

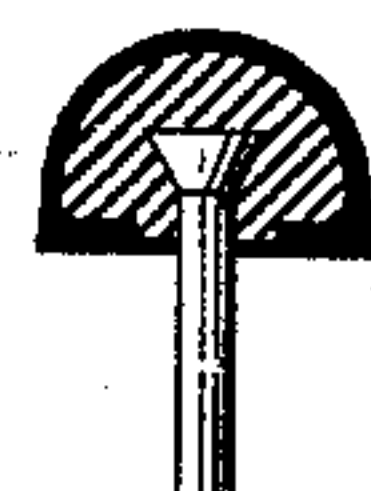
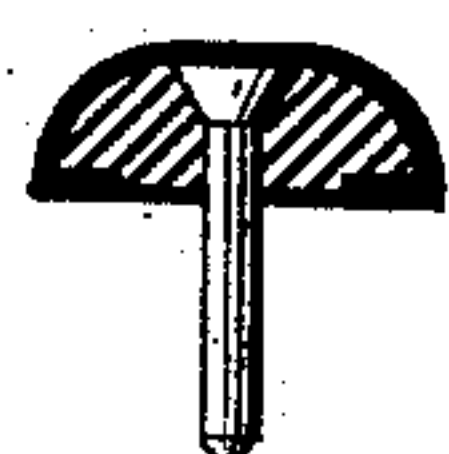
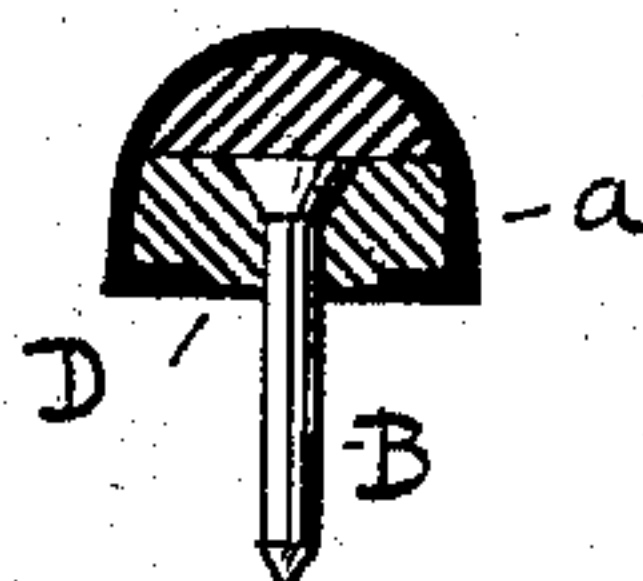
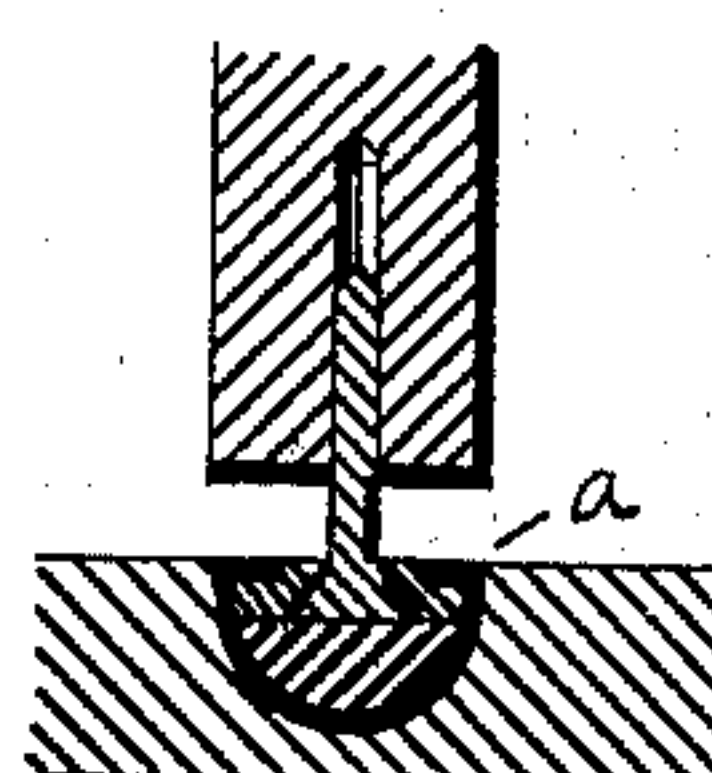
