

No. 675,775.

Patented June 4, 1901.

J. G. GILMER.

APPARATUS FOR FILLING CAPSULES.

(Application filed Oct. 29, 1900.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

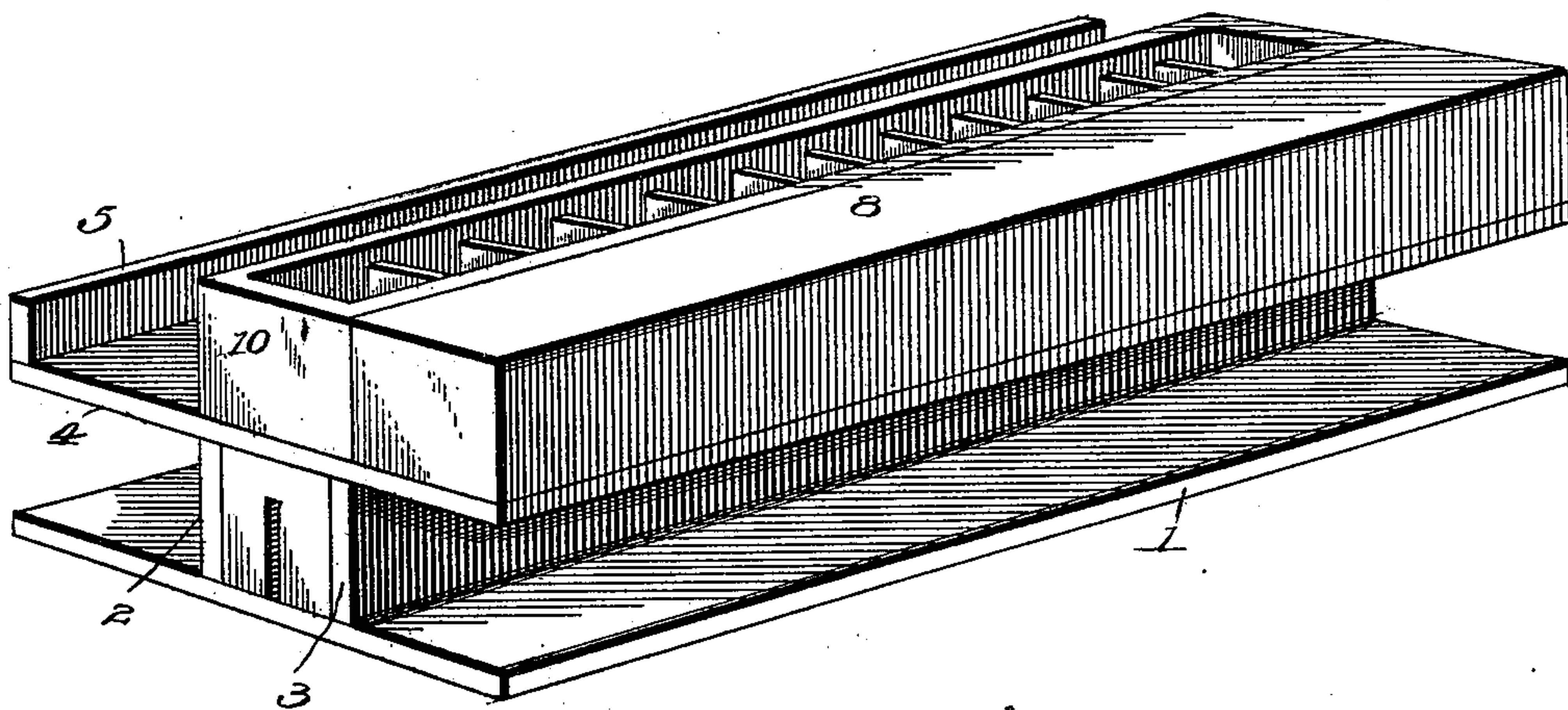


Fig. 2.

