

(No Model.)

L. W. NIMSCHKE.

MOLDING BLOCK FOR THE MANUFACTURE OF BRUSHES.

No. 413,788.

Patented Oct. 29, 1889.

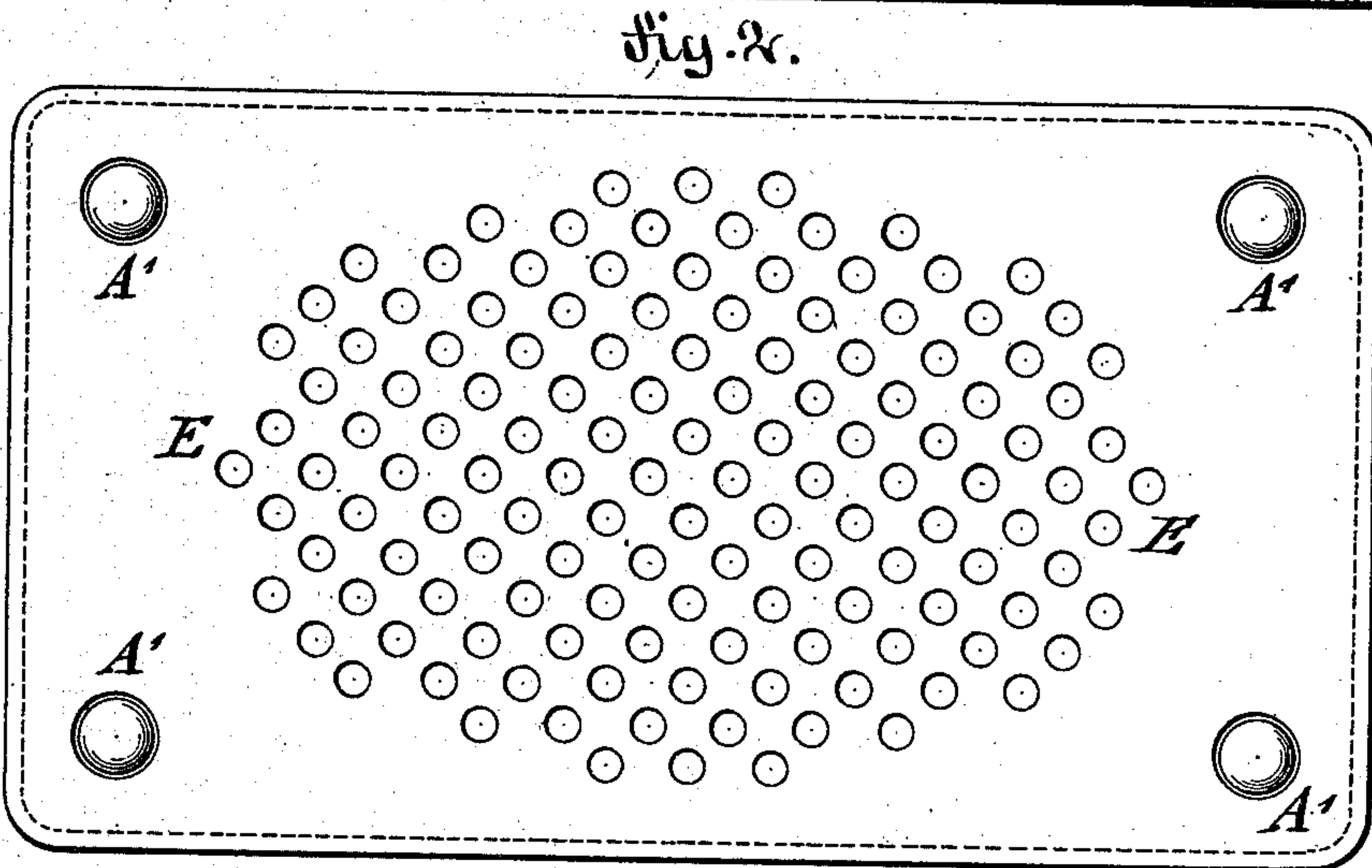
