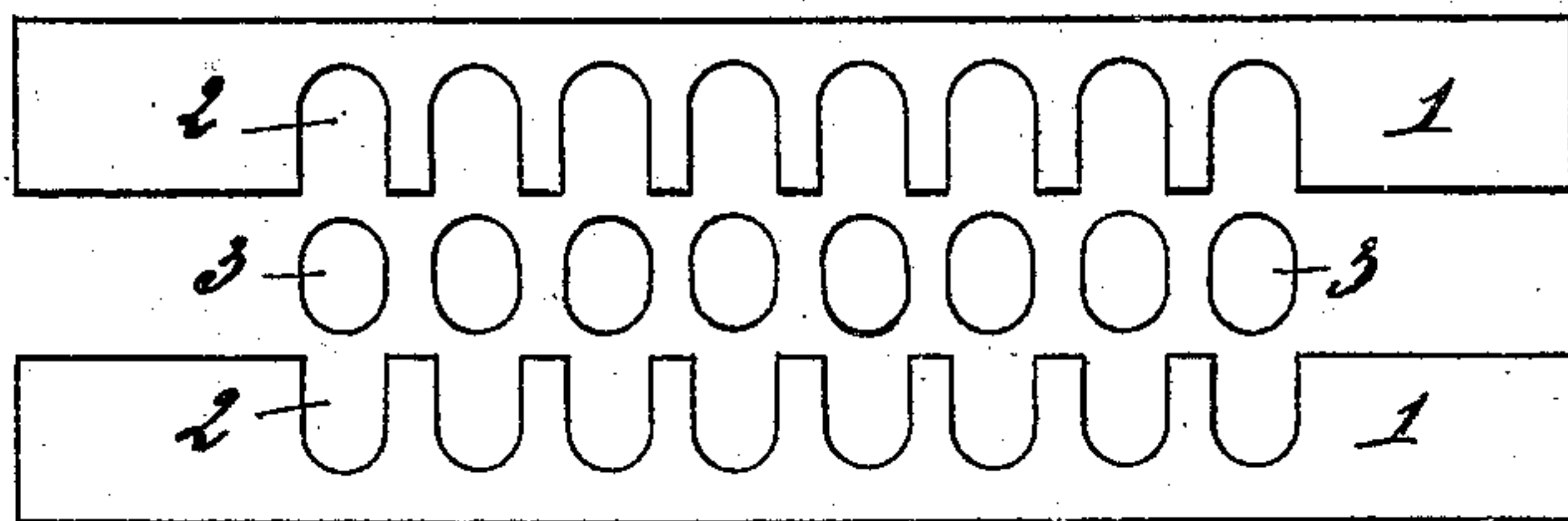


J. GOHY.  
PATTERN CARD FOR LOOMS.  
APPLICATION FILED MAR. 9, 1907.

908,559.

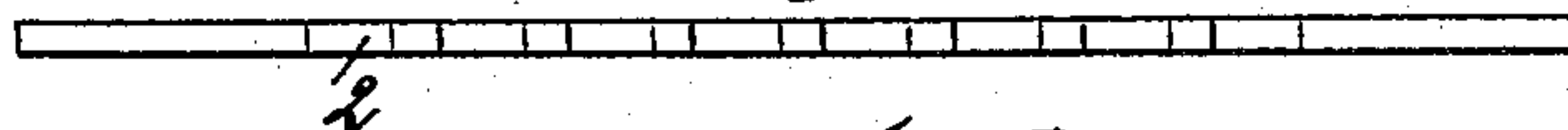
Patented Jan. 5, 1909.



