

No. 849,622.

PATENTED APR. 9, 1907.

D. KENT.
SORTING DEVICE FOR CARDS.
APPLICATION FILED MAR. 6, 1906.

4 SHEETS—SHEET 1.

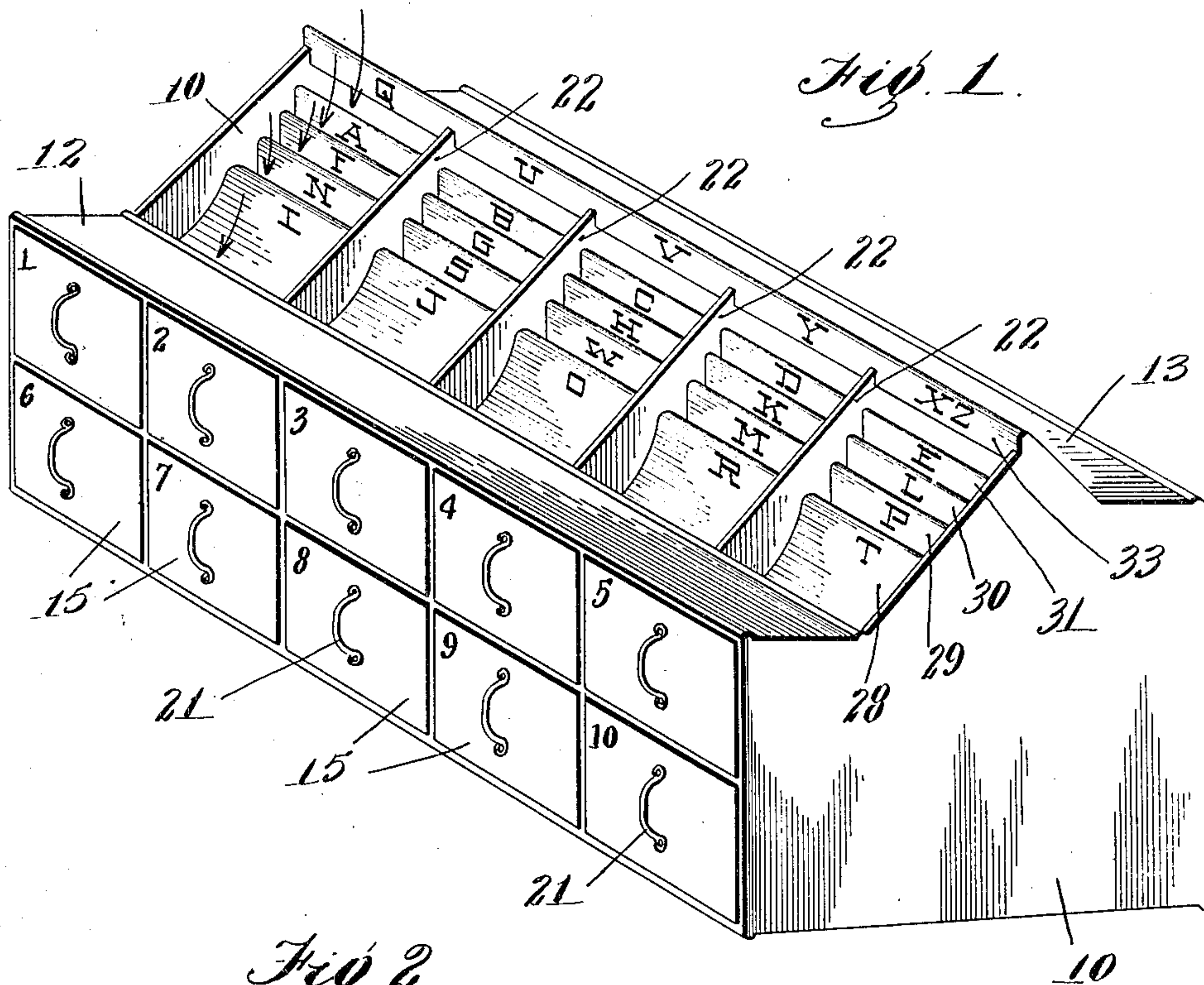
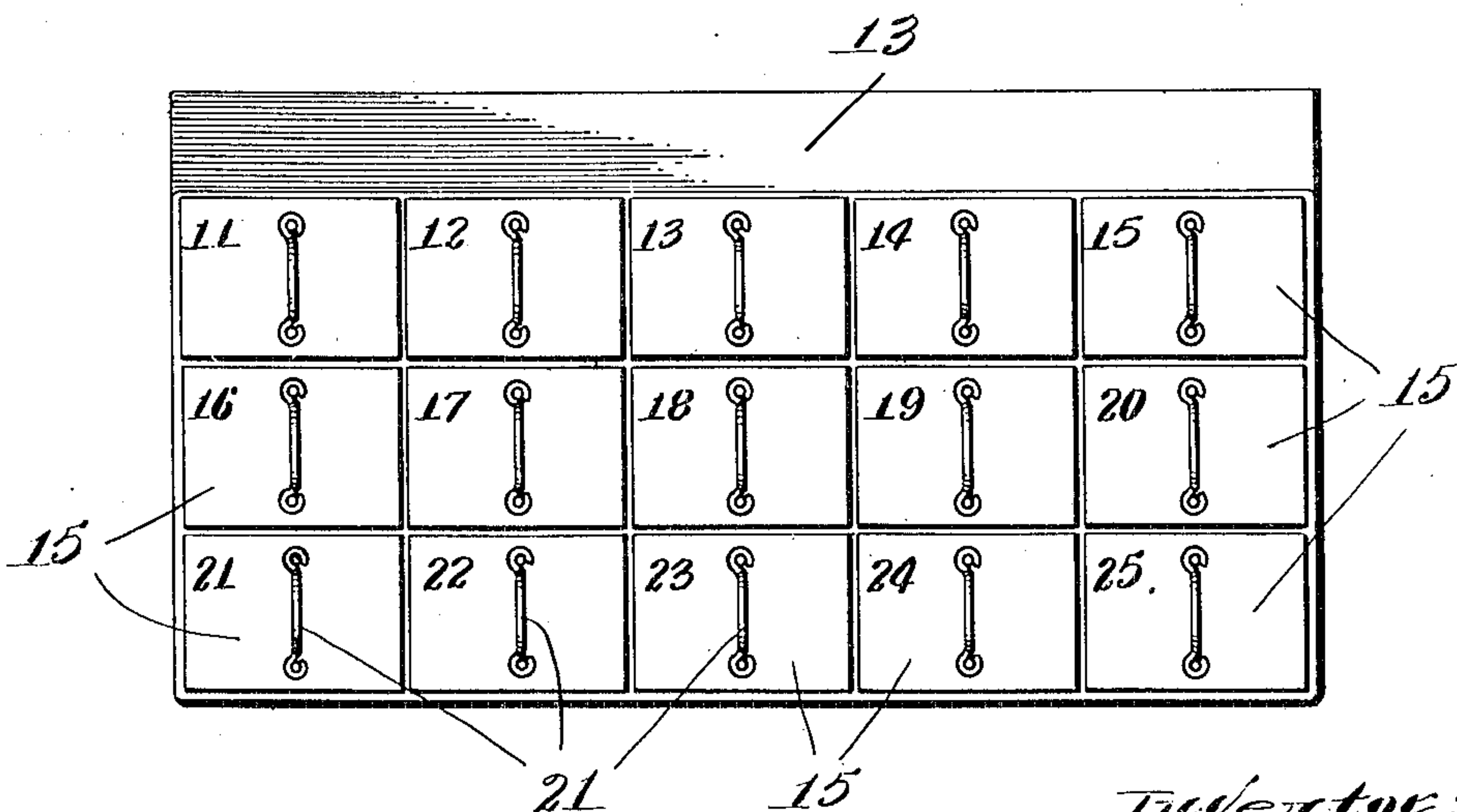


