June 26, 1934. E. L. REMBAUM 1,964,332

KNOCK-DOWN SCREEN

Filed July 26, 1933 2 Sheets-Sheet 1

Fig. 1.

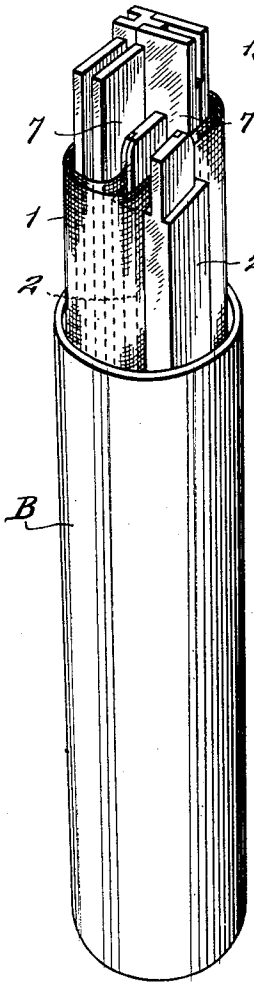


Fig. 2.

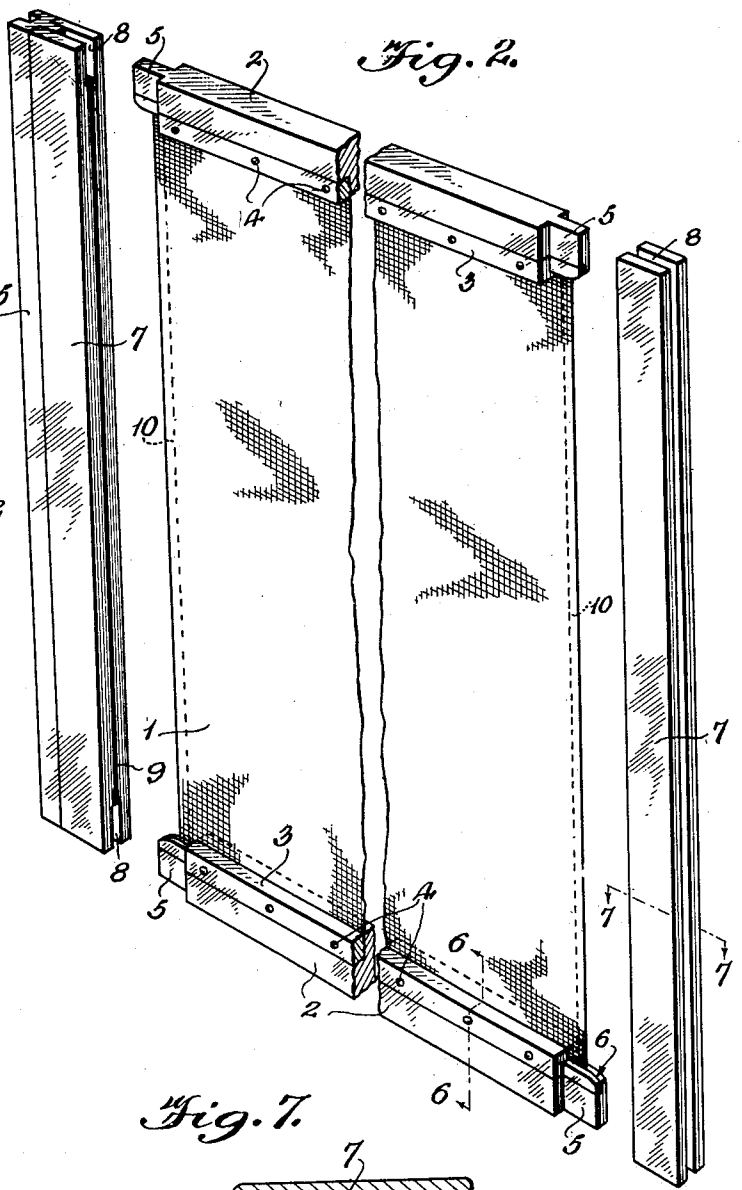


Fig. 7.

