P. G. TRESS.

SAND SCREEN.

APPLICATION FILED MAY 28, 1909.

973,895.

Patented Oct. 25, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

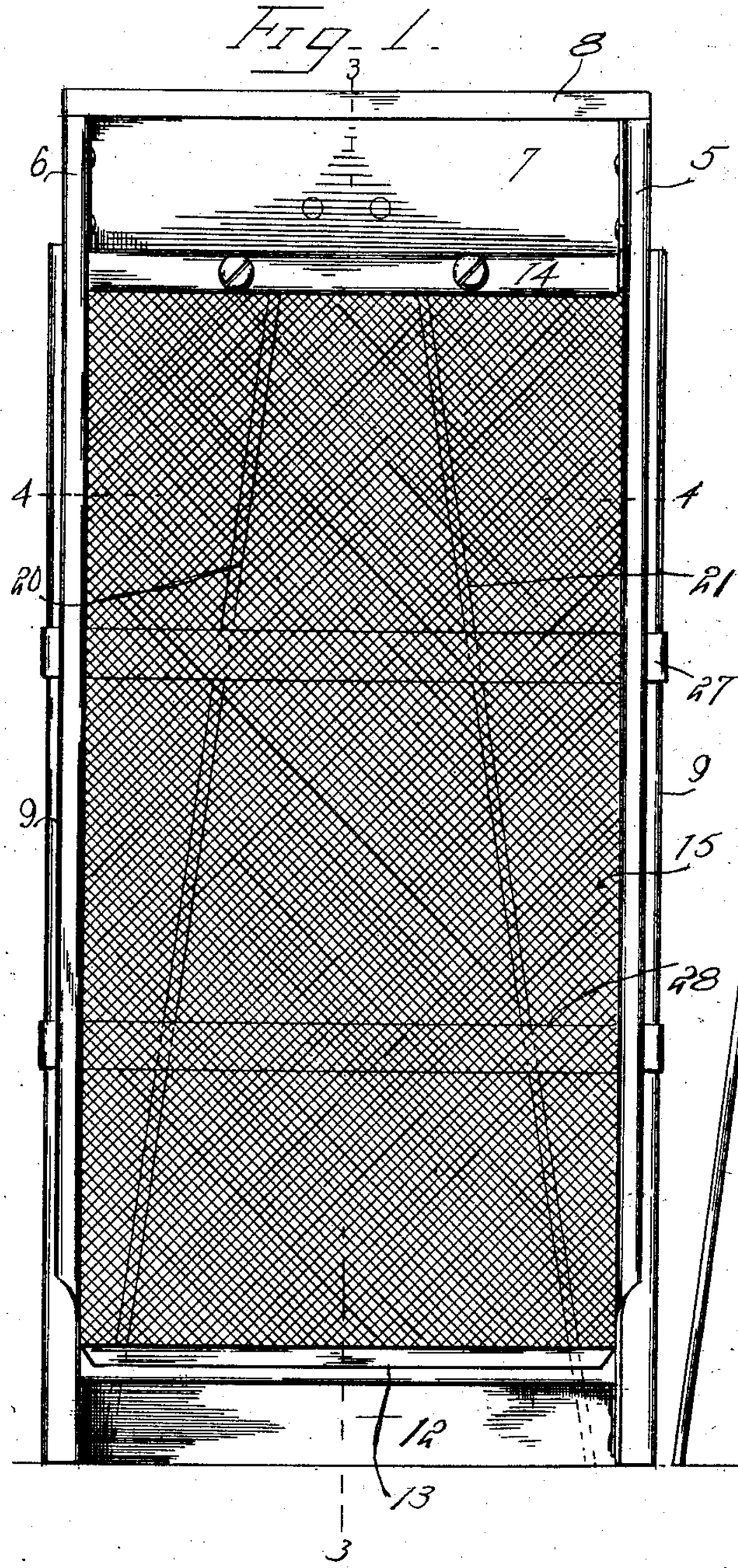
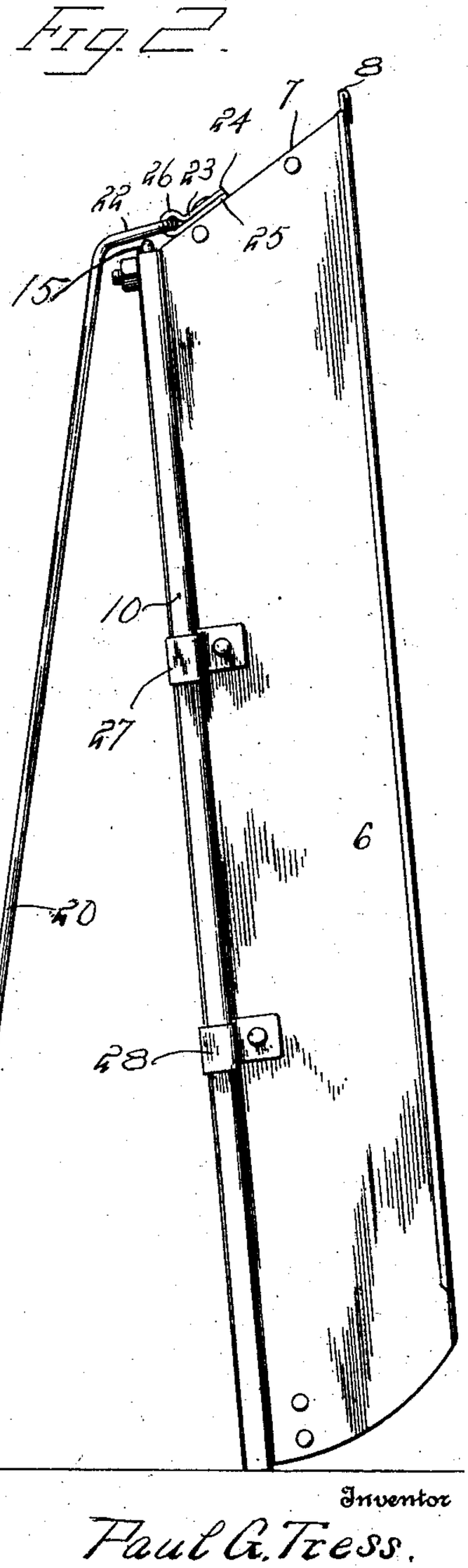


