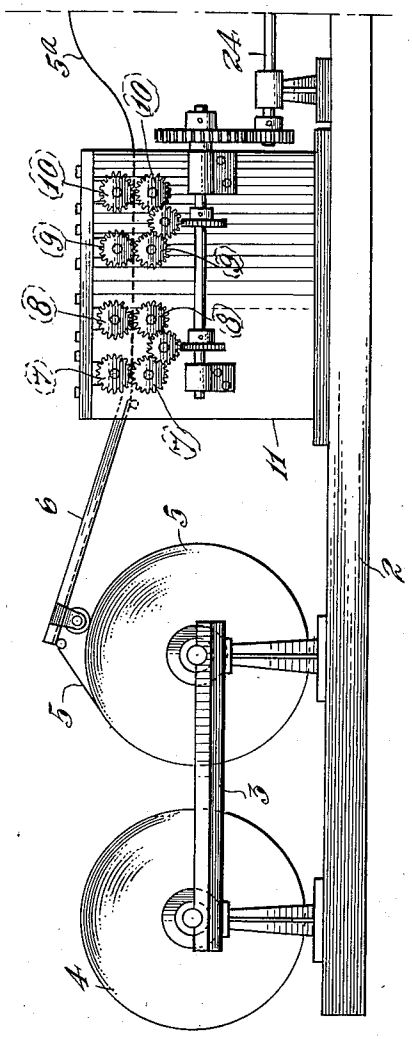
Sept. 14, 1937. W. C. HUGULEY 2,093,241

MACHINE FOR MAKING MATCH CARDS

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Fig. 1



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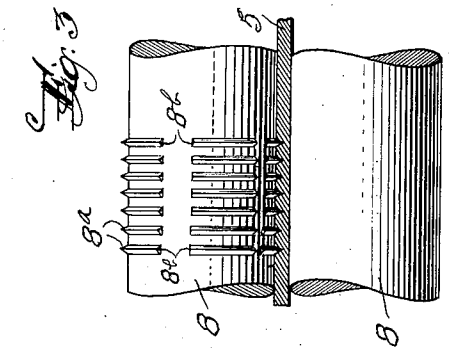


