

No. 633,113.

Patented Sept. 19, 1899.

G. H. BEATTY.  
APPARATUS FOR PACKING CARTRIDGES.

(Application filed July 3, 1899.)

(No Model.)

2 Sheets—Sheet 1.

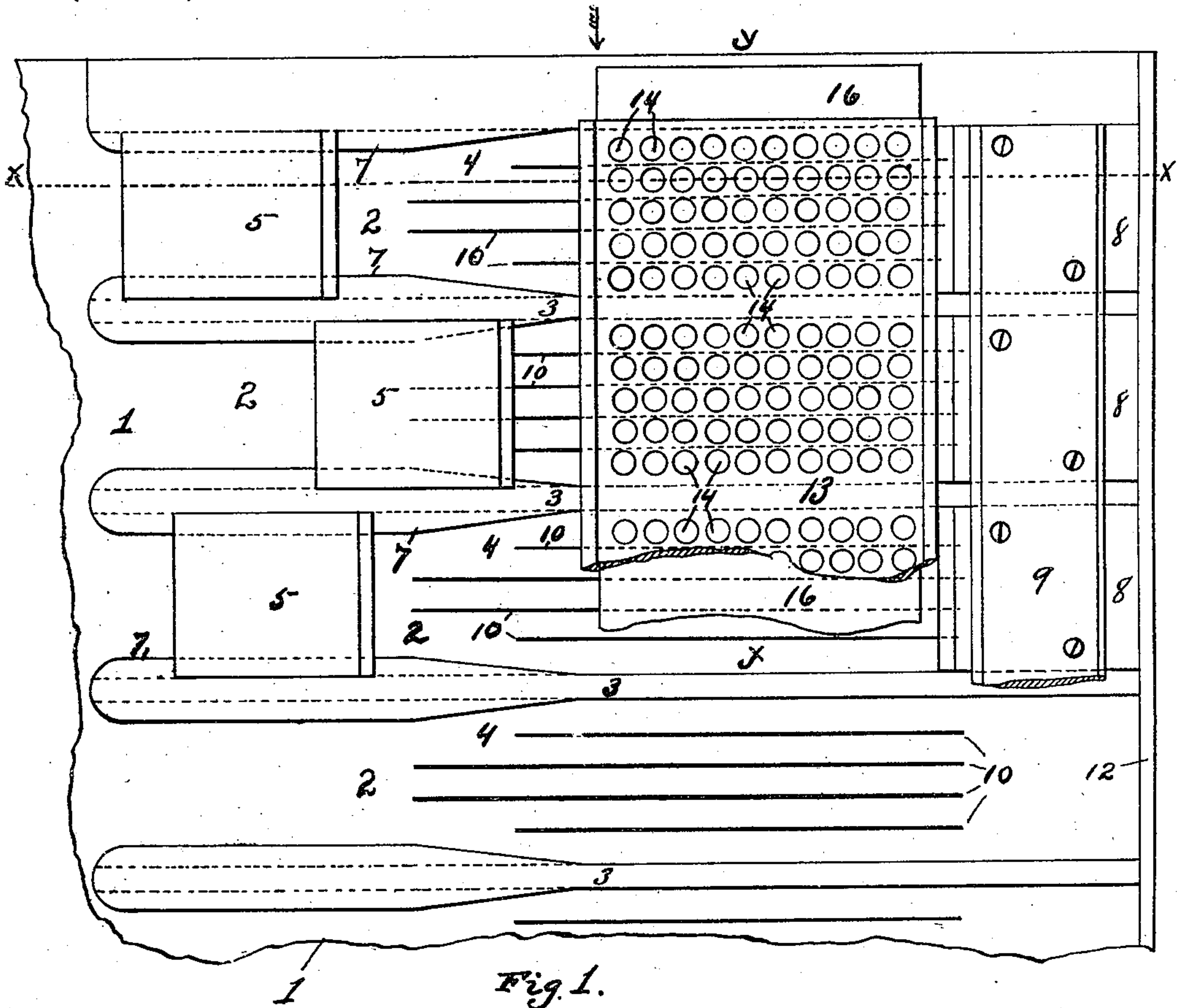


Fig. 1.

