Dec. 19, 1939. J. HASMAN 2,183,991

VIBRATOR SCREEN SUPPORT

Filed Nov. 25, 1938

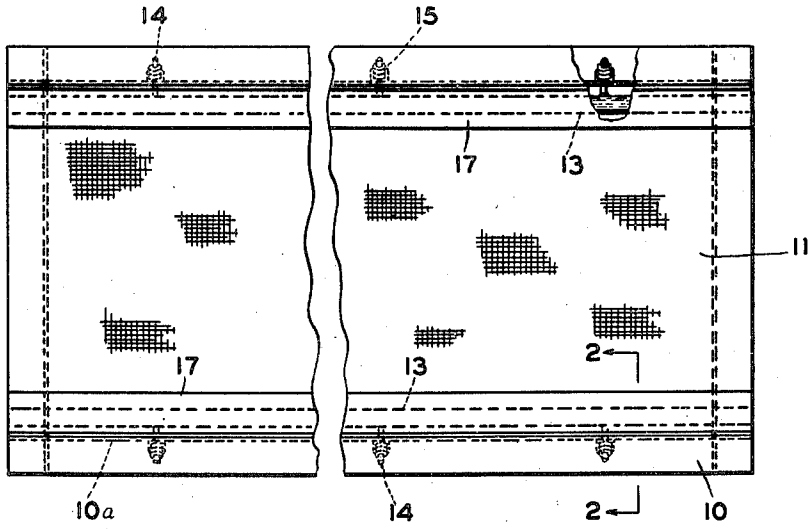

FIG.-1

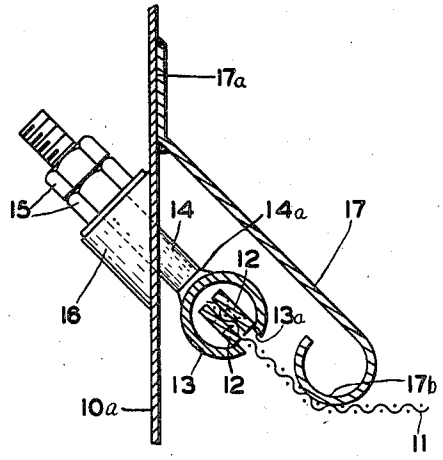

FIG.-2

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Patented Dec. 19, 1939

2,183,991

UNITED STATES PATENT OFFICE

2,183,991

VIBRATOR SCREEN SUPPORT

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Application November 25, 1938, Serial No. 242,225

3 Claims. (Cl. 209—403)

This invention relates to improvements in vibrator screen supports and more particularly to means for holding a screen under evenly distributed and steadily maintained tension.

As is well known, vibrator screens do their best work when maintained under spring tension and when all portions of the screen are as near as possible under even tension.

An object of the present invention is to provide novel means for maintaining an evenly distributed pull on the vibrator screen and resilient means for insuring tension on the screen at all times.

Another object of the present invention is to provide a novel combination of skirt boards or baffle plates adapted to guide material onto and retain material on the screen, such boards or plates being of resilient metal engaging the screen so as to hold it under tension.

Other objects and advantages of the invention including novel formation and arrangement of the parts composing the structure will be apparent from the accompanying drawing and specification and the essential features thereof will be set forth in the claims.

In the drawing, Fig. 1 is a plan view partly broken away showing my invention as supplied to one form of vibrator screen; while Fig. 2 is an enlarged detail section taken along the line 2—2 of Fig. 1.

In the drawing, 10 refers generally to a comparatively rigid frame which serves to support the screen 11. The frame 10 may be of any suitable form, the one shown being made up of structural shapes, it only being necessary for the purpose of the present invention that there be side members 10*a* of the frame lying along opposite side edges of the screen so as to apply a stretching force to the screen. The screen 11 is often of a very fine mesh which is difficult to stretch evenly and tightly and therefore for the purposes of the present invention I have shown metal strips 12 substantially coextensive with opposite side edges of the screen 11 and clampingly secured thereto in any suitable manner as for instance by rivets or bolts. Both sides of the screen are alike and so only one is shown in Fig. 2, it being understood that the other side has similar parts.

Means is provided for exerting an evenly distributed pull to the strips 12 and in the present instance this comprises a pipe 13 extending along the entire side of the screen and slotted as at 13*a* so that the screen with the clamping strips attached may be inserted and removed lengthwise of the pipe 13. It will be noted that the interior diameter of the pipe is adapted to accommodate the strips 12 and when pull is exerted on the pipe the edges thereof adjacent the slot give an evenly distributed pull along the entire length of the strips 12. For so pulling on the pipe 13 to stretch the screen, at various points along the length of the pipe are rigidly secured thereto the bolts 14 as by welding at point 14*a*. These bolts extend upwardly and outwardly through suitable apertures in the frame members 10*a* and nuts 15 pulling against suitably arranged shoulders 16 apply a stretching effect to the screen. The bolts 14 are spaced along the side of the screen at sufficient intervals to exert an evenly distributed pull.

Means is provided to hold the screen under resilient tension when it is stretched by pulling upon the bolts 14. This means comprises resilient metal strips 17 rigidly secured along their upper edges to the frame as at 17*a* by welding or otherwise and having their lower edges at the portion 17*b* engaging the screen. Since the strips 17 are coextensive with the opposite side edges of the screen they exert their resilient tensioning effect at all points along each side of the screen. For cheapness of construction and to engage the screen with the minimum of wear the portion 17*b* may be constructed substantially of a circular section such as a cut-out portion of pipe, if desired. As illustrated in the drawings, the strips or plates 17 are so constructed and position as to form uninterrupted surfaces extending upwardly and outwardly from the screen engaging portions 17*b* so that the plates 17 form skirt boards or baffles directing material onto the screen and holding material from lateral movement off the screen.

It will be obvious from an inspection of Fig. 2 that the pull on the opposite side edges of the screen where the pipe 13 engages the clamping strips 12 pulls upwardly against the resilient plates 17 so that these plates in effect form leaf springs to hold the screen under a resilient tension.

Since all of the parts shown here move together as the screen is vibrated there is no relative friction between them.

What I claim is:

1. A vibrator screen support comprising a screen within a frame, resilient metal strips supported by said frame, one strip along each of opposite side edges of said screen, each strip engaging said screen from end to end and inwardly from the side edges of said screen, and means for exerting an evenly distributed lateral

pull along the side edges of said screen in a direction to pull said screen against said strips.

2. A vibrator screen support as in claim 1 wherein said resilient metal strips are uninterrupted baffles sloping upwardly and outwardly from their screen engaging portions so as to form skirt boards.

3. A vibrator screen support comprising a screen, a frame having portions lying outside opposite side edges of said screen, clamping strips extending continuously along opposite side edges of said screen, tubular members longitudinally slotted and coextensive with said strips and embracing said strips with said screen extending through said slots, means spaced along said frame portions for exerting a tensioning pull on said pipes and hence on said screen, and resilient metal skirt boards secured at their upper edges to said frame and extending downwardly and inwardly to engage at their lower free edges against said screen inwardly of said pipes to exert a spring tensioning effect on said screen, said pipes being positioned above the lower free edges of said skirt boards, whereby tension applied at said pipes will pull said screen upwardly against said boards.

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