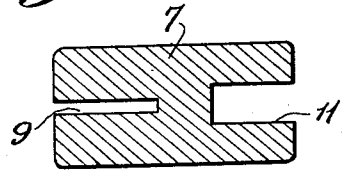
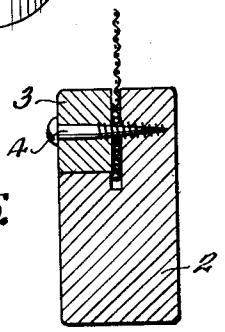


Fig. 6.



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KNOCK-DOWN SCREEN

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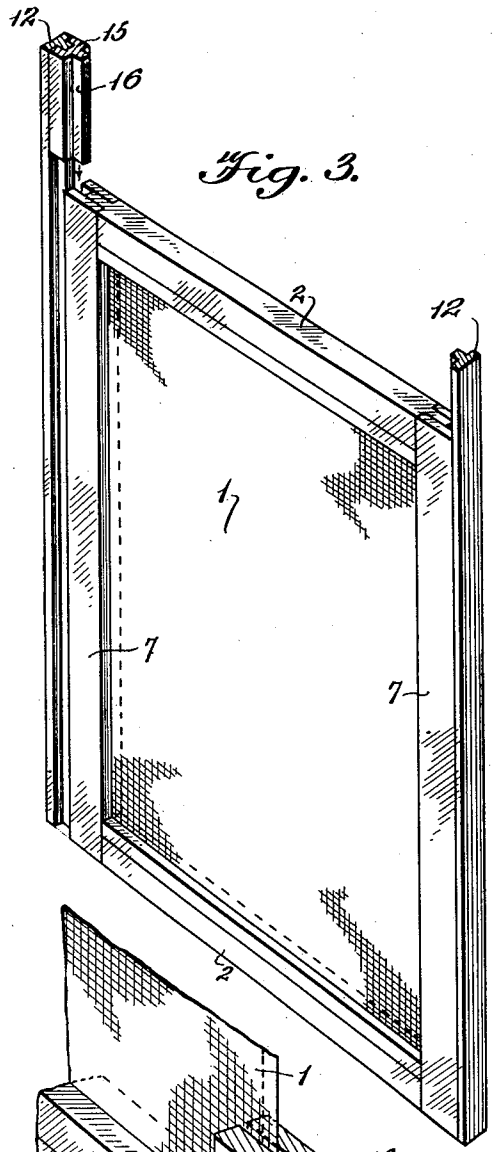


Fig. 3.

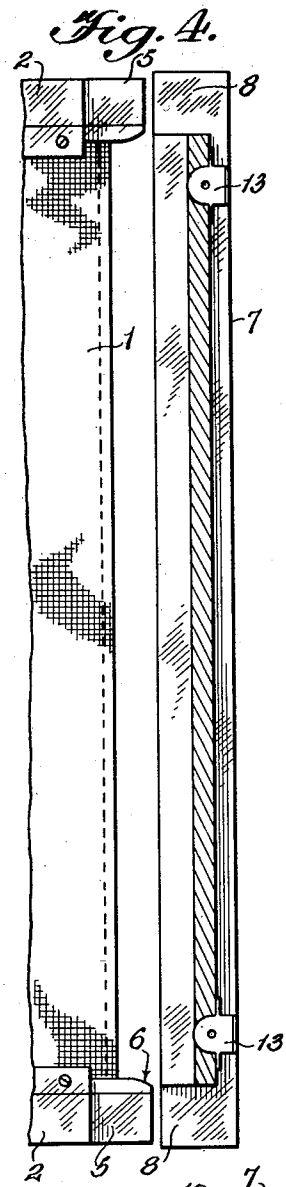


Fig. 4.

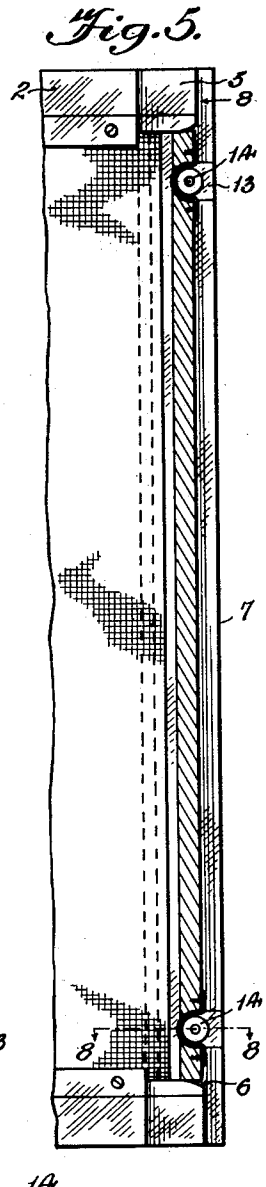


Fig. 5.

