

No. 750,406.

PATENTED JAN. 26, 1904.

E. SIMON.

MOLD PRESS FOR MAKING CIGARETTE OR CIGAR HOLDERS OR THE LIKE.

APPLICATION FILED FEB. 3, 1903.

NO MODEL.

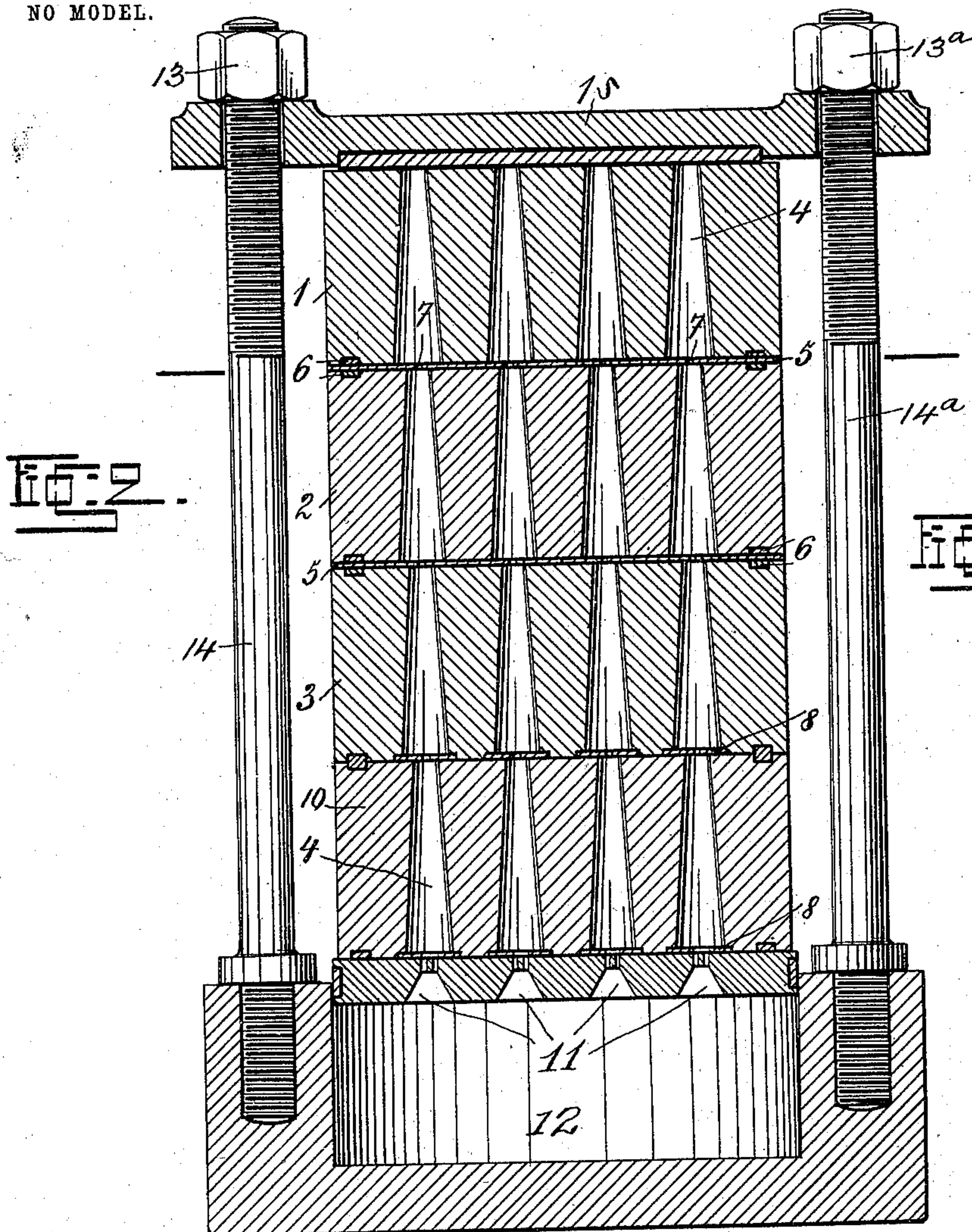


Fig. 3. Fig. 4.

