Sept. 22, 1936. L. B. CARLSON 2,055,401

PRODUCTION OF WOODEN RODS

Filed Nov. 28, 1934

Fig. 1.

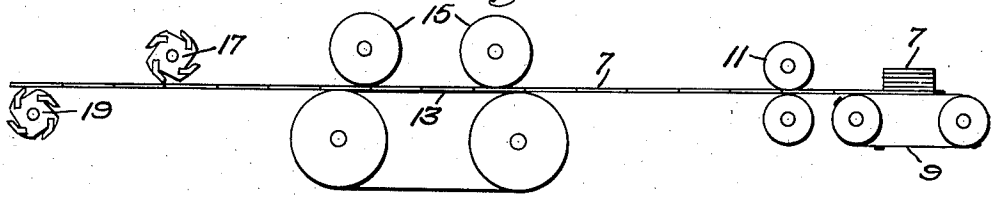


Fig. 2.

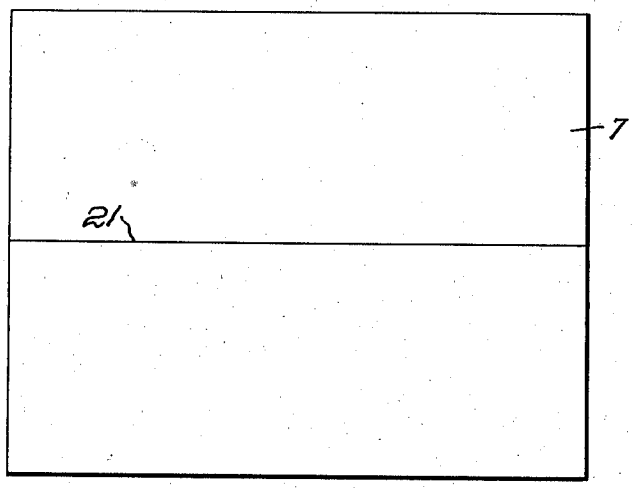


Fig. 3.

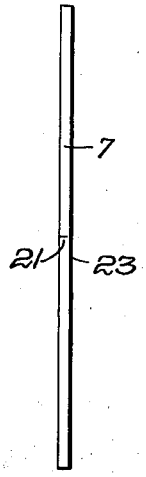


Fig. 4.

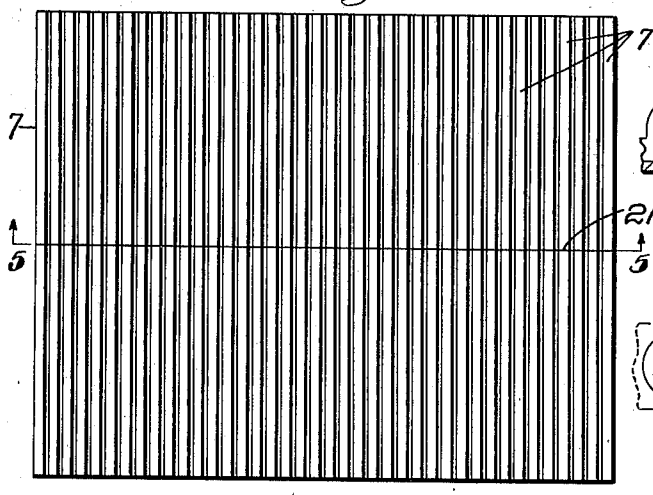


Fig. 5.

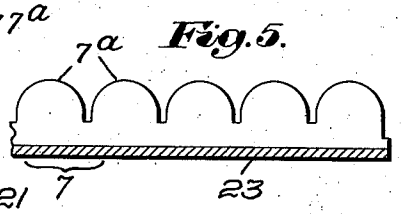
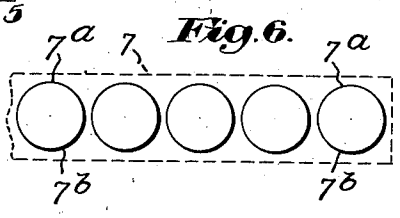


Fig. 6.



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UNITED STATES PATENT OFFICE

2,055,401

PRODUCTION OF WOODEN RODS

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Application November 28, 1934, Serial No. 755,184

3 Claims. (Cl. 144—309)

This invention relates to the production of wooden rods shaped by the use of molding cutters, and the object is to facilitate the molding operation by the provision of a suitably prepared blank. The invention finds a particular application to the production of short sticks from veneers of soft wood.