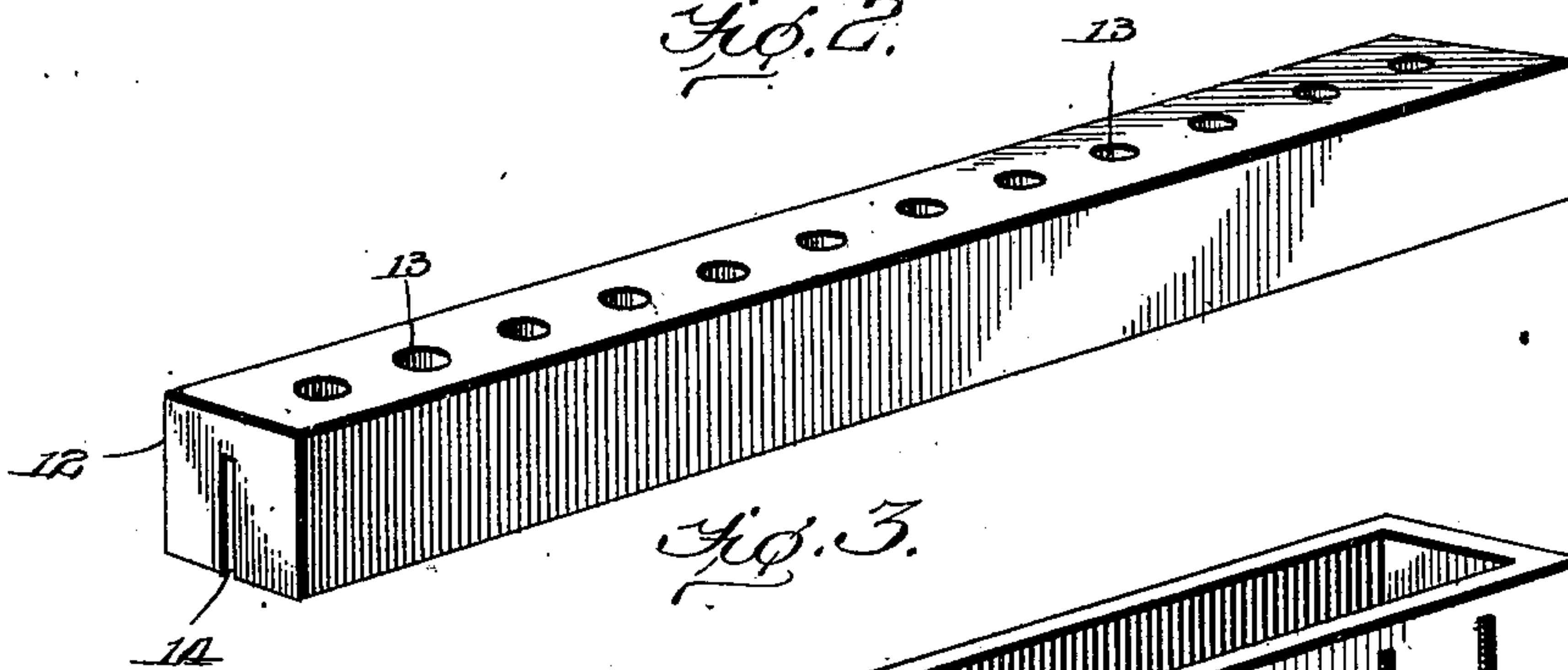


Fig. 3.

