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Patented Oct. 21, 1902.

F. K. ARNOLD.
DIE FOR CUTTING CARDS FROM PAPER STOCK.

(Application filed May 5, 1902.)

(No Model.)

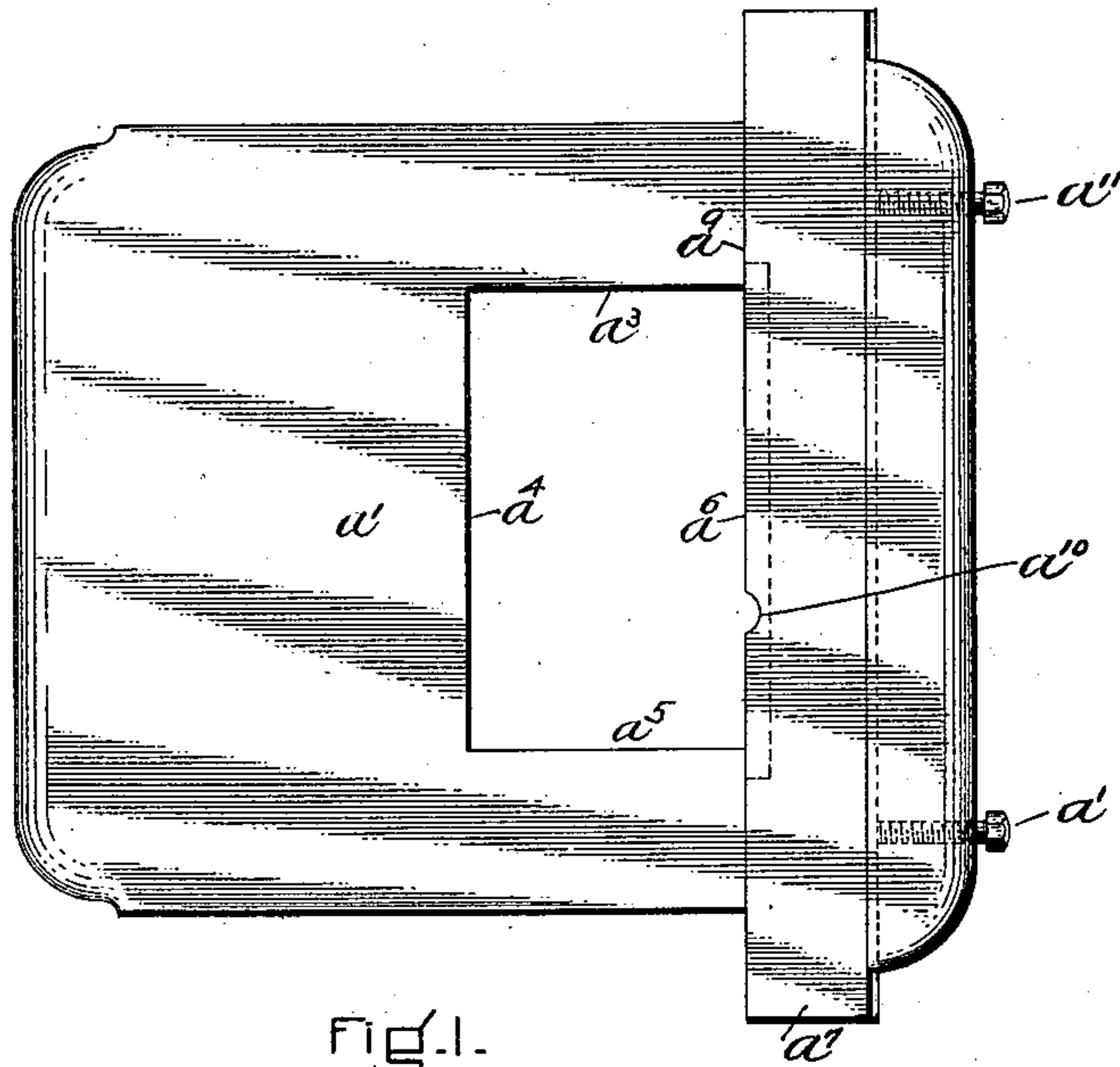


Fig. 1.

