

E. J. OUELLETTE.
SIEVE.
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Patented Dec. 7, 1920.

1,361,772.

Fig. 1.

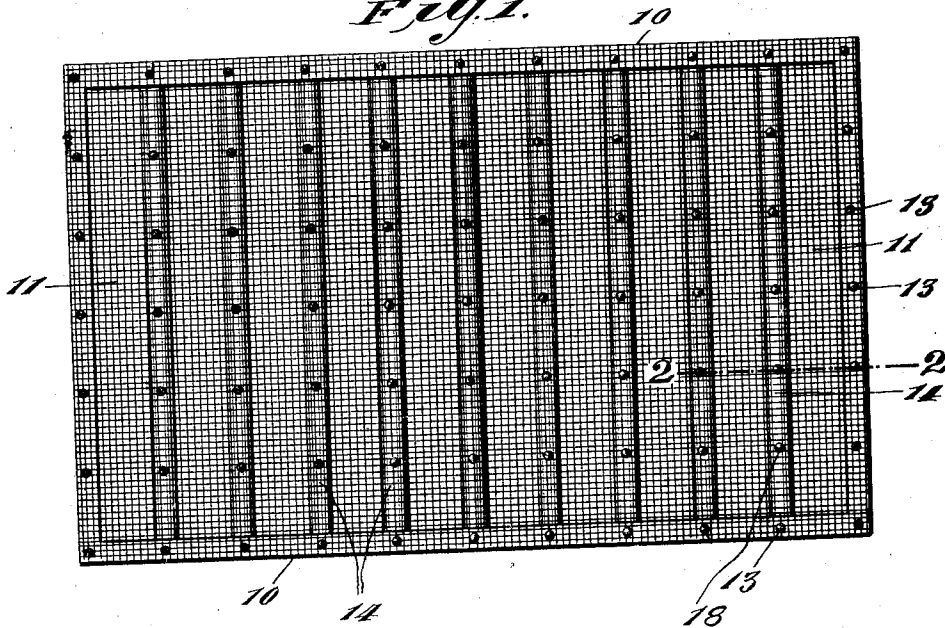


Fig. 2.

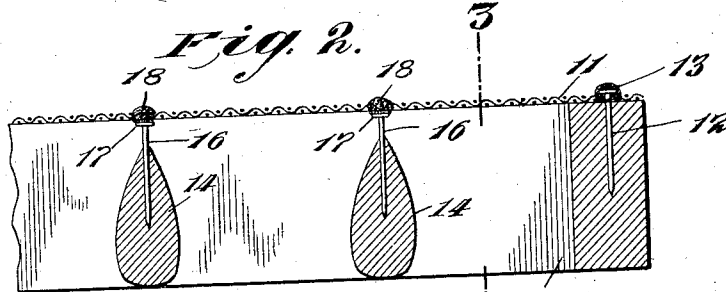


Fig. 3.

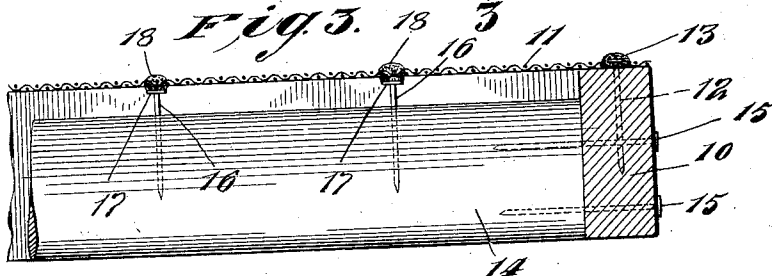
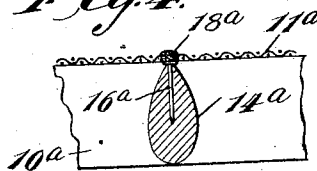


Fig. 4.



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SIEVE.

1,361,772.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDDIE J. OUELLETTE, a citizen of the United States, and a resident of Anaconda, county of Deerlodge, and State of Montana, have invented a new and Improved Sieve, of which the following is a full, clear, and exact description.

This invention relates to sieves for ore concentrators or jigs, and the like, and has reference more particularly to a device of this kind comprising a frame, a strut extending across the frame, a screen disposed over the frame, and means connecting the screen and the strut whereby the latter obstructs no part of the screen.

The invention also relates to a sieve including supporting struts, of upwardly tapering cross-section, or of what is known as stream-line form.

An object of the invention is to provide a sieve capable of use in ore concentrators or jigs of different types, or for other purposes, which is simple in construction and inexpensive to produce, and in which the wear of the sieve incident to its use is minimized.

A further object of the invention is to provide a sieve of the class described, which is so constructed that substantially the entire sieve or screen surface is unobstructed, and available for use, and in which the resistance to the pulsation or flow of water or other fluid through the screen is reduced to a minimum. The invention consists in the construction and arrangement of parts to be described more fully hereinafter, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, in which:

Figure 1 is a plan view of an embodiment of my invention.