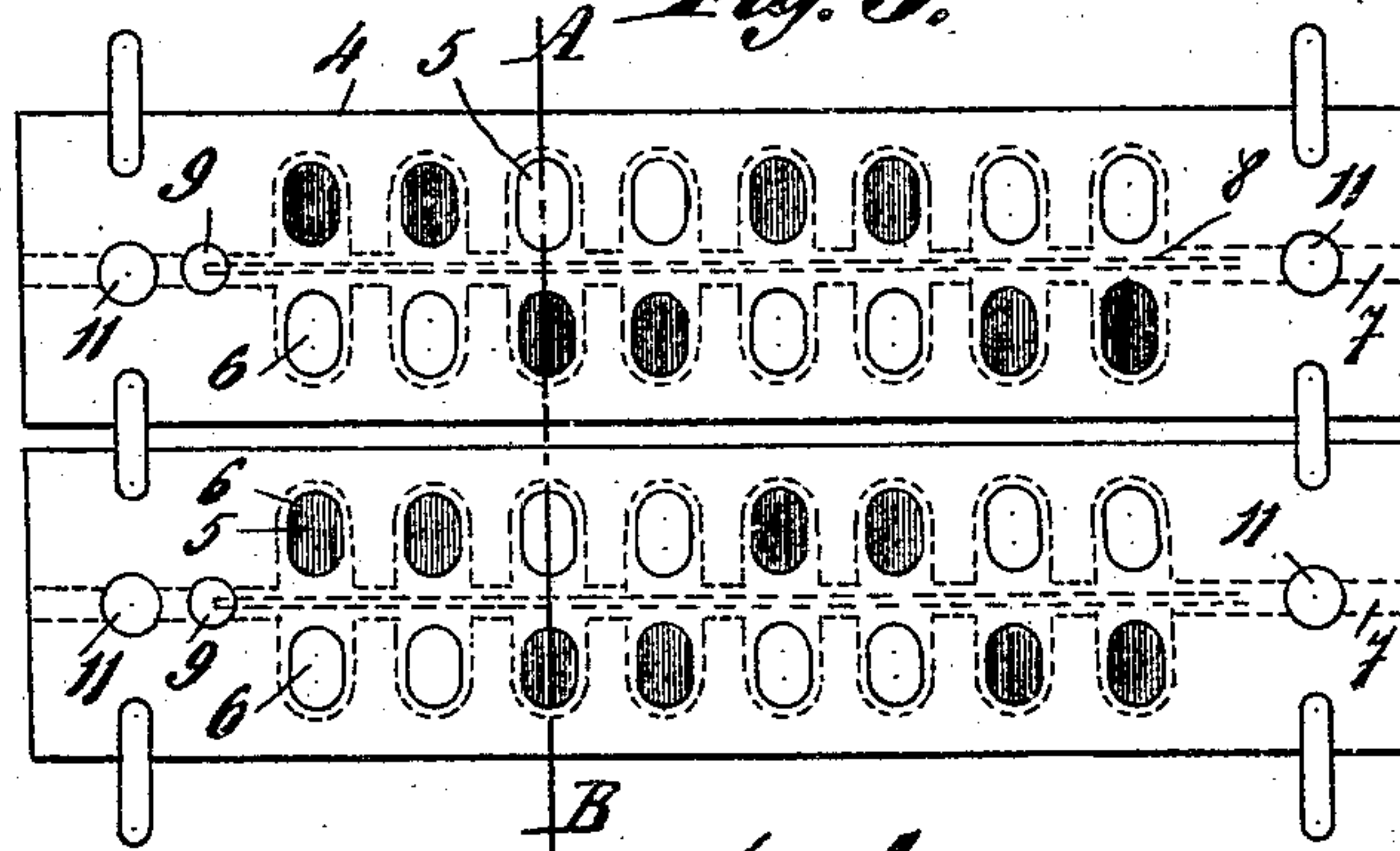
*Fig. 1.*



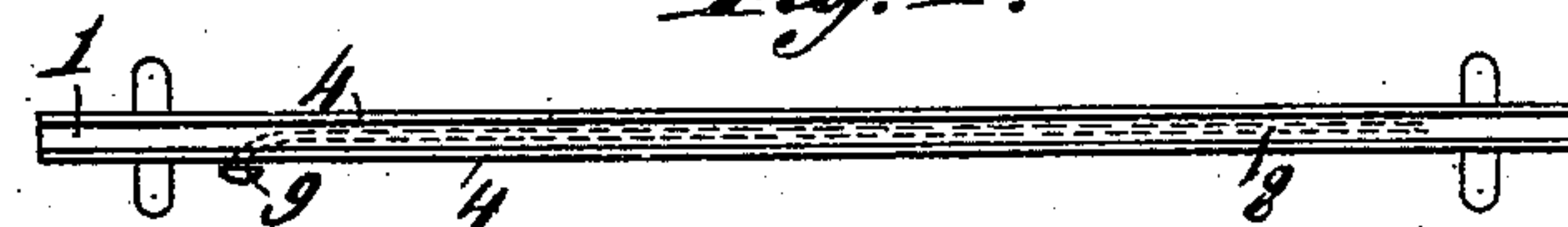
*Fig. 2.*



