(No Model.)

B. BUTZ & O. J. PFLUEGER.

PROCESS OF MAKING MOLDINGS, &c., FROM PAPER, &c.

No. 311,409. Patented Jan. 27, 1885.

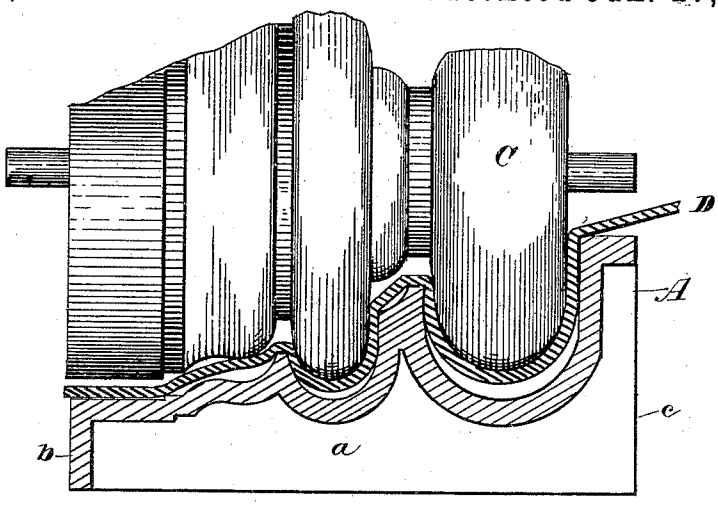


Fig. 1.

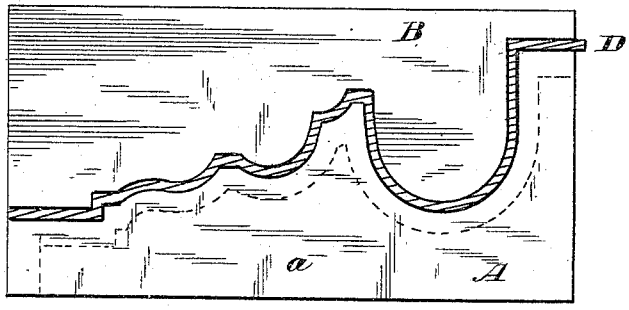


Fig. 2.

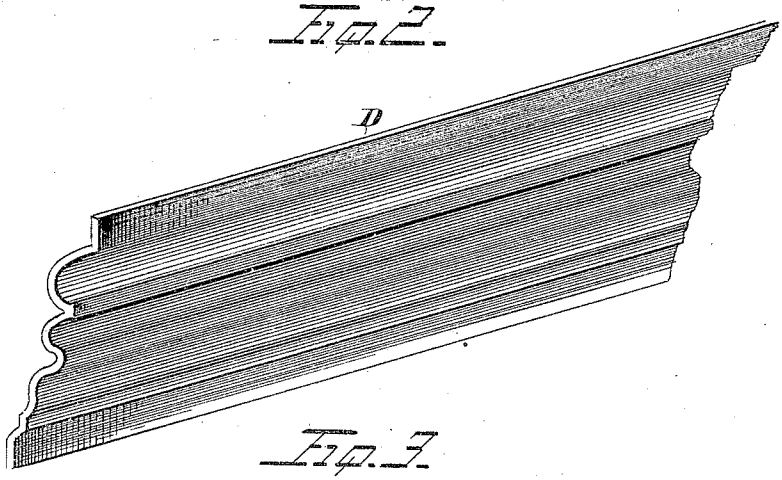


Fig. 3.

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UNITED STATES PATENT OFFICE.

BENNIVILLE BUTZ AND OLIVER J. PFLUEGER, OF ALLENTOWN, PA.

PROCESS OF MAKING MOLDINGS, &c., FROM PAPER, &c.

SPECIFICATION forming part of Letters Patent No. 311,409, dated January 27, 1885.

Application filed December 3, 1884. (No model.)

To all whom it may concern:

Be it known that we, BENNIVILLE BUTZ and OLIVER J. PFLUEGER, citizens of the United States, residing at the city of Allentown, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Process of Making Moldings, &c., from Paper and other Like Materials, of which the following is a specification, reference being had to the accompanying drawings.

Our invention relates to the manufacture of paper, veneer, or other like material into moldings and designs of all kinds for decorative purposes, such as borders for rooms, center-pieces for ceilings, &c.; and the invention consists in the process of making the same, as will be hereinafter set forth, and particularly pointed out in the claims.

Referring to the drawings, Figure 1 represents a section of a female die and a side elevation of a male die with the material inserted thereinbetween and partly pressed. Fig. 2 represents a side elevation with the material firmly pressed, and Fig. 3 represents the product after completion in perspective.

Like letters indicate like parts in all the figures.

Moldings of this character have been heretofore constructed by placing dampened paper between a male and female die and exerting positive, direct, and forcible strain thereon, and in consequence thereof the molding is considerably weakened along the sharp curves and angles, where it is overstrained and in some instances torn so that it is rendered useless.

One of the principal objects of our invention is to overcome this objection, which we accomplish by the process hereinafter set forth.

One means for practicing our invention consists of the following devices:

A represents a female die of any desired configuration, and B represents a gravity male die formed to fit the die A.

C represents a circular or cylindrical male die the periphery of which is of similar contour to that of the male die B.

The paper or material, D, of which the molding is manufactured is first steamed or dampened in any desired manner and placed upon the female die A, and a male die of cylindrical form—such as C—is passed, by hand or otherwise, somewhat lightly back and forth upon the material. This male die is of such weight as to gradually press the damp or pliable paper only partly down into the numerous interstices of the female die. After this operation a male die, B, of somewhat greater weight or gravity, is placed upon the partly-pressed paper, and the die and paper are allowed to settle gradually and uniformly into and partake of the curvature of the female die. After this has been fully accomplished the dies and paper are placed in a drying-chamber, where the molding is allowed to harden, and when thus formed it is compact, and the corners heretofore weakened are greatly strengthened, and the whole product rendered capable of longer usage, and found to possess more rigidity.

It is not wholly essential to the successful operation that the cylindrical male die should be employed, as it will be found that by using only the heavier male die in conjunction with the female die the process can be carried on with almost if not equal success, and we therefore do not confine our invention to the use of both dies, but simply use the first die as an extra precaution against breaking the material, as after the paper is partly pressed a male die of more weight can be placed thereon without the likelihood of abrading or weakening the corners and sudden angles.

The female die may be constructed with a hollow chamber, as *a*, which conforms or runs parallel with the configuration of the molding, so that the drying agents will have the same effect upon all parts thereof between the dies; or, it may be formed of sufficiently thick sheet metal, with or without the end and side supports, *b c*.

Having described our invention and its operation, what we claim is—

1. The process herein described of making molding which consists in placing paper or other like material between two dies the upper one of which possesses sufficient specific gravity independent of other mechanical devices to gradually and uniformly press the material into the lower die, substantially as and for the purpose described.

2. The process of manufacturing paper and other like moldings which consists in damp-

ening the material, placing it upon a female die, and passing a male die of cylindrical shape over the same, to partly press the material into the female die, and then placing a male die upon the material which is of sufficient specific gravity to gradually and uniformly press the same into position, and then subjecting the whole to the action of a drying agent, substantially as and for the purpose described.

3. The combination of a female die of uniform thickness with a male die of the herein-described specific gravity, substantially as specified.

4. The female die A, having the hollow chamber *a*, and side and end walls, *b* and *c*, substantially as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

BENNIVILLE BUTZ.
OLIVER J. PFLUEGER.

Witnesses:
EDWARD H. RENINGER,
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