

No. 753,010.

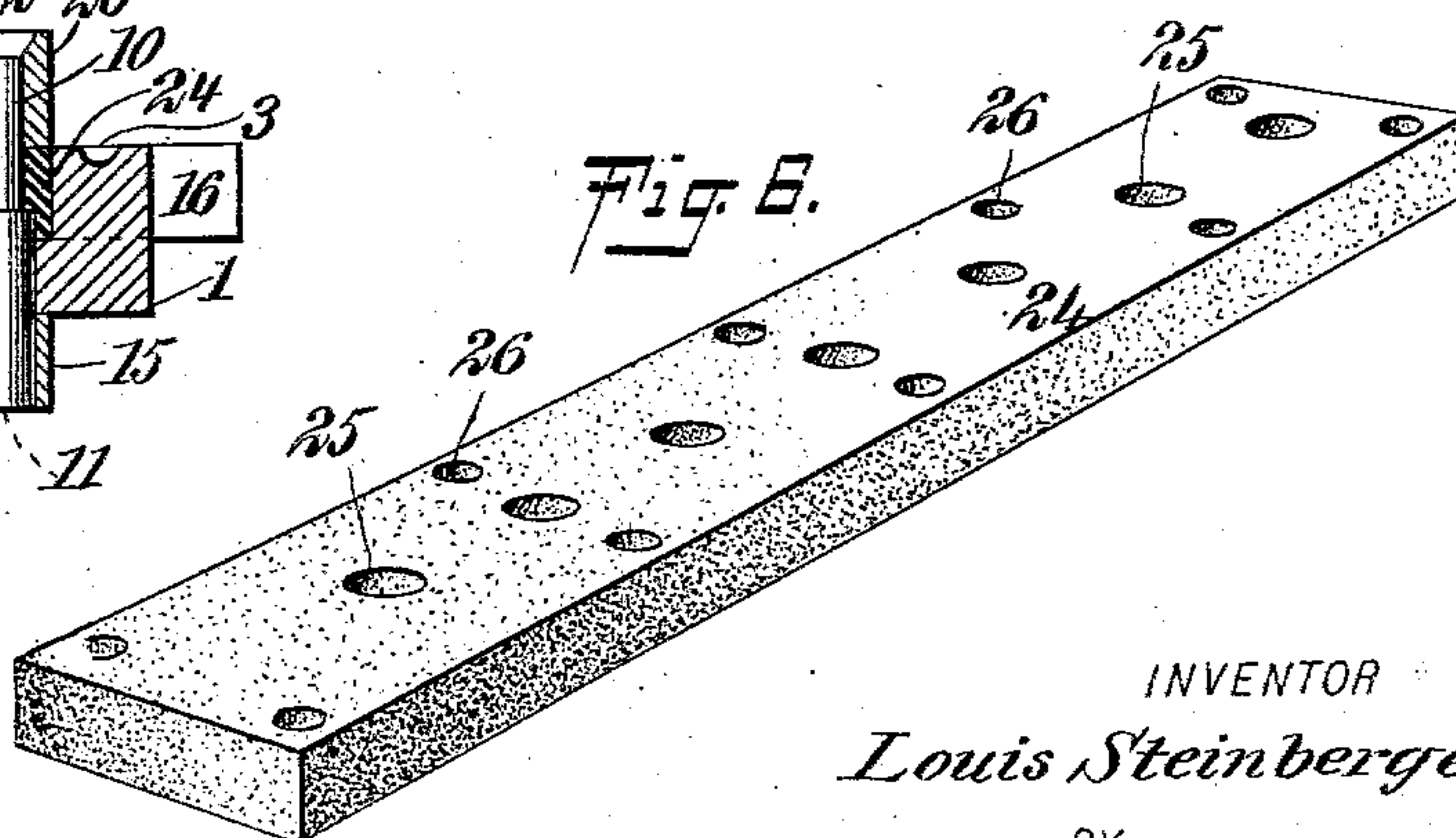
