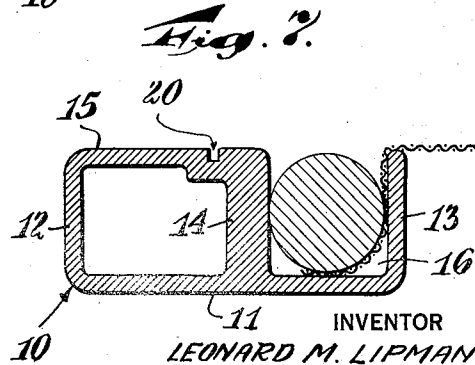
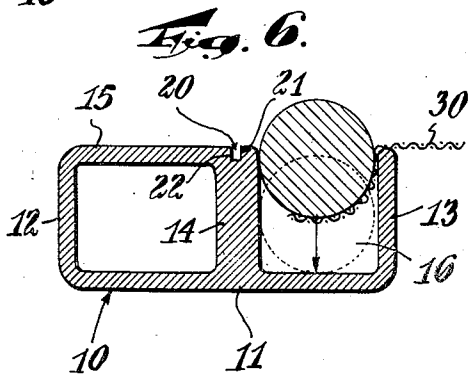
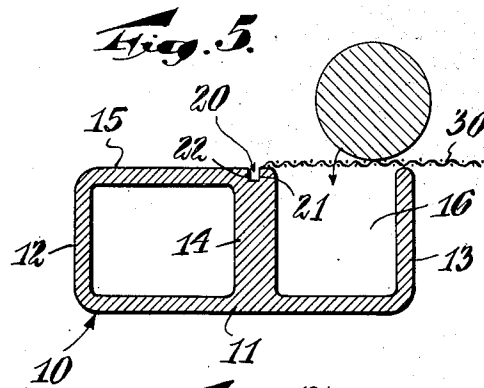
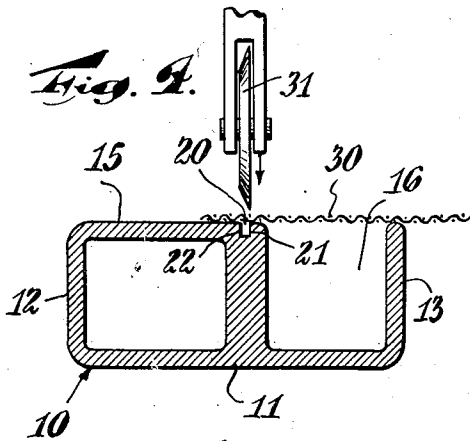
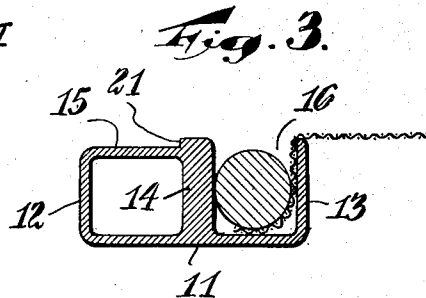
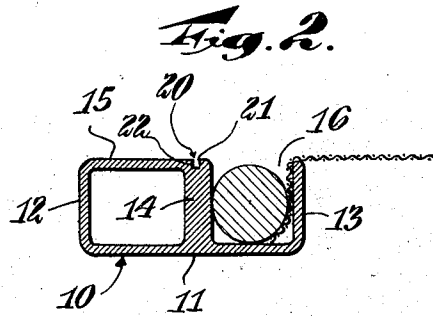
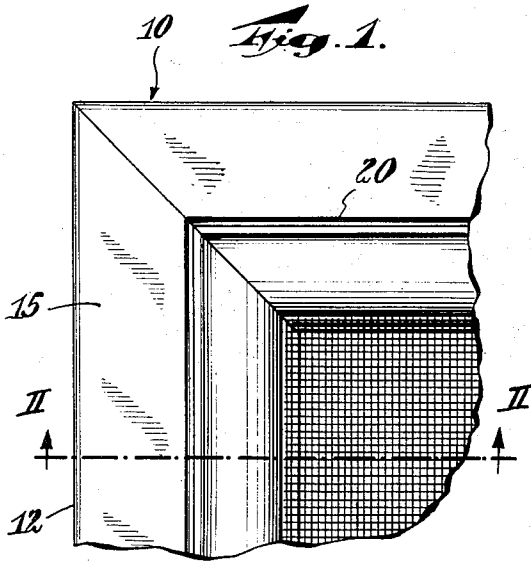


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SCREENS, PARTS THEREFOR AND METHODS
FOR PRODUCING SAID SCREENS
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SCREENS, PARTS THEREFOR AND METHODS FOR PRODUCING SAID SCREENS

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1 Claim. (Cl. 29—509)

This invention relates to novel articles of manufacture and to methods for making them, and is directed to novel screens, parts thereof and methods for making them. In one of its more specific aspects the invention is directed to novel screen frames and also to methods for manufacturing such frames.

