J. E. WASHBURN AND A. E. SHAW.

FILLET MATERIAL.

APPLICATION FILED AUG. 8, 1918.

1,303,430. Patented May 13, 1919.

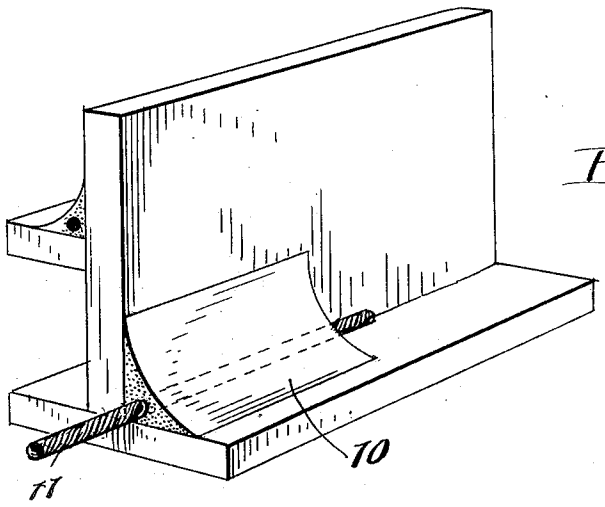

Fig. 1.

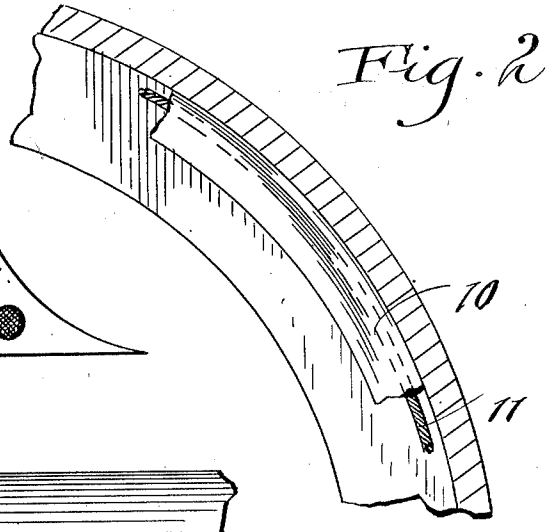

Fig. 2.

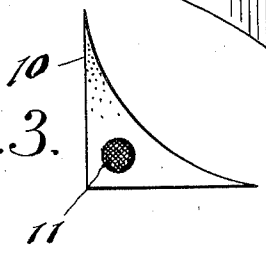

Fig. 3.

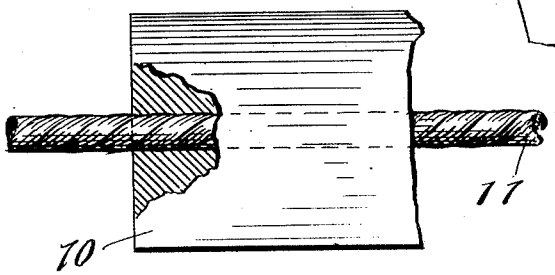

Fig. 4.

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UNITED STATES PATENT OFFICE.

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FILLET MATERIAL.

1,303,430. Specification of Letters Patent. Patented May 13, 1919.

Application filed August 8, 1918. Serial No. 248,907.

To all whom it may concern:

Be it known that we, JOHN E. WASHBURN and ALBERT E. SHAW, citizens of the United States, and residents, respectively, of Lakewood, in the county of Cuyahoga and State of Ohio, and Lakewood, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Fillet Materials, of which the following is a full, clear, and exact description.

This invention relates to a prepared fillet for use in connection more especially with patterns from which castings are to be made, the fillet being used to fill in the angular corners of the pattern to produce a smooth rounding surface which is necessary in order to effect a good mold and produce a strong casting.

The object of the invention is to provide such a fillet made of semi-plastic or waxy material which may be made to conform to the part of the object to which it is attached, and providing this fillet with a reinforcing element or backbone which serves as a support to prevent elongation of the fillet, and generally to hold it in shape. Generally speaking, the invention may be said to comprise the elements and combinations thereof set forth in the accompanying claims.

Reference should be had to the accompanying drawings forming a part of this specification, in which Figure 1 is a perspective view showing a fillet of our invention as applied to a pattern. Fig. 2 is a plan view showing an application of our fillet to a curved pattern; Fig. 3 is a sectional elevation of the fillet, and Fig. 4 is a plan view showing the fillet.

As a means for filling in the angular corners of patterns of similar structures in order to produce a rounding corner between the adjacent members of the pattern, it has been common practice to use a strip of leather properly fashioned to fill in the corner. Also the expedient of providing a strip of wood properly fashioned has been used. And also it is common practice to employ a wax or similar waxy material which is molded into the corner for producing the desired effect.