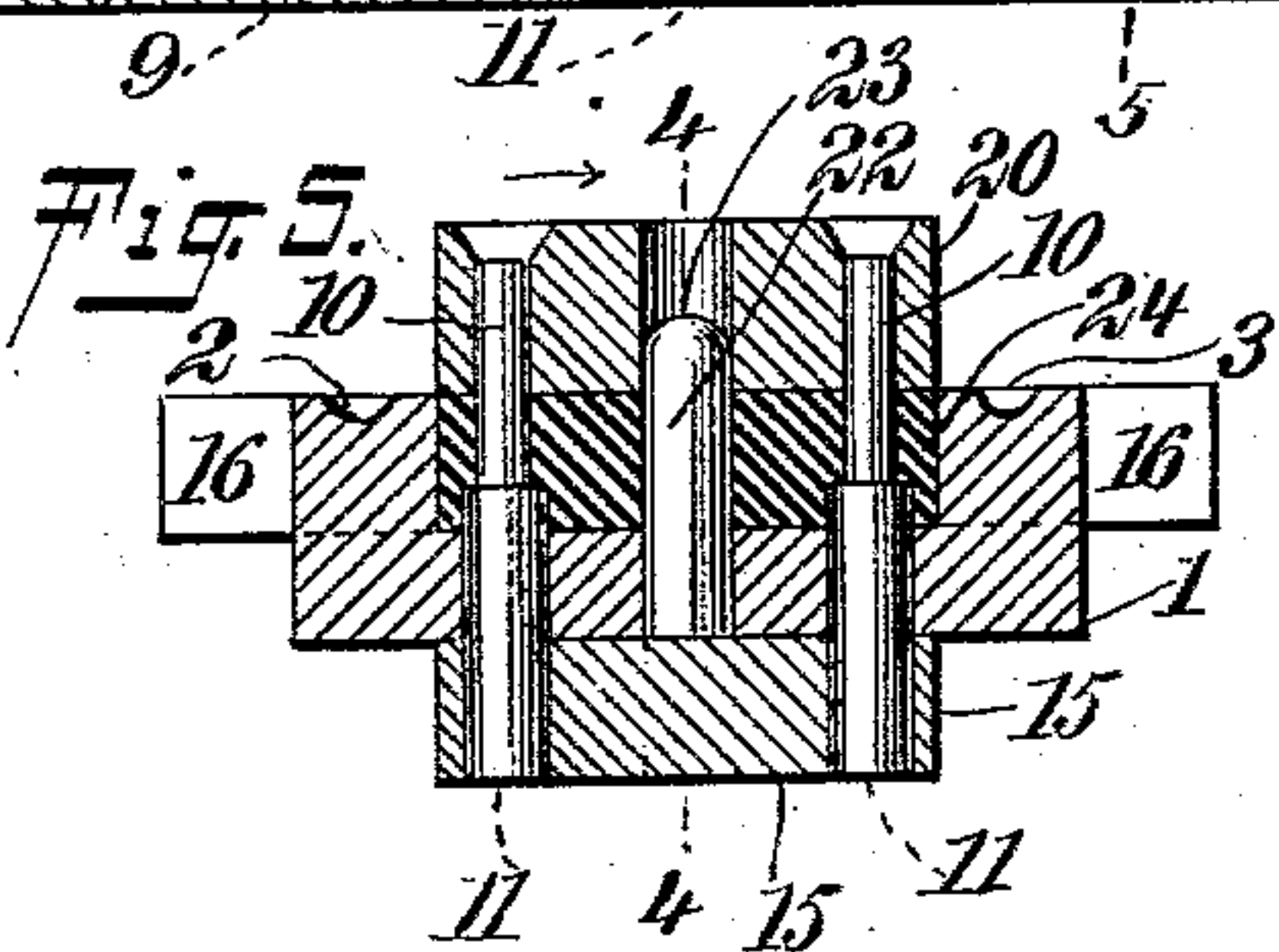
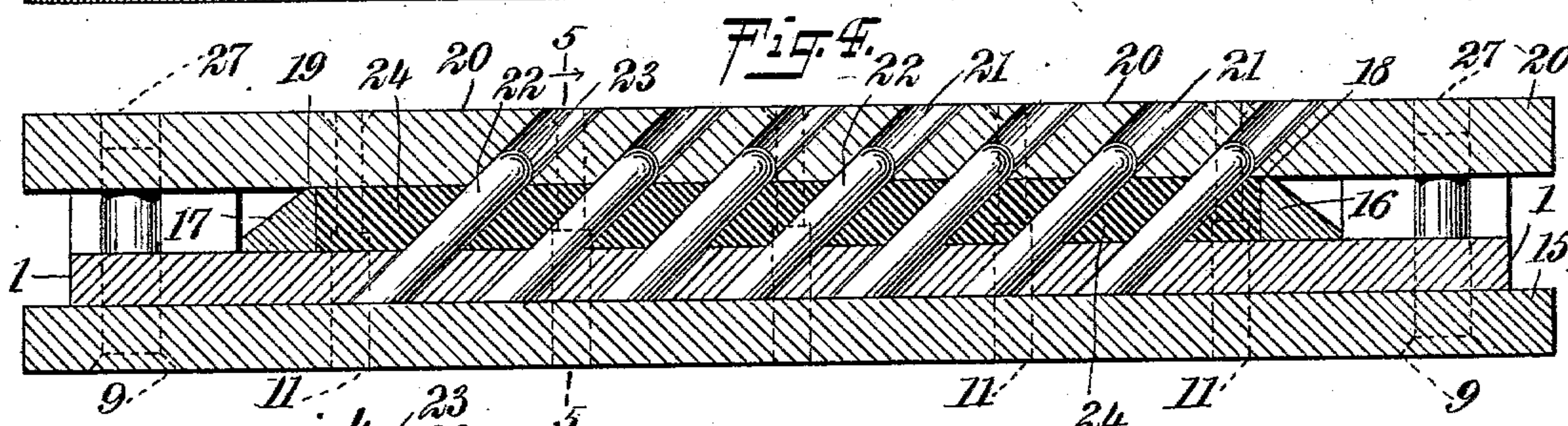