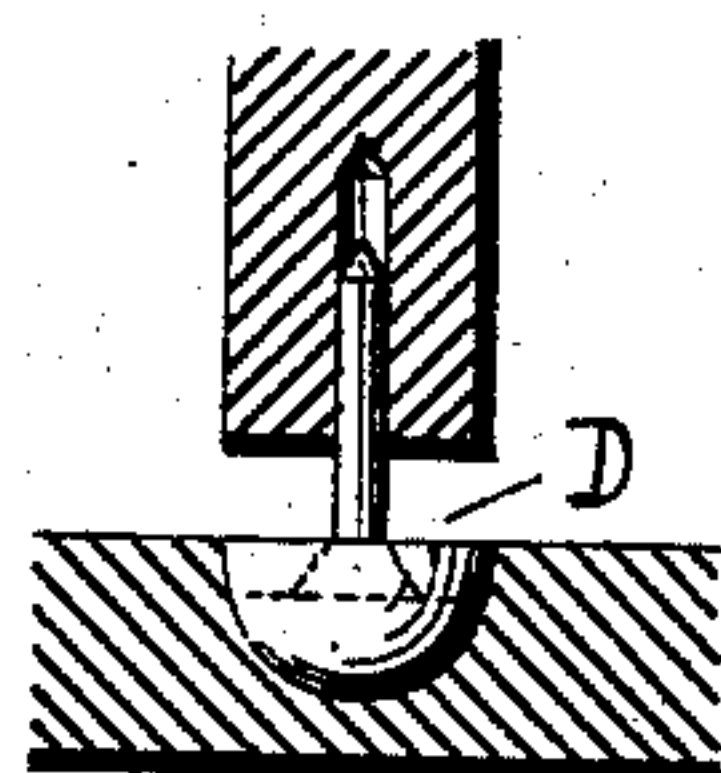
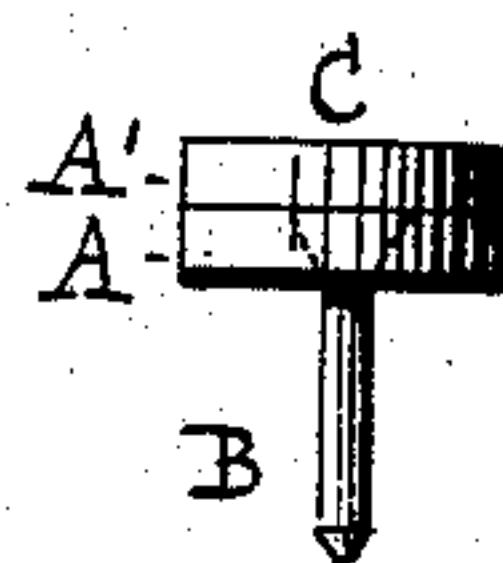
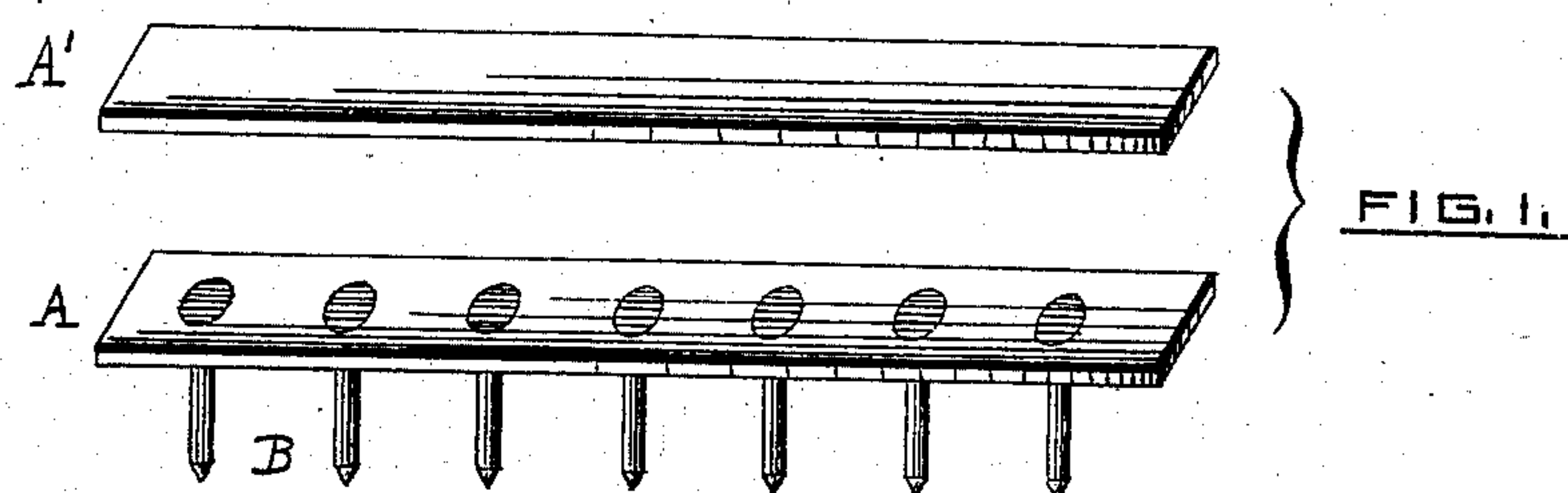
(No Model.)