Fig. 3

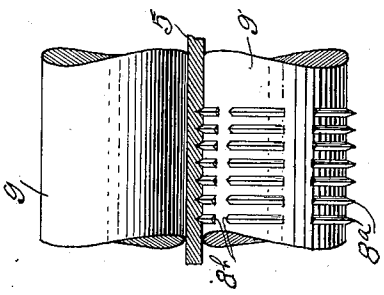


Fig. 4

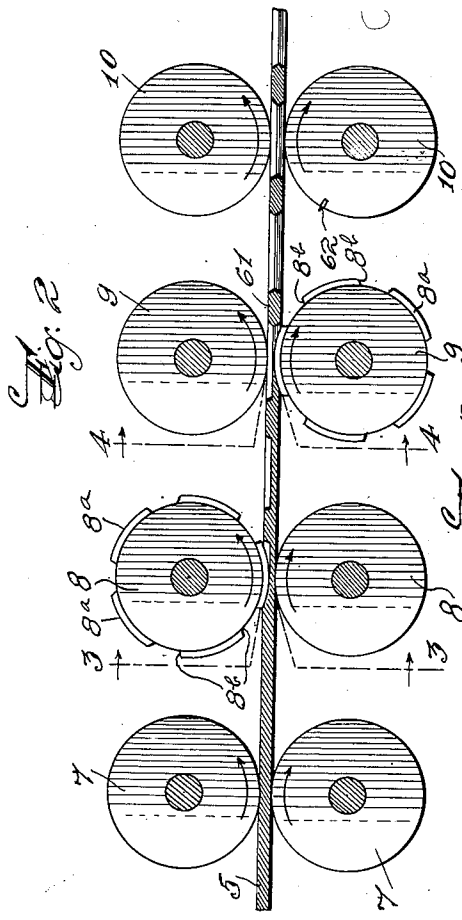


Fig. 2

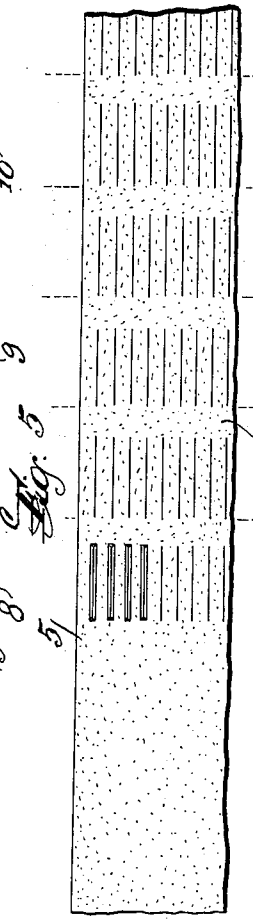


Fig. 5

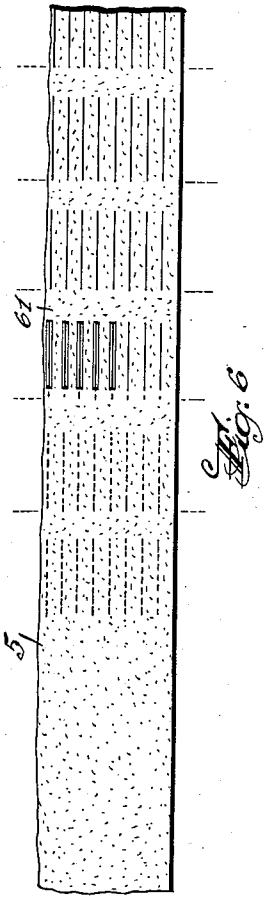


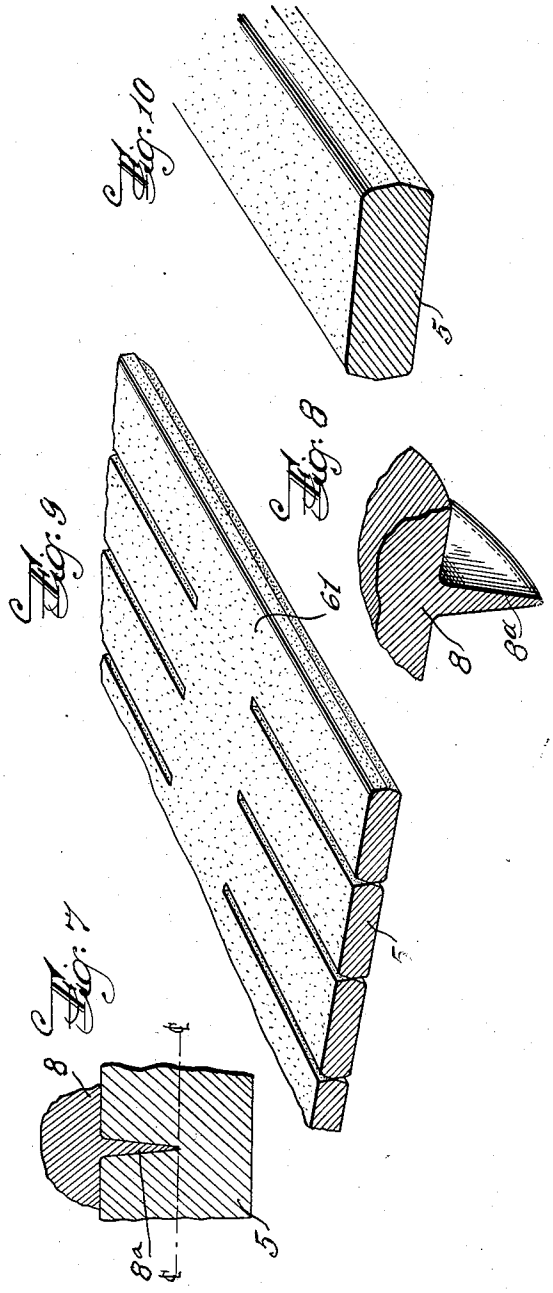
Fig. 6

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MACHINE FOR MAKING MATCH CARDS

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UNITED STATES PATENT OFFICE

2,093,241

MACHINE FOR MAKING MATCH CARDS

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Application February 21, 1935, Serial No. 7,544

1 Claim. (Cl. 144—51)

This invention relates to machines for making match cards for use in the manufacture of book matches.

Heretofore, match cards such as herein considered have been made by passing a strip of mastic or cardboard stock between reciprocating dies which cut the material into strips the sizes of matches, or the matches have been cut by means of sharp edge circular cutting knives, necessitating a keen cutting edge being maintained at all times. Such devices for making match cards have been found objectionable in that the cutting knives or reciprocating dies must be maintained very sharp at all times in order to provide a sharp cut and to prevent fringes from adjacent matches. As soon as the cutters get slightly dull, one side of the match strips will have ragged edges, and such a situation obtains very soon after the sharp cutters have been installed. It has been common practise to operate the somewhat dull cutters until the ragged edges on the splint become so pronounced as to cause rejection of the match cards, after which the cutters are again sharpened.

It is an object of my invention to provide an apparatus for making match cards in which a strip of mastic or cardboard stock material is passed between rotating scoring elements in a rectilinear direction parallel to the finished matches, and providing matches with rounded edges in contradistinction to the old type of match with ragged edges. Through the use of my rotating scoring elements as herein set forth, production is greatly increased, and the wear and tear on the parts of the mechanism is minimized. It is unnecessary to maintain sharp cutting edges for cutting the mastic or cardboard material longitudinally into match strips, and, at the same time, a highly improved match strip is produced having four rounded corners instead of only two as is the case where the strip of material is cut through by devices heretofore employed.