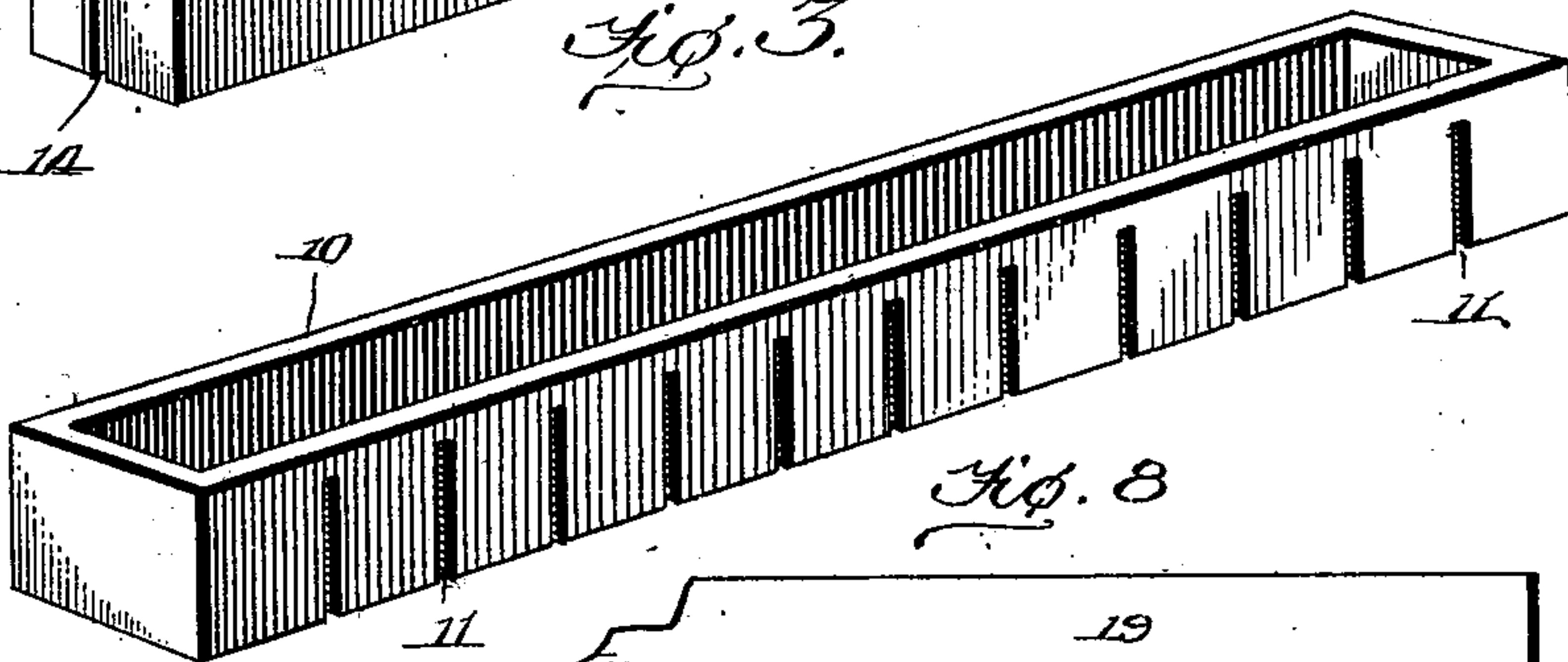
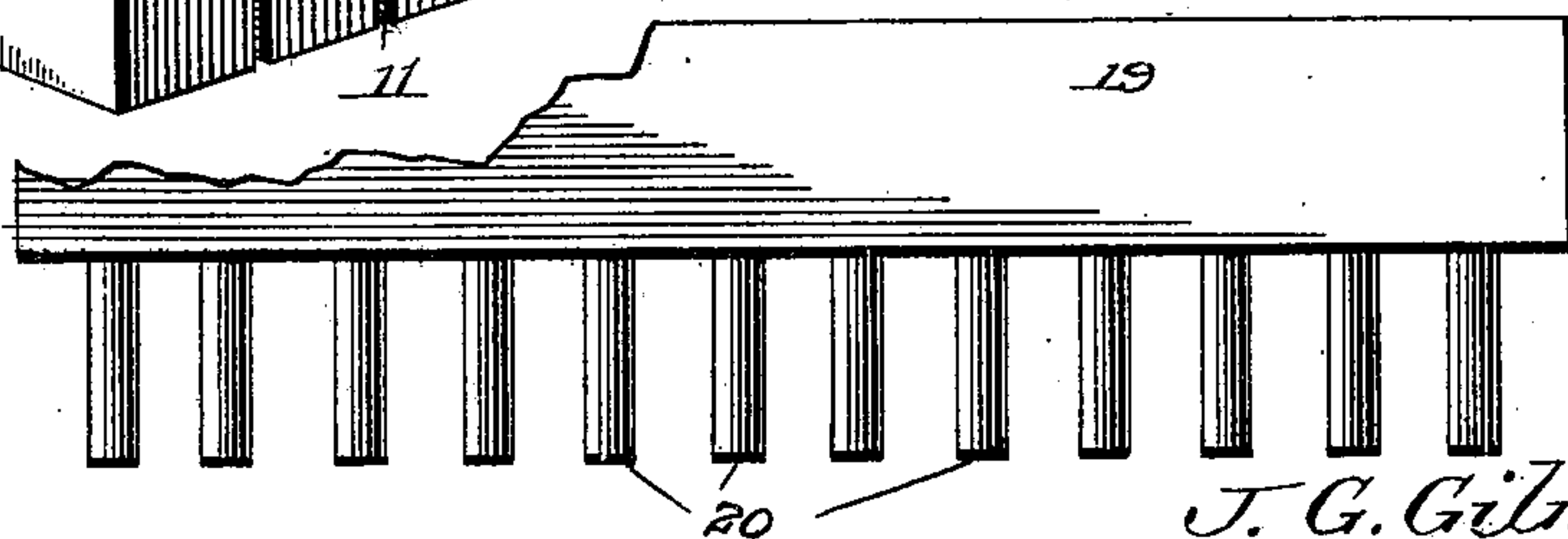


