

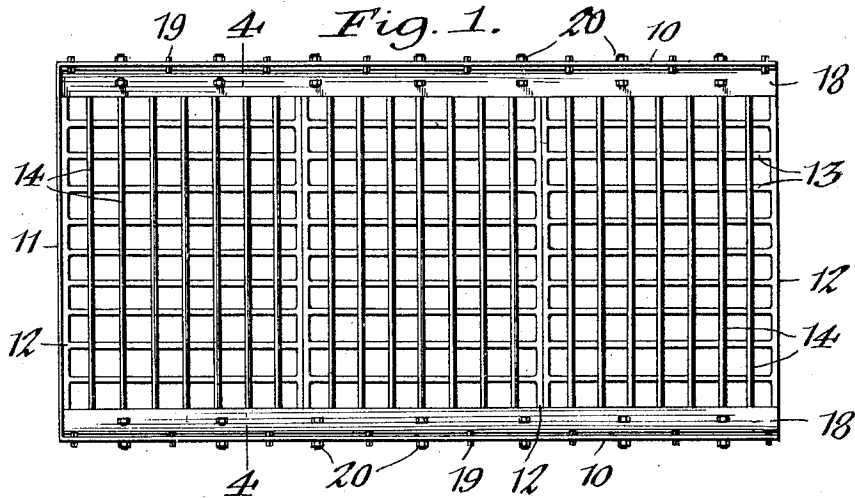
Nov. 17, 1931.

W. L. WETTLAUER

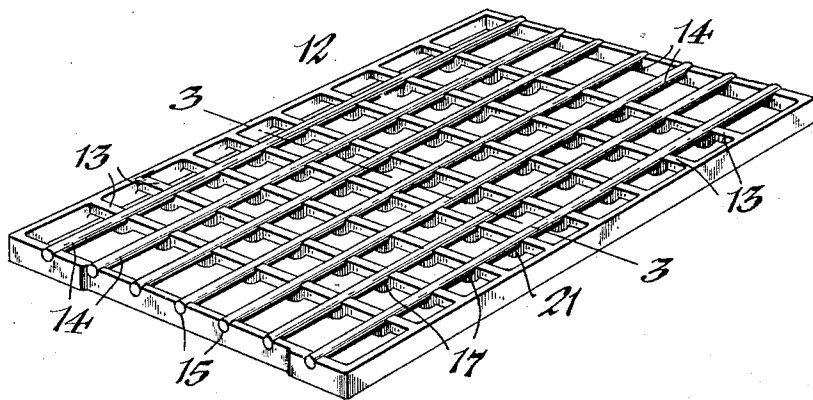
1,832,518

SHAKING SCREEN

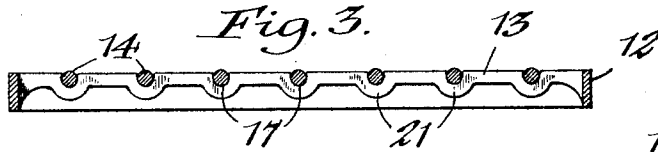
Filed Oct. 26, 1927



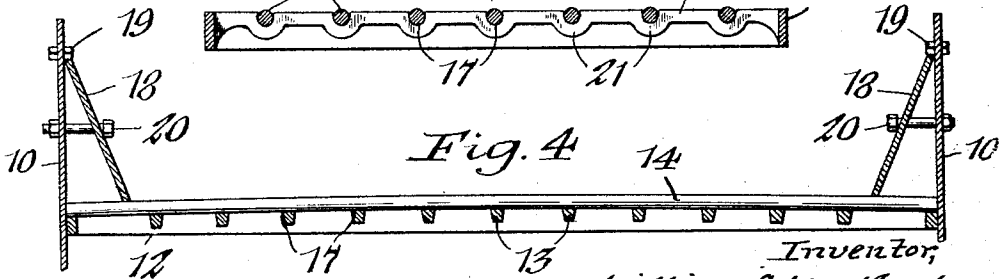
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



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## UNITED STATES PATENT OFFICE

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## SHAKING SCREEN

Application filed October 26, 1927. Serial No. 228,878.

This invention relates generally to shaking screens, but more particularly to machines for screening and grading crushed stone, ores, coal and similar coarse materials by which the screen-cloth is subjected to heavy wear.