J. W. McCRILLIS.

FURNITURE NAIL.

No. 270,239.

Patented Jan. 9, 1883.



WITNESSES,

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UNITED STATES PATENT OFFICE.

J. WILSON McCRILLIS, OF PROVIDENCE, RHODE ISLAND.

FURNITURE-NAIL.

SPECIFICATION forming part of Letters Patent No. 270,239, dated January 9, 1883.

Application filed July 13, 1882. (No model.)

To all whom it may concern:

Be it known that I, J. WILSON McCRILLIS, of the city and county of Providence, in the State of Rhode Island, have invented a certain Improvement in the Process of Manufacturing Furniture-Nails and Analogous Articles; and I declare the following to be a specification of the same, reference being made to the accompanying drawings.

Like letters indicate like parts.

Figure 1 shows in perspective a series of nails in position in a strip of leather-board or other suitable material, and a covering-strip for the same. Fig. 2 is a side elevation of the product of the first operation. Fig. 3 is a vertical section of the die and plunger, showing in elevation the nail as formed in the die. Fig. 4 is a vertical section of the die, plunger, and nail in position, showing the formation of the metallic covering about the knob. Fig. 5 shows my improved furniture-nail, which is the product of the process hereinafter described, the nail-shank and head being in elevation, and the knob and its metallic covering being represented in vertical section to show the arrangement of the parts thereof. Figs. 6 and 7 are modified forms of my invention.

My invention is intended to provide a substitute for the brass-headed nails which are extensively used in upholstering furniture and for other decorative purposes. The nail heretofore used in this manner consists of a nail-shank fastened to a cup-shaped head of brass upon the under side thereof, and secured together by casting in a mold, or by means of a die. They are of European manufacture, and the American market is supplied by importation of these nails, as they cannot be produced in this country by the ordinary process sufficiently cheap to compete with foreign labor; but by my invention I can produce in large quantities, by means of power, nails in all respects of equal utility, and with a great saving of brass stock, thereby reducing the cost to a minimum.