Fig. 4.



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2 Sheets—Sheet 2.

Fig. 4.

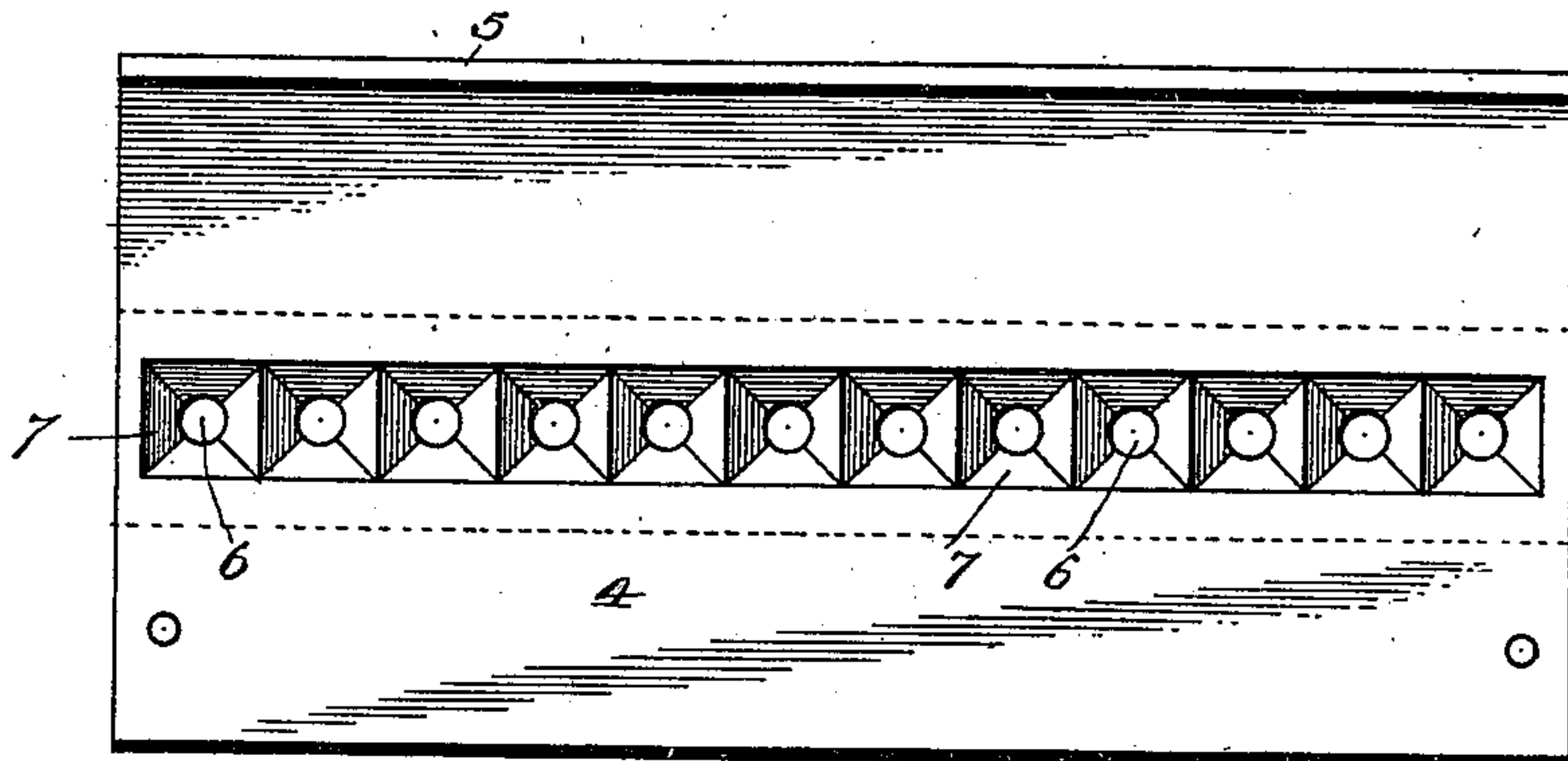


Fig. 5.

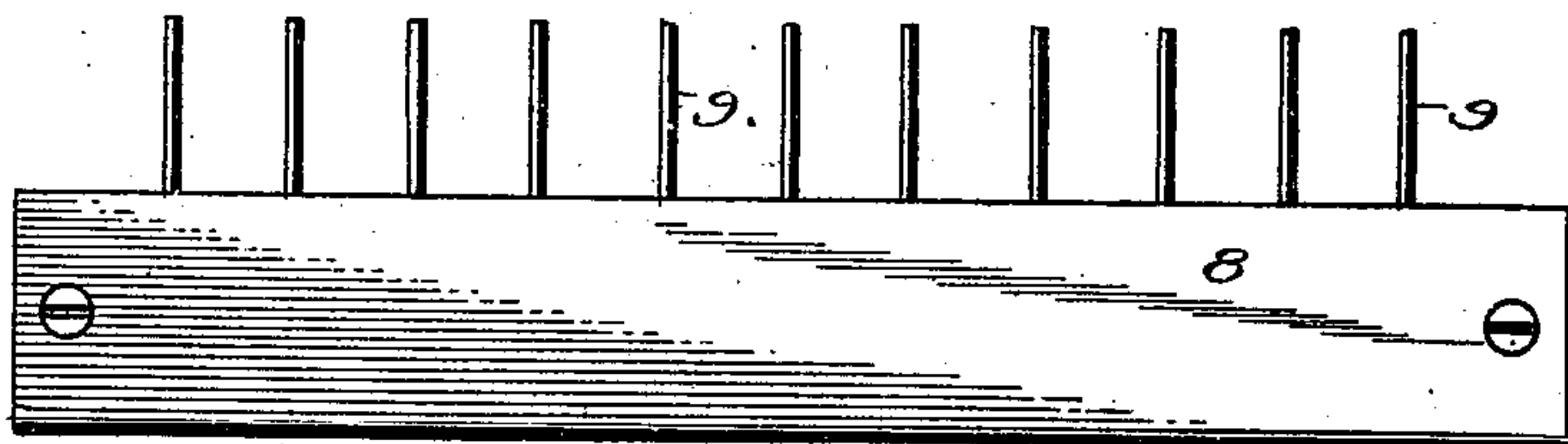


Fig. 6.