Fig. 2.



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4 SHEETS—SHEET 2.

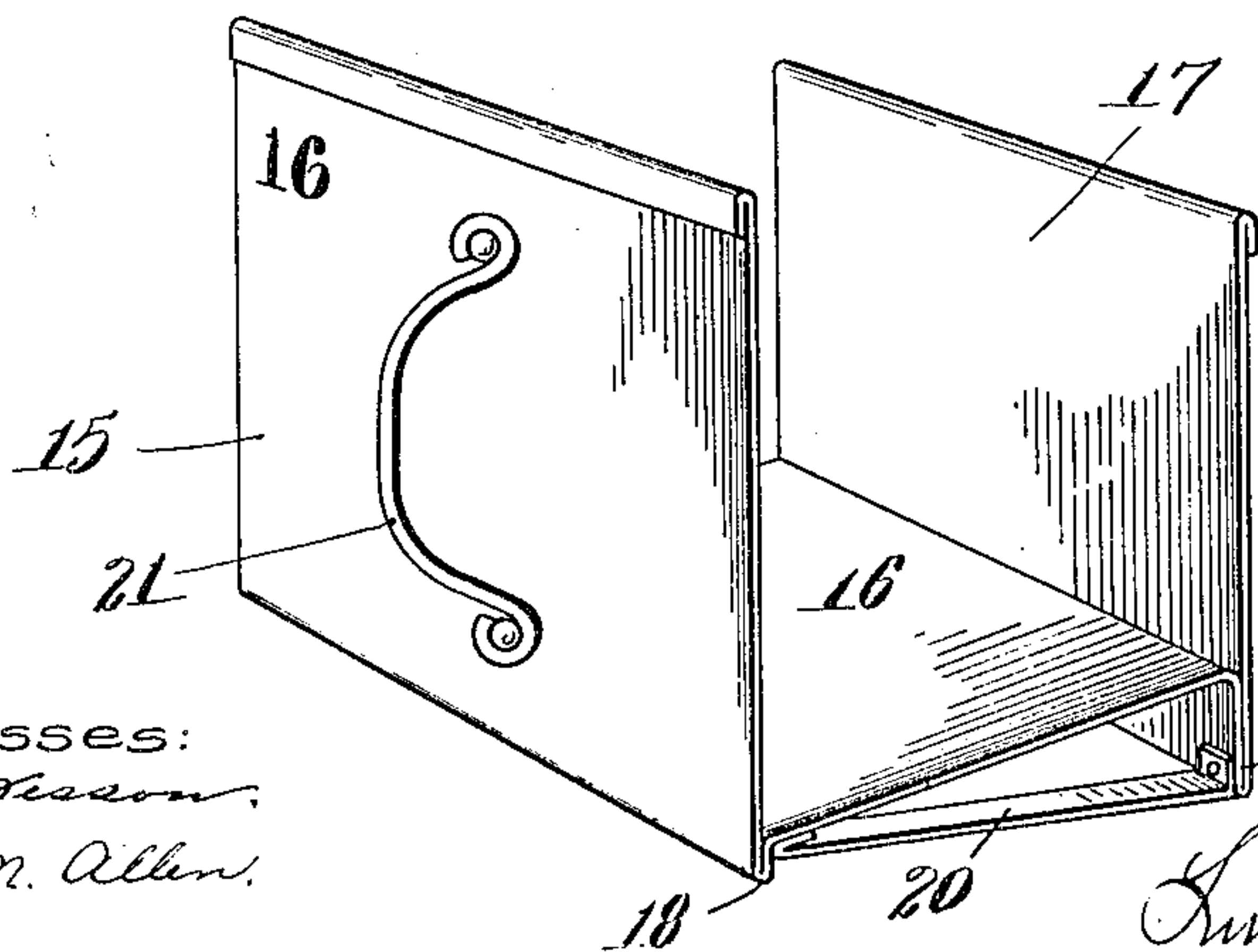
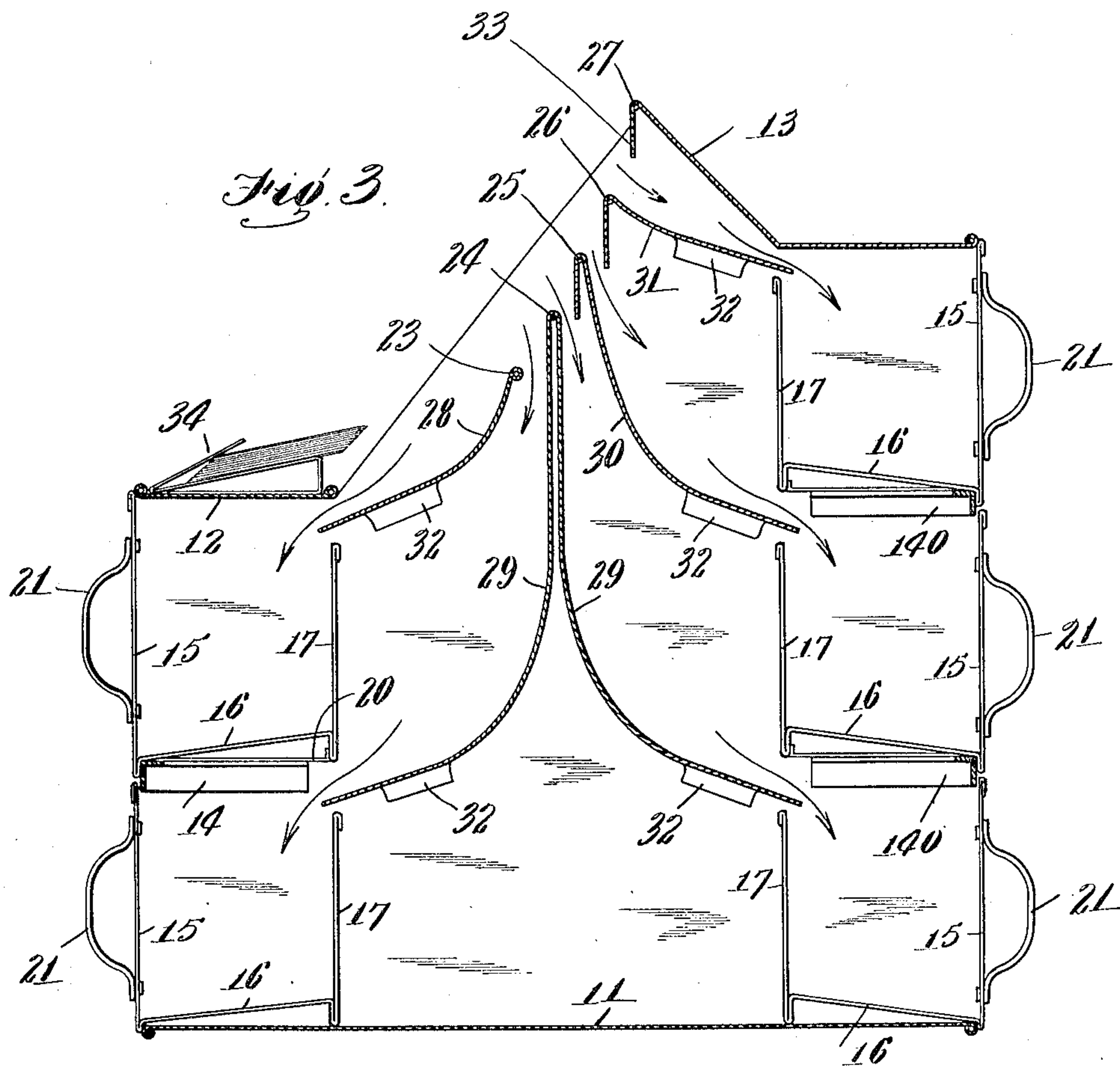