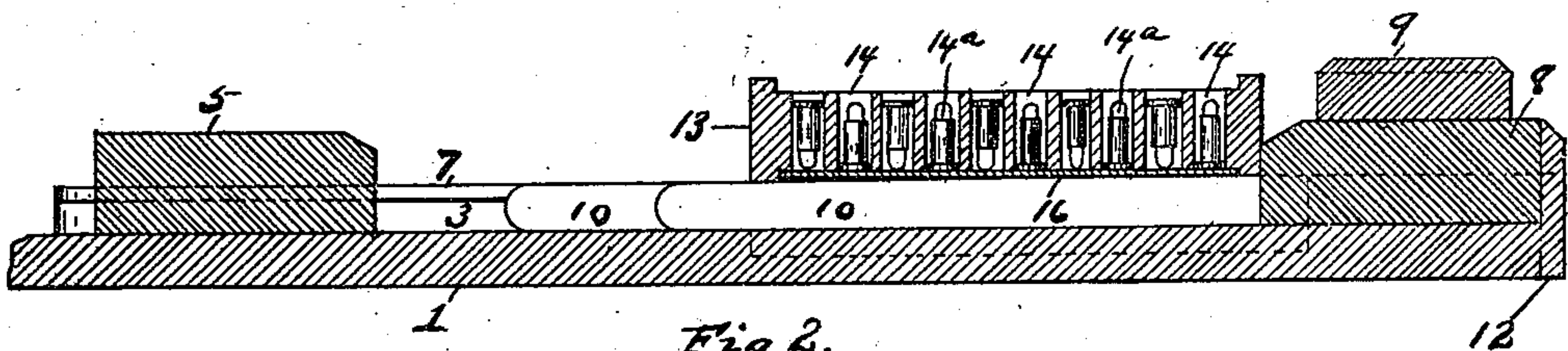


Fig. 2.

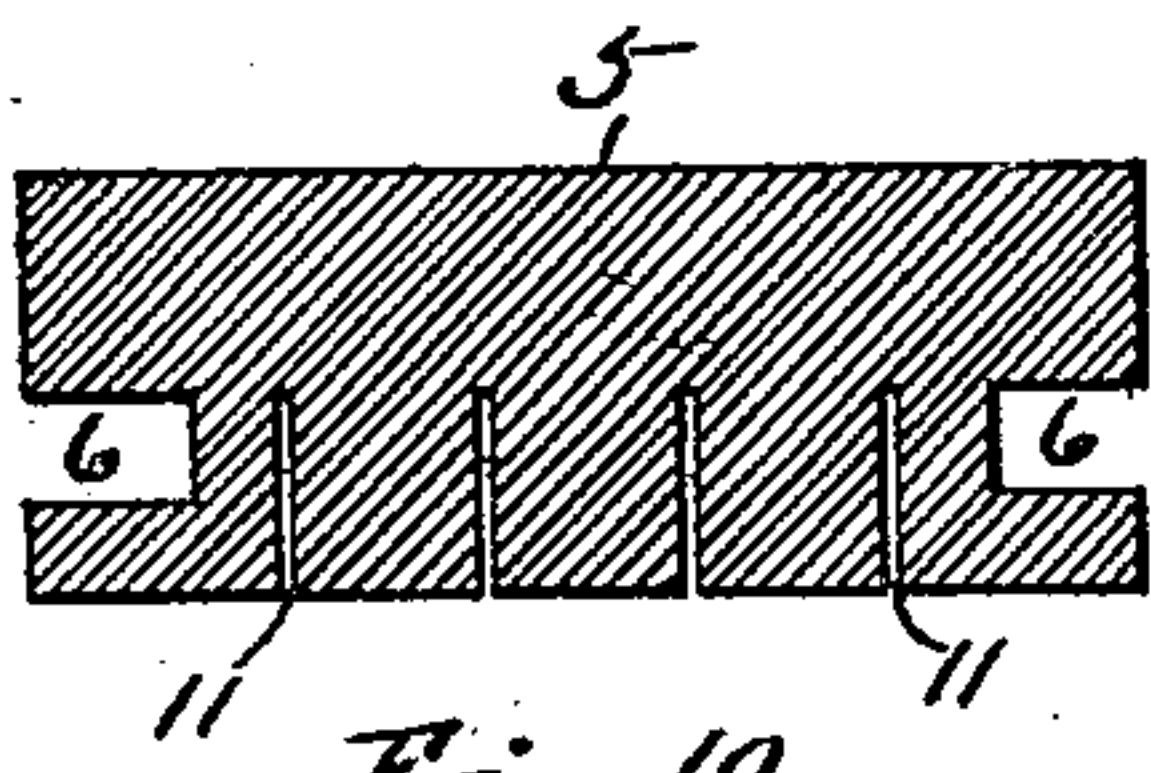


Fig. 10.