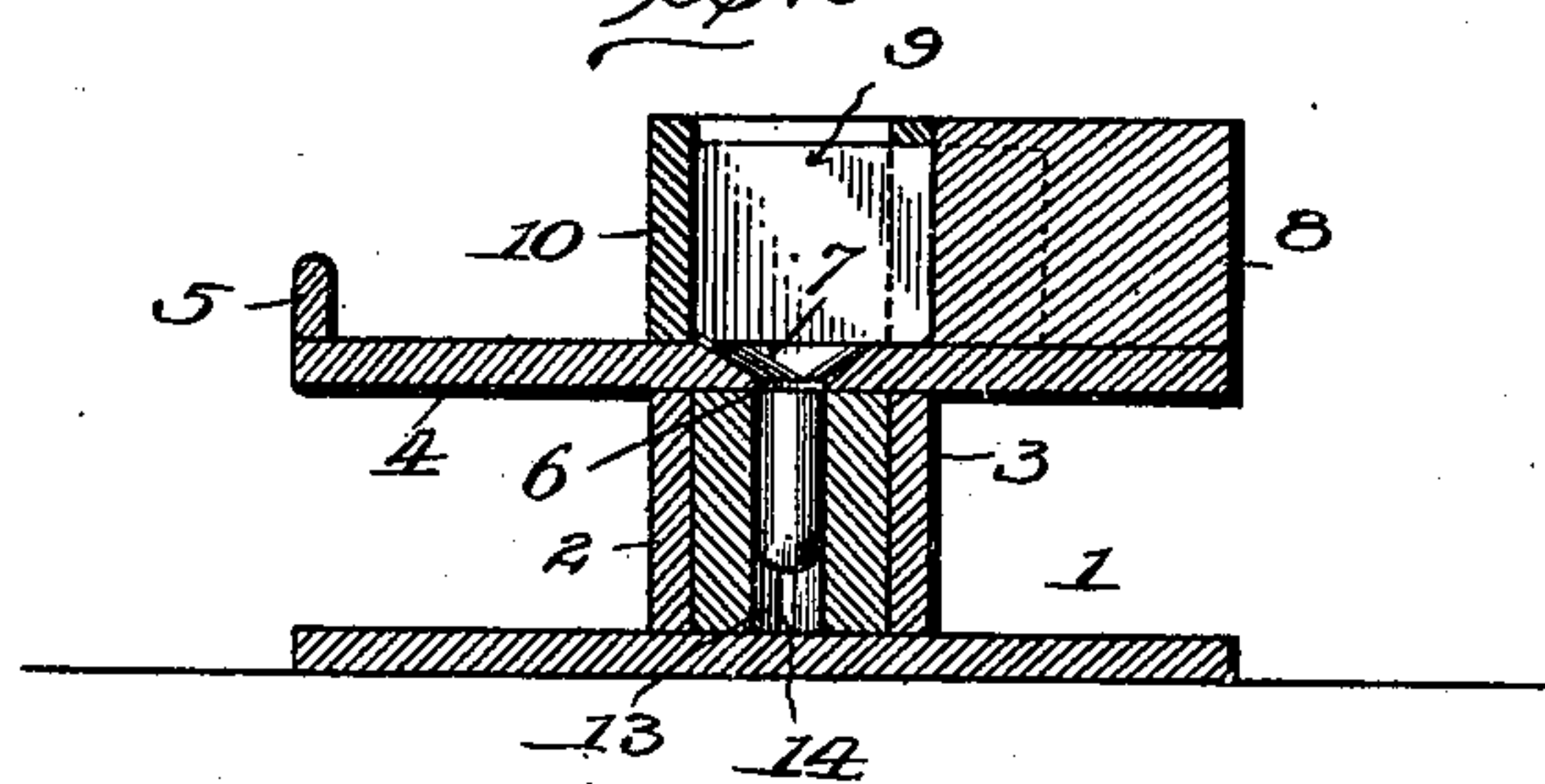