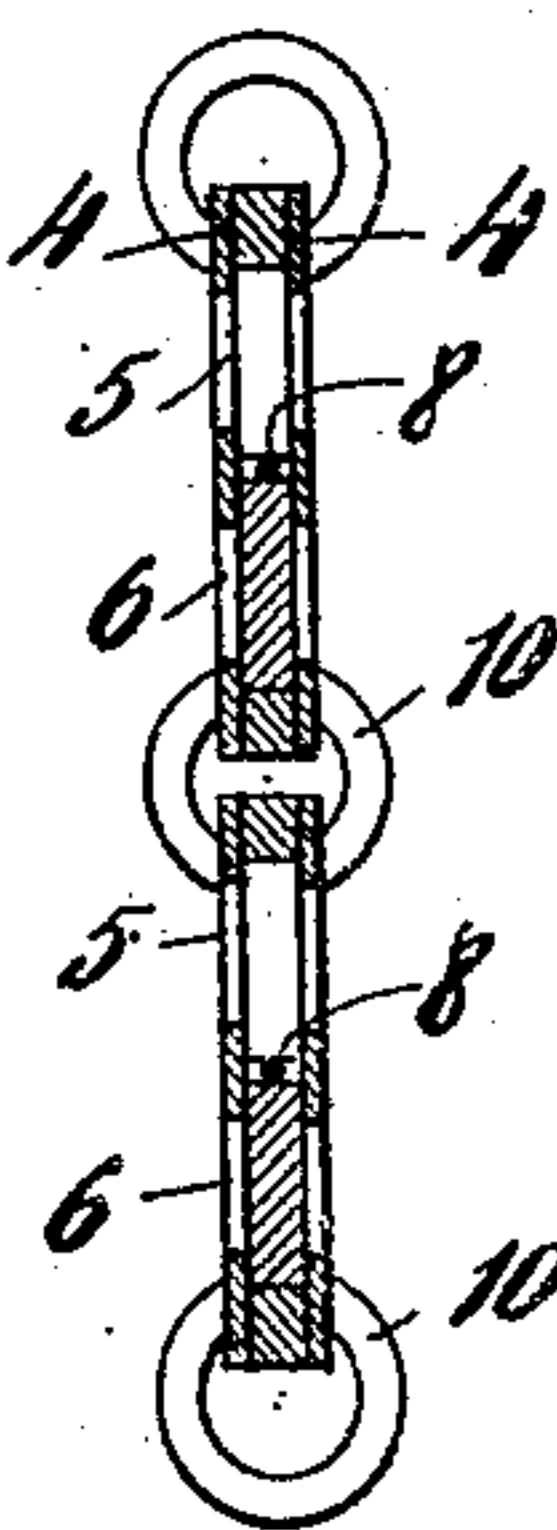
*Fig. 3.*



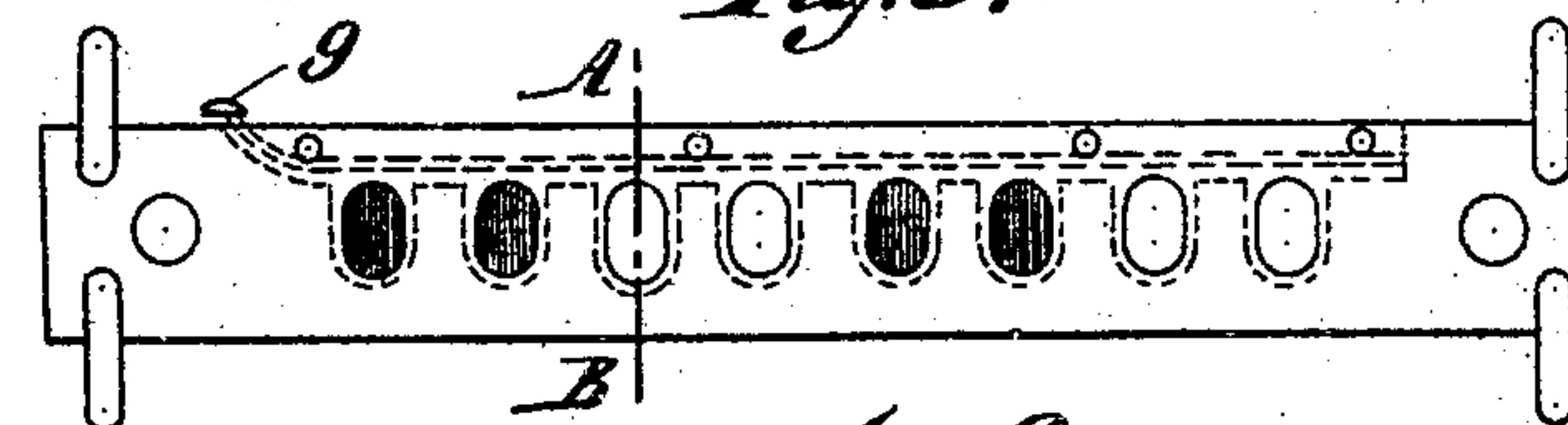