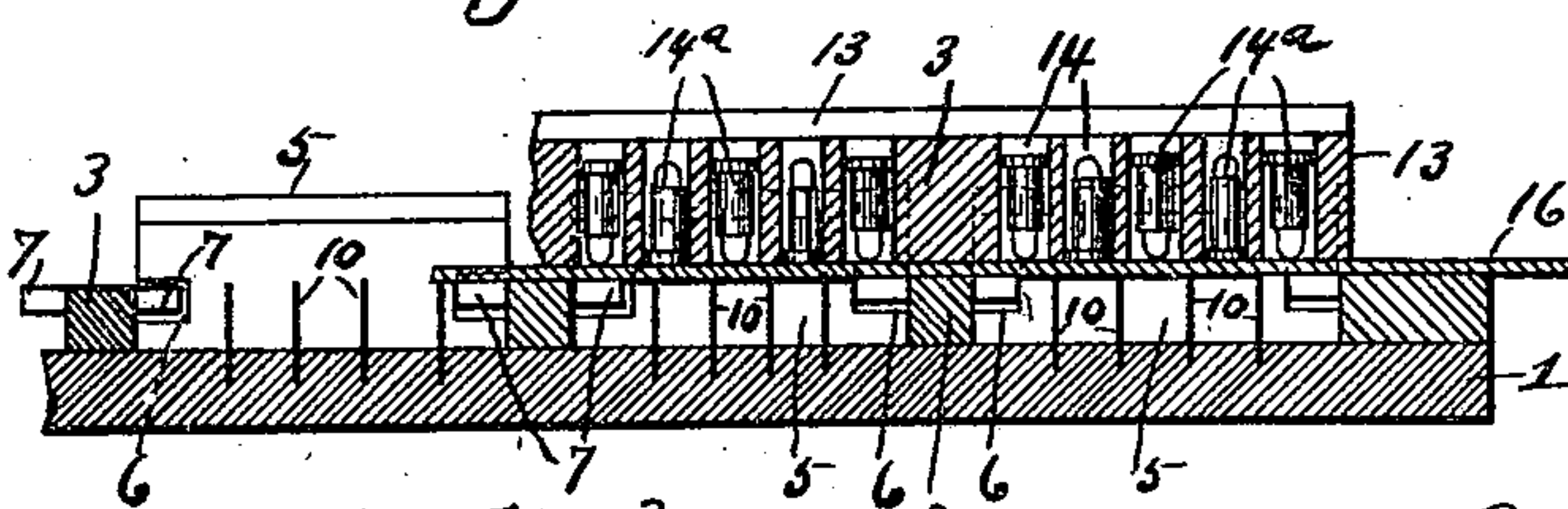


Fig. 3.

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2 Sheets—Sheet 2.

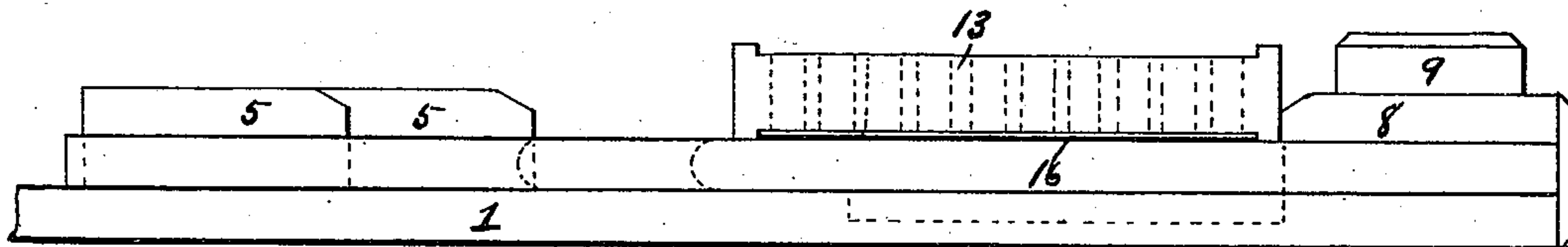


Fig. 4.

