No. 648,535. Patented May 1, 1900.

J. H. SENDEN & G. E. SMITH.

GLASS CUTTING APPARATUS.

(Application filed Aug. 9, 1899.)

(No Model.)

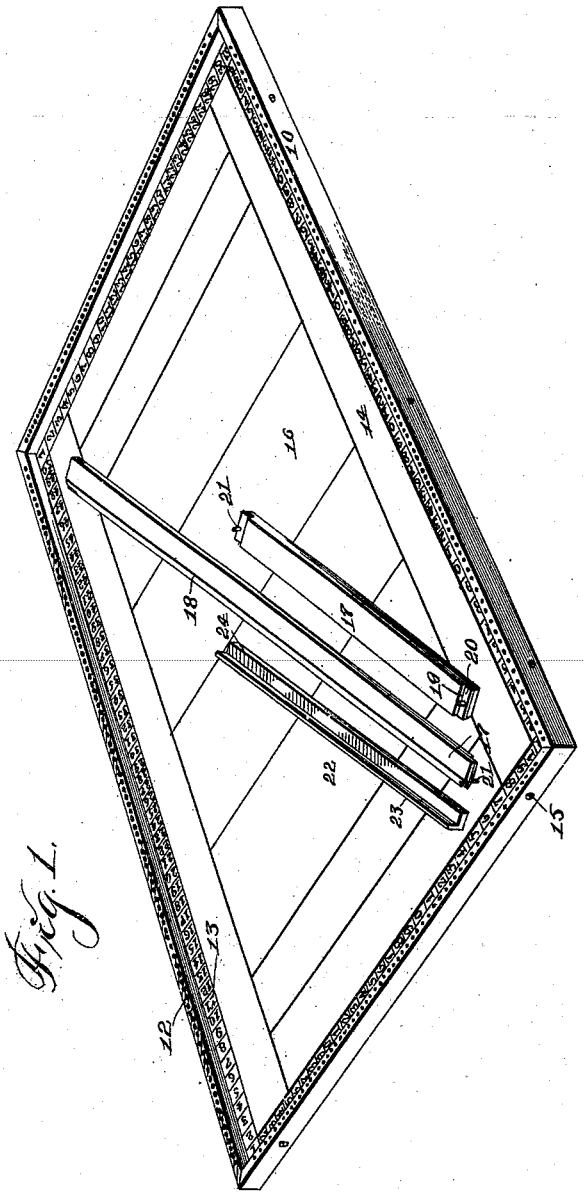

Fig. 1.

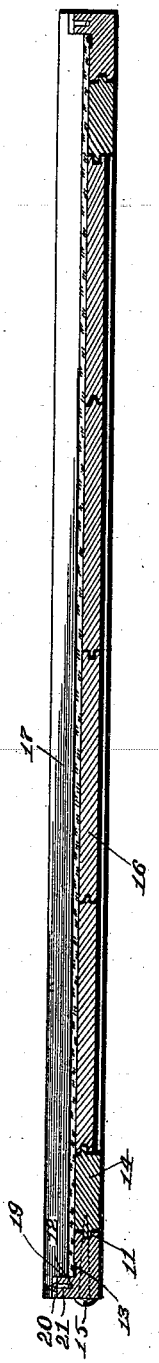

Fig. 2.

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JULIUS H. SENDEN AND GEORGE E. SMITH, OF DES MOINES, IOWA.

GLASS-CUTTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 648,535, dated May 1, 1900.

Application filed August 9, 1899. Serial No. 726,654. (No model.)

To all whom it may concern:

Be it known that we, JULIUS H. SENDEN and GEORGE E. SMITH, citizens of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented a new and useful Glass-Cutting Apparatus, of which the following is a specification.

The object of this invention is to provide a board of simple, strong, and durable construction upon which unskilled persons may cut glass with great ease and accuracy and by the use of which the breakage incident to cutting glass will be minimized.

Our invention consists in certain details in the construction of the board whereby warping is prevented and the scale at its sides and ends kept of a uniform length unaffected by moisture or different temperatures and, further, in the construction, arrangement, and combination therewith of the straight-edges and deducting-strip, as hereinafter more fully set forth, pointed out in the claim, and illustrated in the accompanying drawings, in which—

Figure 1 shows a perspective view of the complete apparatus, and Fig. 2 shows a transverse sectional view of the board with one of the straight-edges in position thereon.

Referring to the accompanying drawings, the reference-numeral 10 is used to indicate the side and end strips, which are substantially L-shaped in cross-section, with a groove 11 on the inner edge thereof, and their ends are beveled and fitted together. On the top edge of each is a series of vertical holes 12, for purposes hereinafter made clear, and on the top of the horizontal part of each strip a scale 13 is fixed. Within the rectangular frame thus formed is a second frame 14, the pieces of which are tongued and grooved to fit to each other and to the said end and side pieces. The two rectangular frames are also preferably held together by means of the screws 15.

The central portion of the board is filled by means of the narrow strips 16 to form the panel, preferably tongued and grooved and so positioned as to be capable of the ordinary contraction and expansion incident to wooden boards of this size without affecting the outer frame bearing the scale.

Two straight-edges are provided, the one being designed for use when cutting transversely of the board and the other when cutting longitudinally. They are similar in construction save for length, and hence will not be separately described.

The numeral 17 is used to indicate the body portion, which has one beveled edge 18. The under surface of its ends is cut away at 19, and a metal plate 20, having a downwardly-projecting pin 21, is secured thereto with its lower face a considerable distance above that of the strip. The said pins and the holes 12 are so arranged with relation to the scales and the straight-edge that when the pins are in two holes the beveled edge of the straight-edge will be directly over one of the inch-marks of the scale. By having the under surface of the straight-edge projecting below the surface of the end plates the straight-edge may rest upon the surface of a pane of glass, and obviously this may be done no matter what the thickness of the glass may be. This feature of having the straight-edge close to the glass will prevent inaccuracies and variations in cutting glass, which would occur if the straight-edge were some distance from the glass by reason of the operator moving his hand to the right or left when drawing the glass-cutter toward him, even though the instrument were held against the straight-edge all the time.

The numeral 22 is used to indicate a deducting-strip. This is made L-shaped in cross-section, and the dimensions of its edges 23 and 24 are preferably one-eighth and one-fourth of an inch, respectively, and the sides three-eighths and one-half of an inch. In use this strip is made to coöperate with the scales at the sides of the board in promoting accuracy and speed in cutting glass, as follows: On said scales the inches only are marked, and hence if it is desired to cut a glass eight and five-eighths inches in length we place the three-eighths-inch side of the deducting-strip against the left-hand side of the board. Then by resting the glass against said strip and placing the straight-edge at the nine-inch mark the glass may be cut to the desired length. It frequently happens that in cutting glass by the common method with a scale on which the small fractions of an inch are marked the operator is unable to see clearly

the small divisions, and glass is cut to the wrong lengths; but by means of our improvement, whereby only the inches are marked upon the scale, the numerals may be quite large and the operator can easily see and also feel the different sides of the deducting-strip, so that the greatest accuracy may be had even in a poorly-lighted room.

We claim as our invention—

An apparatus for use in glass-cutting, comprising the board having a frame L-shaped in cross-section along the sides and ends and provided with holes in its top, a scale on the top face of the horizontal part of each side and end piece of said frame, a central part to the board composed of boards longitudinally grooved and fitted together to allow for contraction and expansion without changing the scales, one or more straight-edges having their end portions cut away and pins therein and an L-shaped deducting-strip having sides of different thickness, substantially as and for the purposes stated.

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