*Fig. 4.*



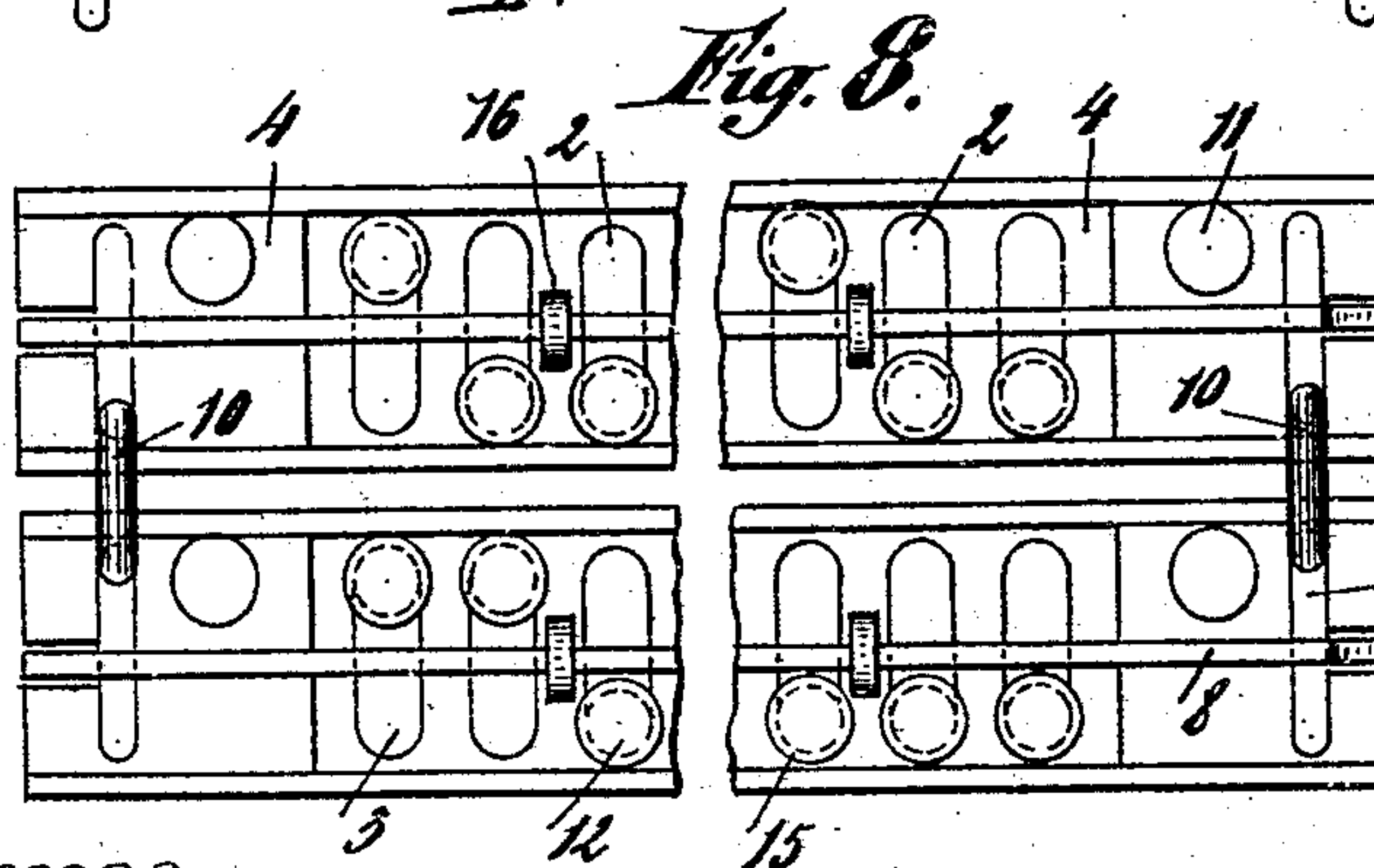
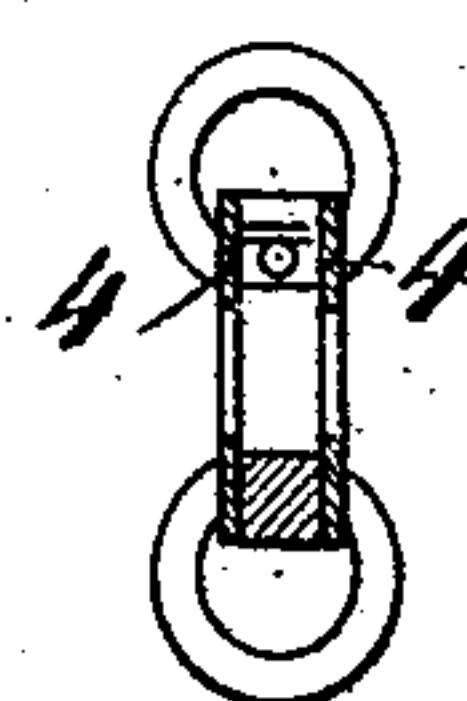
*Fig. 5.*