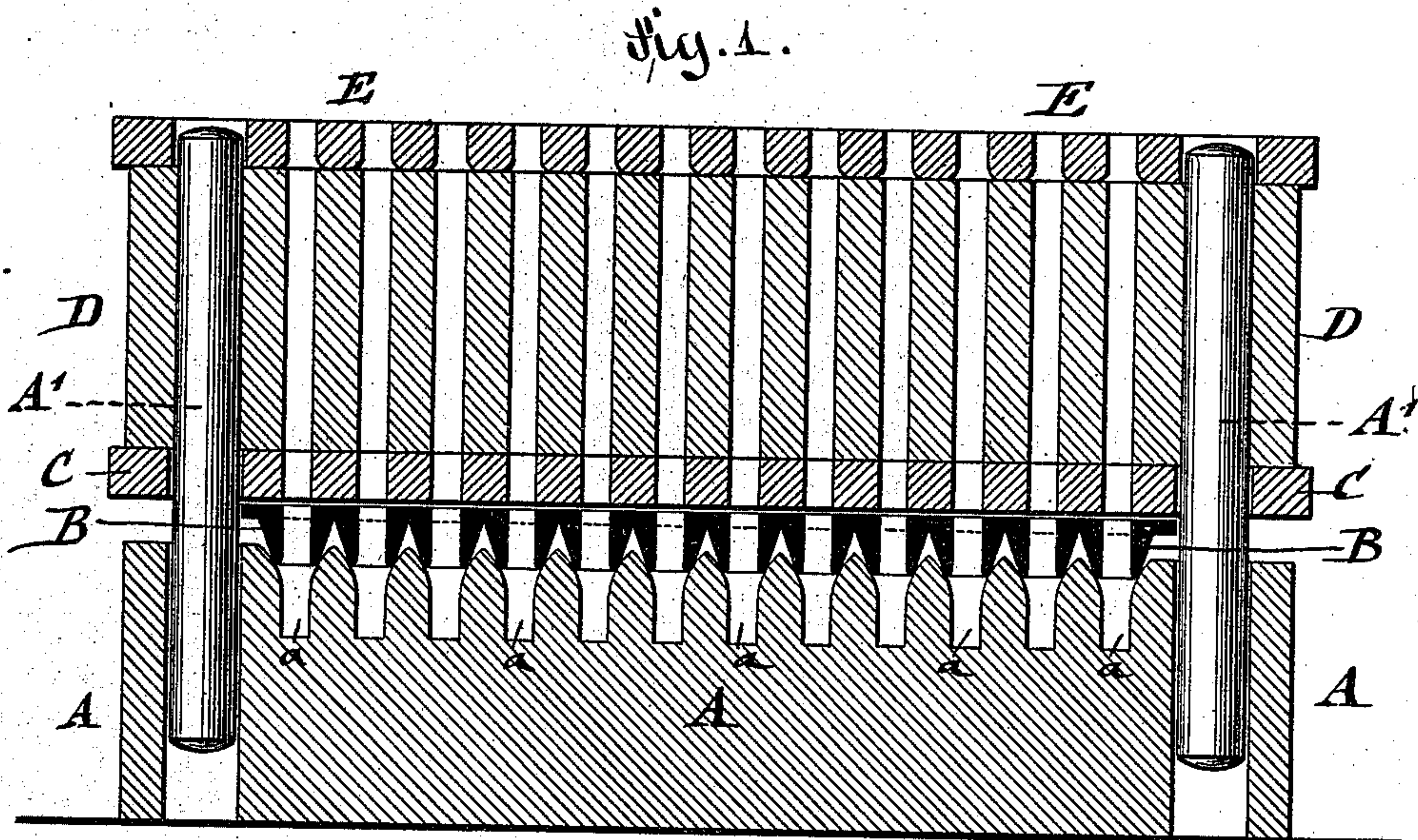