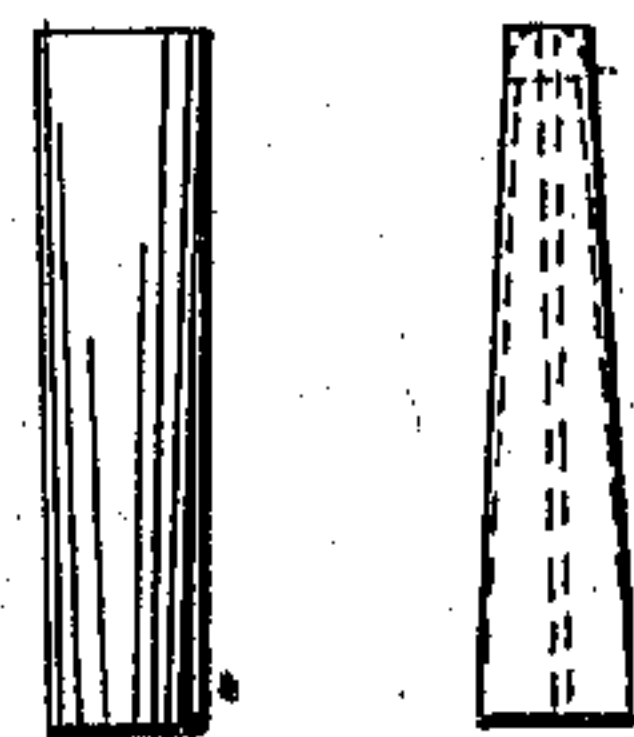
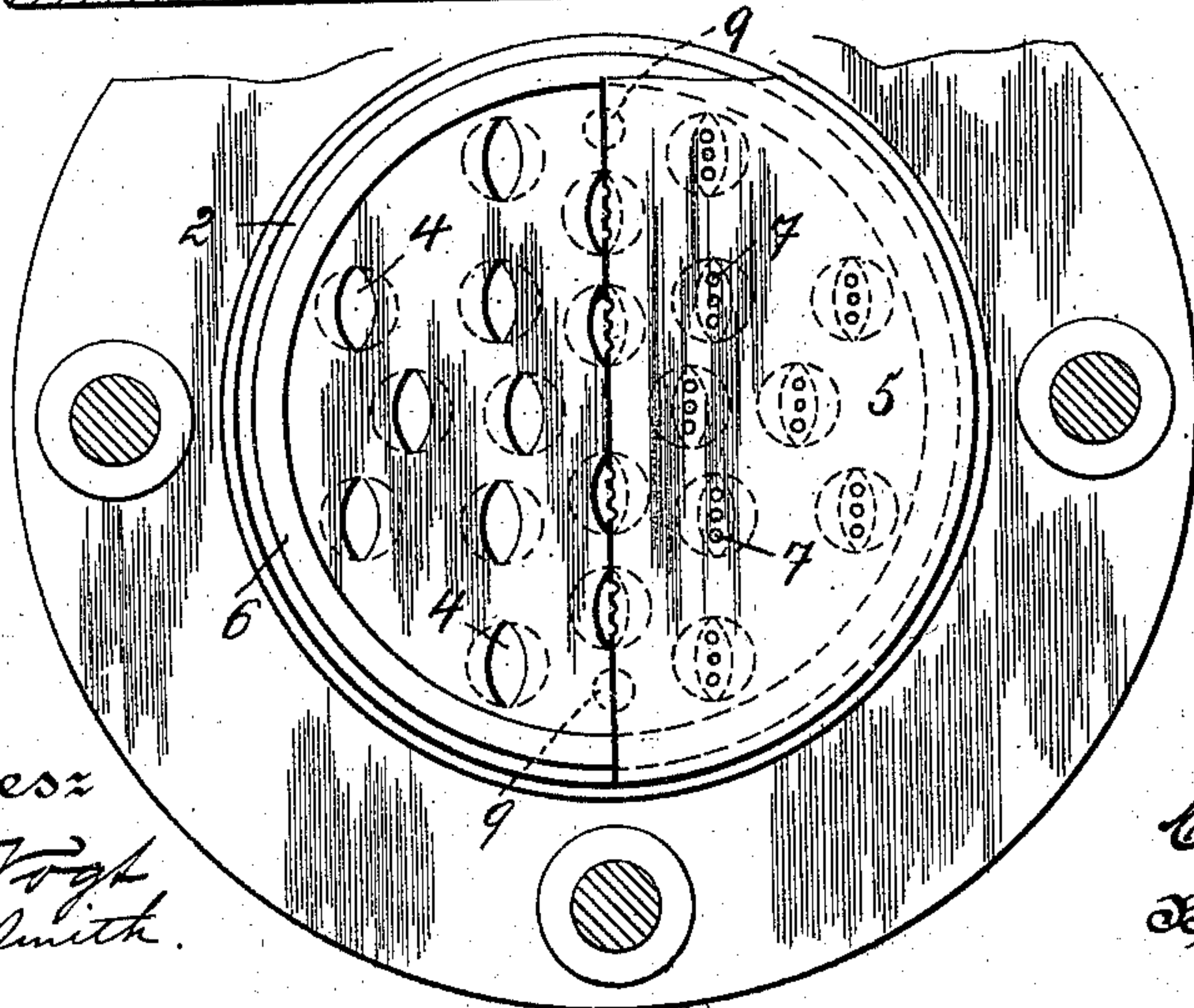