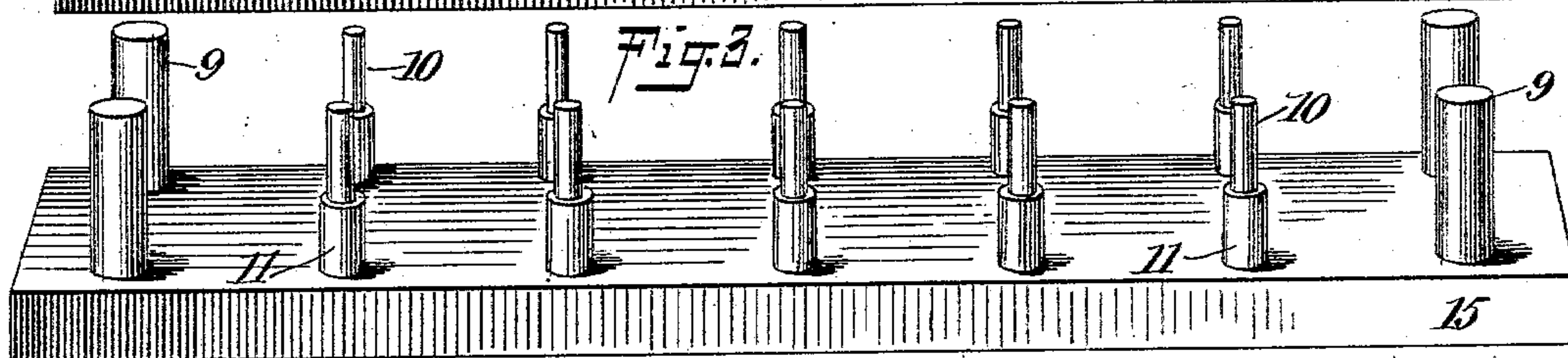
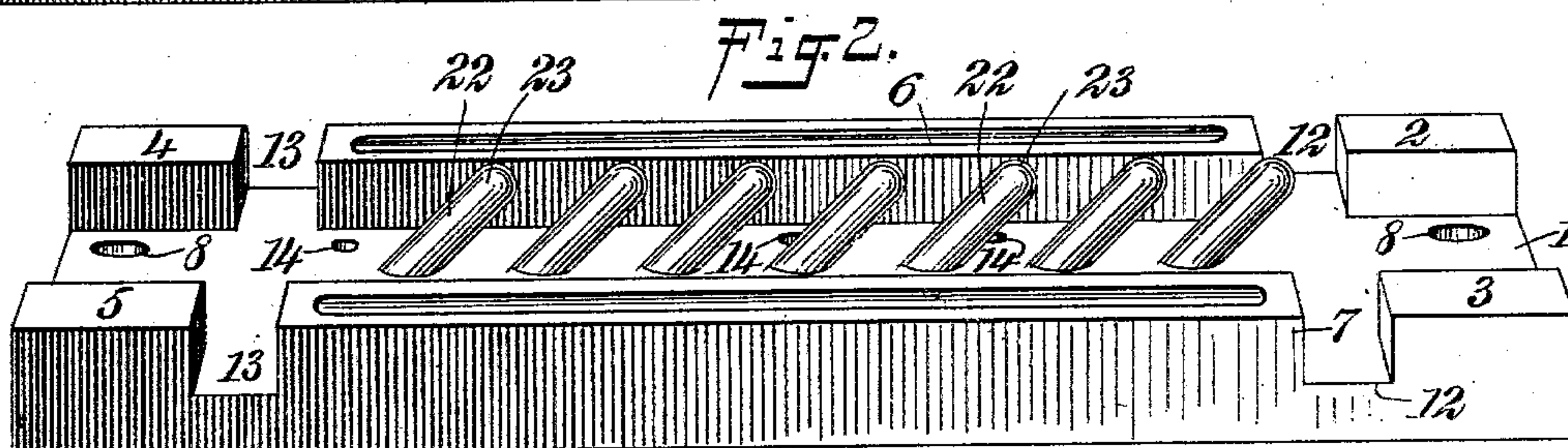
