve being broken away. Fig. 5 is a transverse section taken

practically on the line 5 5 of Fig. 4. Fig. 6 is a similar section taken on the line 6 6 of Fig. 4. Fig. 7 is a transverse section through one of the adjusting-plates, taken substantially on the line 7 7 of Fig. 1; and Fig. 8 is a detail sectional view of a spring-bolt used in connection with one of the lower sieves.

In carrying out the invention the holder A consists of two side pieces 10, connected at the upper portion of their forward ends by a cross-bar 11, and a bottom board 12, secured to the said side pieces, the said bottom board having a decided downward and forward inclination from a point near the rear of the side pieces, which point is designated in Figs. 1 and 2 by the letter *a*, and at the point *a* in the bottom of the holder the said bottom, for a short distance, is provided with a downward and rearward inclination 12^a, likewise shown in Figs. 1 and 2, the said rear inclined section of the bottom leading to a tailings-spout 13, which spout has its inner bottom surface level with the bottom edge of one side piece of the holder, as shown in Fig. 5, and its outer end, which projects beyond the opposite side of the holder, is carried downward some distance below the said side piece at that point, whereby the tailings-spout is given a downward inclination in direction of one side of the holder and conducts the tailings out beyond the same. The outer end of the spout is usually supported by a strap 14, or its equivalent, and a low backboard 15 constitutes the rear portion of the back of the said holder, as shown in Fig. 2. A tail-board 16 is held to slide at the back portion of the holder between the rear side of the tailings-spout and the inner face of the backboard 15.

Preferably, between the forward or delivery end of the holder and its center, vertical grooves 17 are made in the inner faces of the side pieces, extending usually from top to bottom, and strips 18 are introduced into the side pieces and extend some distance over the groove 17 at opposite sides in order to hold in each a slide 19, and each slide is provided with horizontal pins 20, projecting inward from the side piece 10, two pins being shown in the drawings as connected with each slide. A shaft 21 is passed through the central portion of the two slides, and the ends of the shaft are carried through vertical openings 22,

produced in adjusting-plates B, which adjusting-plates are introduced into the side pieces of the holder from the outside over slotted openings formed in the side piece 10, communicating with the slots 17, as shown in Figs. 1, 6, and 7. Each adjusting-plate is provided with a longitudinal rib or boss 23 at each of its sides, and the inner face of one of these ribs or bosses is provided with teeth 24, and at each end of the aforesaid shaft 21 a pinion 25 is securely fastened, the pinions being held to revolve between the ribs of the adjusting-plates and engage with the teeth 24 of the same.

One end of the shaft 21 extends some distance beyond the sides of the holder and terminates in a handle 26, (shown best in Fig. 6,) and the projecting portion of the shaft is exteriorly threaded to receive a lock-nut 27, and a washer 28 is loosely mounted on the threaded portion of the shaft between the lock-nut and the ribs or bosses of the adjusting-plate at that side of the holder. Therefore by loosening the thumb-nut and revolving the shaft through the medium of its handle the slides 19 will be carried upward or downward, according to the direction in which the pinions travel upon the teeth of the adjusting-plate, and the shaft may be held in its adjusted position by tightening up the lock-nut 27 against the washer 28, thereby holding the slides rigid.

A shaft 29 is journaled in suitable bearings formed at the upper end of the tail-board 16, and the said shaft 29 is passed through slots 30, made in the adjusting-plates B', located at the rear end of the holder, being secured upon the outer side pieces thereof, as shown in Fig. 1, and the adjusting-plates B' are practically the same as the adjusting-plates heretofore described in detail, each adjusting-plate being provided with two side ribs 31 and 32, one of which is provided with teeth, and the shaft is provided near each end with a pinion 33, engaging with the toothed surfaces of the adjusting-plates, and one end of the shaft is carried through and beyond the same side of the holder at which the shaft 21 is projected. The extended end of the shaft 29 is threaded and is provided with a loosely-mounted washer, engaging with the outside of the adjusting-plate B', and the said shaft is further provided with a lock-nut 35 upon its threaded surface to engage with the aforesaid washer, and the outer end of the shaft has a handle 36 formed thereon.

Two or more sieves may be used in connection with the holder, the holder shown in the drawings being adapted to receive three sieves, although only two are illustrated, an upper sieve C and a lower sieve C'. The lower sieve rests upon the transverse shaft 21, and is raised and lowered by the upward or downward adjustment of the said shaft, while the upper sieve C is made to rest at a point near its center upon the upper pins 20 of the slides

19, controlled by the adjusting-shaft 21. Both sieves are so located and are of such length that they extend practically to the forward or delivery end of the holder; but the upper sieve extends the full length of the holder, while the lower sieve extends from a point above the upper level of the bottom of the holder, as shown best in Fig. 2, and consequently is much shorter than the upper sieve.

The rear end of the lower sieve C' is pivotally attached to the side portions of the holder, the pivotal attachment being so made that the lower sieve may be readily removed when necessary. Preferably each pivot-pin is made in the form of a bolt 37, (shown in detail in Fig. 8,) mounted to slide in a casing 38, and normally projected outward from one end of the casing by a spring 39. The bolt has a handle 40 formed thereon, and the casing in which the bolt has movement is provided with a bayonet-slot 41, through which the handle extends, as illustrated in Fig. 3, so that when the lower sieve is to be placed in position the bolts can be drawn inward, and the handles 40 carried in the vertical portions of the bayonet-slots, holding the bolts entirely within the casing; and when the sieve has been placed in proper position in the holder the bolts are released, and will enter suitable sockets formed in the sides of the holder.

