C. L. PFERSCH.
CARD MATCHES.
APPLICATION FILED MAR. 29, 1919.

1,339,975.

Patented May 11, 1920.

Fig. 1.

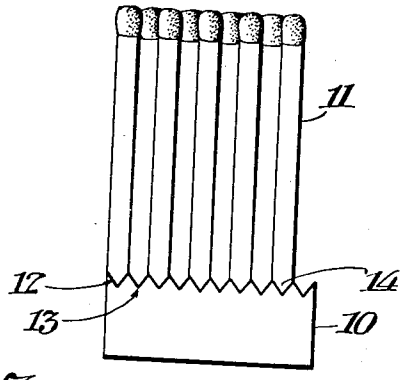


Fig. 2.

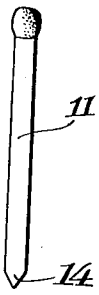


Fig. 7.

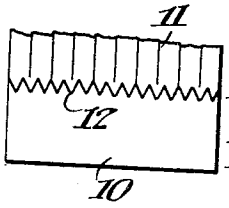


Fig. 3.

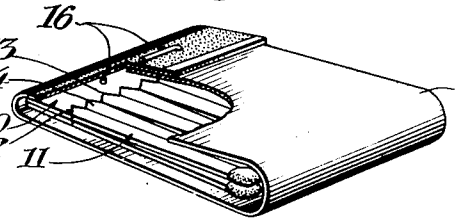


Fig. 8.

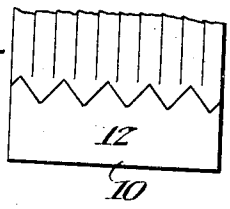


Fig. 4.

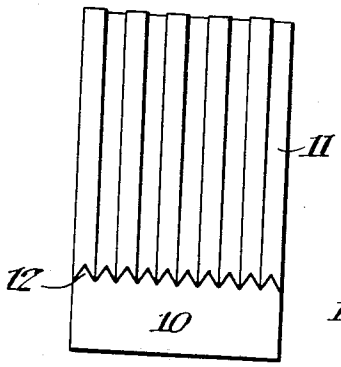


Fig. 5.

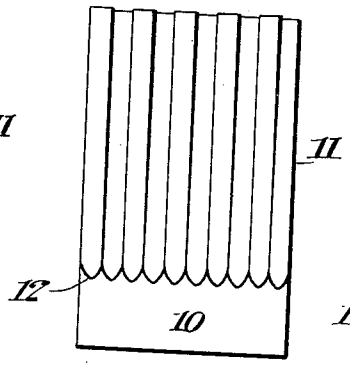
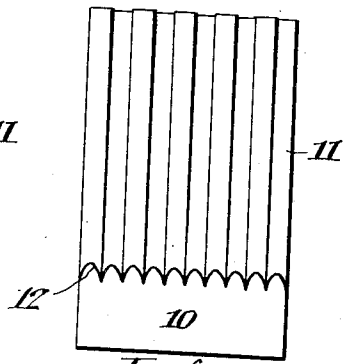


Fig. 6.



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by his Attorney
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UNITED STATES PATENT OFFICE.

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CARD-MATCHES.

1,339,975. Specification of Letters Patent. Patented May 11, 1920.

Application filed March 29, 1919. Serial No. 286,125.

To all whom it may concern:

Be it known that I, CLARENCE L. PFERSCH, a citizen of the United States, and resident of Barberton, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Card-Matches, of which the following is a specification.

This invention relates to that class of integral card matches wherein a row of splints projects from a common marginal portion from which they are intended to be individually separated; my improvement having reference more especially to so-called "book matches" wherein card matches are associated with a flexible protective cover. In card matches composed in whole or in part of wood veneer the splints are necessarily cut approximately in the direction of the grain of the wood, and hence the marginal portion is frequently split and broken by the act of removing a match therefrom, thus rupturing the connection of the card or cards with the cover and impairing the efficiency of the article. Attempts have been made to overcome this objection by scoring the marginal portion of each card across and at right angles to the basal ends of the splints, but owing to the fragility of the veneer, such attempts have been unsuccessful for the reason that if the score were of sufficient depth to insure the requisite weakness the cards of splints were too unstable to withstand effectively the dipping and other steps employed in the process of making and covering the cards of matches.

The object of my invention is to produce a match card having at the roots of its splints a line of weakness of such character that the individual splints can be readily removed from the marginal connecting portion without liability of splitting or breaking the latter, and yet the substantial rigidity of the card is maintained. Accordingly, I provide the match card with a sinuous line of weakness at or adjacent the junction of the respective splints with the marginal portion as will be hereinafter described and claimed.