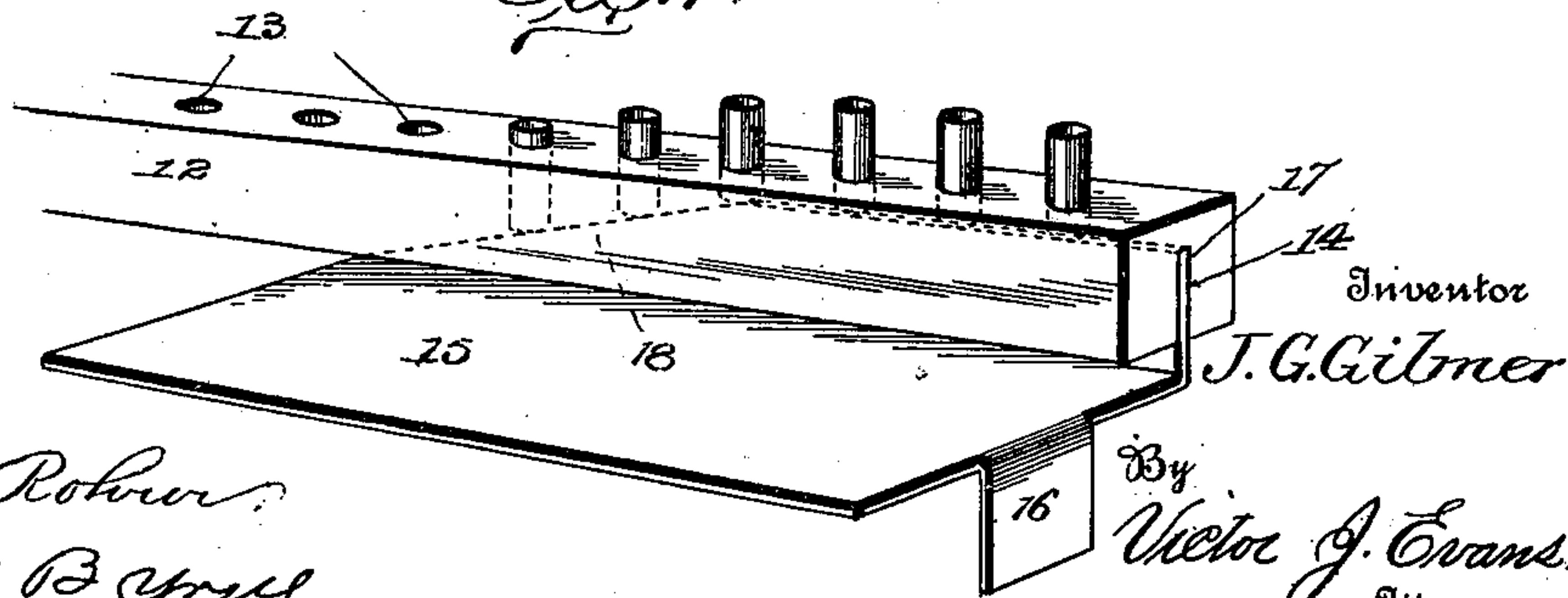