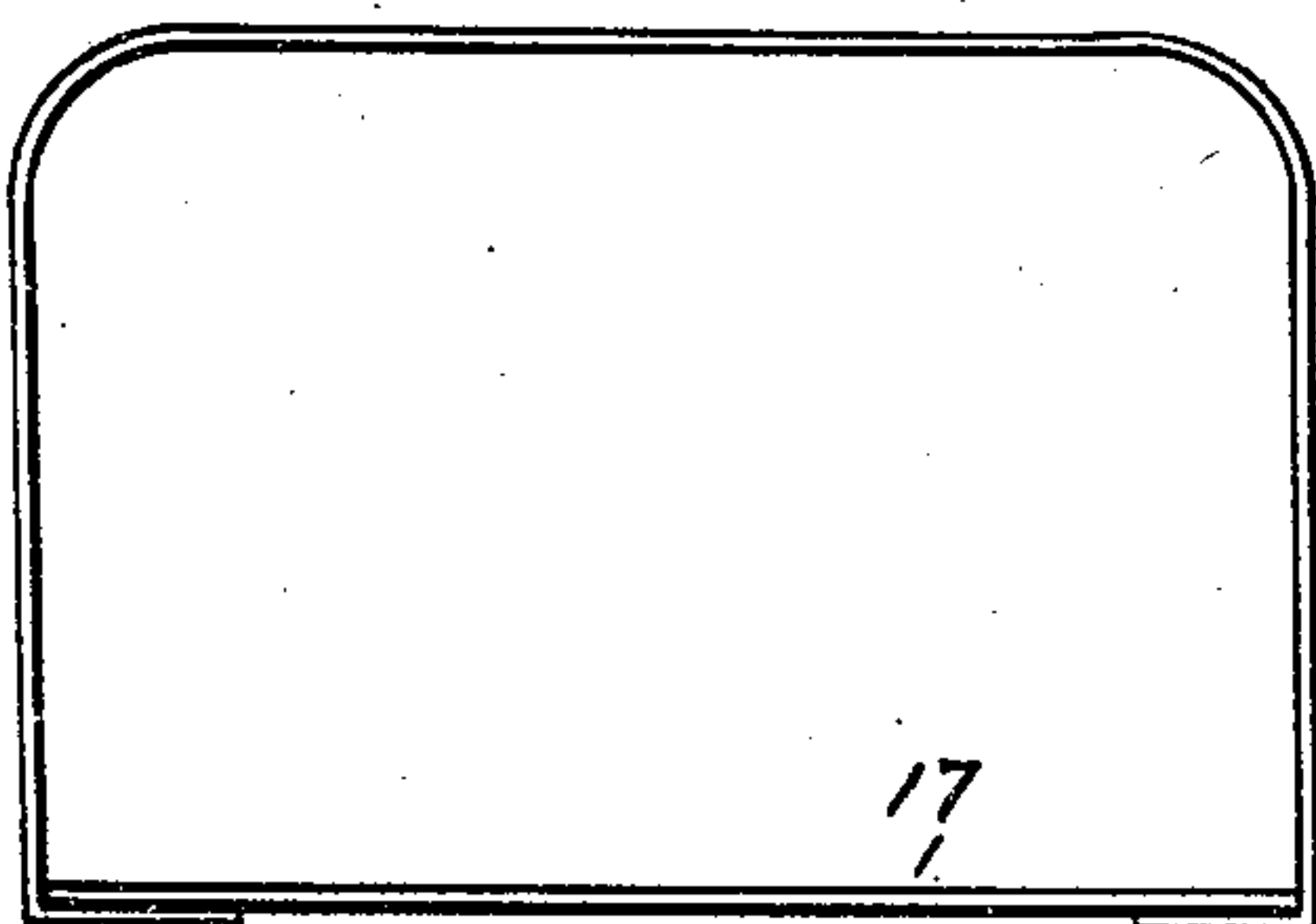


Fig. 6.