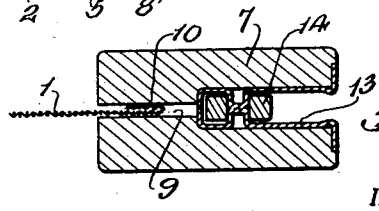


Fig. 8.

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KNOCK-DOWN SCREEN

Eli L. Rembaum, Winthrop, Mass.

Application July 26, 1933, Serial No. 682,332

4 Claims. (Cl. 156—14)

The present invention relates to screens and has for one of its main objects to provide a screen having a knock-down construction whereby the screen may be quickly disassembled and conveniently packaged for shipment and for storage when not in use, and again assembled readily and easily whenever it becomes desirable to use the screen.

Another important object of the invention resides in the provision of a knock-down screen constructed in such a manner that upon assembling the screen frame, the screening will be automatically stretched and maintained in proper position.

The invention also aims to provide a screen having means whereby the screen may be made into window or various sizes, and which permits, if desirable and convenient, to eliminate the use of the so-called screen springs, usually placed in the running groove of the screen.

Other important objects and advantages of the invention will be in part obvious and in part pointed out hereinafter.

In order that the invention and its mode of operation may be readily understood by those persons skilled in the art, I have in the accompanying drawings and in the detailed description based thereupon set out a possible embodiment of the same.

In these drawings:—

Figure 1 is a perspective illustrating the screen in knock-down condition and packaged for shipment or storage;

Figure 2 is a perspective illustrating the parts of the screen in disassembled positions;

Figure 3 is a perspective illustrating the screen in position for use;

Figure 4 is an enlarged detail with portions in section illustrating the position of the screen frame bars before assembly;

Figure 5 is a similar view illustrating the screen frame bars in engagement;

Figure 6 is an enlarged section taken on line 6—6 of Figure 2;

Figure 7 is an enlarged section taken on line 7—7 of Figure 2;

Figure 8 is an enlarged section taken on line 8—8 of Figure 5, and

Figure 9 is a detail in enlarged perspective.

Having more particular reference to the drawings wherein like characters of reference will designate corresponding parts throughout, my improved device may be stated to comprise a length of screening material 1 having two of its diametrically opposed edges secured to a pair of frame bars 2, preferably made of wood, and which, as more clearly shown in Figures 2 and 6, have a portion cut away to accommodate a strip 3 clamping said edges of the screen 1. The strip 3 is affixed to the frame bars 2 by means of suitable fastening elements, such as screws 4.

Extending longitudinally from the ends of the frame bars 2, are tongues 5 having their inner marginal edges beveled as shown at 6, to form a wedge-like surface for the purpose to be hereinafter specified.

A second pair of frame bars 7 also preferably made of wood and having a generally H-shaped configuration in section as particularly represented in Figure 7, are provided to complete the screen frame. These latter bars 7 are formed with grooves 8 for receiving the extended tongues 5 of the frame bars 2, whereas a relatively narrow channel 9 is cut throughout the length of the bars 7 upon the inner sides thereof for enclosing the free edges of the screening 1 in the manner more fully illustrated in Figure 9 of the drawings.

In this connection, it is preferable that the free marginal edges of the screening material 1, be folded upon themselves as represented at 10, thereby affording reinforcement to said screening edges, and facilitating their true and positive engagement with the channel 9 of the bars 7. Of course, if it happens that the free marginal edges of the screen fabric are constituted by the selvedge edges, of the latter, folding at this point may be dispensed with.

The outer sides of said bars 7 are provided with another longitudinal channel 11 extending throughout the length of the bars 7, which channels 11 are intended to engage the runs 12 usually mounted in window frames whereby the screen may be raised or lowered at will. For this purpose, and in order to facilitate the movement of the screen, sheaves 13 having a roller 14 may be inserted at suitable points within the channels 11 of the frame bars 7.