Fig. 5.



Fig. 1.



Witnesses:
Wilhelm Fock
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By J. Walter Dugan
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invention, #461,721, Jan. 20, 1891
Layne, #422, 221, Feb. 25, 1890 (Hall, Dec.)
Smith, et al., #33,055 Aug. 13, 1861 (18-30)
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Greene, #421,700, Feb. 18, 1890 (18-12)
No. 750,406.

Patented January 26, 1904.

UNITED STATES PATENT OFFICE.

ERNST SIMON, OF VIENNA, AUSTRIA-HUNGARY.

MOLD-PRESS FOR MAKING CIGARETTE OR CIGAR HOLDERS OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 750,406, dated January 26, 1904.

Application filed February 3, 1903. Serial No. 141,693. (No model.)

To all whom it may concern:

Be it known that I, ERNST SIMON, a subject of the Emperor of Austria-Hungary, residing at Vienna, Austria-Hungary, have invented certain new and useful Improvements in Mold-Presses for Making Cigarette or Cigar Holders or the Like, of which the following is a specification.

My invention has relation to a mold-press for forming from amber or ambroid mouth-pieces for cigars, cigarettes, pipes, or the like; and in such connection it relates to the general construction and arrangement of such an apparatus for the said purpose.

The principal objects of my invention are, first, to provide a mold-press consisting of a solid block having internal unconnected hollows or chambers in length corresponding to the height of the block and adapted to permit a mass of amber or ambroid to be forced into the hollows or chambers of said block to assume directly a form from which after finishing the same becomes the article required and of a density beyond the natural density of the amber or ambroid material, thereby enabling in the finishing of a high degree of luster or brilliancy being given thereto; second, to provide a press of the character described consisting of superposed blocks, each having a series of internal unconnected hollows or chambers in length corresponding to the height of each block, a series of hollows or chambers of one block registering with another series of the other block, but at the points of registry of one series with another series the openings being of less diameter than the outlets of one series with the inlets of the other series of hollows or chambers of said blocks, in superposed relationship to each other, in conjunction with hydraulic means for forcing a mass of amber or ambroid into the respective hollows or chambers of said blocks to render the mass of amber or ambroid unnaturally dense, the density of the molded amber or ambroid in the form of blanks, thereby enabling in finishing of a high degree of luster or brilliancy being given thereto; third, to provide a mold-press of the character described consisting of a series of superposed solid blocks provided internally with a series of

