

No. 695,522.

Patented Mar. 18, 1902.

M. E. WILKINSON.
SCREEN PLATE FASTENER.

(Application filed Dec. 5, 1901.)

(No Model.)

Fig. 1.

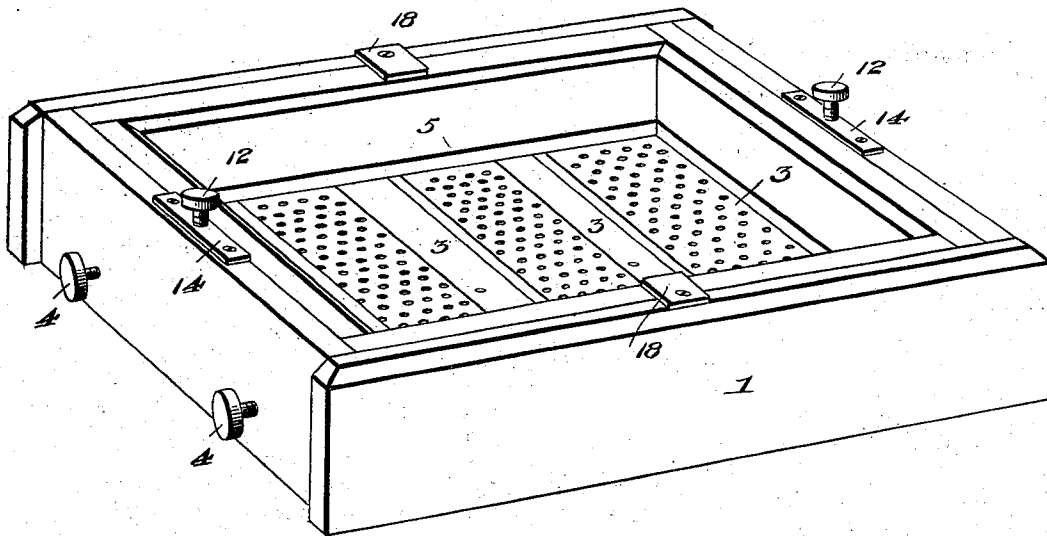


Fig. 2.

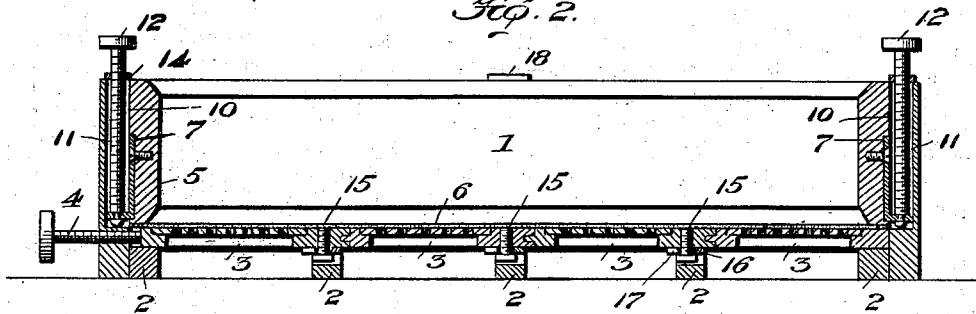


Fig. 3.

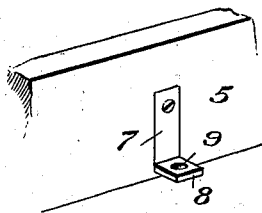


Fig. 4.

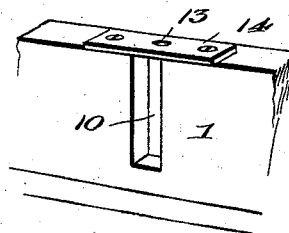


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

MILTON E. WILKINSON, OF GROVETON, NEW HAMPSHIRE.

SCREEN-PLATE FASTENER.

SPECIFICATION forming part of Letters Patent No. 695,522, dated March 18, 1902.

Application filed December 5, 1901. Serial No. 84,729. (No model.)

To all whom it may concern:

Be it known that I, MILTON E. WILKINSON, a citizen of the United States, residing at Groveton, in the county of Coos and State of New Hampshire, have invented certain new and useful Improvements in Screen-Plate Fasteners, of which the following is a specification.

This invention relates to improvements in screen-plate fasteners, having for its object, among others, to provide a simple, novel, and effective means for securely holding in position the screens, yet providing for their ready removal when desired for cleaning or other purposes. It is designed, primarily, for pulp-screens, but of course is applicable to other uses. Means are provided for holding the screens or screen-plates down firmly in position, and this means may be raised by the means shown when it is desired to remove the plates. The plates are matched and are held in their engaged position by means from the outside of the frame. The means for adjusting the plate-holding device are so arranged that they cannot be entirely disengaged, yet readily elevated to permit of the raising of such holding means. Means are provided for engaging the plates upon the under side of the frame, so as to allow of their separation when the means which engage the end plate are loosened. The lower edge of the holding means is made perfectly tight by the interposition of felt or analogous material.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the numerals of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a perspective view showing the improvement. Fig. 2 is a substantially central longitudinal vertical section through the same. Fig. 3 is a perspective view of a portion of the end of the holding means. Fig. 4 is a perspective detail of a portion of the end of the inclosing frame. Fig. 5 is a perspective view of one of the notched plates removed.