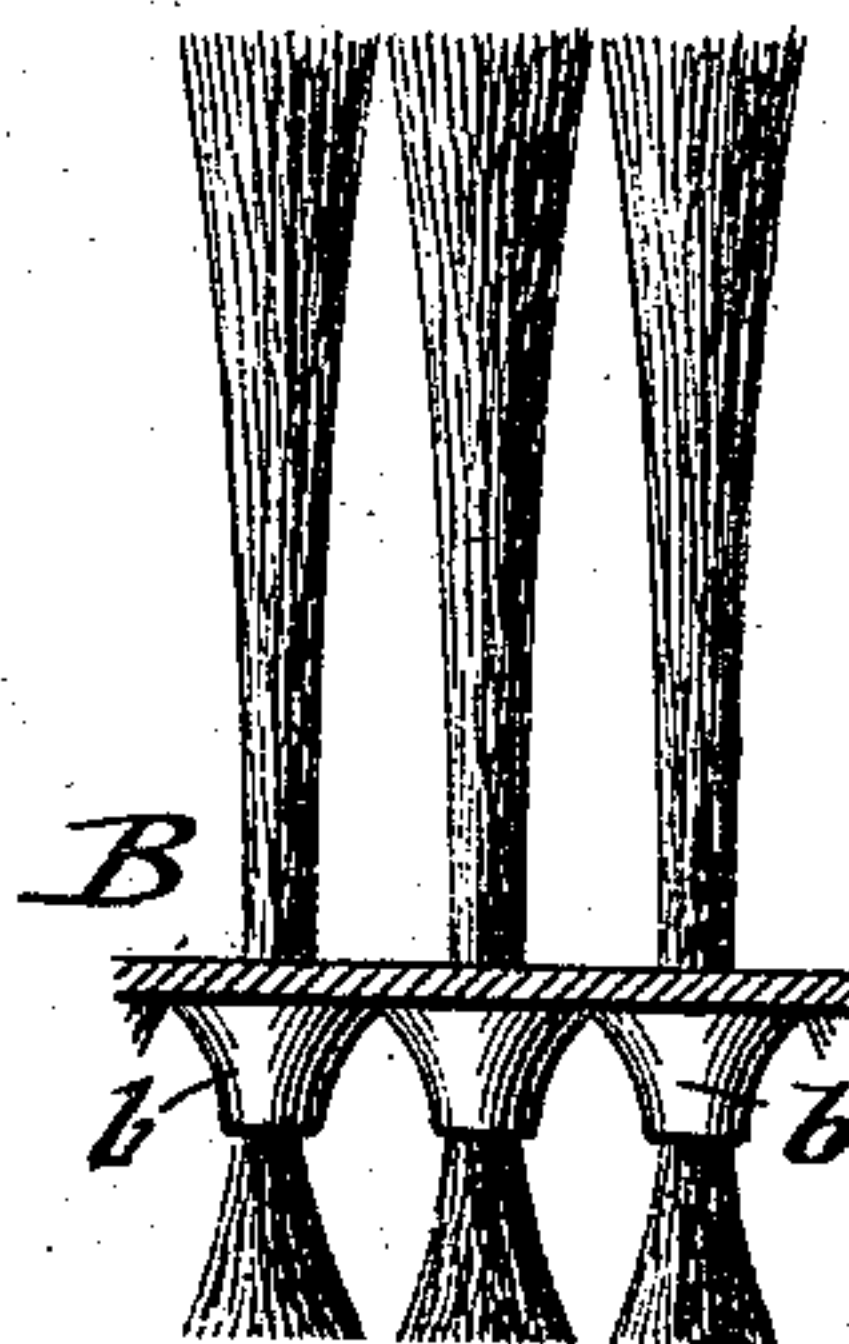
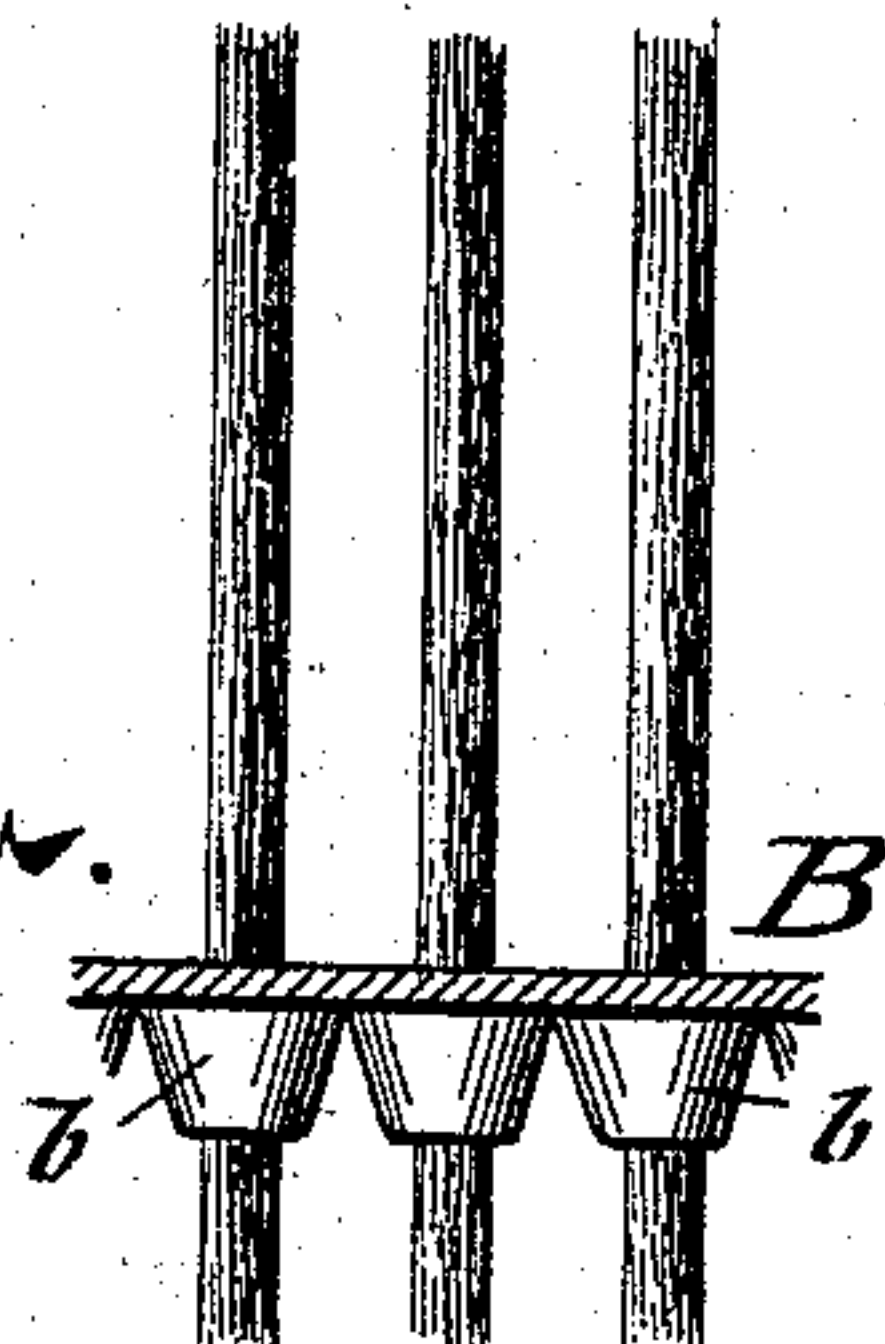