hollows or chambers in length corresponding to the heights of the blocks, perforated plates or disks interposed between said superposed blocks and registering with the outlets and inlets of the hollows or chambers of said blocks, a reservoir for containing a mass of amber or ambroid in conjunction with hydraulic means for forcing said mass into the hollows or chambers of said superposed blocks through the perforations of said interposed plates or disks to render the amber or ambroid dense beyond the natural density of the amber or ambroid material, and also so that in the parting of the blocks and removal of the plates or disks the molded blanks in their uniformly dense form in said hollows or chambers of the respective blocks will be readily separated from each other and their ends laid bare for ready removal of the blanks from said hollows or chambers of said blocks for finishing, and, fourth, to provide a mold-press of the character described for molding amber or ambroid into an article in blank form of a density beyond the natural density of the amber or ambroid material and without fins and adapted to be readily finished for use by boring the interior and notching or undercutting one end of the article when the same is to be used as a mouthpiece for cigars, cigarettes, pipe-stems, or the like.

My invention, stated in general terms, consists of a mold-press constructed and arranged in substantially the manner hereinafter described and claimed.

The nature and scope of my present invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, in which—

Figure 1 is a top or plan view of a mold-press embodying main features of my invention. Fig. 2 is a view, partly in vertical section and partly in elevation, of a mold-press of my said invention for forming blank mouth-pieces for cigars, cigarettes, pipes, or the like. Figs. 3 and 4 are side elevational views of the article produced in the mold-press, the view in Fig. 4 being at a right angle to Fig. 3; and Fig. 5 is a top or plan view of the article produced.

Referring to the drawings, 1, 2, 3, and 10 represent a series of separate solid or undivided mold-blocks superposed one upon the other. These mold-blocks, as illustrated, are of preferably cylindrical form and each contain, as illustrated, a series of cone-shape hollows or chambers 4 for the molding under preferably hydraulic pressure of a molten mass of amber or ambroid into blanks to become when finished mouthpieces for cigars, cigarettes, pipes, or the like. The hollows or chambers 4 of each solid block are such that the blanks produced therein will correspond in length with the height of the block, and both ends of the hollows or chambers are open. The hollows or chambers 4 of each series of superposed mold-blocks of the press are of such configuration as that the articles produced therein, as illustrated in Figs. 3, 4, and 5, will be complete as to structure, save necessary notching or undercutting of one end and boring internally of the structure produced. The blank thus produced, as illustrated in Figs. 3 and 4, will be tapered on two opposite surfaces thereof, with the lower end preferably made circular and the upper end made more or less elliptical, as particularly illustrated in Fig. 5 of the drawings.

The series of superposed mold-blocks may be arranged so as to be fitted and held to each other by studs 9 in order that the series of hollows or chambers 4 of each of the superposed mold-blocks may lie practically in the same plane or in vertical alinement with each other. Between contiguous superposed mold-blocks is interposed a thin perforated plate 5, preferably of steel, with packing-rings 6 fitting grooves of the mold-blocks. The plates 5 connect the hollows or chambers 4 of the superposed mold-blocks in line with each other, so as to cause the molten mass from the reservoir 12 through the sprues or gates 11 to be hydraulically pressed into the series of hollows or chambers 4 of the superposed mold-blocks 1, 2, 3, and 10 of the press, yet at the same time so arranged as to permit of the ready removal of each mold-block from the others in their superposed relationship to each other by simply loosening the nuts 13^a, mounted on the threaded standards 14 14^a, and withdrawing the spanning-plate 15. By arranging the mold-press as illustrated in Fig. 2, with one set of sprues or gates 11 for the series of hollows or chambers 4 of the respective superposed blocks, the waste of material is reduced to a minimum, for the reason that the waste is no greater from such series of hollows or chambers of the superposed blocks so arranged and illustrated in the drawings than it would be if but a single block was used, since one gate serves to supply the material to each vertical series of hollows or chambers superposed in the press, and the material in said gate forms the only waste that in reality occurs in the forming of the blanks in said