*Fig. 6.*

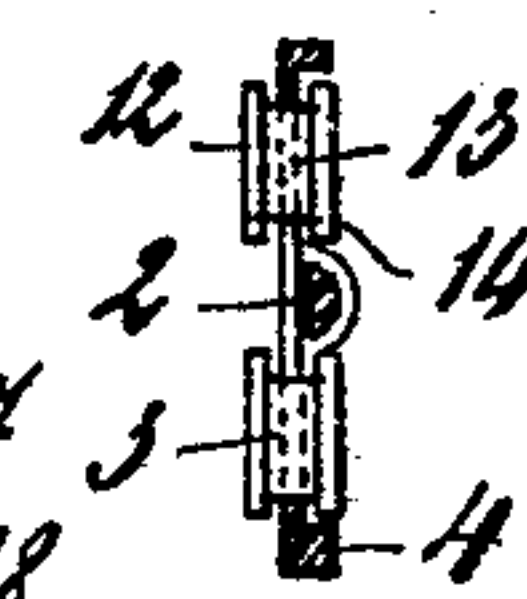


*Fig. 7.*



*Fig. 8.*

*Fig. 9.*



Witnesses

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# UNITED STATES PATENT OFFICE.

JEAN GOHY, OF ENSIVAL, NEAR VERVIERS, BELGIUM.

## PATTERN-CARD FOR LOOMS.

No. 908,559.

Specification of Letters Patent.

Patented Jan. 5, 1909.

Application filed March 9, 1907. Serial No. 361,613.

*To all whom it may concern:*

Be it known that I, JEAN GOHY, a subject of Belgium, residing at Ensival, near Verviers, Belgium, have invented new and useful Improvements in Pattern-Cards for Looms, of which the following is a specification.

The present invention has for its object to provide a construction of pattern card of particularly light weight for looms, and whereby any design whatever can be produced in weaving, without any dismantling and rearrangement of the card chain or the aid of any additional part, and this with but a very simple manipulation as will be hereinafter made clear.

The pattern card according to this invention is characterized essentially by the fact that it is provided with grooves, slots or the like made in the direction of the breadth thereof, and in each of such grooves or the like is placed a sliding stop piece arranged in such a manner that it can slide therein and be fixed at one or the other end of its travel. In the annexed drawing are shown by way of example various forms of carrying out the invention.