In the drawings—

Figure 1 is a plan of a card of matches embodying a preferred form of my invention, one of the matches being removed from the marginal portion of the card.

Fig. 2 is a view of the separated match.

Fig. 3 is a perspective view of a book match provided with a plurality of the said cards, part of the stapled end fold being broken away for clearness.

Figs. 4, 5, 6, 7 and 8 illustrate slightly modified forms of the invention.

Referring to the drawings, 10 designates a narrow strip of thin match stock from one edge of which projects a row of splints 11, integral with the strip, the outer ends of which splints are impregnated and tipped with match composition in the usual manner to provide a card of matches. The match stock employed may be wood veneer, or veneer interposed between and intimately cemented to layers of paper.

In pursuance of my invention I score or indent the marginal strip 10 at or adjacent the junction therewith of the splints in order to produce a sinuous line of weakness, 12, whereof the bends or angulations determine the basal ends of the splints.

In the form of the invention illustrated in Figs. 1, 2 and 3 the line of weakness is constituted by a zig-zag score, whereof the successive angulations define the roots of the splints; that is, the two sides of the angulation at the base of each splint converge to a point, 13, within the margin and medially of the splint to form a V-shaped root, 14, for the splint, thus affording an angular line of breakage about twice the length of a straight score line across the base of the splint. When the splint is pulled sidewise there is imparted to its angular root connection a slight rocking effect which ruptures such connection in a smooth and easy manner and thus insures the separation of the match from the marginal portion 10 without any liability of splitting or breaking the latter in the direction of the grain. The V-shaped indentation formed in the marginal portion, where a match is removed therefrom, is shown at the right of Fig. 1; the separated match with its angular root being illustrated in Fig. 2.

The double score, as it may be termed, for each splint can be cut much deeper than a single or straight score without injuriously weakening the splint at the root. Hence the card of splints possesses sufficient rigidity to enable it to withstand the match making operations. Moreover the improved score enables the manual separation of the individual splints from the marginal portion of the card with greater

ease and facility than is possible with a straight score of equal depth.

Fig. 3 represents a series of my improved match cards as associated with a suitable cover 15, the parts being united by a staple, as 16, which is driven through the folded end of the cover and the interposed margins of the confined cards and then clenched on the reverse side of the cover. The sinuous score line, insuring the breaking of each individual splint at its basal end as above described, preserves the integrity of the marginal portion of the card and thus obviates the otherwise liability of impairment of the cover connection until all the matches within the cover have been removed.

The term "sinuous" is used herein as comprehensive of a succession of alternately reversed or staggered angles or curves, and therefore it is to be understood that I do not limit my invention to the particular form or location of zig-zag score line shown in Figs. 1 and 3; thus, for example, as illustrated in Fig. 4, the angulations may extend into the bodies of the splints instead of into the body of the marginal portion; or, as illustrated in Figs. 5 and 6, the converging or oppositely-related lines of weakness at the root of each splint may be of curved formation; or, as illustrated in Figs. 7 and 8 respectively, the number of angulations in the score line may be more or less than the number of splints. Also as indicated in Figs. 7 and 8 the basal ends of the splints may terminate slightly above the score line, in which case, in the act of breaking off a match the slit between it and the adjoining match will split down with the grain of the wood to the adjacent angulation of the score and then follow the latter.

From the foregoing it will be seen that the form and location of the line of weakness is susceptible of variation within the principle of my invention and the scope of certain of the appended claims.

I claim—

1. A match card comprising a sheet of veneer having a marginal portion and a row of splints projecting therefrom, the basal ends of the splints being determined by a sinuous line of weakness.

2. A match card comprising a sheet of veneer having a marginal portion and a row of splints projecting therefrom, the basal ends of the splints extending into the body of the marginal portion and being defined by a succession of converging lines of weakness.

3. A match card comprising a sheet of veneer having a marginal portion and a row of splints extending therefrom, said marginal portion having a zig-zag line of weakness whereof the angulations define the basal ends of the splints.

4. A match card comprising a sheet of veneer having a marginal portion and a row of splints projecting therefrom, the junction of each splint with said portion comprising a V-shaped score.

5. In combination, a match card and a flexible cover therefor, said card comprising a sheet of veneer having a marginal portion to which the cover is secured and a row of splints projecting from said marginal portion, the basal ends of the splints being determined by a sinuous line of weakness, and the said cover comprising a sheet of pliable material having an overlapping portion secured to the margin of the card.

Signed at Barberton in the county of Summit and State of Ohio, this 24th day of March, A. D. 1919

CLARENCE L. PFERSCH.