press. The thin plate 5, interposed between contiguous mold-blocks of the press in their superposed relationship to one another, is provided with one or more small holes 7, as clearly illustrated in Fig. 1, to allow under pressure the molten ambroid or amber to pass from one mold into the other with uniformity and in regulated quantity and at the same time leave but one or more small connecting parts between the mold-blocks, so that thereby is permitted ready separation of the mold-blocks from one another as required. Since the hollows or chambers 4 of the mold-blocks extend the entire height thereof and are separated from each other by the interposed plates 5, the article produced therein will have straight or flat bases and correspond in length with that of the hollows or chambers, and as the plates 5 have small openings therein the separation of the formed blanks in the hollows or chambers will be readily obtained thereby, due to the fact that it is necessary only to part the material at the perforations of the plates to remove the solid blocks of the press containing the formed blanks as occasion requires. As illustrated in the lower portion of Fig. 2, a number of small plates 8 can be used in lieu of the continuous plate 5, such small plates being preferably sunk into the mold-blocks.

It may be remarked that the hollows or chambers 4 of the mold-blocks 1, 2, 3, and 10 may be of any desired configuration for the production of mouthpieces or other similar articles—that is, either elliptical, circular, angular, or the like. As an example of stepped objects or articles that can be produced in the hollows or chambers of such mold-blocks may be mentioned the so-called “saddle-mouthpieces.” Mouthpieces produced from the materials or compositions described in a mold-press having the characteristic features of my invention are of great density, and hence a higher finish—that is, luster or brilliancy—can be given thereto, and, moreover, can be made so that in appearance they will be clear, cloudy, or variegated to closely imitate the expensive articles produced from amber.

I am aware that it is not new to mold amber under the application of heat and pressure in sectional or two-part molds into mouthpieces or the like; but amber articles so molded have fins and other forms of waste attached thereto when liberated from the molds that must be removed before being finished, which occasions unnecessary expense and labor that it is very desirable to avoid. Moreover, in sectional molds the amber cannot be given by the molding therein, as practice has proven, the requisite degree of density to insure any luster or brilliancy being given to the finished article without increasing the size of the fins and other objectionable forms of waste from the pressure exerted when produced according to the processes and apparatus described in the

United States Letters Patents No. 234,756, of November 23, 1880, No. 237,497, of February 8, 1881, and Nos. 461,721 and 461,722, of October 20, 1891, and therefore I disclaim as of
5 my invention any features set out in the said recited Letters Patents; but what I do claim as new at the date hereof is the production of blanks in a solid block having individual
10 unconnected hollows or chambers, used either singly or in supported relationship under heat and pressure sufficient to produce blanks for mouthpieces or other uses from amber or
15 ambroid of a density beyond the natural density of the amber or ambroid material and without fins or other objectional waste attached to the blanks in their formation, so that in finishing a high degree of luster or brilliancy may be
20 given thereto. The method of producing such articles according to my invention is a decided advance in the art when the nature and
characteristic properties of amber or ambroid are considered and as understood by those practically skilled in the art of producing such
articles.

25 Having thus described the nature and objects of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a mold-press of the character described, a series of solid blocks, each provided with one
30 or more hollows or chambers extending from end to end through the block, said blocks

superposed with their respective hollows or chambers in alinement and separated from each other in a plane at right angles to the
axis of the mold-chambers, combined with
35 means for forcing material to be molded into and through the mold-chambers in a direction parallel to the axis of said chambers.

2. In a mold-press of the character described, a series of superposed solid blocks, each pro-
40 vided with one or more mold-chambers extending from end to end through the block, said blocks separated from each other in a plane at right angles to the axes of the mold-
45 chambers of the blocks, a perforated plate or disk arranged between contiguous faces of adjacent blocks, all arranged so that the axes of the mold-chambers of the series of blocks
register with each other and with the perfora-
50 tions of the plates or disks, combined with means for forcing material to be molded through the mold-chambers in the blocks and
through the perforated disks or plates separat-
ing the blocks in a direction corresponding to
55 the axes of said chambers.

In testimony whereof I have hereunto affixed my signature, this 15th day of January, 1903, in the presence of two witnesses.

ERNST SIMON.

Witnesses:

FRANZ REITEN,
ALVESTO S. HOGUE.