The waxy material is a very convenient form of filleting material for use in this connection because it may be more or less molded into place, it is perfectly pliable, and may readily be worked into a corner, as for instance, where three plain surfaces meet.

The difficulty in the use of this waxy fillet material lies in the fact that as the pattern stands and the fillet becomes old the wax is liable to crack, and portions of it drop out, this being particularly true where at the initial application of the wax a firm adhesion between the wax and the wood was not obtained. Furthermore, in the application of unmolded waxy material it is difficult to get a fillet of uniform thickness which is very desirable, for reasons which will be obvious.

A prepared fillet of waxy material has been proposed and used, this fillet being formed in a substantially triangular shape and of indeterminate length, the method of use of this fillet being to cut off a required length of fillet material and apply it to the pattern by pressing it into position with the aid of a slightly heated tool of proper conformation upon the surface thereof to press the waxy fillet into place. In practice there are several objections to the use of this material, one of them being that as the pattern stands, sections of the waxy fillet may crack, become loosened from the pattern, and drop out. Another objection is that this material when manufactured and sold in strips, in cold weather, tends to crack and break into short pieces. A still further objection lies in the fact that in long strips of the prepared wax fillet, there is no means of supporting the wax fillet and there is a tendency, particularly in hot weather, for the fillet to become elongated, being thinner in certain places than in another.

With the object of utilizing all the advantageous properties in a prepared fillet of waxy material, and at the same time eliminating the objectionable features which are connected with the use of such a prepared waxy material, we propose a fillet of waxy material which is provided with a core of substantially nonstretchable material, which core serves as a support and backbone to the fillet so that in the event that when the fillet is prepared, if perchance in cold weather portions of the fillet crack they can not become separated, because owing to the presence of this core, and further, the waxy fillet even in warm weather does not stretch and become reduced in cross sectional area, because any tendency to stretch of the waxy fillet is resisted by the core of substantially nonstretchable material.

Obviously the core while performing the

functions heretofore ascribed to it must be of flexible material in order that the material may be worked around curves as well as into corners in a pattern or similar structure.

In the drawing we have shown a fillet which is made to assume a substantially triangular form, this being indicated at 10, and extending through the body of the fillet is a core 11, this core being preferably a cord or similar material, which is flexible, at the same time is substantially nonstretchable.

While the fillet is shown of triangular form, this is in no wise intended to limit the invention for other forms of fillet may be used embodying the invention disclosed herein.

The fillet is prepared by extruding the waxy material forming the body of the fillet through a proper die which die is fashioned to produce a fillet of the shape and proportions desired, and at the time of extrusion the core 11 is extruded with the fillet and embedded therein after the manner illustrated in the drawings.

The body of the fillet may be composed of any suitable material, which is sufficiently plastic particularly when slightly hardened, to enable it to be made to conform to the object to which it is applied. And for this purpose we have found that a waxy material of proper composition may be used to good advantage.

In utilizing the fillet of our invention, a suitable length of fillet material is cut from a longer strip and the fillet applied by passing the fillet into the corner to be filled, and ironing the same into place by means of an ironing tool, which has a head portion of proper conformation for the purpose. This ironing tool is preferably slightly heated so that the fillet is thereby warmed sufficiently so that it becomes sufficiently plastic to enable it to be pressed into the corner and made to adhere to the wood.

It will be obvious that even if after standing for a time the waxy material of the fillet should crack no portions of it can drop out unless the entire fillet becomes loosened, and it will also be apparent that in the application of the fillet to a pattern the fillet material cannot be stretched to any great extent because the presence of the core prevents this action.

As before stated, it is our purpose to manufacture the fillet, by extruding long lengths of the fillet through suitable dies, these long lengths being sold as articles of commerce. The presence of the core prevents disintegration of the fillet, or any elongation of the fillet material.

Having described our invention, we claim—

1. As an article of manufacture, a fillet comprising a body portion of plastic pliable material, and a core formed as a distinct unitary body extending longitudinally through the body of the fillet.

2. As an article of manufacture, a fillet comprising a body portion of pliable waxy material and a core formed as a distinct unitary body extending longitudinally through the body of the fillet.

3. As an article of manufacture, a fillet comprising a body portion of pliable plastic material, and a distinct unitary core body extending longitudinally through the body of the fillet.

4. As an article of manufacture, a fillet comprising a body portion of pliable waxy material, and a distinct unitary core body extending longitudinally through the body of the fillet.

5. As an article of manufacture, a fillet having a body portion of pliable plastic material having a core body extending through the body portion of the fillet said core body being substantially nonstretchable.

6. As an article of manufacture, a fillet comprising a body portion of pliable plastic material having a flexible substantially nonstretchable core body extending longitudinally through the fillet.

In testimony whereof, we hereunto affix our signatures.

JOHN E. WASHBURN.
ALBERT E. SHAW.