Fig. 4.

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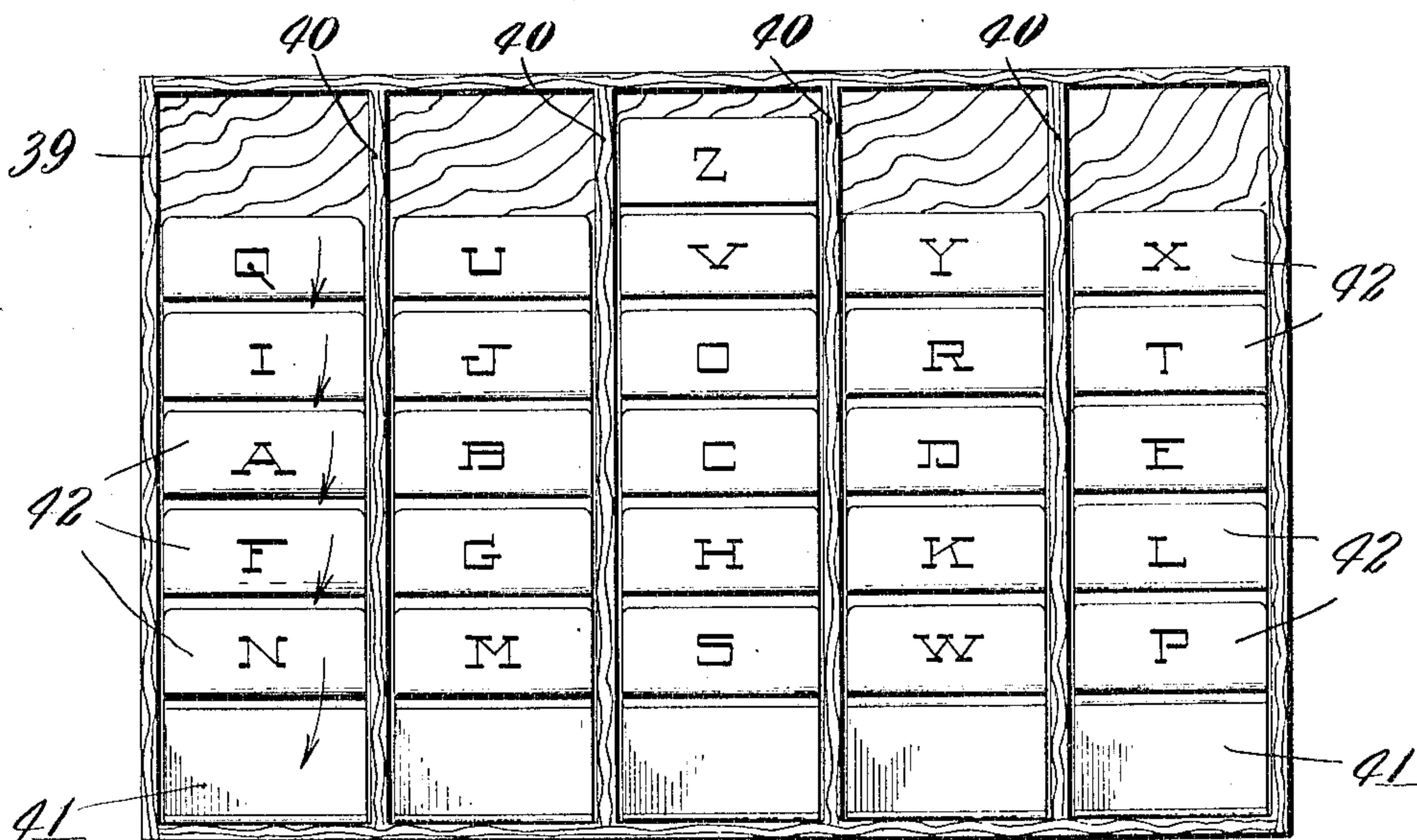


Fig. 5.