A detachable strip 15 formed with a rib 16 and a channel 17, is also provided for the screen frame, said strip being adapted for engagement with the frame bars 7 by introducing the rib 16 of the former within the channel 11 of the latter, the channel 17 of the strip 15 being for the purpose of engaging the adjacent run 12.

Due to the provision of the strip 15, which may vary in width, it will be understood that the screen may be made to fit windows which are wider than the standard size windows for which the screen is manufactured. Also, by using the strip 15 in combination with the screen frame proper, it is possible to eliminate the use of the ordinary so-called

screen springs, because said strip will take up the play between the screen and the window frame for which purpose the springs are utilized.

From the foregoing, it will be appreciated that I have provided a simple yet advantageous screen construction which, because of its known-down features, may be conveniently packaged for shipment and for storage whenever the screen is not in use. Upon reference to Figure 1 of the drawings, it will appear that the screening material 1 may be rolled and placed with the frame bars within a suitable container or box B, thus, in addition to requiring but small space in storing the screen, further protecting and preserving the same against exposure.

When it becomes desirable to mount the screen, the same may be readily and easily assembled even without requiring expert workmanship or the use of tools, since all that is necessary is, after unrolling the screen material, to engage the grooves 8 of the bars 7 with the tongue 5 of the bars 2.

In this connection, it will be noted particularly upon referring to Figures 4 and 5, that upon introducing the tongues 5 of the bars 2 into the grooves 8 of the bars 7, the screening material 1 will be stretched because of the wedge-like surface provided upon the inner edge of the tongues by means of the beveled portion 6.

The screen may then be engaged with the runs 12 of the window frame and thus placed in operative position.

If convenience or necessity requires the use of the strip 15, as hereinbefore mentioned, the screen frame is first inserted in the run 12 at one side of the window, whereupon the strip 15 is slid between the run and the groove of the screen on the opposite side, as indicated by the arrow in Figure 3.

It will be understood that, in assembled position, the frame bars 7 are rigidly maintained in their engagement with the frame bars 2, due to the tension of the screening material, tension which is imparted to the latter because of its stretching in the manner hereinbefore stated. The screen may, however, be knocked-down whenever desired, by merely pulling the frame bars 7 out of their engagement with the bars 2.

Manifestly, the construction shown and described is capable of considerable modification and such modifications as come within the scope of my claims, I consider within the spirit of my invention.

I claim:—

1. A screen of the character described comprising, a length of screening material, a first pair of frame bars each fixed respectively to one of the two diametrically opposed edges of said screening material, a second pair of frame bars slidably and freely engageable with said first pair of frame bars and with the free marginal edges of said screening material, whereby the screen may be knocked down and packaged.

2. A screen of the character described comprising, a length of screening material, a first pair of frame bars each fixed respectively to one of the two diametrically opposed edges of said screening material, a second pair of frame bars engageable with the first pair of frame bars and with the free marginal edges of said screening material, and means at the engageable portions of the first and second pair of frame bars and acting thereon to stretch the screening material and maintain the same in position.

3. A screen of the character described comprising, a length of screening material, a first pair of frame bars each fixed respectively to one of the two diametrically opposed edges of said screening material and having tongues extending from the extremities thereof, a second pair of frame bars having grooves at the extremities thereof engageable with the tongues of the first pair of frame bars to interconnect said first and second pairs of frame bars, said tongues having a wedge-edge whereby to displace the first pair of frame bars upon their engagement with the second pair of frame bars for stretching the screening material and to maintain the same in position.

4. A screen of the character described comprising, a length of screening material, a first pair of frame bars each fixed respectively to one of the two diametrically opposed edges of said screening material and having tongues extending from the extremities thereof, a second pair of frame bars having grooves at the extremities thereof engageable with the tongues of the first pair of frame bars for interconnecting said first and second pairs of frame bars, said second pair of frame bars having a general H-shaped configuration in cross-section, the groove upon the inner side of the same disposed to receive the free marginal edges of the screening material, sheaves within the groove upon the outer side of said second pair of frame bars, and said tongues having a wedge-edge whereby to displace the first pair of frame bars upon their engagement with the second pair of frame bars for stretching the screening material and maintain the same in position.

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