Fig. 7.



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APPARATUS FOR FILLING CAPSULES.

SPECIFICATION forming part of Letters Patent No. 675,775, dated June 4, 1901.

Application filed October 29, 1900. Serial No. 34,810. (No model.)

To all whom it may concern:

Be it known that I, JOHN G. GILMER, a citizen of the United States, residing at St. Petersburg, in the county of Hillsboro and State of Florida, have invented new and useful Improvements in Apparatus for Filling Capsules, of which the following is a specification.

My invention relates to apparatus for filling capsules; and its object is to provide convenient and effective means for filling capsules for medicinal use which may be constructed at small expense and will be especially adapted for the use of retail druggists.

The construction of the improvement will be fully described hereinafter in connection with the accompanying drawings, forming a part of this specification, and its novel features will be defined in the appended claims.

In the drawings, Figure 1 is a view in perspective of a device embodying the invention. Fig. 2 is a perspective view of the movable block formed with perforations to receive the capsules. Fig. 3 is a similar view of a sliding receptacle which constitutes the hopper of the device. Fig. 4 is a plan view of the apparatus with the parts removed therefrom. Fig. 5 is a plan view of a strip of block provided with projecting parallel plates. Fig. 6 is a transverse section of Fig. 1. Fig. 7 is a perspective view illustrating the means for ejecting the capsules from the holder, and Fig. 8 is a side elevation of a device for packing the medicine into the capsules.

The reference-numeral 1 designates the base of the filler, to which are secured parallel walls 2 and 3.

4 designates a board or table supported upon the walls 2 and 3 and formed at one side with a vertical flange 5. The table 4 is formed with a series of openings 6, and the upper surface of the table adjacent to the openings 6 is hollowed out to form hopper-shaped depressions 7.

Secured to one side of the table 4 is a block 8, from the inner side of which project a plurality of parallel plates 9, and between the block 8 and the flange 5 of the table is located a movable frame 10 of rectangular form, open at top and bottom and formed on its inner side with a plurality of slots 11, through which the plates 9 are adapted to extend, said

plates serving as vertical partitions to divide the movable frame 10 into independent compartments.

12 designates the capsule receiver or holder, comprising a rectangular block or bar formed with a series of circular openings 13, which are vertically disposed and parallel to one another and of a size to receive the capsules, as indicated in Figs. 6 and 7.