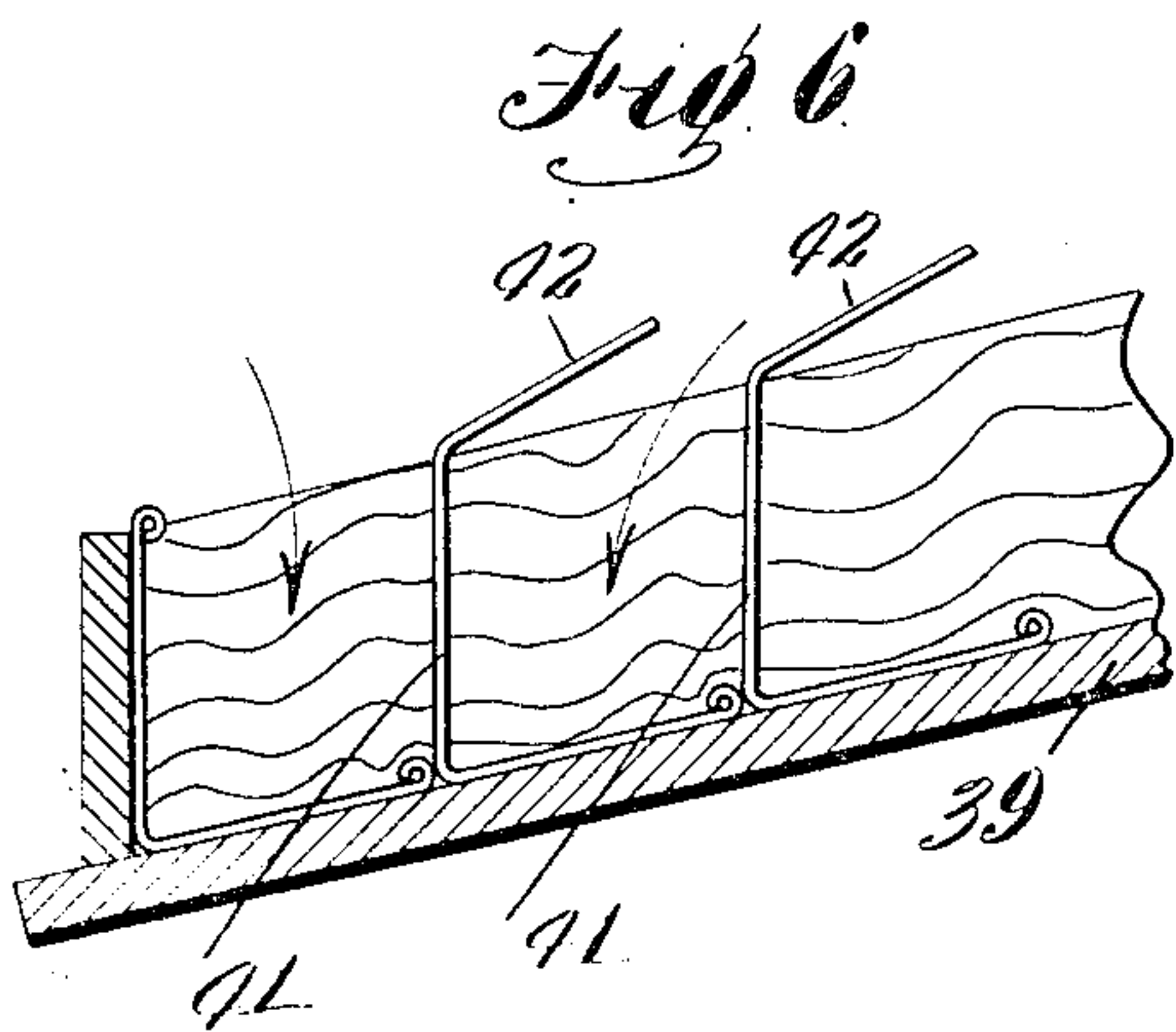


Fig. 6.

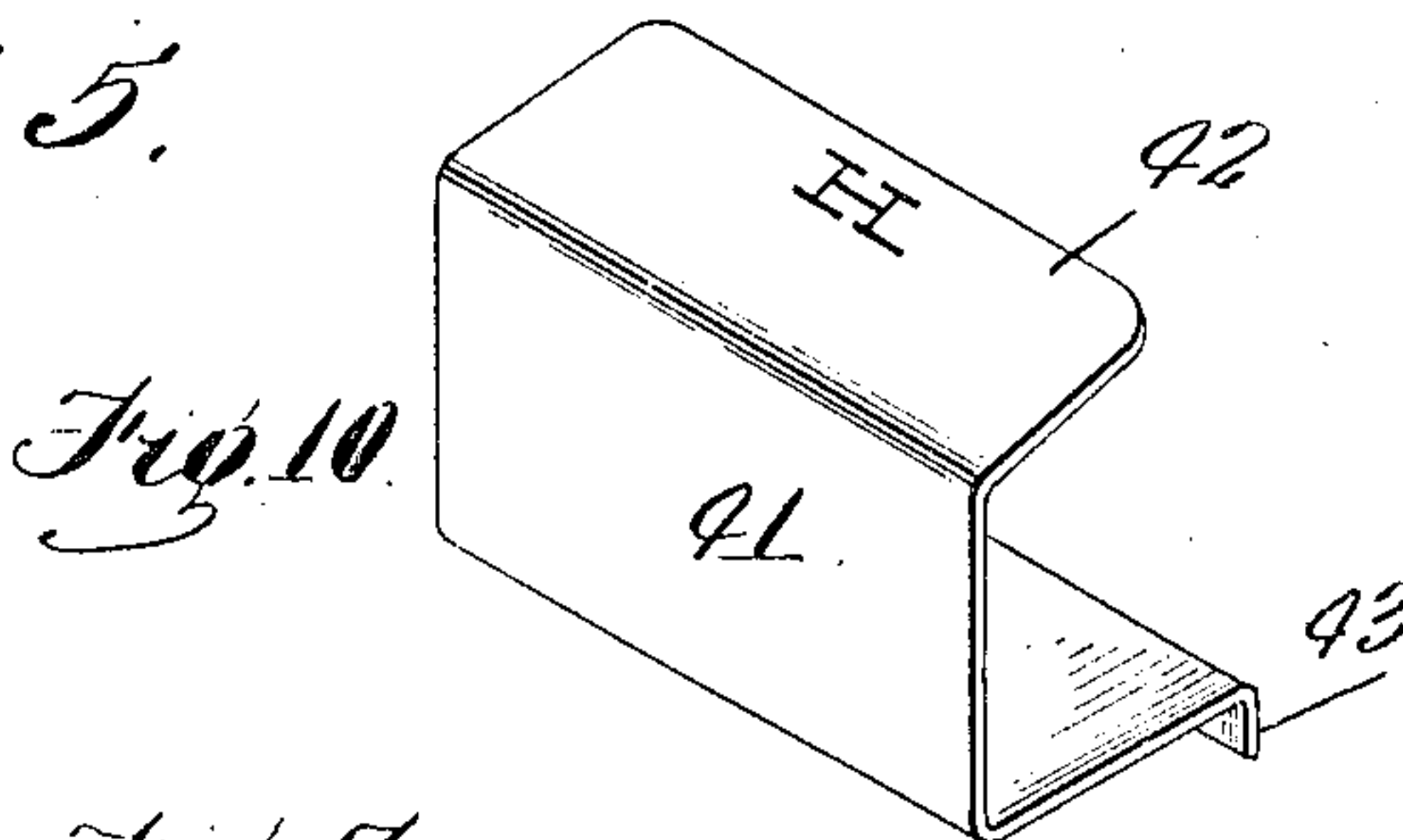


Fig. 10.