The upper sieve C is provided with a cross-bar 42 where it rests upon its supporting-pin 20, and the cross-bar serves to prevent the sieve from sagging, while at the rear end of the upper sieve one or more hooks 43 are attached, adapted to extend under the shaft 29, operating the tail-board, or any equivalent of the hooks may be employed. In this manner the rear end of the upper sieve is given its vertical adjustment by the rear adjusting-shaft 29, and the tail-board 16 is adjusted, together with the said upper sieve.

The lower sieve C' is raised and lowered as heretofore stated, by the forward adjusting-shaft 21, and the forward end of the upper sieve C is likewise raised through the medium of the said shaft, since it rests upon the pins 20, projected from the slides 19, given movement by the aforesaid adjusting-shaft. While the two sieves are adjusted together when the forward adjusting-shaft is operated, the two sieves will assume different planes by reason of the difference in position of their pivot-points; and the upper sieve C may be given independent adjustment at its rear end by the rear adjusting-shaft 29.

Thus it will be observed that these sieves may be placed in any desired position, as, for example, the upper sieve may be placed horizontally, in which event the lower sieve will have a slight rearward inclination, and a third sieve, if pivoted in the holder and supported upon the bottom pins 20 of the slides 19, might be given an inclination downwardly

and forwardly to conduct the material delivered thereto by the second sieve to the outlet of the holder.

The upper sieve C combines a tailings-sieve with a sorting or separating sieve, the tailings-section C² of the upper sieve being over the tailings-spout 13 and preferably stops short of a line drawn vertically through the pivot of the lower sieve C'.

It will be seen that the slides which move to adjust the sieves serve not only to hold the sieves, but to cover the slots or openings through the walls of the shoe or holder A. These slides have therefore a double function.

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

1. The combination, with a sieve-holder provided with a tailings-spout, an adjusting-shaft located at the tail end of the holder, and a tail-board attached to the said adjusting-shaft, of sieves located one above the other, the upper sieve being fulcrumed upon the adjusting-shaft of the tail-board, the lower sieve being pivoted in the holder at a point in advance of the fulcrum of the upper sieve, an adjusting-shaft, and slides connected therewith and operated thereby, the lower sieve resting upon the said shaft and the upper sieve having bearing upon a projection from the said slides, whereby the two sieves may be adjusted simultaneously at a point between their ends, and the upper sieve independently at the tail end of the holder, as and for the purpose specified.

2. The combination, with a sieve-holder provided with a tailings-spout, a shaft located at the tail end of the holder, means, substantially as shown and described, for imparting vertical adjustment to the said shaft, and a tail-board secured to the said adjusting-shaft, of slides having vertical movement in the holder, a shaft capable of vertical adjustment connected with the said slides, a sieve fulcrumed upon the rear or tail-board adjusting-shaft, and supported upon a projection from the said slides, the said sieve being provided with a tailings and a separating section, and a second and lower sieve fulcrumed in the holder at a point in advance of the tailings-section of the upper sieve, the lower sieve being adjusted from the slide-controlling shaft, as and for the purpose specified.

3. The combination, with a sieve-holder provided with a tailings-spout, a shaft located at the tail end of the holder, means, substantially as shown and described, for imparting vertical adjustment to the said shaft, and a tail-

board secured to the said adjusting-shaft, of slides having vertical movement in the holder, a shaft capable of vertical adjustment, connected with the said slides, a sieve fulcrumed upon the rear or tail-board adjusting-shaft, and supported upon a projection from the said slides, the said sieve being provided with a tailings and a separating section, and a second sieve located beneath the upper sieve and fulcrumed in the holder at a point forward of the forward edge of the tailings-section of the upper sieve, the pivots of the lower sieve consisting of spring-controlled bolts having slotted casings, and handles adapted to travel in the casing-slots, the said lower sieve being raised and lowered by the slide-controlling shaft, as and for the purpose specified.

4. The combination, with a sieve-holder provided with openings in its sides, one wall of each opening being toothed, of sieves fulcrumed within the said holder, shafts adapted as supports for the said sieves, the said shafts being passed through the openings in the sides of the holder, pinions secured on the said shafts, engaging with the toothed walls of the aforesaid openings, washers secured upon one end of each of the said shafts, a lock-nut also located upon each shaft, for engagement with the said washers, the washers being adapted to bear against the outside of the holder, and handles whereby the shafts are revolved, as and for the purpose specified.

5. The combination of a sieve-holder having openings in its sides, a rack-bar extending along one of said openings, slides movable along the sides of the casing over the openings therein, a sieve mounted in the casing and supported on the slides, and a shaft extending through the openings in the casing and having a pinion meshing with the rack-bar, said shaft forming a tie between the slides, substantially as set forth.

6. The combination of a sieve-holder having openings in its sides, a rack-bar extending along one of said openings, slides movable along the sides of the casing over the openings therein, a sieve mounted in the casing and supported on the slides, a shaft extending through the openings in the casing and having a pinion meshing with the rack-bar, said shaft forming a tie between the slides, and means to lock the shaft against turning, substantially as set forth.

JEFFERSON TOLLEFSON.

Witnesses:

GEO. TOLLEFSON,
OTTO HELFRITY.