Nov. 18, 1924.

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A. T. STUART

SCREEN FOR FILTER PRESSES.

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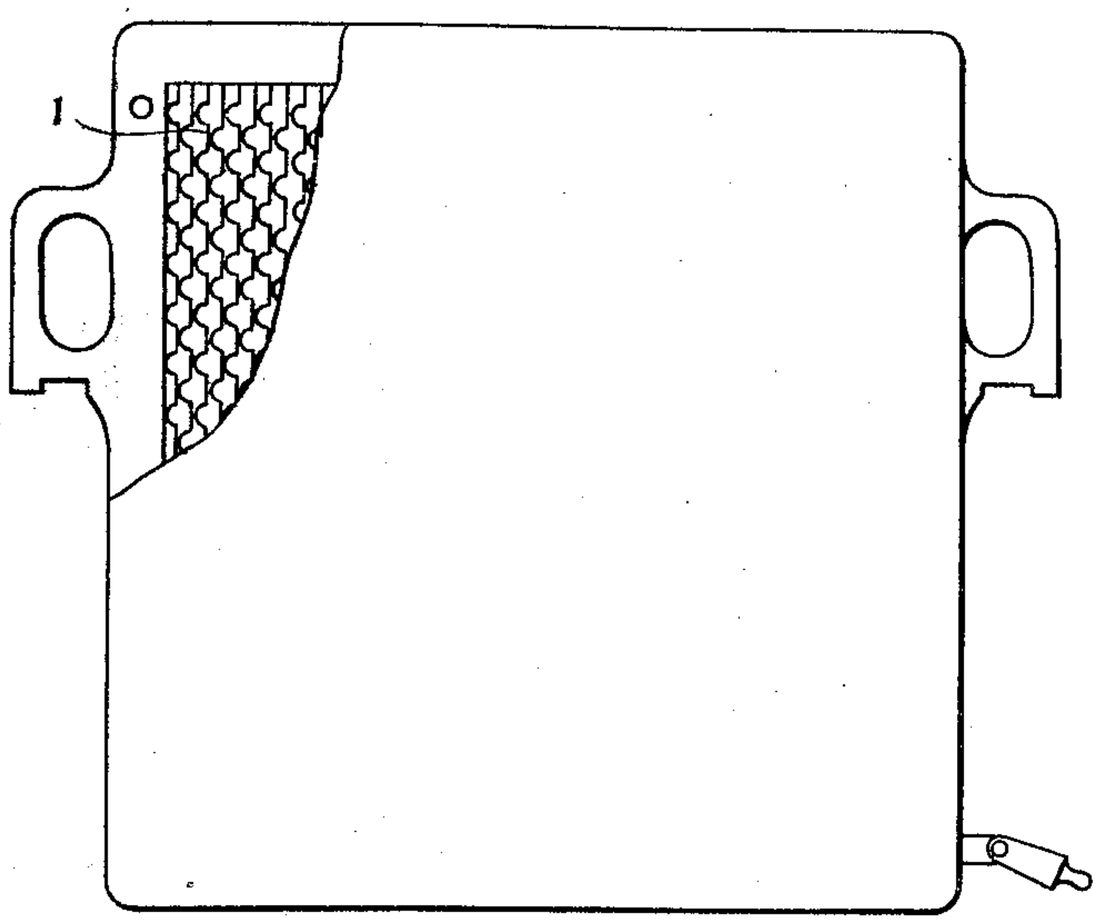

Fig. 1.

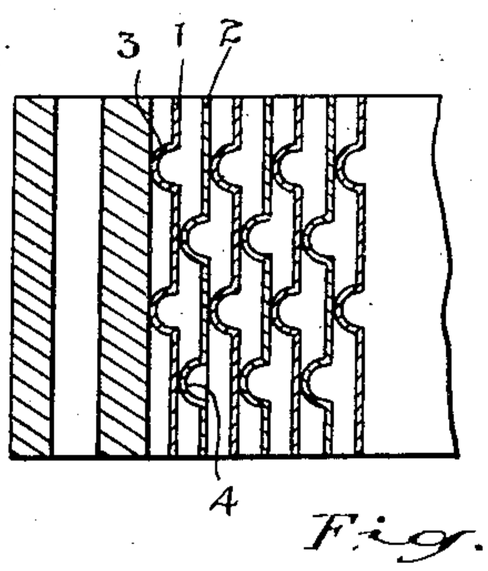

Fig. 2.

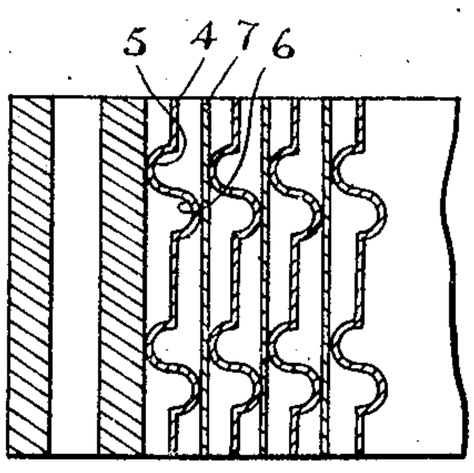

Fig. 3.

