

O. KNIPFER.

Improvement in Treating Wood for the Manufacture
of Sleeve-Buttons, &c.

No. 126,816.

Patented May 14, 1872.

Fig. 1.



Fig. 2.

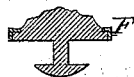


Fig. 3.

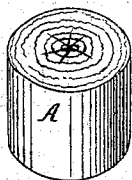


Fig. 4.

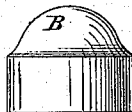


Fig. 5.



Fig. 6.



Fig. 7.



Fig. 8.



Fig. 9.



Witnesses.

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UNITED STATES PATENT OFFICE.

OTTO KNIPFER, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO CLAPP SPOONER, OF SAME PLACE.

IMPROVEMENT IN TREATING WOOD FOR THE MANUFACTURE OF SLEEVE-BUTTONS, &c.

Specification forming part of Letters Patent No. 126,816, dated May 14, 1872.

To all whom it may concern:

Be it known that I, OTTO KNIPFER, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented a new and useful Improvement in Treating Wood for the Manufacture of Sleeve-Buttons, Studs, and similar articles; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 is a vertical central section of a sleeve-button made in accordance with my invention. Fig. 2 is a like section of a sleeve-button provided with a metallic rim. Fig. 3 is a perspective elevation of a cylindrical block of wood in the natural state, from which the finished article, like that shown in Fig. 1, is produced. Fig. 4 is an elevation, showing the same block with its face end turned to a convex shape. Fig. 5 is an elevation, showing the same block after it has been solidified and at the same time pressed to form the sleeve-button or article. Fig. 6 shows it turned off, at the back where the shank is to be formed, to the diameter of the fastening-disk. Fig. 7 shows the shank and fastening-disk fully formed. Fig. 8 is an elevation of a plain button or stud of small size. Fig. 9 shows a modification of the fastening.

Similar letters indicate corresponding parts.

This invention relates to the treatment of wood for the manufacture of sleeve-buttons, brooches, studs, and breast-pins, and such like articles, intended both for use and ornament; and consists in a new article of manufacture of the same, produced from wood that is first freed of moisture and sap and then solidified by being subjected to pressure endwise of the grain, being confined during the pressure so that it cannot expand laterally. Each article is produced from a single blank or block, which is brought to the diameter required for the article to be made and placed in a confining ring, and then solidified by being subjected to pressure endwise of the grain, the die or dies used in the pressure being so formed that the same pressure which solidifies the block, forms the face or faces of the article to

be produced. The article is then finished by forming a fastening on the back, which can be done by turning the back off or by inserting a metal fastening. A thin coating of varnish is applied to the article to give a higher finish and to exclude moisture, or it is oiled, as may be preferred. The edge of the face can be left as it comes from the die, or can be further finished by turning a bead thereon for ornament, and I also combine with it a metallic rim, when desired. In this manner I produce sleeve-buttons and other buttons, brooches, breast-pins, and studs, and similar articles, using fastenings or fastening-disks behind their faces.

In carrying out my invention I take a blank, A, of wood, cut across the grain, and bring it to the diameter and shape transversely of the button or stud to be made, (see Fig. 3,) and then turn off the end B that is to constitute the head or face to a rounded or convex form, (see Fig. 4,) in order that the figure or ornament produced thereon by the die in the process of pressing may be in proper relief, the convexity being greater or less, according to the elevation that is desired to be given to the ornament. The face may, however, be left plane, as shown in the blank or block, Fig. 3, if preferred. I then press the blank endwise of the grain in a suitable press between dies, the blank being confined in a ring or holder, so that it cannot expand or be increased in diameter or altered in shape transversely, while the upper die is brought against the top of the blank and forms the head or face of the button, impressing thereon whatever ornament or character may be cut on the die, and at the same time reducing the entire blank in thickness and solidifying the wood by the pressure, as is illustrated in the example given in Fig. 5, which represents a blank like that shown in Fig. 4, after it has been pressed between dies endwise of the grain and ornamented on its face end in the process. After the blank has been pressed and the face formed by the die I turn off in a lathe the plain end of the blank to form the shank C and fastening D, which are of one piece with the rest of the button, the solidified wood enabling me to turn the disk very thin, with a fine edge, so as to be sufficiently delicate and suitable for use on sleeve-buttons, studs for shirt-bosoms, pins,

brooches, and similar articles. An ornamental border or bead, E, can also be turned around the edge of the ornamented face. The article may be varnished or oiled to give it a bright appearance, and I use for that purpose shellac, combined, if desired, with other light, delicate varnish. The die which forms the head of the button or article may be plain, with a straight face, so as to produce a sleeve button or stud of solidified wood with a plane face, like that shown in Fig. 8; and such articles, of small size, can be used for fastening collars, wristbands, and the like. The edge of the article is provided, when desired, with a metallic rim, F, consisting of a ring of metal, of any kind or color desired, made of the proper shape to fit over the edge of the button, the lower edge of the metallic rim being pressed close so as to clamp the rim to the edge. The metallic rim serves for ornament, and also as a binding to the article to strengthen it when made of wood of frail texture.

I do not wish to restrict myself to a disk and shank, as here shown, in connection with sleeve-buttons, brooches, or other articles, as other suitable fastening devices can be used therewith, according to the manner in which the pressed article is to be worn; as, for example, in case of a brooch, breast-pin, or stud, a pin and hasp can be secured to the back side, or a screw-fastening can be applied, as is shown in Fig. 9 of the drawing, the back being left or turned off square and the fastening device secured in the body of the article.

My invention enables me to produce sleeve-buttons and similar articles from wood, and to impart to them sufficient strength for actual use and wear, their faces and heads being shaped and formed by the same action which solidifies the wood by pressing the grain endwise.

I do not broadly claim stamping or compressing figures or ornaments upon the end of the grain of sheets or cross-sections of wood, as such, *per se*, is not new, the same being shown in the Letters Patent granted to Henry May, No. 50,608, dated October 24, 1865.

What I claim as new, and desire to secure by Letters Patent, is—

1. The process, substantially as above described, of producing articles from wood by first freeing the wood from moisture and then solidifying the body or mass of the wood and giving form to the face or faces of the article by pressure in the direction of the grain.

2. Articles made of wood, such as sleeve-buttons, brooches, and studs, and other articles, produced by freeing the wood from moisture and solidifying the mass, and giving form to the end face or faces of the articles by pressure endwise of the grain, substantially as above described.

OTTO KNIPFER.

Witnesses:

BENJ. H. CASE,
J. P. REED.