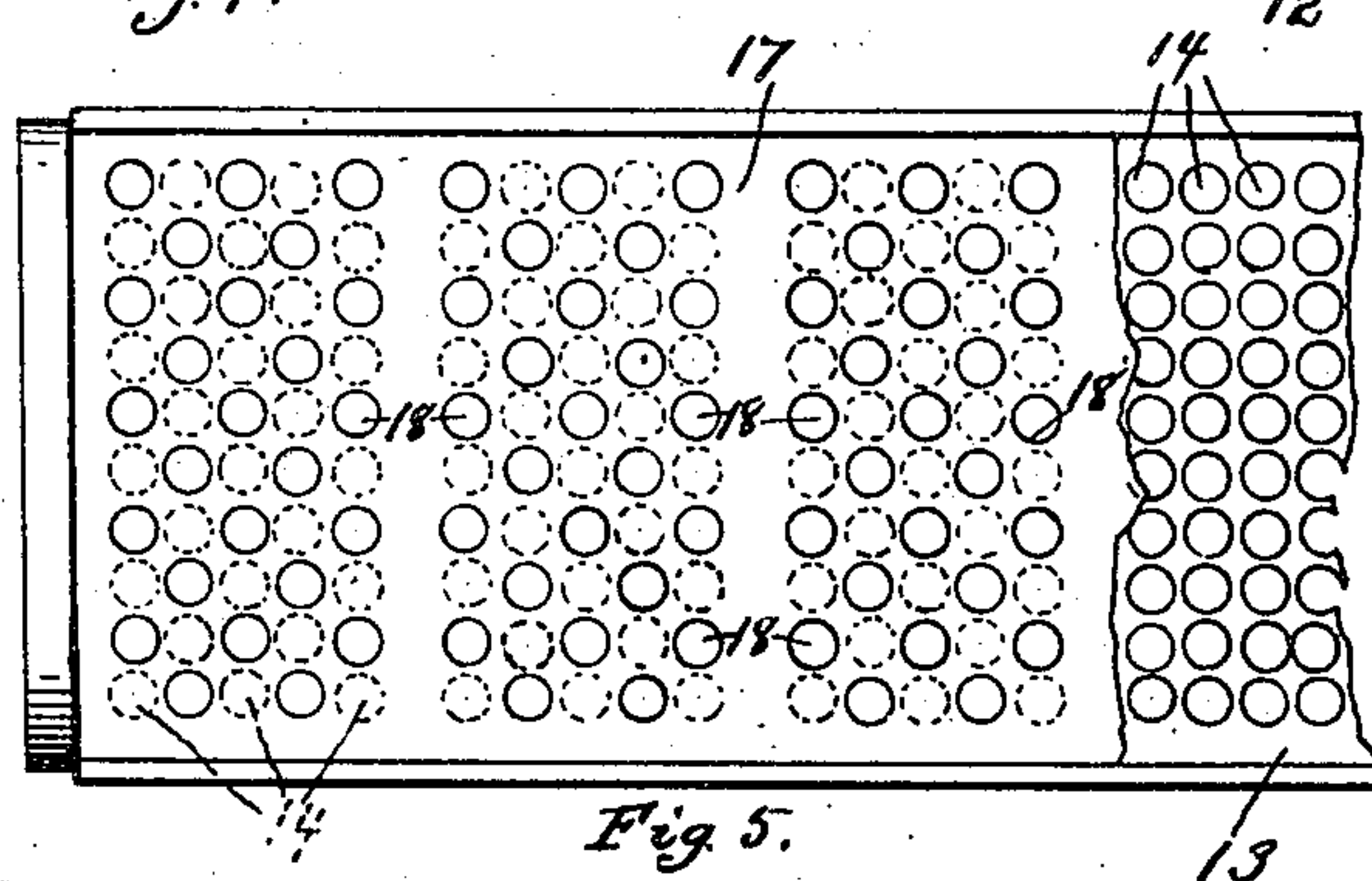


Fig. 5.