The object of my invention is to prolong the life of the screen by so constructing and mounting the separating members of its panels or screen surfaces that one or more worn-out rods or members can be readily replaced by new ones without disturbing those still in serviceable condition, thus avoiding the necessity of discarding the whole panel or surface and effecting an important saving.

In the accompanying drawings:—

Figure 1 is a top plan view of a paneled shaking screen embodying the invention. Figure 2 is a perspective view of one of its panels. Figure 3 is an enlarged longitudinal section of one of the panels, on line 3—3, Figure 2. Figure 4 is an enlarged cross section of the screen, on line 4—4, Figure 1.

Similar characters of reference indicate corresponding parts throughout the several views.

The frame of the screen may be of any appropriate construction, that shown in the drawings being intended for use in an inclined position and having parallel side walls 10 and a transverse wall 11 at its lower end.

In the example illustrated in the drawings, the screen has three separate panels, each comprising a rectangular frame 12 of the proper dimensions to fit into the screen frame and carrying a series of parallel equi-spaced bars or members 13 preferably extending lengthwise of the screen, and similarly-spaced rods or members 14 extending crosswise of the screen and forming with said bars the separating surface of the screen. The longitudinal bars 13, which receive much less wear than the cross rods 14, may be formed integral with each panel-frame or otherwise permanently secured thereto, but the rods which receive considerable wear are removably mounted in the panel, so that one or more of them can be readily replaced by new rods. In the preferred embodiment of the improvement shown, the rods rest at their

ends in semi-circular seats or notches 15 formed in the side bars of the panel-frame, while their intermediate portions are supported in similar seats 17 formed in the longitudinal bars 13 of the panel in alinement with the seats 15. These seats are spaced to correspond to the spacing of the bars 13.

Preferably these seats and the cross rods are of such relative dimensions that the rods extend somewhat above the surfaces of said screen-bars, to retard the flow of the material over the screen and obtain a more thorough separation. The rods are held or clamped in their seats by any suitable means; for example, by inclined guard-plates 18 applied to the inner sides of the side walls of the screen and bearing at their lower edges upon the end-portions of the rods, as shown in Figure 4. These plates fulcrum against nuts or abutments 19 and are drawn toward the screen-walls by clamping bolts 20, thus securely holding said rods in place.

It is desirable to crown the screen surface slightly, and for this purpose those longitudinal bars 13 near the sides of the panel are in a somewhat lower plane than those at or near its center. The cross rods 14 are normally straight, but their end-portions are bent downward against their seats upon tightening the clamping bolts of the guard-plates 18.

The longitudinal bars may be straight on their under as well as their upper sides, but they are preferably formed opposite their notches with lugs or enlargements 21. This construction permits said bars to be made narrower from top to bottom, reducing the weight of the panel without sacrificing the strength of the bars opposite their notches.

Some parts of the screen-panels receive more wear than others and some of the cross rods therefore wear out more rapidly than others. By the construction herein shown and described, such a worn-out rod or rods can be readily renewed, without disturbing the screen panels, by loosening the guard plates 18, substituting new rods for the worn-out ones and again tightening the guard-plates. These acts cause but a brief interruption in the operation of the machine and

the improvement effects a substantial reduction in the cost of renewals.

I claim as my invention:—

1. In a screen of the character described,  
5 a frame having permanent integrally formed separating members extending lengthwise of the screen and individually-replaceable separating members intersecting and supported by the first-named members said first and  
10 second-named members being approximately equi-spaced to conjointly form screen-openings of substantially the same dimensions both lengthwise and crosswise of the frame.

2. In a screen of the character described,  
15 a frame having permanent separating members extending from front to rear of the screen and individually-replaceable separating members extending from side to side of the screen at right angles to the path of travel  
20 of the material to be screened, said replaceable members being raised above the surface of said permanent members and interlocking with the upper edges thereof.

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**CERTIFICATE OF CORRECTION.**

Patent No. 1,832,518.

Granted November 17, 1931, to

**WILLIAM L. WETTLAUER.**

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 2, line 5, claim 1, strike out the word "permanent"; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 9th day of February, A. D. 1932.

(Seal)

**M. J. Moore,**  
Acting Commissioner of Patents,