Fig. 3.

Fig. 4.

WITNESSES:
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MOLDING-BLOCK FOR THE MANUFACTURE OF BRUSHES.

SPECIFICATION forming part of Letters Patent No. 413,788, dated October 29, 1889.

Application filed January 4, 1889. Serial No. 295,420. (No model.)

To all whom it may concern:

Be it known that I, LOUIS W. NIMSCHKE, of the city, county, and State of New York, a citizen of the United States, have invented certain new and useful Improvements in Molding-Blocks for the Manufacture of Brushes, of which the following is a specification.

This invention relates to an improved molding block or die which is to be used in the manufacture of brushes of that class in which the tufts are supported by metal plates; and the invention consists of a mold or die for making brushes which comprises a base-block having sockets with enlarged mouths, an intermediate stripping or clearing plate having openings registering with said sockets, a filling-block also provided with openings registering with the openings of the stripping-plate, and a perforated protecting plate or shield above the filling-block, said stripping-plate, filling-block, and protecting-plate being guided on fixed registering pins or posts of the base-block, so as to be readily removed when the tufts are retained by the compression of the conical rims of the tuft-retaining plate and permit the removal of the tuft-holding plate from the mold or die.

In the accompanying drawings, Figure 1 represents a vertical longitudinal section of my improved mold for making brushes. Fig. 2 is a top view of the same, and Figs. 3 and 4 are details showing a portion of the tuft-retaining plate before and after compression by the mold.

Similar letters of reference indicate corresponding parts.

The mold shown in the drawings is intended for making brushes of the construction shown and described in an application heretofore filed by me, under date of September 20, 1887, Serial No. 250,171, allowed September 12, 1888, in which the tufts or bristles are firmly retained by a perforated metal plate, which is provided with conically-tapering rims around said perforations at one side of said plate, said rims being tightly compressed and contracted so as to firmly bind on the tufts and retain them firmly in position.

The mold for making my improved brush is made of any suitable shape and size, according to the shape and size of the tuft-holding

plate. The parts composing the mold are made of steel, and are placed in a press after the bristles are supplied to the same, and then compressed, whereby the conical rims of the tuft-holding plate are compressed on the tufts of the bristles. The mold is composed of a base-block A, having a number of sockets *a*, of such a depth as is required by the length of the projecting ends of the tufts at one side of the retaining-plate, the upper ends of the sockets being made of conical or gradually-enlarged shape, so as to permit the entrance of the conical rims *l* of the metal tuft-retaining plate B, as shown in Fig. 1. The tuft-retaining plate B corresponds in size and shape to the brush, and is provided with as many holes and conical rims as tufts of bristles are to be arranged in the same. Above the base-block and retaining-plate B are arranged in successive order a stripping or clearing plate C, a filling-block D, and a bristle-end-protecting plate or shield E, which are guided on guide-pins *A'* of the base-block A and provided with as many holes as there are sockets in the base-block and perforations in the retaining-plate, said holes being in line with each other and the perforations of the retaining-plate, as shown in Fig. 1.

When it is desired to use the mold for making brushes, the stripping or clearing plate, filling-block, and protecting-plate are removed and the tuft-retaining plate placed in position on the base-block, so that the conical rims of the same project into the enlarged upper ends of the sockets *a* of the base-block A. The stripping-plate C and filling-block D are then placed in position above said plate and all the holes of the filling-block, retaining-plate, and base-block carefully filled with bristles, care being taken that a uniform number of bristles is inserted into each hole of the filling-block and socket of the base-block. When this is accomplished, the protecting-plate or shield E is placed on the filling-block, and the whole exposed to pressure in a suitable press, so that the conical rims of the tuft-retaining plate are contracted and tightly closed around the tufts or bristles in the sockets of the base-block. The compression of the retaining-plate, stripping-plate, and filling-block by the action of the press lowers the retaining-plate and causes the end of the

bristles to project slightly above the filling-block into the openings of the protecting-plate E, which serves to protect the ends against injury by the plunger of the press, which
5 would be the case when no protecting plate or shield were used. When the compressing action on the rims of the retaining-plate is completed, the protecting-plate, filling-block, and stripping-plate are removed, and finally
10 the retaining-plate with the tufts of bristles secured thereto lifted clear of the base-block and removed. The operation just described is then repeated, and so on, the brushes being thus manufactured in a quicker and more
15 reliable manner and at a considerable saving of time and labor. The brush is then finished by being provided with the tuft-retaining plate and with a suitable backing in the usual manner.

20 Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A mold for making brushes, which con-

sists of a base-block having sockets with enlarged upper ends, a stripping or clearing plate, and a filling-block, the stripping-plate 25 and filling-block being provided with openings in line with the sockets of the base-block, substantially as set forth.

2. A molding-block for making brushes, composed of a base-plate having sockets with 30 enlarged upper ends, a stripping or clearing plate, a filling-block, and a protecting plate or shield above said filling-block, said stripping-plate, filling-block, and protecting-plate being provided with openings in line with 35 the sockets of the base-block, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

LOUIS W. NIMSCHKE.

Witnesses:

PAUL GOEPEL,

JOHN A. STRALEY.