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3

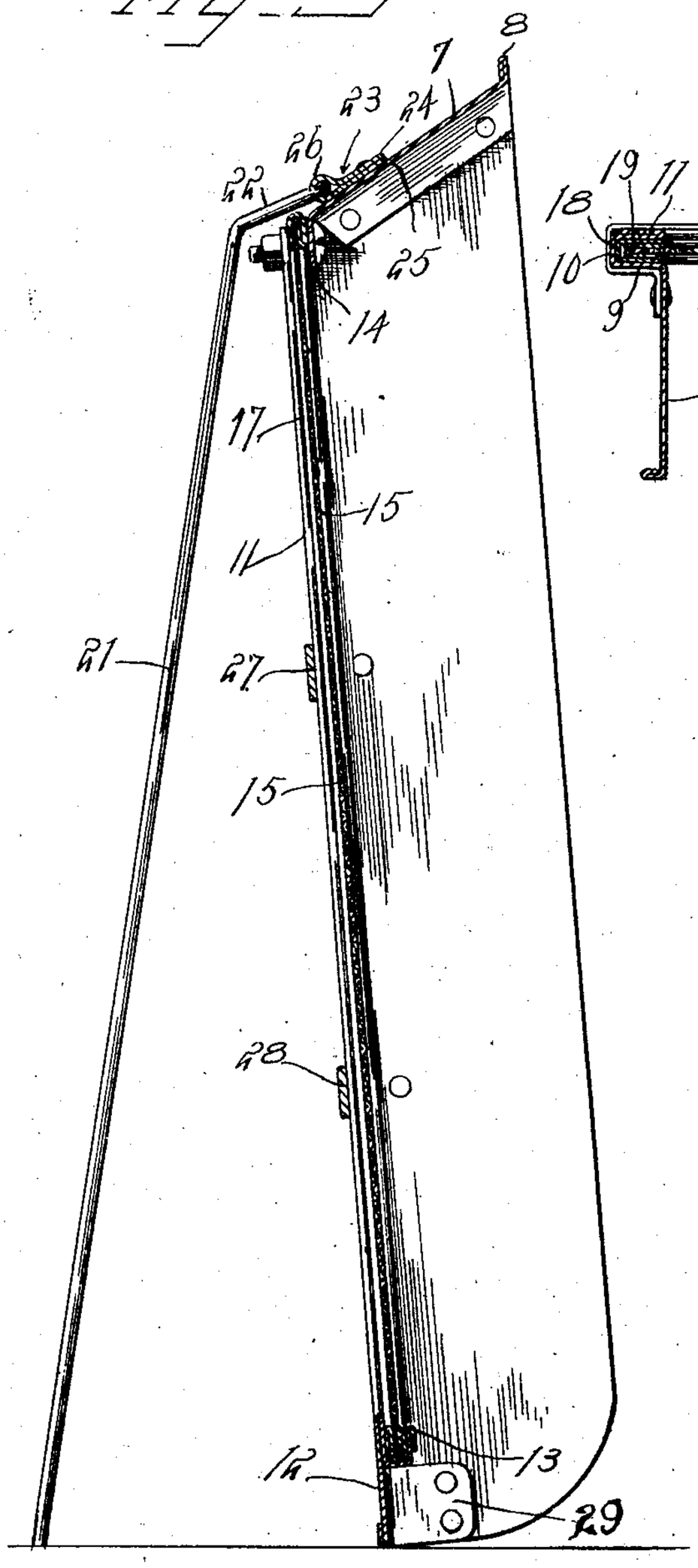
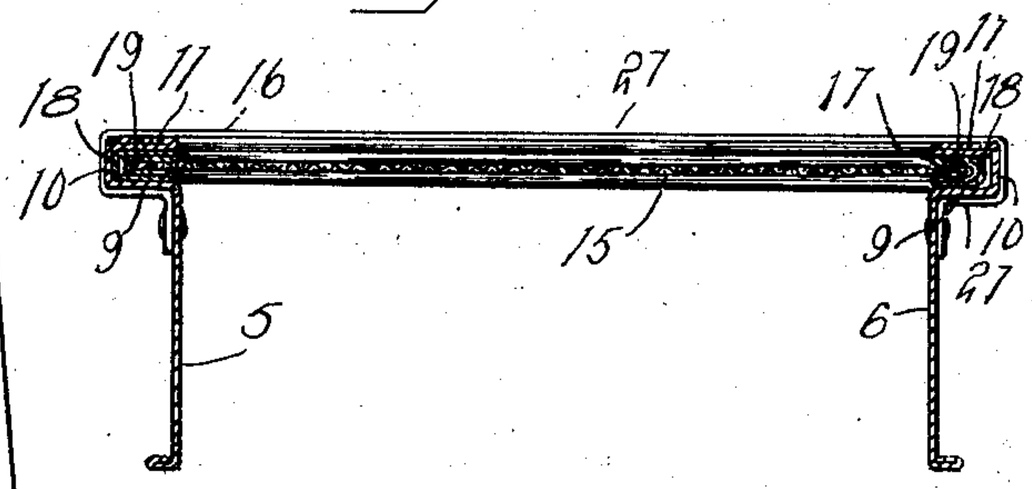


Fig. 4.