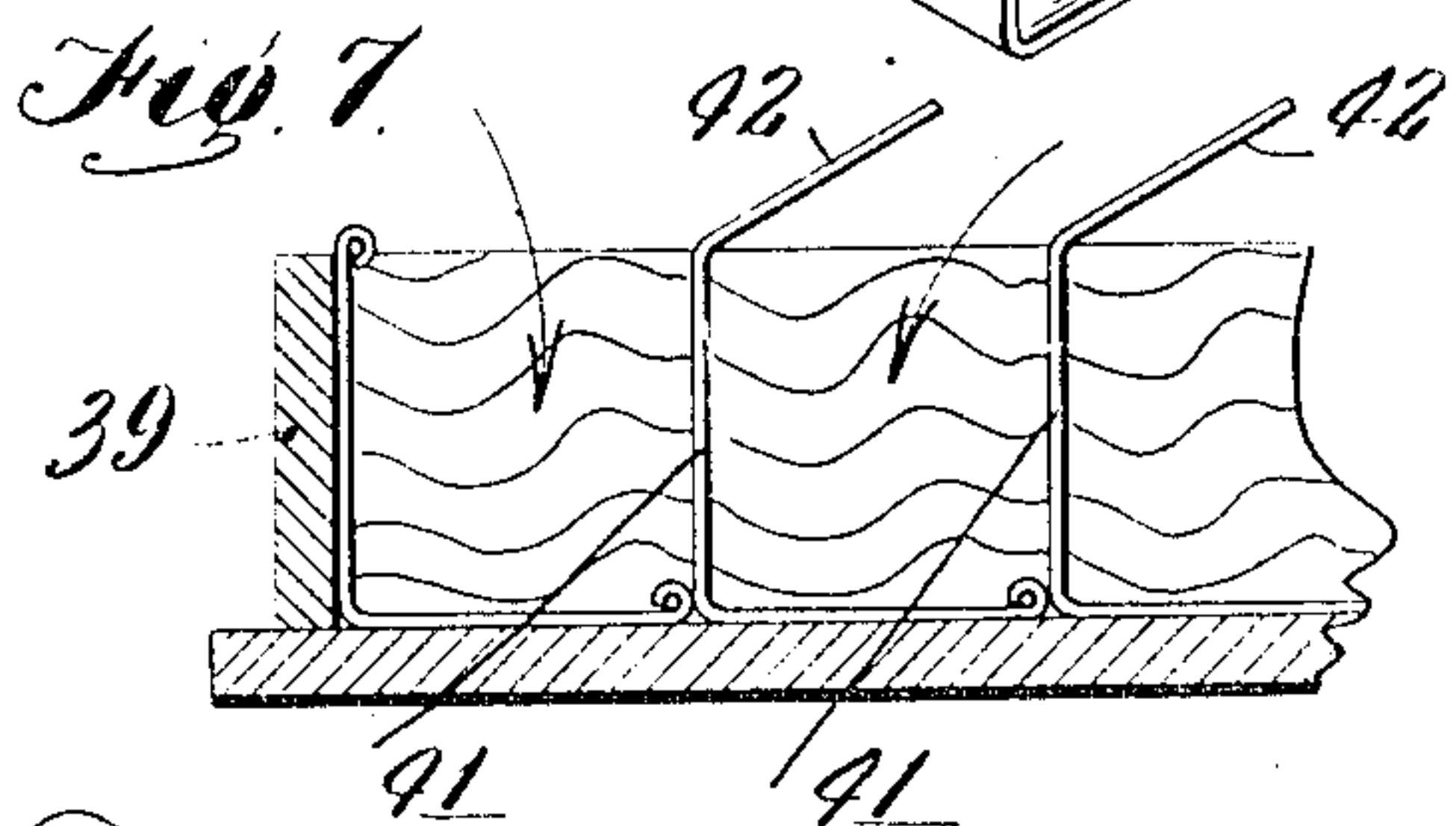


Fig. 7.

Fig. 8.