By means of my apparatus, a match strip is produced that is stronger and better, and which has a form that is new in the manufacture of book matches, having four rounded corners with the edges of the splints being scored through from both sides instead of being cut from one side only as above described.

It is a further object of the invention to provide a relatively simple apparatus for making match cards having rounded edges and no ragged portion.

These and other advantageous objects, which will later appear, are accomplished by the simple and practical construction and arrangement of parts hereinafter described and exhibited in the accompanying drawings, forming part hereof, and in which:

Fig. 1 is a side elevational view of one section of the apparatus embodying my invention,

Fig. 2 is a side elevational view of the scoring rolls used for dividing strips of mastic or similar material longitudinally into match splints,

Fig. 3 is a sectional view taken on line 3—3 of Fig. 2,

Fig. 4 is a sectional view taken on line 4—4 of Fig. 2,

Fig. 5 is a top plan view of the match material as in Fig. 2,

Fig. 6 is a bottom plan view of the mastic material shown in Fig. 5,

Fig. 7 is a sectional view showing the manner in which one of the scoring elements pierces a strip of cardboard or mastic,

Fig. 8 is a fragmentary perspective view, partially in section, of one of the scoring elements,

Fig. 9 is a perspective view of a portion of a strip of material after having been scored,

Fig. 10 is a perspective view showing generally the shapes of match splints produced by my apparatus.

Referring to the drawings, my apparatus is shown to comprise a base 2 having mounted on one end thereof a stand 3 (see Fig. 1) upon which are supported rolls 4 and 5 of cardboard or mastic out of which the match cards are made. The roll 4 is a reserve roll of cardboard which is in position to be readily advanced when roll 5 has been exhausted.

The strip material is drawn off roll 5 and passes through a guide 6 into feed rollers 7 (see Figs. 1 and 2), after which it passes between scoring elements 8, one of which is provided with scoring ribs 8a as shown in Fig. 8, which score the strip throughout its entire width approximately one-half way through the material from one side only, that is, the upper side. The strip is then passed between scoring elements 9, the lower one of which is provided with scoring ribs similar to the rib 8a, which score the strip one-half way through from the underside thereof, and completing the division of the strip of cardboard or mastic into a plurality of match splints having rounded edges and a cross-sectional shape substantially as shown in Fig. 10.

The strip then passes on through feed rollers 10. The feed rollers 7 and 10, together with the scoring elements 8 and 9 are mounted in a suitable

framework 11 and are driven by a system of gears operated from a common source of power, the framework 11 being mounted on the base 2. The feed-rollers 7 and 10 and the scoring elements 8 and 9 are rotated continuously and cause the cardboard strip to be continuously fed from the feed rollers 10.

The rollers 8 are provided with bevelled ribs 8a as above stated, each of said ribs being divided into portions equal to the length of a match splint and each portion having its ends inclined as shown at 8b to provide a clean cut at the end of each scoring operation. The space between each of the scoring ribs 8a allows a portion of the strip to be unscored as shown at 61 in Fig. 5 for the purpose of providing a base for holding the match comb.

One of the rolls 10 is provided with a plurality of piercing elements 62 arranged upon a line extending across the roll and parallel with the longitudinal axis of the roll. These piercing elements are adapted to provide minute scorings in each match splint adjacent the base 61 so that the splints may be readily severed from the base.

From the above description it will be seen that I have provided a relatively simple and inexpensive machine for satisfactorily producing match splints having rounded corners and no ragged edges, at the same time requiring a minimum amount of maintenance such as heretofore has been found necessary in other machines for keeping cutting knives or other cutting elements sharp.

The foregoing disclosure is to be regarded as descriptive and illustrative only, and not as restrictive or limitative of the invention, of which obviously an embodiment may be constructed including many modifications without departing from the general scope herein indicated and denoted in the appended claim.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

A machine for making match combs from a continuous strip stock of cardboard-like material, two pairs of spaced apart scoring rollers, means for feeding strip stock through said rollers, one roller of each pair of scoring rollers being provided with spaced wedge-shaped ribs having a depth sufficient to score half way through the stock from opposite sides thereof at predetermined intervals to produce scores extending entirely through the stock to separate the stock into match strips of predetermined widths, each of said ribs being divided into sections equal to the length of a match strip, each of said sections having its ends inclined to provide a clean cut at the end of each scoring operation, feed rolls for said strip, and means on one of said feed rolls for perforating each match strip at one end thereof to enable said strips to be readily detached from the stock strip.

WILLIAM C. HUGULEY.