The invention will be well understood by reference to the following description of an illustrative embodiment thereof as applied to the production of small, short sticks taken in connection with the accompanying drawing, wherein:—

Fig. 1 is a diagrammatic view of a molder for the production of rods in accordance with my invention;

Fig. 2 is a plan view of a blank from which the rods are to be cut;

Fig. 3 is a side elevation thereof;

Fig. 4 is a plan view of the blank partly formed;

Fig. 5 is a fragmentary enlarged section on the line 5—5 of Fig. 4; and

Fig. 6 is a view corresponding to Fig. 5 showing the completion of the cutting operation.

Referring to the diagram, Fig. 1, I have there shown a row of sheets or blanks 7 as if moving from right to left in the figure in unbroken series through the machine. A preliminary feeding means, which may include a chain with feed dogs 9, may take the blanks or sheets 7 one by one from a pile, as shown at the right of Fig. 1, delivering them to the feed rolls 11 by which they are forwarded to the main feeding mechanism of the molder proper which may be of the general type disclosed in the patent to Blood 1,704,677 including a travelling bed 13 and cooperating rolls 15 by means of which the blanks are advanced in succession, each pushing forward the one preceding it to upper and lower rotary cutter heads 17 and 19.

Herein I have shown a blank 7 designed for producing cylindrical sticks. The blank is of a sufficient width to form a considerable number of these sticks and of a length which is a multiple of the length of the sticks, herein twice such length. The thickness corresponds to the diameter of the cylindrical sticks to be cut, being somewhat greater providing a certain amount of waste wood at each face which is cut away in the formation of the stick. The blank 7, as best seen in Fig. 3, is scored previously at 21 from one face thereof to the waste wood at the opposite face, this scoring dividing the blank into rod lengths without, however, separating it. The blank thus scored is in effect two separate sheets, each of the length of the desired rod and of a thickness at least substantially that of the entire section of the rod and preferably slightly greater than that section connected at one side by an integral unbroken septum 23, which last is substantially or entirely waste wood. The blank 7 thus scored is advanced through the molder with the scored face up so that the upper cutter head 17 which cuts first acts upon this scored face. This cutter head has knives suitably formed to shape the upper semi-circumference 7a of the rod in the manner indicated in Figs. 4 and 5 and preferably arranged to cut between them past the center line. The bottom head with similarly formed knives completes the formation of the rods forming the semi-circumference 7b (Fig. 6) and in so doing cuts away the connecting septum 23 which was left untouched by the upper head or at least so much thereof that the consecutive sticks readily break apart.

By this method of forming the rods the likelihood of jams throughout the entire operation of the mechanism is considerably diminished. Obviously for a given number of rods only half as many blanks need be handled and the possibility of one riding above or beneath another and interrupting the smooth and steady succession of the pieces through the machine is diminished. The preliminiary feeding means need work only half as fast in separating blanks from the supply. As the successive rods are not separated one from another until the bottom cutter head passes the scored line at 21, the work passes through the machine in the form of a relatively long piece which is enabled to bridge over the tables or beds at opposite sides of the cutter heads with relatively little likelihood of jams or other misplacements.

It will be obvious that the rods need not necessarily be of the circular section shown by way of example.

I am aware that the invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof, and I therefore desire the present embodiment to be considered in all respects as illustrative and not restrictive; reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

I claim:

1. A method of forming wooden rods which comprises providing a blank of a length equal to a multiple of the length of the rods, dividing the blank into rod lengths without separation thereof by scoring the same transversely from one side while leaving a connecting septum at the other

side, partly shaping the rods by a longitudinal molding cut on the scored side and completing the same by a longitudinal cut on the other side which at least substantially cuts away said septum.

2. A method of forming small wooden rods or the like which comprises providing a sheet of a width to provide a number of rods, of a length equal to a multiple of the length of the rods and of a thickness corresponding to the diameter thereof plus suitable allowance for waste wood, dividing said sheet into rod lengths by transversely scoring the same from one face substantially to the waste wood at the other face, shaping the rods at said one face by a longitudinal molding cut which grooves said face past the center of the rods and completing the same by a similar cut at the other face which also at least substantially separates longitudinally successive rods.

3. A method of forming molded wooden articles which comprises providing blanks of a length corresponding to a plurality of articles, scoring said blanks transversely from one face substantially to a portion of the blank at the other face which is to be cut away in the hereinafter described molding operation, advancing said blanks by the thrust of following blanks past successive molding knives, the first of which shapes the scored face and the second of which completes the molding operation on the articles to be formed and at least substantially severs the blanks at the scored portion.

LEWIS B. CARLSON.