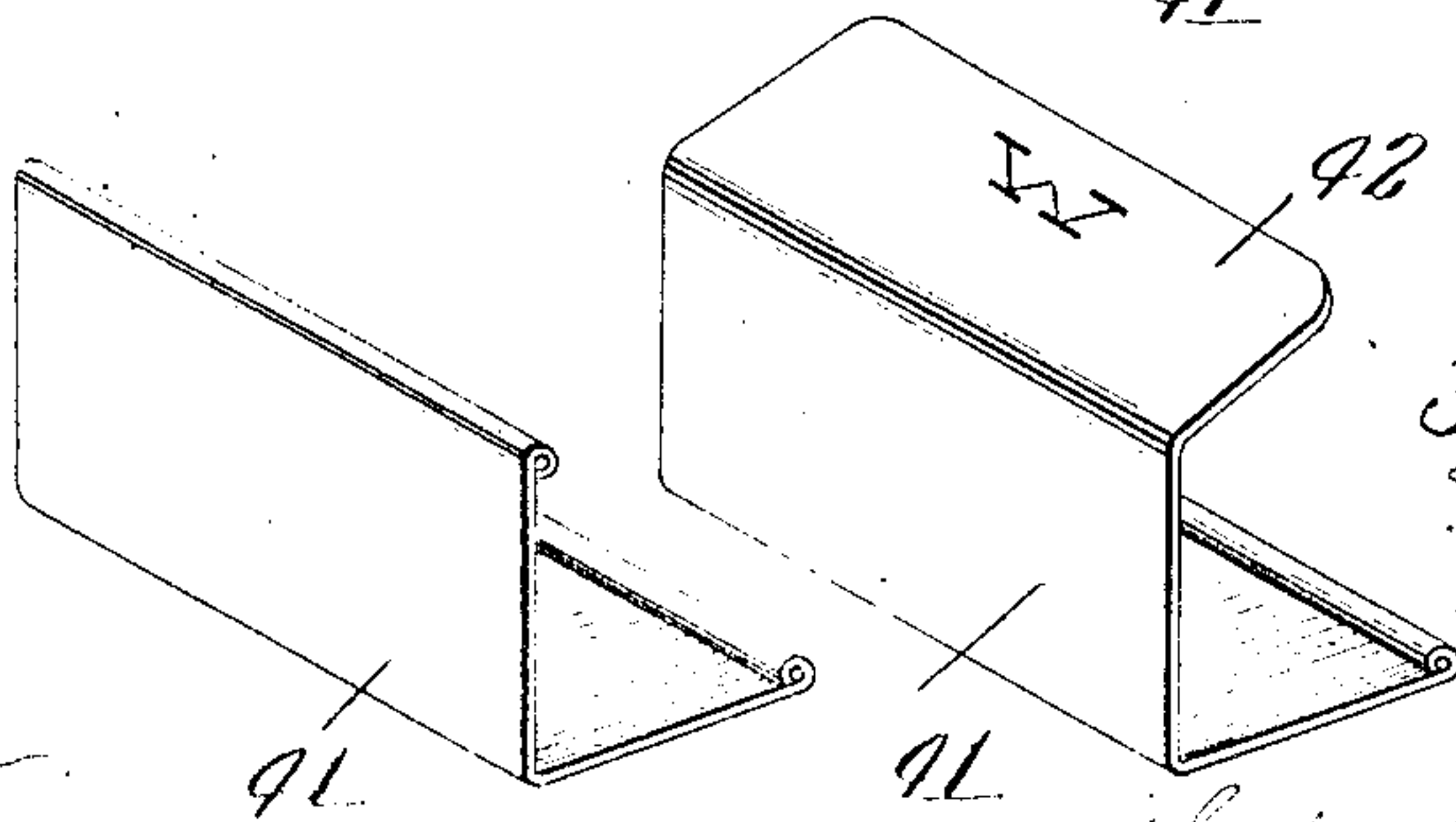


Fig. 9.

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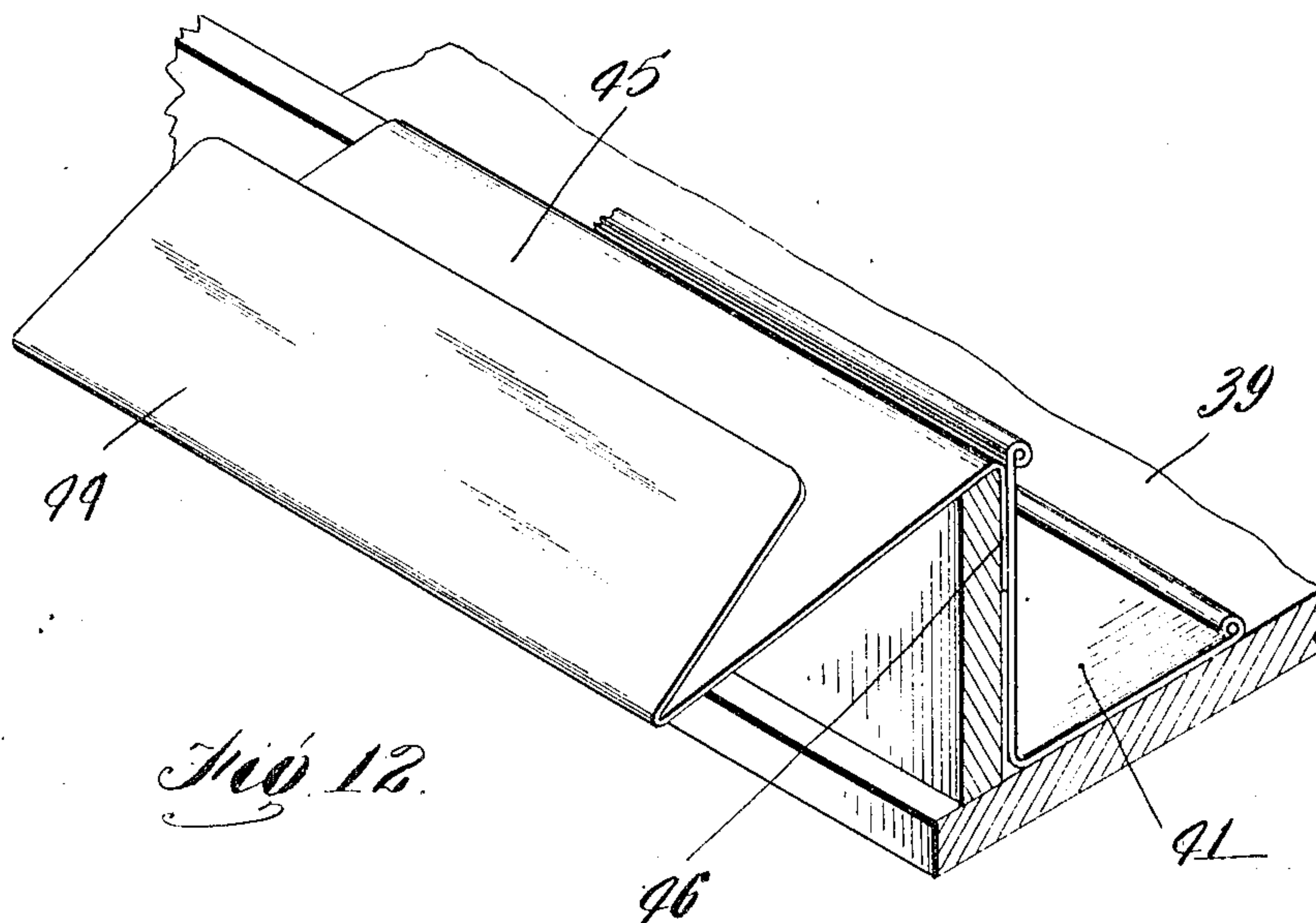
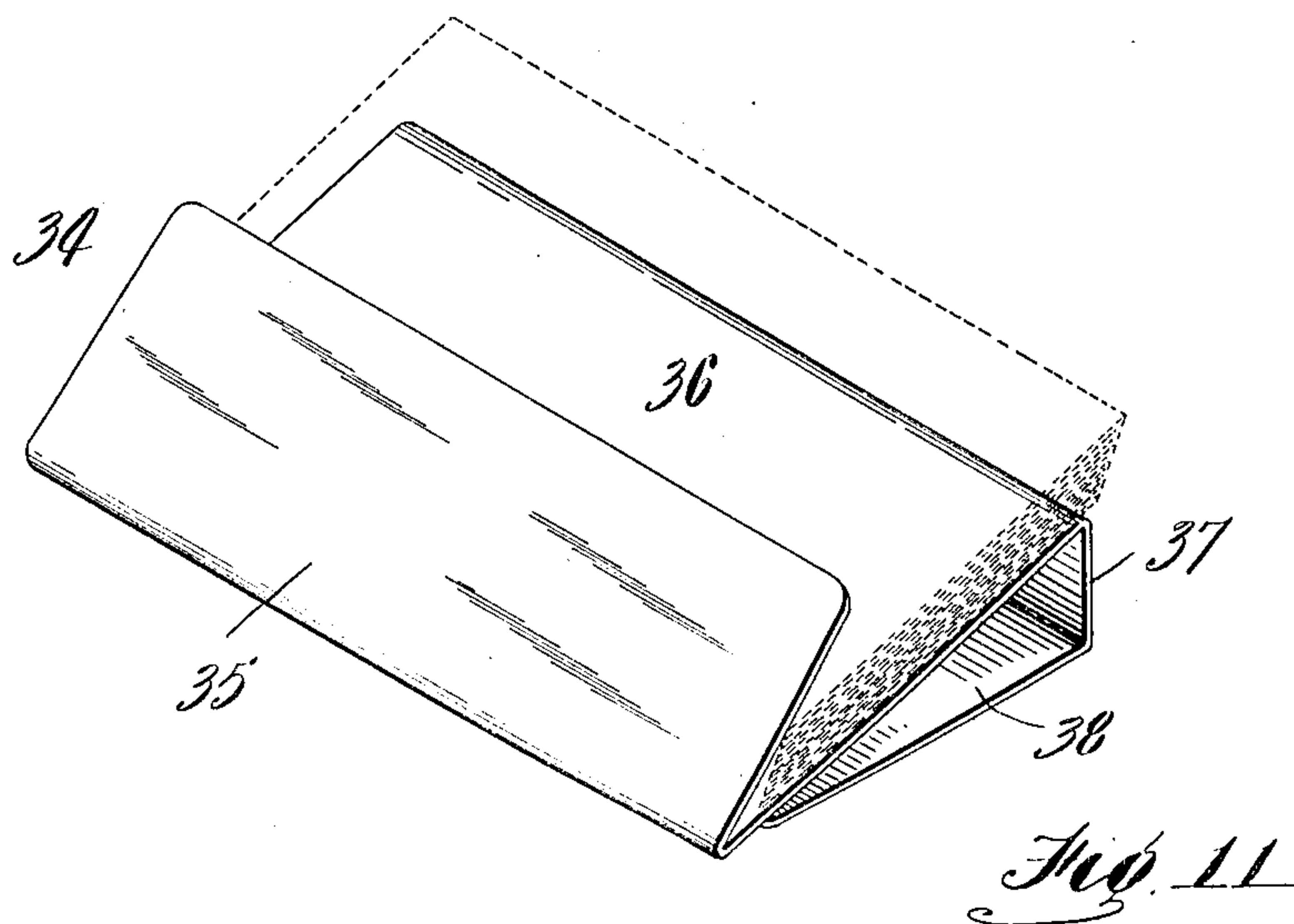
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4 SHEETS—SHEET 4.