Heretofore a great number of metallic screen frames for windows and doors have been manufactured and sold in this country. In general such screen frames are made by first combining a plurality of extruded or roll-formed stiles or rails to produce a frame. Each of the stiles has a spline channel for accommodating a locking spline. Then from a roll of screen material one end thereof is laid on to the frame with its free end disposed adjacent a spline channel and with the side edges thereof disposed along two other parallel spline channels. While in this position a spline is forced down against the free end of the screen material to locate and lock it in the frame channel therebelow. Subsequently the screen is cut to the desired length by an operator and the remaining three sides are spline locked in their respective channels. Heretofore the operator has depended mainly on his skill of guessing and his eye for cutting the screen to the required length. As a consequence, sometimes the length of screen cut is too short or too long.

According to the present invention, this guess work or skill is completely eliminated so that now by practicing this invention even a beginner or unskilled operator may be employed, and in every instance the correct length of screening material will be cut off of the roll. This, as well as other objects and advantages of the invention, will be readily apparent from the following description taken in conjunction with the appended drawing, wherein:

Fig. 1 is a top plan view of a fragment of a screen frame showing an embodiment of the invention.

Fig. 2 is a cross sectional view taken on line II—II of Fig. 1.

Fig. 3 is a view similar to Fig. 2 and illustrates a modification of the embodiment shown in Fig. 2.

Fig. 4 is a cross sectional view of a stile or rail showing the location of the screen thereon before cutting and the position of the knife cutter relative thereto.

Fig. 5 is a view similar to Fig. 4 showing the screen after cutting and with a locking spline about to be inserted.

Fig. 6 is a view similar to Fig. 5 and showing the spline partially in the channel.

Fig. 7 is a view similar to Fig. 2 and is a modification illustrating another embodiment of the invention.

The frame comprises a plurality of stiles or frame members 10 which may be coupled with each other in any convenient manner to provide a rectangular frame, a corner of which is shown in Fig. 1. Each of said frame members 10 is an extruded or roll-formed member generally composed chiefly of aluminum but may be of any desired composition, and in the specific embodiment shown comprising a base 11 having a pair of side plates 12 and 13 integral with the base 11 and extending

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therefrom at the outer longitudinal edges thereof. Disposed intermediate the sides 12 and 13 is a dividing side plate 14 which is parallel to the plates 12 and 13 and integral with the base 11. A top plate 15 is integral with the sides 12 and 14 and is parallel to base 11. In this embodiment of frame members 10, as illustrated, there is provided an extruded tubular frame member 10 having an elongated channel 16 whose width is determined by the distance between side plates 13 and 14, and the height or depth of channel 16 is determined by the distance from the free end of side 13 to the base 11.

According to this invention, the upper face of the frame members 10 is recessed or grooved to provide an elongated groove or recess 20 having elongated shoulders 21 and 22, all shown in Figs. 1, 2 and 4-7, with the recess 20 and shoulders 21 and 22 all being parallel to side plate 13. Instead of having an elongated narrow groove in the upper face of frame members 10 the face may be recessed to provide a single elongated shoulder 21 as shown in Fig. 3. However, in all cases the upper face of the frame members 10 at the shoulder line is in the same plane as the free end of the side 13.

The distance between the inside face of member 13 and the shoulder 21 is equal to approximately the height or depth of the channel 16 and about 10%-100% of the width of channel 16. When a recess or groove 20 is used, I prefer that it be relatively narrow as shown, but of sufficient width to provide clearance for a screen cutter. In general, the width of recess 20 is about three to eight one hundredths of an inch, and its depth is about three to six one hundredths of an inch.

In the production of the screen frame, a corner of which is shown in Fig. 1, the frame members such of those heretofore described are coupled together in any convenient manner to provide a rectangular frame. This frame is placed flatwise on a work table of the operator who pulls the screen thereon and forces a spline 30 against the free end of the screen to locate and lock it in a channel 16. Then the operator brings the cutting tool 31 downwardly on the screen alongside shoulder 21 and runs it therealong to cut the screen which is subsequently locked into the channels 16 by splines. The shoulder 21 has provided the operator with a guide and cutter locator and controller. In this manner, it is possible to obtain the desired length of screen at all times in the channel 16 for the cut end of the screen material which may be the lengths shown in Figs. 1, 3 and 4.

The invention accordingly comprises the several steps and relation of one or more of such steps with respect to each of the others, and the article possessing the features, properties and the relation of elements, which are exemplified in the foregoing detailed disclosure, and the scope of the invention will be indicated in the claim.

Since certain changes in carrying out the above process and certain modifications in the article which embody the invention may be made without departing from its scope, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claim is intended to cover all the generic and specific features of the invention herein described, and all statements of the scope of the invention, which as a matter of language might be said to fall therebetween.

I claim:

The method for assembling a screen with a screen frame including a plurality of stiles secured together in the form of a rectangle, with one of said stiles including a spline channel for accommodating a screen-locking spline and a top facing adjacent said channel with a shoulder in said top facing, said shoulder extending the

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full length of the top facing and spaced from that face of the channel further therefrom a distance equal to the sum of the height of said channel and approximately 10-100% of the width of said channel, comprising laying a length of screening material on said screen frame, spline-locking a free end of said screen in one of said channels, shearing said screen along said shoulder and spline-locking the cut end of said screen in the channel adjacent thereto.

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