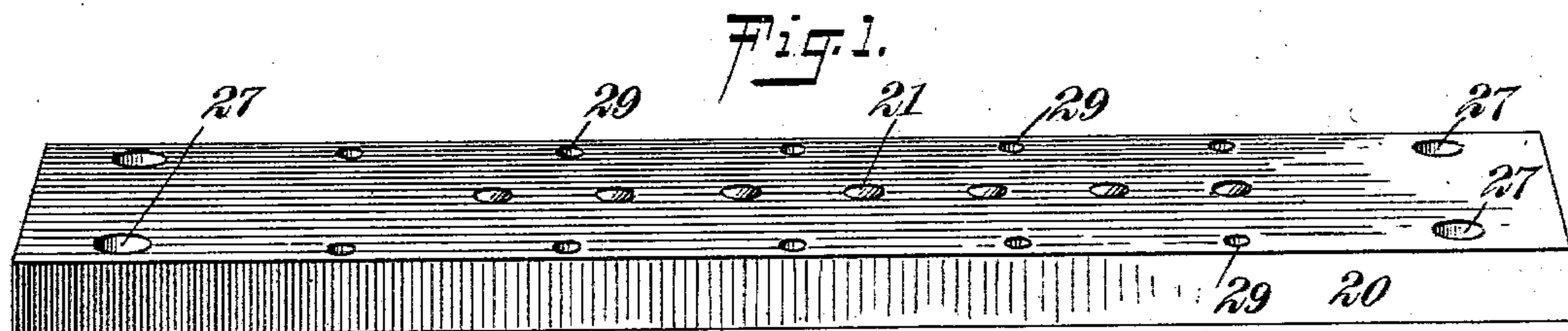
PATENTED FEB. 23, 1904.

