Oct. 2, 1928. 1,685,940

E. DEISTER

VIBRATING SCREEN

Filed May 24, 1926

Fig. 1.

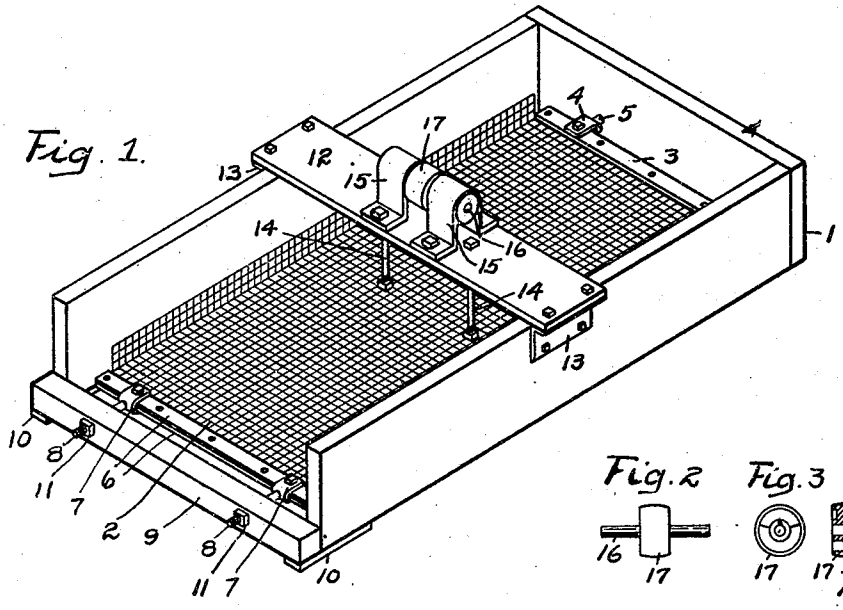


Fig. 2

Fig. 3

Fig. 4.

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EMIL DEISTER, OF FORT WAYNE, INDIANA.

VIBRATING SCREEN.

Application filed May 24, 1926. Serial No. 111,223.

The invention relates to vibrating screen mechanisms and its object is to provide a simple form of mechanism in which the screening medium is vibrated efficiently in novel manner.

The invention consists in the novel arrangement and combination of parts hereinafter described and illustrated in the accompanying drawings.

In the illustrative drawings, Figure 1 is a perspective view of the mechanism embodying the invention; Fig. 2 a front elevational view of the unbalanced member or pulley; Fig. 3 an end view of the pulley and Fig. 4 a vertical cross-sectional view of the pulley.

In the illustrative embodiment of the invention the frame is substantially a box like structure 1, the bottom being open and one end being open. In operative position the box is inclined with the open end at the low point. Two plates or bars 3 are bolted to opposite sides of the upper end of the screening medium 2 and U-shaped members 4 are also bolted to the plates 3, each carrying a bolt 5 that is extended through the aperture in the upper wall of the box and carrying one or more nuts on the projecting end by which the bolts are attached to the wall. Two plates or bars 6 are secured to opposite sides of the lower end of the screening medium and similar U-members 7 are secured to the plates and each carries a bolt 8 that is extended through a bar 9 which abuts the lower ends of the side members of the box and rests upon the projecting ends of two plates 10 secured to the lower edges of the side members of the box. By tightening the nuts 11 on the bolts 8 the desired tension is placed upon the screening medium 2. The said medium is not attached to the sides of the box but is held in flexible tension thereon and it is free to vibrate independently of the box. I preferably turn up the sides of the screening medium.

The vibrating mechanism comprises a spring board or elastic member 12 that is secured at its opposite ends to the brackets 13, which brackets are secured to the side members of the box. Bolts 14 or other suitable devices are attached to the member 12 and to the screening medium. Upon this member 12 are mounted two bearings 15 in which is supported a shaft 16 having secured thereto an unbalanced member or pulley 17. This member 17 may be driven in any suitable manner as by a belt engaged on it and leading from any suitable source of power. As the member 17 is rotated its unbalanced condition causes the elastic member 12 to vibrate and the vibrations of the member 12 are transmitted to the screening medium by the members 14. A positive vibration is thereby set up in the screening medium and it is most effective in the treating of materials fed at the upper end of the device.

What I claim is:

1. The combination with a frame, a screening medium flexibly supported in tension on the frame, a flat elastic member rigidly secured to the frame, and extending transversely of the same, motion transmitting means secured to the elastic member and to the screening medium, and means mounted on and rigidly secured to the elastic member to vibrate said member and cause the said medium to vibrate independently of the frame.

2. The combination with a frame, including two opposite side walls, a screening medium flexibly supported in tension on the frame between said side walls, a flat elastic member rigidly secured at its opposite ends to said side walls, motion transmitting means connected to the central portion of the flat elastic member and to the said medium and vibrating means rigidly secured to the elastic member for vibrating said member and said medium.

In witness whereof I have hereunto signed my name this 19th day of May, 1926.

EMIL DEISTER.