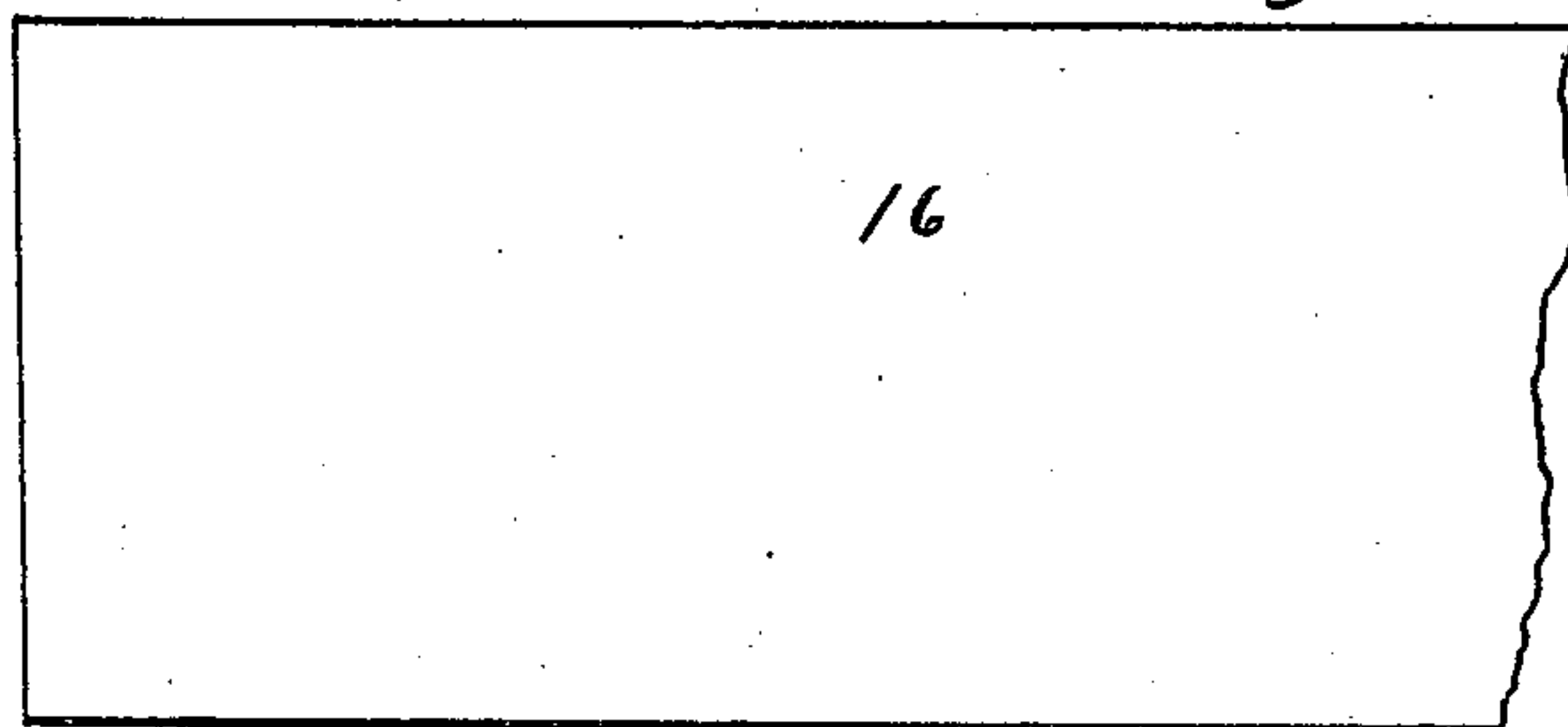


Fig. 7.

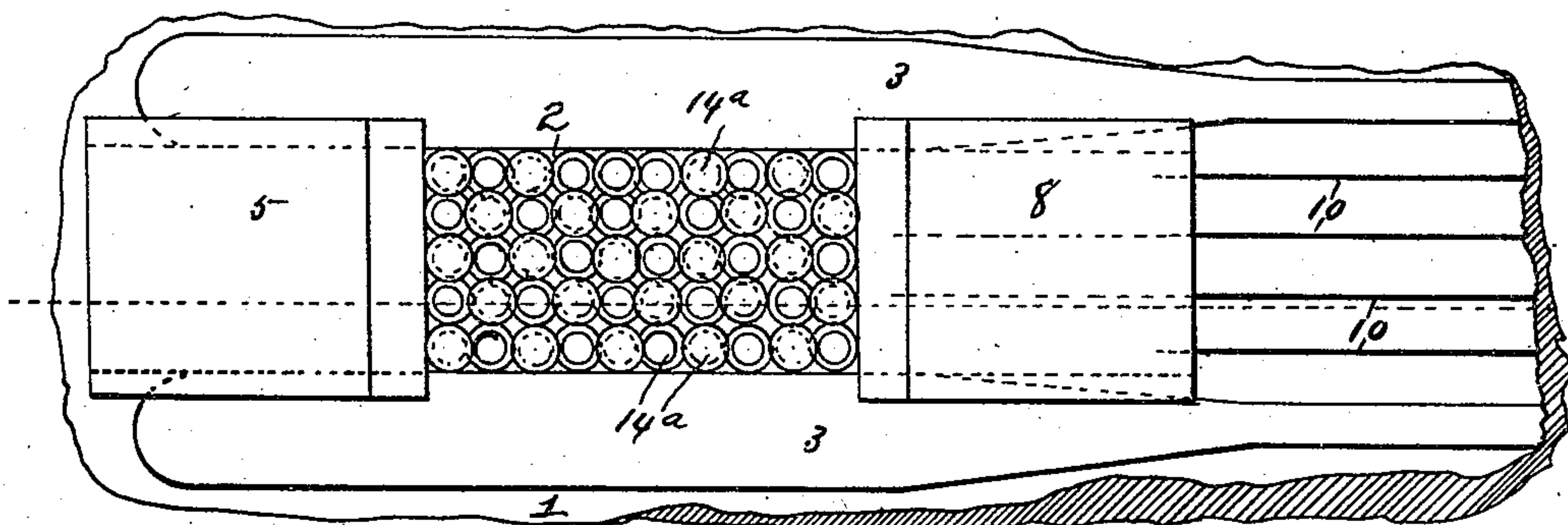


Fig. 8.