L. STEINBERGER.

DIE FOR PRODUCING ARTICLES FROM PLASTIC MATERIALS.

APPLICATION FILED JULY 13, 1903.

NO MODEL.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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DIE FOR PRODUCING ARTICLES FROM PLASTIC MATERIALS.

SPECIFICATION forming part of Letters Patent No. 753,010, dated February 23, 1904.

Application filed July 13, 1903. Serial No. 165,249. (No model.)

To all whom it may concern:

Be it known that I, LOUIS STEINBERGER, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Die for Producing Articles from Plastic Materials, of which the following is a full, clear, and exact description.

My invention relates to dies for molding and admits of general use, but refers more particularly to a special type of die peculiarly adapted for molding perforated insulating-strips, and more especially adapted for telephone cable-boxes and the like. Heretofore strips of this character were produced from wood and hard rubber, which necessitated drilling of all the holes. That procedure, as is well known, is slow and expensive, and the locating of the holes in their proper positions and the retention of their proper diameters has always been very difficult, uncertain, and unsatisfactory.

The object of my invention is to produce by molding perforated insulating-strips having both vertical and slanting holes in an inexpensive and efficient manner and at the same time to obtain a positive uniformity in the location of the holes and their given diameters. The vertical holes are adapted for receiving fastening devices, and the slanting holes are intended for receiving the wires or cables. The insulating-strip is attached to the cable-box in such a manner that the central line of holes slant downwardly, thereby preventing the rain or moisture from entering the cable-box.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the top plate of the device. Fig. 2 is a perspective view of the box-like portion to be engaged by the top plate. Fig. 3 is a perspective view of the bottom plate provided with bosses and pins for securing the same relatively to the other portions. Fig. 4 is a longitudinal central section upon the line 4 4 of Fig. 5 looking in the direction of the arrow. Fig. 5 is a vertical

cross-section upon the line 5 5 of Fig. 4 looking in the direction of the arrow, and Fig. 6 is a perspective view of one of the perforated insulating-strips removed from the die or mold.

A box-like portion 1 is integrally provided with lugs 2 3 4 5 and with beads 6 7 in alignment with these lugs. The box-like portion 1 is also provided with comparatively large guide-holes 8 for engaging guide-pins 9. Rigidly mounted within a bottom plate 15 are cylindrical bosses 11, provided with comparatively small portions or pins 10, these pins 10 being free to pass through holes 14 in the box-like member 1. The lugs 2 3 4 5 are separated from the beads 6 7 by spaces 12 13, as indicated more particularly in Fig. 2, and in these spaces 12 13 are fitted angular spacing-blocks 16 17, provided, respectively, with comparatively sharp surfaces 18 19 to be engaged by the top plate 20, as will be understood by referring to Figs. 4 and 5. The top plate is provided with holes 21, disposed obliquely to the general direction of the plate.

Mounted within the box-like member 1 are inclined pins 22, each provided with a rounded end 23, these sloping pins being just long enough to allow the rounded end 23 to grip slightly into the holes 21, as will be understood by referring to Fig. 4. An insulating-strip 24 or other article to be molded is formed around the pins 22, so as to partially embed the same, as indicated in Fig. 4. Holes 25 in this strip are made by the inclined pins 22, and holes 26 are made by the smaller pins 10. The top plate 20 is provided with comparatively large guide-holes 27, which engage the guide-pins 9, and also with smaller guide-holes 29, which engage the tops of the smaller pins 10, the guide-holes 21 in said plate engaging the inclined pins 22.

My invention is used as follows: The bottom plate 15 is placed upon a table or other supporting-surface. The box-like member 1 is fitted neatly down upon the same, as indicated in Fig. 5, and the angular spacing-blocks 16 17 are placed within the spaces 12 13, the arrangement being such that the tops of the bosses 11 protrude slightly through the lower portion of the box-like member 1.

The plastic material is now poured or pressed into the mold thus formed by the box-like member 1, which, in effect, constitutes a sort of composite flask. The top plate 20 is next placed in the position indicated in Fig. 5, the guide-pins 9 passing into the guide-holes 27 and the inclined holes 21 taking a slight grip upon the rotund ends 23 of the pins 22. The pins 10 fit neatly in the holes 29, said pins virtually forming a part of the mold.

Referring to Figs. 3 and 5, it will be seen that the portions of the bosses 11 extending slightly above the box-like member 1 serve to make countersinks in the article 24, which is being molded. By this arrangement the holes 26 (shown in Fig. 6) are peculiarly fitted to receive screws, bolts, or other articles.

