

C. F. JENKINS.
FLEXIBLE, REINFORCED, TRANSPARENT SHEET.
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1,327,281.

Patented Jan. 6, 1920.

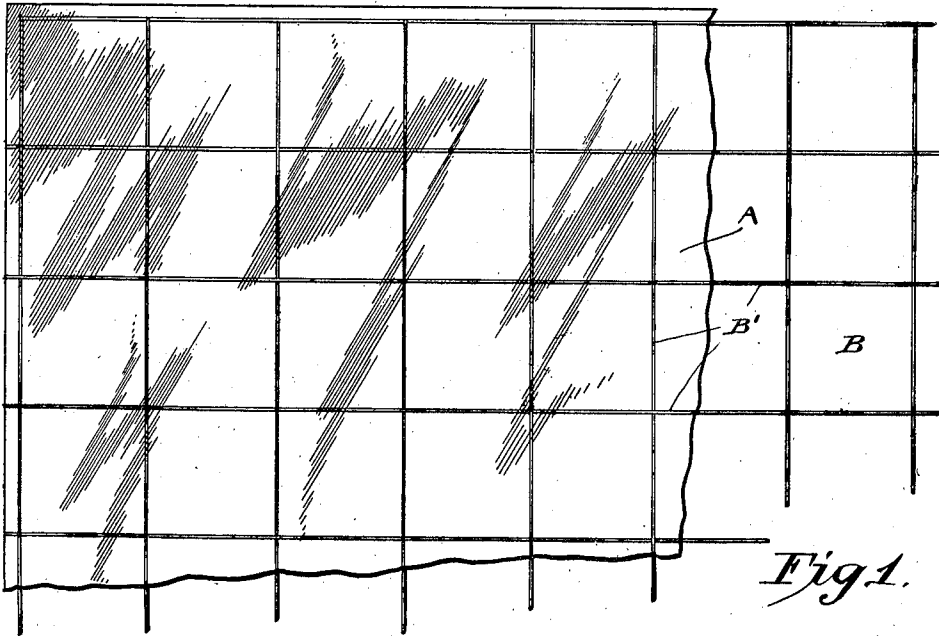


Fig. 1.

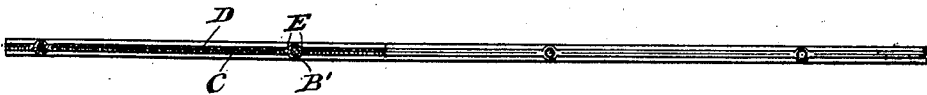


Fig. 2.

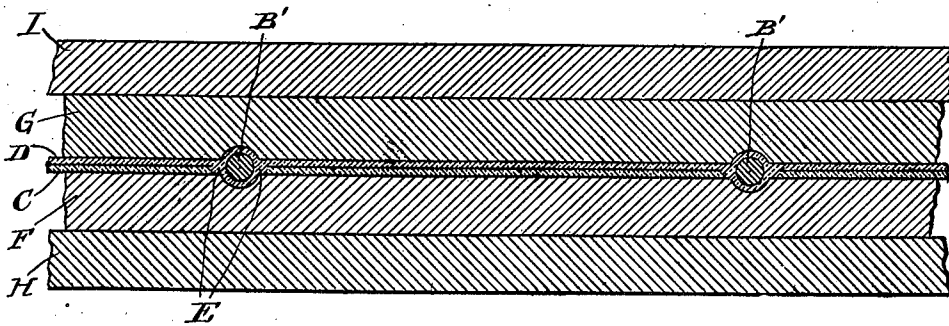


Fig. 3.

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FLEXIBLE REINFORCED TRANSPARENT SHEET.

1,327,281.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES FRANCIS JENKINS, a citizen of the United States, and a resident of Washington, in the District of Columbia, have invented certain new and useful Improvements in Flexible Reinforced Transparent Sheets, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to reinforced, flexible, transparent sheets such, for example, as are to be used in windows in automobile tops and like situations. Neither ordinary glass nor celluloid has proved satisfactory. 15 So far as I am aware, there has heretofore been no such window panes which were inexpensive, durable, fully transparent, and of desirable size. To provide panes which have all these advantages and are, further, 20 so light that their weight will not deform the leather or fabric in which they are inserted and supported, is the object of this invention. With this object in view, I place non-stretching filaments between very thin 25 closely adjacent sheets of highly transparent material which is light and flexible.

In the accompanying drawings,

30 Figure 1 is a view of the broad face of a sheet made in accordance with my invention.

Fig. 2 is an enlarged cross section of such a sheet.

35 Fig. 3 is an analogous section illustrating my method of producing such sheets.

In these figures, A represents the body of a sheet or pane having between two thin transparent sheets, C, D, filamentary wires or threads B' which are pliable and practically non-extensible. The transparent sheets 40 closely fit the entire free surface of each filament B' and are themselves substantially integral with each other closely alongside said filaments, but not elsewhere. This completed sheet is formed by laying a thin 45 transparent sheet C of celluloid, for example, upon a thick yielding sheet F of rubber or the like, placing on the transparent sheet filaments,—in this case shown as a netting sheet,—after they have been coated with material adapted to soften and "weld" celluloid, covering the filaments with a similar

celluloid sheet and adding a second thick sheet G similar to the sheet F, and pressing all the superposed sheets between rigid plates H, I. Under slow, heavy pressure, 55 the celluloid, softened temporarily along the filaments, is forced into intimate contact with the entire free surface of the wires, and near these wires the two sheets are fully united with each other, the softening material having been forced outward slightly 60 under pressure. It is preferred to use little softening material because it is not desired to impair the transparency of the constituent sheets at any very material distance 65 from the filaments. The sheet when completed is very light, and highly transparent, except substantially at the wires, where the softening material injures transparency. 70 The sheet is, then, well adapted for various uses, and when used in curtains and the like it may be rolled. In curtains, these windows are usually at some distance from that margin at which rolling begins and hence the windows bend about rolls so large 75 that the filaments do not become permanently set.

One celluloid sheet is sometimes omitted, the filaments being coated with plastic celluloid, placed upon a celluloid sheet and 80 pressed as when two sheets are used.

What I claim is:

1. The combination with two superposed flexible sheets of transparent material, of non-stretching netting interposed between 85 the sheets and having its mesh forming elements adhering to both sheets, whereby the two sheets are connected only along the interposed reinforcing wires.

2. A flexible reinforced transparent sheet 90 consisting of a sheet of non-stretching netting interposed between very thin transparent sheets of celluloid which are in intimate contact throughout with the constituent members of the netting and are integrally united with each other only in regions 95 closely adjacent to each side of said members.

In testimony whereof I hereunto affix my signature.

CHARLES FRANCIS JENKINS.