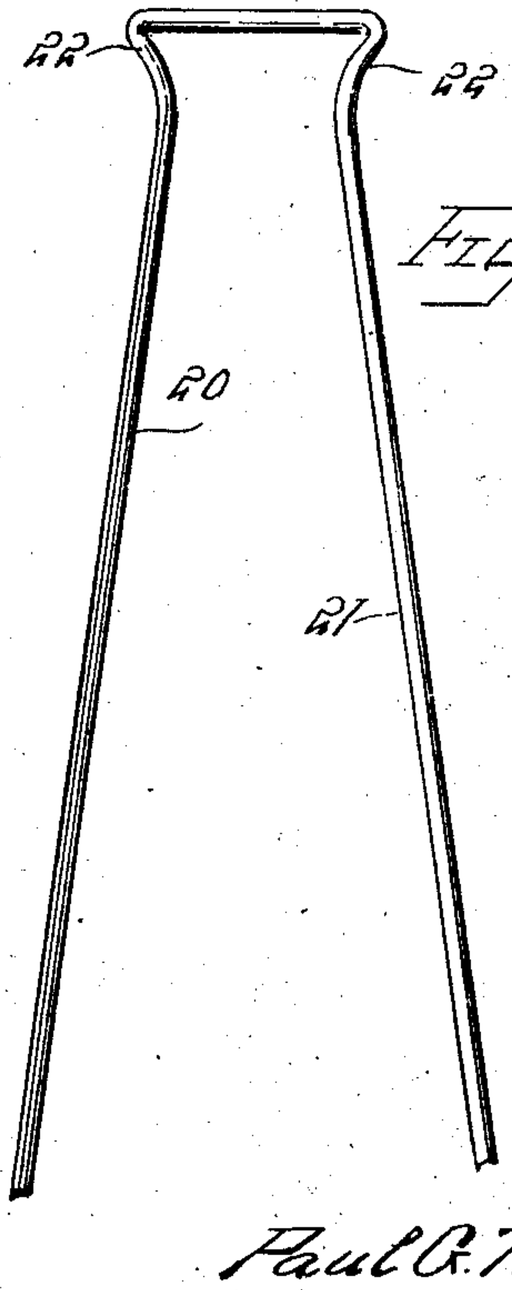


Fig. 5.

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UNITED STATES PATENT OFFICE.

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SAND-SCREEN.

973,895. Specification of Letters Patent. Patented Oct. 25, 1910.

Application filed May 28, 1909. Serial No. 498,939.

To all whom it may concern:

Be it known that I, PAUL G. TRESS, a citizen of the United States, residing at Amarillo, in the county of Potter, State of Texas, have invented certain new and useful Improvements in Sand-Screens; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in screens or sifters and more particularly to the type employed for screening or sifting sand.

It has for its object the provision of a device of that kind wherein the sifter or screen can be readily removed in order to place a screen or sifter having a different mesh within the frame.

Another object is the provision of an improved form of bracket for maintaining the screen in upright position.

A further object is the provision of a device which is designed to increase the life of the screen.

With these and other objects in view as will more fully hereinafter appear, the present invention consists in certain novel details of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings and more particularly pointed out in the appended claim, it being understood that various changes in the form, proportion, size and minor details of the device may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings forming part of the specification:—Figure 1 is a front elevation of the device. Fig. 2 is a side view thereof. Fig. 3 is a vertical sectional view taken on the line 3—3, Fig. 1. Fig. 4 is a transverse section taken on the line 4—4, Fig. 1. Fig. 5 is a detailed plan view of the support.

Similar numerals of reference are employed to designate corresponding parts throughout.

As shown in the drawings the side walls of the frame are substantially rectangular in cross section and facial contour. These side walls are designated by the numerals 5 and 6 and at their upper ends are connected by the obliquely disposed upper end wall 7. What will subsequently be termed the front edges of the side and end walls, are flexed outwardly and at right-angles, and then rebent upon themselves as shown at 8 so as to provide no sharp edges. The frame may be of any suitable material and in the present instance is shown to be of sheet iron. The longitudinal sides of the side walls 5 and 6 remote from the rebent portions 8, are, throughout their lengths, bent outwardly at right-angles as shown at 9, for a short distance and then downwardly as shown at 10, and thence inwardly and parallel with the portions 9, as shown at 11, these bent portions 9, 10 and 11 constituting guides, which are adapted to receive the screen, to be described later.