To remove the molded strip from the die, the top plate 20 is first removed. This is accomplished without difficulty, for the reason that the inclined pins 22 do not extend a great distance into the holes 21. The spacing-blocks 16 17 are next removed, and the bottom plate 15 and the box-like portion 1 are forced asunder, thereby withdrawing the pins 10 from the article molded. All that now remains is to separate the molded article from the box-like portion 1. This may be done by any mechanical instrument—such, for instance, as by striking the end of either the article molded or the box-like member, so as to disengage the two, whereupon the strip is easily forced off the inclined pins 22.

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

1. A die for molding, comprising a member provided with pins inclined obliquely, a second member provided with holes inclined obliquely for engaging said pins, and means for spacing said members apart so as to form a flask.

2. A die for molding, comprising a longitudinal member provided with pins rigidly connected therewith and inclined relatively thereto, a second longitudinal member provided with holes mating said pins and inclined obliquely, and spacing-blocks connected with one of said members and provided with surfaces to be engaged by the other of said members.

3. A die for molding, comprising mechanism provided with a surface to be engaged by the material to be molded, pins projecting from said surface and slanting relatively thereto, bosses projecting above said surface and provided with pins, said pins and said bosses respectively being so disposed as to be partially enveloped by said material for the purpose of forming holes and countersinks therefor, and means for bringing into engagement with said mechanism the material to be molded so as to partially embed said bosses and said pins.

4. A die for molding, comprising a bottom plate provided with pins, a box-like member to be fitted upon said bottom plate and provided with apertures engaging said pins, said

box-like member being further provided with pins inclined relatively to a surface of said box-like member, spacing-blocks for engaging said box-like member, and a top plate provided with apertures for engaging all of said pins, said top plate being free to rest upon said spacing-blocks.

5. A die for molding, comprising a longitudinal die member provided with pins inclined relatively thereto, a longitudinal die member provided with holes, the general direction of which is inclined relatively to said longitudinal member, and mechanism to be connected with said die members so as to form a flask.

6. A die for molding, comprising a bottom plate provided with bosses and with upright members, a box-like member to fit upon said bottom plate and provided with holes engaging said bosses, said box-like member being further provided with inclined members, and with holes for engaging said upright members, and spacing-blocks for engaging said box-like member and said top plate.

7. A die for molding, comprising a plurality of parts adapted to fit together and thus form a flask, one of said parts being provided with a flat surface and with pins mounted thereon and inclined relatively thereto, and spacing-blocks adapted to engage said parts.

8. A die for molding, comprising mechanism provided with pins inclined relatively thereto, said pins having rounded ends, a member provided with holes mating said pins and free to detachably engage the same, and mechanism for spacing said members apart, thereby forming a flask.

9. A die for molding, comprising a longitudinal member provided with pins inclined relatively thereto, said die being also provided with holes extending vertically, pins for engaging said holes, a second longitudinal member provided with holes for engaging all of said pins, and spacing-blocks and bearing mechanism connected with one of said members.

10. A die for molding, comprising mechanism provided with a surface to be engaged by the material to be molded, slanting pins free to project from said surface, bosses projecting above said surface and provided with pins, said pins and said bosses respectively, and also said slanting pins, being so disposed as to be partially enveloped by said material for the purpose of forming holes and countersinks therefor, and means for bringing into engagement with said mechanism the material to be molded.

11. A die for molding, comprising mechanism provided with upright pins and also with slanting pins, a member provided with holes for engaging all of said pins, and means for spacing said mechanism relatively to said member.

12. A die for molding, comprising mechanism provided with upright pins and with pins

disposed obliquely to said upright pins, a member provided with holes disposed at different angles for the purpose of mating said upright and said oblique pins, and means for
5 detachably securing said members together.

13. A die for molding, comprising a plurality of separable parts adapted to fit and form a box-like member, said box-like member having both upright and slanting pins and
10 having upright and slanting holes for mating

said pins, and means for closing said box-like member.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LOUIS STEINBERGER.

Witnesses:

WALTON HARRISON,

EVERARD BOLTON MARSHALL.