Figure 1 represents separately certain of the parts which may enter into the construction of a card which is to be provided with two rows of holes. Fig. 2 is a side view of one of the parts or plates shown by Fig. 1. Fig. 3 shows how the two parts or plates are joined to form one complete card or separate part of the card chain. Fig. 4 is an edge view of a complete card. Fig. 5 is a transverse section through the line A B of the two cards shown by Fig. 3. Fig. 6 shows a variation in which each part or separate card is provided with a single row of holes. Fig. 7 is a transverse section through the line A B of Fig. 6. Fig. 8 shows another variation in which the slots, openings or the like are made directly in the plates forming the parts of the card. Fig. 9 is a transverse section of one of the parts of the card.

In the forms shown by Figs. 1 to 7 each card or element of the card chain is formed of two similar plates 1, each having a certain number of indentations or recesses 2 forming ways in which may be engaged small plates, shutters or slides 3. The plates 1 are held between two plates or outside sheets 4 (Figs. 4, 5, 6 and 7) pierced with one or two rows of holes 5, or 5 and 6, of suitable shape to permit the entering into these holes of the select-

ing needles of the yoke levers with which the card chain works. The plates 1 are arranged between the sheets or covers 4 so that one row of holes 5 corresponds to the ways 2 made in one of the plates 1, while the other row of holes 6 (when two rows of holes are used) corresponds to the ways 2 of the second plate 1. These two plates 1 are spaced apart to provide a certain space 7 (shown in dotted lines in Fig. 3) in which can be inserted a pin or needle 8 which may be manipulated from the outside of the card by a top piece or a button 9. Under those conditions, as may easily be seen, the small plates, shutters or slides 3 being inserted in the ways 2, such slides may be brought opposite the holes 5 forming the upper row in the plates 4, or opposite the holes 6 forming the lower row in these plates. It is sufficient for this to draw the needle 8 from its groove 7 and to then slide the shutters 3 in one or the other direction so as to make them pass into one or the other of the ways 2. When any particular slides 3 are brought into the ways 2 corresponding to the upper row of the holes 5, the lower holes will be free and the selecting needles of the yoke levers will be able to enter into these orifices, but not those covered by the slides. Consequently it is very easy either to free all the holes 5 of the upper row, or all the holes 6 of the lower row, or alternatively, one hole of the lower row and one hole of the upper row, or again two successive holes of the upper row and two successive holes of the lower row, or to realize any other combination whatever corresponding to a certain design.

Fig. 3 shows as an example a combination which may be made, the blocked openings being shown shaded.

The displacement of the slides 3 in the grooves 2 forming the holders of the plates 1 may be very easily obtained by withdrawing the needle 8 and by the simple oscillation of the card or part of the card chain under consideration, the oscillation in one direction effecting to bring the slides 3 opposite one of the rows of holes 5 or 6, where a determined number of the slides may be held by a suitable forward movement of the needle 8, and a fresh oscillation of the card in the contrary direction effecting to bring back into the opposite indentations or ways 2 the slides not held by the needle. Thus for example by a first oscillation, in one direction, all the movable slides might be brought opposite the



holes 5 of the upper row; the needle being then advanced to the extent of the two first holes 5, so as to hold in the corresponding indentations or ways the slides which are therein, the card being thereupon oscillated in a contrary direction will bring all the free slides into the indentations or ways corresponding to the lower row of the holes 6. Then again pushing forward the needle 8 to the extent of two indentations or ways the corresponding slides 3 therein would be held and so on, so as to obtain alternately the blocking of two holes of the upper row and of two holes of the lower row (Fig. 3).

The different parts of the card chain are connected together by rings 10 or in any other suitable manner and each part may be provided at its ends with holes 11 in which may engage projections on the card cylinder.

As may be easily seen the above construction is not indispensable for carrying out the invention. The recesses or ways 2 might be formed directly in one of the plates 4 as will later be seen. The construction described lends itself however particularly well to obtaining at the same time lightness and rigidity as it permits the use of light material such as fiber for the plates 1, and steel plate for the plates 4.

The above construction, specially designed with a view to insure the positive control of the selecting needles may if necessary be modified by only using a single plate 1 held between two plates 4 bored with holes (Figs. 6 and 7). In this case the slides are movable and inserted by hand in the recesses or ways corresponding to the holes to be obtained. A needle 9, Fig. 6 inserted between the plates, keeps the slides in position.