By referring now to the drawings it will be seen that the lower end portions of the side walls 5 and 6 are connected by means of a horizontally disposed plate 12, the opposite ends of which are provided with lugs 29, arranged at right angles to the plate and corresponding in width to one half the width of the plate. The lugs are secured to the opposed inner faces of the side walls 5 and 6 as shown in Fig. 3. The plate 12 extends upwardly for a short distance between the side walls 5 and 6, and is provided on its front face with a stop 13. The stop is formed by bending the plate at a point adjacent its longitudinal center, outwardly and upon itself as shown at 30. The said bent portion extends to a point in alinement with the upper sides of the lugs 29, whence it is directed outwardly as shown at 31, for a distance corresponding to the width of the bent portion 30; the said outwardly directed portion 31 terminating in an upwardly bent portion 32, the said upwardly bent portion 32 extending parallel with the bent portion 30. The space between the bent portions 30 and 32 corresponds to the width of the guides 11. By referring now to the drawings it will be seen that the inner side, or that remote from the rebent portion 8 of the obliquely disposed top wall, is bent inwardly as shown at 14, and constitutes a flange, which is in a plane with the front wall 9 of the guide.

The screen in the present instance is designated by the numeral 15 and as shown in the drawings is incased in a frame. The frame is preferably formed of sheet metal or the like, the opposite sides and ends of which are designated in general by the nu-

merals 16 and 17 respectively. Each of the sides is preferably formed of a single piece of sheet metal, bent upon itself at its longitudinal center as shown at 18, and the longitudinal edges of the bent portion turned inwardly as shown at 19. The opposite sides and edges of the screen are insertible between the bent portions and thence curved upwardly and between one side of the bent portions and the bent portion 19. When the edges of the screen are in this position the rebent portions 18 are pressed together which likewise compresses the rebent portions 19, thus firmly securing the screen against displacement. The frame is of a width to nicely fit into the guides, as shown in Fig. 4 of the drawings, and of a length to extend from the channel plate 13 to the flange 14. The upper end bar of the frame is provided with a pair of spaced openings which are adapted to aline with similar openings formed in the flange 14. These openings are adapted to receive suitable bolts, which serve to hold the screen within the guides, as clearly shown in Figs. 1 and 3. Thus it will be seen when it is necessary to remove the screen, all that need be done is to remove the bolts, and slide the screen upwardly and out of the guides. It will be further observed when the parts are in position as shown in the drawings, that accidental displacement of the screen will positively be prevented.

By referring now to the drawings it will be seen that a suitable support is provided for the device, and in the present instance is shown to consist of a single piece of bar iron or the like bent to substantially a U shape so as to provide legs 20 and 21. The legs 20 and 21 converge toward the connected ends, and adjacent this portion the metal is flexed laterally as shown at 22. A suitable holder for the support is designated by the numeral 23, and in the present instance is shown to be arranged on the upper face and adjacent the lower and rear side of the oblique end wall. This member is preferably formed of a single piece of sheet metal, bent upon itself at its intermediate portion so as to provide opposite sides 24 and 25, the inner sides of which are curved outwardly so as to present an eye or opening 26, for the loose reception of the horizontal portion of the U shaped support. With this construction it is obvious that the device may be adjusted at any desired angle, by simply moving the support to or from the device.

In order to prevent the screen from bulging outwardly due to the repeated blows of the sand, when the latter is thrown against its front face a pair of spaced straps 27 and 28 are employed. Each of these members is preferably of sheet metal, and has its opposite end portions bent outwardly and inwardly around the guides and secured to the outer faces of the sides 5 and 6.

From the foregoing it can be seen that I have provided a device which is comparatively simple in structure and inexpensive to manufacture, embodying few parts and these so arranged that the danger of derangement will be reduced to a minimum.

It will be observed that the provision of the oblique end wall will deflect particles of sand, and stones, which are thrown too high upon the screen and prevent the particles from flying back into the eyes of the operator.

It can be seen that the provision of the removable screen will be greatly appreciated, when it is desired to sift sand to various degrees of fineness.

Having thus described my invention what is claimed as new, is:—

A sifter having side walls bent longitudinally upon themselves to form guide channels, transverse brace bands having their terminals conforming to the outline of the outer faces of the channels and secured to the side walls, a transverse stop having terminal lugs fixed to the side walls and having its upper edge bent to form a channel in registration with the guide channel, and a screen member detachably secured in said guide and stop channels.

In testimony whereof, I affix my signature, in presence of two witnesses.

PAUL G. TRESS.

Witnesses:

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C. W. BAGLEY.