My invention relates to upholstering-nails and other analogous articles in which a shank is secured to an ornamented head or knob.

The process consists in thrusting a series of nails through pasteboard, leather, leather-board, or other similar substance formed in a flat strip, the heads of such nails lying flush

with the top of the strip, then cementing a plain strip of like material upon the upper side of such nailed strip, then cutting by suitable tools or machinery a disk of such cemented strips around the head of each nail, then by means of a die and plunger compressing the knob so formed into the desired shape, and finally forming by a die and plunger a disk of sheet-brass as an exterior covering of such knob, and turning down the edge of the sheet metal upon the under side of the knob by compression in the die or by burnishing down the edge. The product is a brass-headed nail having a solid and firm filling of corresponding shape, which not only supports the metallic covering and prevents it from being crushed or defaced, but also confines and holds securely the nail in position. I prefer to use leather-board; but paper, papier-maché, pulp, or any other compressible substance of sufficient density, capable of retaining a rigid form, may be used in my process. This filling substance I prefer to use in the form of strips, as shown at A in Fig. 1. Through this I thrust a series of headed nails, B, driving the heads flush with the top surface of the strip A. A similar plain strip, A', may be cemented upon the strip A. I do not, however, desire to confine myself to the use of such covering-strip, because equally useful results may be secured with some styles of knobs by using simply the strip A with the nails thereof. By means of cutters I cut from the nail-strips a series of disks, C, each surrounding a nail, B, in the center of such disks, as shown in Fig. 2. I next use a die and plunger, the former being cut in the shape of the intended knob and the latter having a central aperture to receive the shank of the nail. The operation of the die and plunger is to compress and form the disk C into the desired shape. I next lay a disk of sheet-brass, a, over the die, and by means of the plunger again force the compressed disk C into the matrix, which causes the sheet metal to form smoothly and snugly upon the face and sides of the knob, as shown at D in the several figures. The edges of such metallic stock are by the plunger crushed down into the under face of the knob, or may be burnished down, if desired. The nail is now finished and is withdrawn from the die and plunger.

As the essential feature of my invention is

the use of a cheap and compressible filling to serve as a body for the knob and to contain or confine the head of the nail proper, together with the covering of such knob, by a thin sheet
5 of metal, it is obvious that the modified forms shown in Figs. 6 and 7 are equally within my invention.

By this process I have obtained a nail the exterior surface of which exactly resembles the
10 foreign product heretofore used. The knob is as firm as if made of thick metallic stock, because it is filled with a solid and compressed body, which also securely holds the shank from any displacement. The cost of the manufac-
15 ture, however, is greatly reduced by using the cheaper but equally useful substance for filling, while a comparatively small amount of metallic stock suffices for the exposed ornamental surface.

20 It is evident that other analogous articles, consisting of a shank held within the body of an ornamental knob, may be made by this process.

I therefore claim as a novel and useful in-
25 vention and desire to secure by Letters Patent—

1. The improved process of manufacturing ornamental nails or other analogous articles,

herein described, consisting in thrusting a series of headed shanks through a strip of com- 30
pressible material, then cementing to said strip a layer of like material, thereby covering and confining said heads in position, then cutting around each head a disk of said strip and covering, then compressing said disk into the form
35 of a rigid knob of the desired shape by means of a die and plunger, and then covering said knob with a sheet of metallic stock formed upon said knob by means of a die and plunger, substantially as specified. 40

2. The improved process of manufacturing ornamental nails and other analogous articles, consisting in securing a series of headed shanks in a strip of compressible material, then cutting
45 from said strip disks, each surrounding a nail-head, then forming said disks into rigid knobs by means of a die and plunger, and then forming upon said knobs by means of a die and plunger a covering of sheet-brass having a like configuration with said knobs, substantially as
50 described.

J. WILSON McCRILLIS.

Witnesses:

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