Like numerals of reference indicate like parts throughout the several views.

Referring now to the details of the drawings, 1 designates the inclosing frame, in this

instance made rectangular in form and provided with the bottom of slats 2.

3 represents the screen-plates, their abutting edges being matched or provided with tongue and groove, as seen in Fig. 2. They rest at their ends on the rabbets formed around the inner wall of the frame at the bottom and upon the slats 2, as shown in Fig. 2.

4 represents screws adjustable through the end of the frame 1, as seen in Figs. 1 and 2, and their inner ends are adapted to bear against the outer end of the adjacent end plate, as seen clearly in Fig. 2, when by screwing in the screws the screen-plates will be forced tightly together to form a tight joint between them. When the screws are loosened, the plates may be moved apart sufficiently to disengage their tongues and grooves and allow of removal of the plates.

5 is the crane or rectangular clamping-frame or holding device for the plates. It is of a shape and size to fit quite snugly within the inclosing frame 1, as shown in Figs. 1 and 2, and the lower edge is beveled, as seen in Fig. 2.

6 is a suitable substance, as felt, placed at the lower edge of the crane 5, as seen in Fig. 2, to form a tight joint at that point.

Upon the outer faces of the ends of the crane 5 there is secured a plate 7, seated in a recess in the end piece, as seen in Fig. 2, the said plate being provided at its lower end with a horizontal portion 8, having an opening 9, all as seen best in Fig. 3.

The inner walls of the ends of the frame 1 are provided with vertical grooves 10, in which work the vertical screws 11, provided at their upper ends with heads or the like 12, by which they may be readily turned, the said screws being threaded into threaded openings 13 in plates 14, secured to the top edge of the end pieces of the frame 1, as seen clearly in Fig. 4 and also in Fig. 1. The lower ends of the screws 11 are swiveled in the horizontal portions 8 of the plates 7, as seen in Fig. 2, the said horizontal portions working in the grooves 10 of the end pieces of the frame 1.

Secured to the under faces of the screen-plates are the headed bolts or screws or analogous means 15, which are designed for cooperation with the slotted plates 16, which are secured to the top surfaces of the slats 2, the

bolts or screws 15 having their shanks riding in the slots 17 of the slotted plates and the heads of the screws or bolts engaging beneath said plates, all as clearly shown in Fig. 2.

5 In assembling the parts the plates 7 are secured to the ends of the crane 5, and the screws 11, which are swiveled at their lower ends and engaged in the plates 14, are placed in the grooves 10 of the ends of the inclosing
10 frame 1, and then the plates 14 are secured in position. When the screws 4 are turned up, the plates are bound firmly together, and when the screws 11 are turned down the crane 5 is forced down firmly upon the plates, and
15 then buttons or the like 18, which are pivoted on the upper edge of the sides of the frame 1, are turned over the upper edge of the sides of the crane 5, as indicated in Fig. 1, and the crane is held from vertical movement. When
20 it is desired to remove the plates, or any one of them, the screws 11 are turned upward, which will raise the frame or crane 5 until it is raised a sufficient distance, and then the screws 4 are loosened and the plates moved
25 toward the end of the frame, so as to disengage their tongues and grooves, when the desired plate may be removed. The crane 5 cannot be entirely removed by reason of the horizontal portions of the plates 7 engaging
30 the under sides of the plates 14, as will be readily understood.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

35 Having thus described my invention, what I claim as new is—

1. The combination with an inclosing frame and screen-plates, of detachable means for holding said plates, embodying a movable
40 rectangular crane, means on the crane movable therewith, and means guided on the frame and connected by swivel with said means on the crane for actuating said crane and means engaging the end of one of the
45 plates to hold them together.

2. The combination with the inclosing frame

and its slatted bottom, of plates having tongue-and-groove union, and swiveled means for holding the said plates to the said slats.

3. The combination with an inclosing frame 50 and plates, of a rectangular crane movable within the inclosing frame, swiveled means connected with said crane for elevating the same, and means movable at right angles to such means for clamping the plates together. 55

4. The combination with the inclosing frame and bottom slats with slotted plates, of plates detachably united and means on the plates to engage the said slotted plates.

5. The combination with the inclosing frame 60 and its slatted bottom, of slotted plates on said slats, screen-plates and headed means on the plates to cooperate with the slotted plates.

6. The combination with the inclosing frame and the screen-plates, of the crane fitted with- 65 in the inclosing frame, the ends of the inclosing frame having vertical grooves, and means for raising and lowering the said crane located in said grooves.

7. The combination with the inclosing frame 70 having grooves in its end pieces, of the crane fitted within the said frame, plates on the ends of the crane having horizontal portions working in said grooves and screws working in said grooves and having swiveled connection with said horizontal portions. 75

8. The combination with the inclosing frame having vertical grooves in its end pieces, of a crane fitted to move within the said frame, plates on the ends of the crane with horizontal 80 portions working in said grooves, screws working in said grooves and having swiveled connection at their lower ends in said horizontal portions, and plates on the upper edges of the ends of the inclosing frame through 85 which the said screws are threaded.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

MILTON E. WILKINSON.

Witnesses:

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