The block or holder 12 is formed on its under surface with a continuous slot 14, which extends centrally throughout the length of the block, intersecting the openings 13, as shown in Fig. 6.

In Fig. 7 I have shown a device for raising the capsules into position to be capped after being filled and which comprises a plate 15, having a depending projection 16 at one end and a flange 17 at one side, said flange being beveled for a portion of its length, as shown at 18 in Fig. 7 by dotted lines.

19 designates a block from the under surface of which project a plurality of rods or pins 20 of varying diameter and so spaced apart as to adapt them to enter the openings in the holder 12 to pack the medicine in the capsules.

The operation of the apparatus constructed as above described is as follows: The capsules to be filled are uncapped and placed within the opening 13 of the holder or block 12, as illustrated in Fig. 6, after which the holder is placed within the space between the walls 2 and 3, so that the upper open ends of the capsules register with the openings 6 in the table 4. The frame 10 is then moved against the flange 5, which serves as a stop, and the medicine is placed within said frame and carefully leveled, so that the frame will be evenly filled. The frame 10 is then moved toward the block 8, and the plates 9 enter the slots 11, cutting through and dividing the medicine into equal parts. The contents of the frame 10 drop through the opening 6, being guided by the hopper or funnel-shaped depressions 7. The plunger or packer (shown in Fig. 8) is then used to force the medicine through the holes 6 and into the capsules, after which the packer is removed and the holder or block 12 is withdrawn and placed upon the plate 15, which has meanwhile been placed upon the top of the frame 10, with its

depending portions 16 extending down within the frame, which it snugly fits. By moving the block 12 longitudinally in contact with the flange 17 of the plate 15, which extends into the slot 14, the capsules are raised into position to be capped, as clearly illustrated in Fig. 7. After the filled capsules have been capped, the holder-block 12 is inverted to allow the completed capsules to drop therefrom.

The plate 15 serves a further purpose than that above described, for when it is desired to fill a less number of capsules than the capacity of the holder 12 the plate 15 is placed upon the frame 10 with its depending arm 16 extending into the frame, and by sliding said plate 15 longitudinally the arm or depending portion 16 may be brought opposite any one of the slots 11, thus serving as a partition to divide the frame 10 and reducing the capacity of the device to adapt it to fill any number of capsules less than the full capacity of the frame 10.

I claim—

1. A capsule-filling apparatus comprising a base; parallel walls rising therefrom; a table supported by said walls and formed with a plurality of perforations; a capsule-holder formed with openings adapted to register with those in said table; a movable frame or receptacle for medicine; and means for dividing said frame or receptacle into independent compartments.

2. A capsule-filling device comprising a base; parallel vertical walls rising therefrom; a table supported upon said walls and formed with a series of openings and hopper-shaped depressions surrounding said openings; a removable block or holder formed with openings adapted to register with openings in the table, and with a longitudinal slot on its under surface extending throughout the length of the block; a frame to contain medicine movably supported on said table and formed

on one side with parallel slots; a block secured to one side of the table and having a plurality of plates projecting therefrom adapted to enter the slots of said frame.

3. A capsule-filling device comprising a base; parallel walls rising therefrom; a table supported upon said walls formed at one edge with a vertical projecting flange and with a central row of openings; a block or capsule-holder formed with openings adapted to register with those in the table and formed on its under surface with a continuous vertical slot; a movable frame supported upon the table and formed at one side with parallel slots; a block secured to the table and having a plurality of plates projecting therefrom adapted to enter the slots of the movable frame; and means for raising the capsules out of the openings in the capsule-holder.

4. A capsule-filling device comprising a base; a plurality of walls rising therefrom; a table supported by said walls and formed centrally with a row of openings surrounded by hopper-shaped depressions; a flange projecting from one side of the table; a block secured to the opposite side of the table; parallel plates projecting from the inner side of said block; a movable frame arranged on said table and formed with slots through which said parallel plates project; a capsule-holder comprising a block formed with a plurality of openings adapted to register with openings in the table and with a continuous vertical slot; and a device for raising the capsules into position to be capped, comprising a plate having a depending arm at one end and a vertical flange along one side, said flange being beveled or inclined.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN G. GILMER.

Witnesses:

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J. P. GREENLEAF.