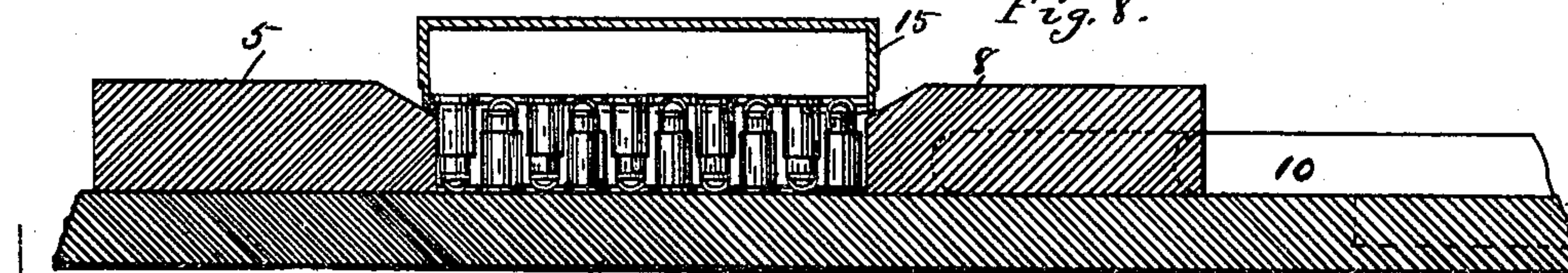


Fig. 9.

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# UNITED STATES PATENT OFFICE.

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## APPARATUS FOR PACKING CARTRIDGES.

SPECIFICATION forming part of Letters Patent No. 633,113, dated September 19, 1899.

Application filed July 3, 1899. Serial No. 722,616. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE H. BEATTY, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Apparatus for Packing Cartridges; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in apparatus for packing metallic cartridges in the boxes in which they are sold to the trade, and said invention comprises a series of implements or devices which in their conjoint use enable the cartridges to be quickly packed in said boxes, all as will be hereinafter more fully described.

In the accompanying drawings, Figure 1 is a plan view of the apparatus, parts of which are broken away. Fig. 2 is a sectional view taken on the line *x x*, Fig. 1. Fig. 3 is a sectional view taken on the line *y y*, Fig. 1. Fig. 4 is an edge view of the apparatus, looking in the direction of the arrow in Fig. 1, parts being broken away. Fig. 5 is a top plan view of one of the elements, termed a "shaker-plate," and the delivery-plate, parts being broken away. Fig. 6 is an end view of the shaker-plate. Fig. 7 is a plan view of a blank plate or slide used in connection with the shaker-plate. Fig. 8 is a plan view of a portion of the base-plate, showing the crowding-slides for pushing the cartridges into the required space for the box to fit over them. Fig. 9 is a sectional view showing the cartridges delivered from the perforated delivery-plate onto the base-plate and in a position to be taken up by the box; Fig. 10, a transverse section of one of the crowding-slides. Similar numerals of reference indicate the same parts in the several views of the drawings.

The base-plate 1 may form the top of a table or it may be separate therefrom. It may also have any desirable number of spaces 2, which increase the capacity of the apparatus in accordance with the number of such spaces.

The narrowest portions of such spaces are substantially the width of the conventional cartridge-box, or the width and length of such spaces may correspond to any of the usual shapes of cartridge-boxes. The widest parts of said spaces are separated by division-strips 3. The spaces 2 between said division-strips narrow at their entrances or throats 4, and each of said spaces has an independent slide 5, which is movable in and out of the widest and narrowest parts of said spaces. The said slides are enabled to be moved in this manner by having their longitudinal edges or sides provided with grooves 6, which permit the edges 7 of the divisions 3 to project therein. There is also another series of similar slides 8 at the opposite ends of said spaces. These slides are all connected by a common bar 9, which lies across their tops. Therefore these slides are moved together for purposes similar to those of slides 5, and which will be hereinafter described.

Within the widest parts of spaces 2 and between the slides 5 and 8 there is arranged a series of parallel strips 10, over the ends of which the slides 5 and 8 are movable by means of grooves 11 cut in the under sides of said slides, said grooves receiving the strips 10 when moved in the direction of said strips. The slides 8 are prevented from moving off the base-plate 1 by means of a strip 12, which lies throughout the length of the base 1.