Figs. 8 and 9 show a form of construction in which the ways 2 are made directly in the plates 4. Under these conditions, as may easily be seen, each card is reduced to a plate 4 provided with ways 2 arranged in the direction of the width of the card. The slides or shutters 3 are formed by washers or small plates 12 of any shape, but preferably round, provided with a central pin 13 passing through the plate 4 and projecting on the other side of this plate to receive a similar plate or washer 14 (Fig. 9) suitably riveted or otherwise fitted to the pin 13. The washers 12 and 14 thus form a kind of roller which is guided by the edges 15 of the ways 2.

The plate 4 is provided with a certain number of raised eyes 16 for the passage of the needle 8 intended to keep the shutters in each of their extreme positions. The parts of the card chain are fitted together as in the preceding case by means of the rings 10. The latter are preferably in one piece and may be placed in the grooves 17, into which they are introduced through the openings 18. Under these conditions the supporting

pin 8, when it is put in position, closes the openings 18 and thus prevents the pins 10 falling out.

The movement of the card chain made as shown by Figs. 8 and 9 may be effected as in the previous cases by means of projections engaging in the openings 11 or better still by means of projections engaging directly in the space between two consecutive parts of the card chain.

No claim is herein made to the specific construction of the pattern card shown in Figs. 8 and 9 of the drawings, for the reason that said construction forms the subject matter of a divisional application filed by me on April 3, 1908, Serial No. 425,020.

What I claim is:

1. A pattern card provided with transverse slots, the major axis of each slot being crosswise of the card, and stop members each fitted in one of said slots, each stop member being slidable in one slot for closing a part of said slot, thereby leaving the remainder of the slot free and unobstructed for the passage of a needle into said card.

2. A pattern card provided with slots extending through and crosswise of said card, and a plurality of stop members, each partially closing one of said slots, whereby the remainder of said slot is free or unobstructed for the passage of a needle into said card.

3. A pattern card provided with slots extending through and crosswise of the card, stop members each partially closing one of the slots therein, and locking means cooperating with each of said stop members for holding them against movement relative to said slots, said locking means being out of alinement with certain portions of the slots which are left free or unobstructed by the stop members, whereby needles are adapted to enter the card at the unobstructed portion of the slots therein.

4. A pattern card provided with slots extending through and crosswise of the card, stop members each partially closing one of the slots therein, and a locking member extending lengthwise of the card and cooperating with the individual stop members for holding the same against displacement in the slots of the card, said locking member being laterally of the unobstructed portions of the slots in the card.

5. A pattern card comprising complementary members having transverse notches in register with each other, and stop members adjustable to different positions in said notches of the members.

6. A pattern card comprising complementary members each having a plurality of notches, said members being assembled and held for the notches of one member to register with those of the other member, said registering notches forming slots which open through the card, and stop members par-



tially closing the slots in said card, the remainder of each slot being unobstructed by the stop member occupying the same.

7. A pattern card comprising perforated plates, members within said plates and having notches which register with each other and the perforations of the plates, whereby transverse slots are provided which open through the card, and stop members each partially occupying one of said slots in the card.

8. A pattern card having cooperating members provided with registering notches, said notches forming slots which open through the card, stop members each partially closing one of said slots in said card, and locking means cooperating with the individual stop members.

9. A pattern card having cooperating members provided with registering notches, said notches forming slots which open through the card, stop members each partially closing one of said slots in the card, and a locking member extending between the cooperating members and operatively related to the individual stop members.

10. A pattern card comprising plates provided with notches, said notches forming slots which open through the card, slides

placed in the said slots, outside plates holding the said slides in the said slots, the said outside plates being provided with holes and means for holding the slides in one or the other position before the hole in the outside plates, substantially as described and for the purpose set forth.

11. A pattern card provided with transverse slots which open through said card, stop members each partially closing one of said slots, said stop members remaining normally connected to the card and slidable into one end or the other of the slot therein, and means for retaining said stop members in either of the adjusted positions on said card.

12. A pattern card provided with slots which open therethrough, stop members each partially closing one of the slots and slidable into position at either end of the slot in the card, and locking means for retaining said stop members in their adjusted positions at either end of the slots in the card.

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

JEAN GOHY.

Witnesses:

A. ENRY IMURZ,  
GOUGER.