Fig. 2 is an enlarged fragmentary cross-section on the line 2—2 of Fig. 1.

Fig. 3 is a similar view on the line 3—3 of Fig. 2, and

Fig. 4 is a view similar to Fig. 3 showing a modified form of my invention.

Before proceeding to a more detailed explanation of my invention, it should be understood that while the sieve is particularly useful in connection with ore concentrators or jigs, such for example as the Evans type of granulated ore concentrating machine, it can also be advantageously employed for other purposes in which sieves or screens are used, especially in connection with streams of water or other fluid.

The screen proper of my sieve may be fashioned from woven wire in the usual manner, or any other reticulated sheet adapted for the purpose, may be employed. The sieve frame and the struts are preferably fashioned from wood, but any other material adapted for the purpose may be used. Certain of the details of construction form no part of the invention, and may be varied in accordance with individual preference and special conditions.

Referring more particularly to the drawings, I provide a sieve frame 10 fashioned from frame members of rectangular cross-section, of any form adapted to suit the sieve to the particular purpose for which it is intended. As shown, for example, here-with the frame 10 is rectangular. Stretched over the frame is the screen 11 secured at its margins to the frame members by means of nails 12, or in any other suitable manner. Preferably, the heads of the nails are driven as nearly flush with the surface of the wood as possible, and then the mesh of the sieve is soldered to the nail heads in such manner as to leave the surface as smooth as possible, to receive cleats or liner boards which may be positioned upon them.

In order suitably to support the screen, I provide a plurality of struts 14 in parallelism, and extending across the frame. The ends of the struts are secured to the opposite frame members by means of nails 15, or in any other manner adapted for the purpose. Each strut is of so-called stream-line form, tapering upwardly in cross-section to a longitudinal edge, as is clearly shown in Fig. 2. The lower edges of the struts are rounded, and have their narrower or more pointed parts upwardly disposed. Preferably, the struts are arranged with their upper edges a substantial distance below the plane of the upper edges of the frame, and of the screen. I provide a plurality of connecting members between the struts and the screen. These connecting members for example consist of nails 16 driven into the struts at the upper edges thereof, and projecting above them a distance such that the heads 17 of the nails are in close juxtaposition to the under side of the screen. The latter is securely attached to the nail heads by means of small quantities of solder 18 or in any other suitable manner.

In Fig. 4 is shown a modified form of the sieve, comprising the frame 10^a, the

screen 11^a and the struts 14^a, these parts being similar to the corresponding parts 10, 11, and 14 of the preferred form of the device.

In the modification, however, the struts 5 are so disposed that their upper edges lie closely under the screen and the nails 16^a are driven sufficiently far into the struts that their heads only project. In this form 2, the screen is fastened to the nails, or 10 other connecting members, by means of solder 18^a, or the like.

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

15 1. A sieve of the class described comprising a frame, a screen secured upon the frame, struts fixedly mounted in the frame with their upper edges spaced from the screen, and spaced members fixedly secured to and 20 projecting from the upper edges of the struts and having their upper ends secured to the screen.

2. A sieve of the class described, comprising a frame, a screen secured upon the frame, 25 struts fixedly mounted in the frame with their upper edges spaced from the screen, said struts being pear shape in cross section, and spaced members fixedly secured to and projecting from the reduced longitudinal 30 edges of the struts and having their upper ends secured to the screen.

3. A sieve of the class described, comprising a frame, a screen mounted upon said frame, a plurality of struts positioned within said frame below said screen and spaced 35 therefrom, nails driven into the said struts and projecting upwardly therefrom to the

underside of said screen, and means for securing said screen to the upper ends of said nails. 40

4. A sieve of the class described, comprising a frame, a plurality of struts fixedly secured to and extending across said frame within the same, each of said struts tapering upwardly of its length to a longitudinal 45 edge and having rounded lower edge, a screen stretched across said frame, and extending over said struts but spaced therefrom, connecting members fixedly secured to and extending upwardly from the reduced longitudinal edges of said struts to 50 said screen and having heads, and means for securing said heads to the underside of said screen.

5. A sieve of the class described, comprising a frame, struts extending across said frame, a screen stretched upon said frame over the said struts, nails driven into the upper longitudinal edges of said struts and having their heads on the underside of said 60 screen, and solder securing said screen to said nail heads.

6. A sieve of the class described, comprising a frame, struts extending across said frame, said struts being of upwardly tapering stream line cross-section, a screen 65 stretched upon said frame over said struts and spaced therefrom, nails driven into said struts at the longitudinal edges thereof and having their heads in juxtaposition with the under side of said screen, and solder securing 70 said screen to said nail heads.

EDDIE JOSEPH OUELLETTE.