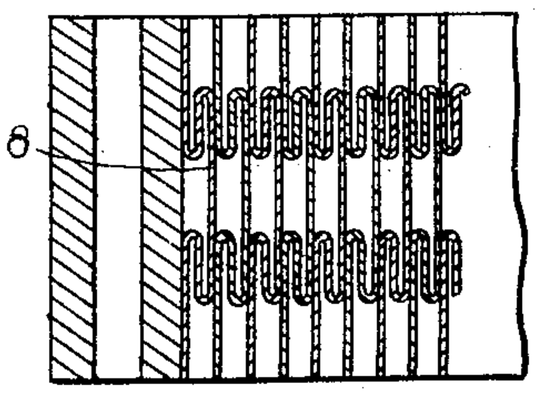

Fig. 4.

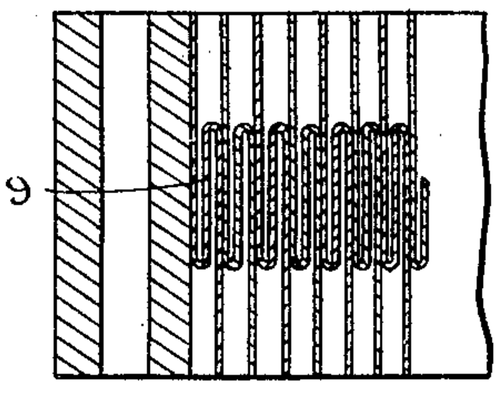

Fig. 5.

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UNITED STATES PATENT OFFICE.

ALEXANDER T. STUART, OF TORONTO, ONTARIO, CANADA.

SCREEN FOR FILTER PRESSES.

Application filed November 9, 1921. Serial No. 513,933.

To all whom it may concern:

Be it known that I, ALEXANDER T. STUART, a subject of the King of Great Britain, and resident of the city of Toronto, county of York, Province of Ontario, in the Dominion of Canada, have invented certain new and useful Improvements in a Screen for Filter Presses, described in the following specification and illustrated in the accompanying drawings, that form part of the same.

The principal objects of this invention are, to simplify the construction of the means for supporting the filtering fabric, thereby cheapening its cost and rendering it more serviceable and more easily handled.

The principal feature of the invention consists in the novel construction of a plurality of thin strips of rigid material arranged between the screens, whereby the edges of said strips are spaced uniformly.

In the drawings, Figure 1 is an elevational view of a filter screen showing the filter fabric partly broken away.

Figure 2 is an enlarged cross sectional view showing a simple form of structure for maintaining a uniform spacing of the edges.

Figure 3 is an enlarged cross sectional view of a modification of the structure.

Figures 4 and 5 are enlarged cross sectional views of still further modifications.

Improved forms of screens for filter presses propose the use of a plurality of extremely thin blades of rigid material spaced apart and presenting their edges to support the screen fabric and it is the purpose of this invention to produce blades of a character which will be very easy to handle both in assembling the screen and in otherwise handling the same.

The method of spacing the supporting blades as herein proposed and illustrated in Figure 1 provides blades 1 and 2 which are deformed having the surfaces thereof indented at points 3 and 4 each side of the transverse centre, which indentations may be either in the form of ribs extending longitudinally from end to end of the blades or they may be in the form of teats. The ribs or teats thus formed are in the adjacent blades arranged in offset relation so that the ribs or teats of each blade will engage the smooth surface of the adjacent blade. The blades may be held in the frame in any desirable manner either by having holding rods passed therethrough or by having the frames grooved to receive and hold them, whichever may be the more desirable.

In the modification shown in Figure 3, the blades 4 are formed with reversely arranged ribs or teats 5 and 6 which project to either side of the plane surface. Between these peculiarly formed blades are placed in alternate arrangement the flat blades 7 and the ribs or teats extending from either side of the intermediate blades hold them apart.

A further modification is shown in Figure 4 where the metal of the thin blade is folded to form a rib 8 which holds the adjacent blade separate therefrom at the edges the desired distance.

A still further modification is illustrated in Figure 5 where a single fold 9 in the blade offsets the longitudinal sides and the thickness of the fold spaces the edges the desired distance apart.

What I claim as my invention is:—

1. In a plate for filter presses, the combination with a frame, of a plurality of blades of thin sheet material having their longitudinal edges spaced apart throughout the entire length thereof, the blades being deformed intermediate of their width to form spacers.

2. In a plate for filter presses, the combination with a frame, of a plurality of blades of thin sheet material having raised projections intermediate of their width adapted to engage the adjacent blade, such projections being placed in offset arrangement and adapted to space the edges of the blades a uniform distance apart from end to end.

3. In a plate for filter presses, the combination with a frame, of a plurality of blades of thin sheet material, having raised projections from both surfaces intermediate of their width and intermediate flat blades arranged between alternate deformed blades.

ALEXANDER T. STUART.