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UNITED STATES PATENT OFFICE.

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SORTING DEVICE FOR CARDS.

No. 849,622.

Specification of Letters Patent.

Patented April 9, 1907.

Application filed March 6, 1906. Serial No. 304,531.

To all whom it may concern:

Be it known that I, DANIEL KENT, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Sorting Device for Cards, of which the following is a specification.

The object of this invention is to provide a new and improved device for sorting cards.

The device has been primarily designed for use in connection with card-index systems where it is desired to handle a large number of cards and to arrange them alphabetically or numerically.

The device comprises a cabinet having a series of removable holders therein and guiding means registering with the holders. If the cards are to be sorted alphabetically, a number of holders are used equal to the letter classification which is to be obtained, a convenient number for this purpose being twenty-five holders, one holder carrying two letters which seldom occur, such as "Z X." The holder for the cards is guided into place upon or attached to the carrier.

By using a device of this character an operator can very quickly sort the cards, as all that has to be done is to glance at each card in turn and drop the same into the proper guiding channel or chute. The letters which are most commonly employed are usually arranged at the center, so as to keep the movement of the hands of the operator as short as possible.

Two forms in which the invention may be practiced are illustrated in the accompanying four sheets of drawings, referring to which and in detail—

Figure 1 is a perspective view of a sorting-cabinet constructed to embody my invention. Fig. 2 is a rear view thereof. Fig. 3 is a cross-sectional elevation on an enlarged scale. Fig. 4 is a perspective view of one of the holders. Fig. 5 is a plan view of a modified form of cabinet constructed to embody my invention. Fig. 6 is a partial cross-sectional view of the cabinet shown in Fig. 5. Fig. 7 is a view similar to Fig. 6, illustrating a slight modification. Fig. 8 is a perspective view of one of the front holders used in the cabinet shown in Fig. 5. Fig. 9 is a perspective view of one of the holders, which has guiding means attached thereto, used in the cabinet shown in Fig. 5. Fig. 10 is a view similar to Fig. 9, illustrating a slight modification. Fig. 11 is a perspective view of the

holding-clip for the cards to be sorted, which is used in connection with the sorting-cabinet shown in Fig. 1; and Fig. 12 is a perspective view of the holder for the cards to be sorted, which is used in connection with the sorting-cabinet shown in Fig. 5.

The details of my invention will be best understood by describing the structures shown in the drawings.

Referring first to the structure illustrated in Figs. 1 to 4, inclusive, it will be seen that I have therein shown a cabinet made up of end walls 10 10 and a bottom 11. The cabinet is also provided with a partial top plate 12 at its front and a partial top plate 13 at its rear. A series of guides 14 is arranged in the front of the structure, so that two tiers of holders can be slid in and out of the same. Two series of guides 140 140 are arranged in the rear, so that three tiers of holders can be slid in and out of the device from the rear.

The holders which are employed are preferably constructed out of sheet metal, and one of said holders is shown in Fig. 4.

A sheet-metal strip is taken and bent to form a front wall 15, a bottom 16, and a rear wall 17. The ends of the sheet-metal strip are turned over so as not to present sharp edges. The sheet-metal bottom is crimped to the front wall 15, as at 18, and is crimped to the rear wall 17 by a crimp 19, the crimp 19 being larger than the crimp 18, so that the bottom wall 16 of the holder stands at an incline.

The crimps 18 and 19 are connected together by ties 20, which are slotted or riveted in position. These ties will form guides which can easily run on the guides 14 and 140 of the cabinet.

As shown, the cabinet is made five holders in width, whereby with two tiers of holders in front and three tiers of holders in the rear twenty-five holders are provided. The holders are provided with suitable handles 21, by which they can be inserted or withdrawn from position.

Arranged between the end walls 10 10 are a series of dividing-partitions 22, four such partitions being shown, whereby the cabinet will be divided to correspond with the five widths of holders. Strung between the end walls 10 10 and through the partitions are a series of wires 23, 24, 25, 26, and 27. Arranged on the wire 23 in each of the divisions formed by the partitions 22 is a guide 28, which thus, with the sides of the partition, forms a guid-

ing-chute into one of the top front holders. Arranged on the wire 24 between each of the dividing-partitions 22 is a guide 29, which is bent around to extend down from both sides of the wire 24. Each of these guides, in connection with the partitions, thus forms a chute leading into the bottom holders on both the front and back of the cabinet. Arranged on the wire 25 and between each of the partitions is a guide 30, leading into the second rear tier of holders, and arranged on the wire 26 and between each of the partitions is a guide 31, which leads into the top tier of the rear holders.