13 designates a perforated plate of a length sufficient to cover all of the spaces 2 in the base-plate 1 in which the division-strips 10 are placed. This plate 13 delivers the cartridges to the base-plate. As shown, the said plate is provided with groups or clusters of round holes 14, which are large enough to receive each a single cartridge 14<sup>a</sup>, which are allowed to pass therethrough into the spaces between the strips 10. Each group of holes 14 covers an area of space which is equal to all the space between the strips 10. Each face of the plate 13 is recessed or chamfered to provide suitable recesses and guides for slides 16, which are placed therein to maintain the cartridges in said plate 13 at stated times, as will be more apparent hereinafter. One of said plates 16 forms the bottom of plate 13 while the latter is being carried with its load of cartridges and placed in position on



the base-plate 1, as shown in Fig. 1, preparatory to discharging the cartridges into the spaces between the strips 10. Plate 13 is loaded with cartridges from a perforated shaker-plate 17. This latter plate is loaded in pairs and the charges or contents of two of such plates are necessary to fill the holes in plate 13. Each plate 17 has half the number of holes 18 as has plate 13, and the holes in said plates 17 alternate in their positions—that is to say, the holes in one of the plates 17 would register with the dotted circles 14 in Fig. 5, which represent the holes in plate 13 which are not filled by the plate 17, which is shown thereon in Fig. 5. The dotted circles shown in Fig. 5, it will be borne in mind, indicate the holes in plate 13 which are not filled by plate 17 shown, but which will be filled by the companion plate 17. In thus placing the other plate 17 plate 13 is turned over from the position shown in Fig. 5 with a blank plate under it and the remaining vacant holes are filled by the other plate 17. When plate 13 is thus completely filled, the cartridges in said plate 13 project in opposite directions, as shown in Figs. 2, 3, and 8.

The shaker-plates 17 are in common use for dipping or lubricating cartridges. Therefore I do not consider them any part of this invention. Such plates are filled with cartridges in a well-known manner, as follows: They are placed side by side in a box or inclosure and are subjected to a constant shaking or vibration, during which the cartridges are thrown onto them by hand until each hole 18 receives one, the bullet end of which projects down. When each of said plates is thus filled, a blank plate 19 (shown in Fig. 7) is placed on the top thereof, and said plates 17 are carried one at a time to plate 13 and placed thereon with a blank plate 16 between. After said plate 17 has been placed in such position the blank plate 19 is drawn from between said plates 17 and 13 and the cartridges allowed to drop into the holes 14 in plate 13. Plate 13 is then turned over with a blank plate 19 under it to support the cartridges, and the remainder of the unfilled holes 14 in plate 13 are filled with cartridges from the other of the plates 17. When the plate 13 has thus been filled, it together with a blank plate 16, serving as a bottom, are carried and placed in position on the base-plate 1, as shown in Fig. 1. When the plates are in such position, it is observed each cluster of holes is above the space 2 and the rows of said holes are immediately over the spaces between the strips 10. The slide 16 is then drawn out, and the cartridges are allowed to drop in upright positions into the spaces between the

strips 10. The slides 5 and 8 are then moved toward each other in the widest parts of spaces 2 to crowd and maintain the cartridges in an upright position, after which said slides, with the cartridges, are moved into the narrowest part of said space 2, which brings the said cartridges within a suitable space for the cartridge-box 15 to be placed over them, the narrow space into which the cartridges are moved by the slides 5 and 8 being of the same area as the space within the cartridge-box. (See Figs. 8 and 9.) After this is done cartridge-box 15 is pressed on the sides by the hand, and said box with the cartridges are removed from the apparatus.

Having fully described my invention, I claim—

1. In an apparatus for packing cartridges, the combination of a base-plate provided with a series of separated spaces which vary in width, a series of parallel division-strips in the widest part of each of said spaces, and slides movable from opposite ends of said spaces and over said division-strips, substantially as and for the purposes specified.

2. In an apparatus for packing cartridges, the combination of a base-plate having a series of division-strips 3 which provide a series of spaces 2 of varying widths, a series of parallel strips 10 arranged in the widest parts of said spaces 2, slides movable in said spaces 2 from opposite ends thereof, a perforated plate adapted to contain cartridges, and a slide forming a removable bottom for said perforated plate, the said slide and perforated plate being adapted to be placed on the base-plate above the strips 10 substantially as and for the purposes specified.

3. In an apparatus for packing cartridges, the combination of a base-plate having a series of division-strips 3 providing a series of spaces 2 of varying widths a series of parallel strips 10 arranged in the widest parts of said spaces, movable slides 5 and 8 in said spaces, a plate 13 provided with clusters of openings, each cluster covering a space equal to the greatest width of the spaces 2 in the base-plate, and each longitudinal row of holes in each cluster being over one of the spaces between the strips 10 when the plate 13 is placed in position on the base-plate, and a slide forming a removable bottom for said plate 13, all arranged and operating substantially as and for the purposes specified.

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

GEORGE H. BEATTY.

Witnesses:

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