The guides 28, 29, 30, and 31 are preferably made of sheet metal, and each guide has a wing 32 turned down on its side, which is soldered or riveted to one of the partitions or to one of the ends of the cabinet, so that the structure will be rigidly put together.

The rear top piece 13 is bent over the wire 27. The letters of the alphabet are marked on front of the guides 28 29 30 31 and on a bent-down lip 33, extending down from the rear top piece 13.

The cards to be sorted are placed into a clip or holder 34, which is bent, as shown in Fig. 11, to have faces 35, 36, 37, and 38. The faces 35 and 36 come together at a sharp angle, so that when the cards are placed in the same they will be spread out, the top card projecting farthest from the face 35, so that the operator can quickly pick up the top card with either hand. The face 37 holds the bottom face 38 in such line that the cards will stand in convenient position, as shown in Fig. 3.

The clip, with a package of cards in it, is placed centrally on the front top wall 12. The letters which occur most commonly are arranged at the center of the chutes, and the letters which do not occur so often are arranged in practical progression away from the center.

The operator takes each card in turn, glances at it, and drops it into the proper chute. The chute will direct the card down into the proper holder, and the inclined bottom of the holder will hold the sorted pile of cards in a slightly-inclined shape, so that the cards will not turn over and so that they will be arranged smoothly against the front wall 15 of the holders. In this way the operator can very quickly and accurately sort cards.

It also will be noted that the device is made entirely out of sheet metal, which makes a durable, simple, and lasting structure.

In the third sheet of drawings, in Figs. 5 to 10, inclusive, I have shown a modified form of structure which may be used in some instances. In this structure a box 39 is provided, and the same is divided by four partitions 40 into five compartments. Arranged in each of these compartments is a series of

holders, there being five holders used of the shape shown in Fig. 9 and one holder at the front of the shape shown in Fig. 8. These holders 41 comprise a piece of sheet metal bent substantially to right-angle form of a width suitable to fit in the compartment in the box.

Each of the holders illustrated in Fig. 9 is provided at its top with a guiding means, which consists of a wing or lip 42, bent at an angle to the upright section of the holder. The letters are placed on these lips or wings 42. By placing a card on the lips or wings the card is guided into the holder directly in front. Any one of these holders can be taken out to remove the cards without disturbing the others.

The device may be arranged on an incline, as shown in Fig. 6, or may be arranged flat, as shown in Fig. 7.

In some cases where the device is arranged flat it is desirable to incline the bottom leg or floor of each of the holders, and this can be done, as shown in Fig. 10, by providing the holders with additional small turned-down lips 43.

The clip which is used for holding the cards last described is illustrated in Fig. 12. This clip consists of a sheet-metal piece, which is bent to have three faces 44, 45, and 46, the face 46 being of a length proper to insert between the upright face of one of the front holders and the front edge of the box. The faces 44 and 45 are bent at a sharp angle, as shown, so that the cards will be spread out, as described in connection with the previous sorting-cabinet. This device is used practically the same as the device previously described.

Further modifications may be worked out and the details and arrangements herein shown and described may be greatly varied by a skilled mechanic without departing from the scope of my invention as expressed in the claims.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A device for sorting cards, comprising a cabinet having an inclined opening near the top thereof, a series of sheet-metal guides located with their upper ends parallel and out of vertical alinement, certain of said guides having at their upper ends a lip extending substantially vertically downwardly into the space between them and the guides below for receiving a reference character, the upper and outer portions of the lower guides also being provided with reference characters.

2. A device for sorting cards comprising a cabinet having an inclined opening in the upper portion thereof, the greater part of the opening being located at one side of the center of the cabinet, a set of wires extending horizontally across said opening, said wires

being located at different heights and out of vertical alinement with each other, and a series of sheet-metal guides extending from said wires and supported at their upper ends by said wires.

3. A device for sorting cards comprising a cabinet having an inclined opening in the upper portion thereof, the greater part of the opening being located at one side of the center of the cabinet, a set of wires extending horizontally across said opening, said wires being located at different heights and out of vertical alinement with each other, and a series of sheet-metal guides extending from said wires and supported at their upper ends thereby, each of said guides being curved, the curvature of those in the lower part of the cabinet being greater than that of those in the higher part of the cabinet.

4. A device for sorting cards comprising a cabinet having an inclined opening at the top thereof, a series of horizontal wires extending across said opening, said wires being arranged substantially in an inclined plane, a series of sheet-metal guides passing over said wires at their upper ends whereby said guides are supported by the wires, the guide supported by the upper wire being provided with a lip extending downwardly into the space between the upper guide and the guide below for receiving a reference character, the upper and outer portions of the lower guides also being provided with reference characters.

5. A device for sorting cards comprising a cabinet having a number of compartments provided with a series of guides in the compartments, said guides being located at several different heights therein, each of the guides being curved at a point adjacent to the discharge end thereof, the curvature of the guides in the lower part of the cabinet being progressively greater than that of those near the top thereof, and a plurality of series of holders into which said guides are adapted to discharge cards, each holder having a bottom crimped to the front and rear walls thereof, the rear crimp being wider than the front one.

6. A device for sorting cards, comprising a cabinet, a number of partitions dividing said cabinet into a series of compartments, wires passing through said partitions, sheet-metal guides arranged on said wires and forming in

connection with the partitions a series of chutes, and a series of removable holders fitting into said cabinet and registering with said chutes.

7. A holder for use in sorting-cabinets made out of a piece of sheet metal having a front wall, a bottom wall, and a rear wall, the bottom wall being crimped to the front and rear walls, the rear crimp being larger than the front crimp, whereby the bottom wall will stand at an incline.

8. A holder for use in sorting-cabinets made out of a piece of sheet metal having a front wall, a bottom wall, and a rear wall, the bottom wall being crimped to the front and rear walls, the rear crimp being larger than the front crimp, whereby the bottom wall will stand at an incline, and ties connecting the crimps and forming guiding-supports for the holders.

9. A holder for use in sorting-cabinets, made of a piece of sheet metal having a front wall, a bottom wall, and a rear wall, the bottom wall being crimped to the front and rear walls, the rear crimp being larger than the front crimp, and the two ends of the holder being open, whereby cards may be discharged from the holder by simply tilting it on one side.

10. A portable holder for cards comprising a sheet-metal piece having two faces arranged at a sharp angle to each other, and a rear supporting-face, the sides being open to permit cards to be discharged sidewise.

11. A holder for cards, comprising a sheet-metal piece having two faces arranged at a sharp angle to each other, and a rear supporting-face, the rear supporting-face and the bottom piece extending back toward the sharp angle.

12. A holder for cards comprising a sheet-metal piece having two faces arranged at a sharp angle to each other, and means for supporting the lower of said faces on an incline with said angle at the lower edge of said faces.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

DANIEL KENT.

Witnesses:

LOUIS W. SOUTHGATE,
MARY E. REGAN.