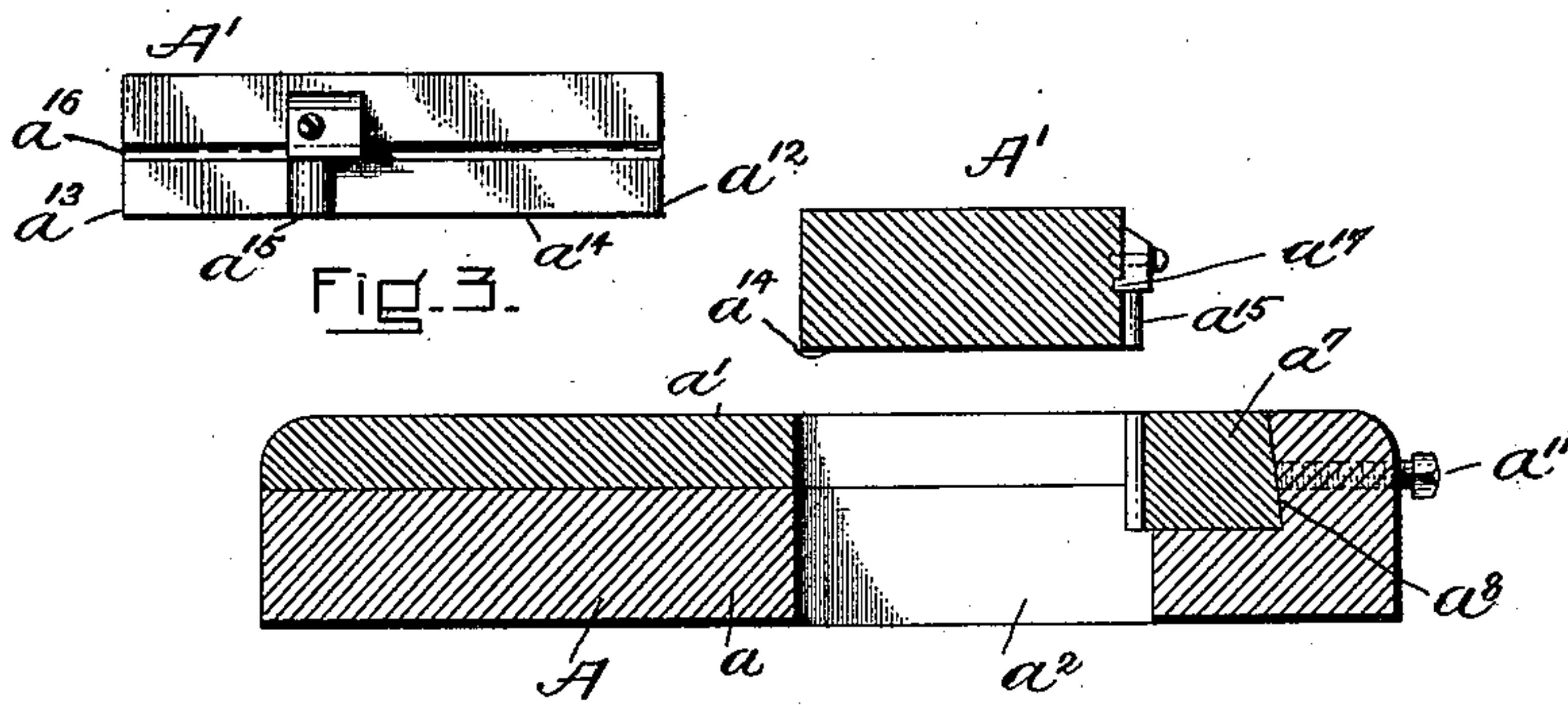


Fig. 2.

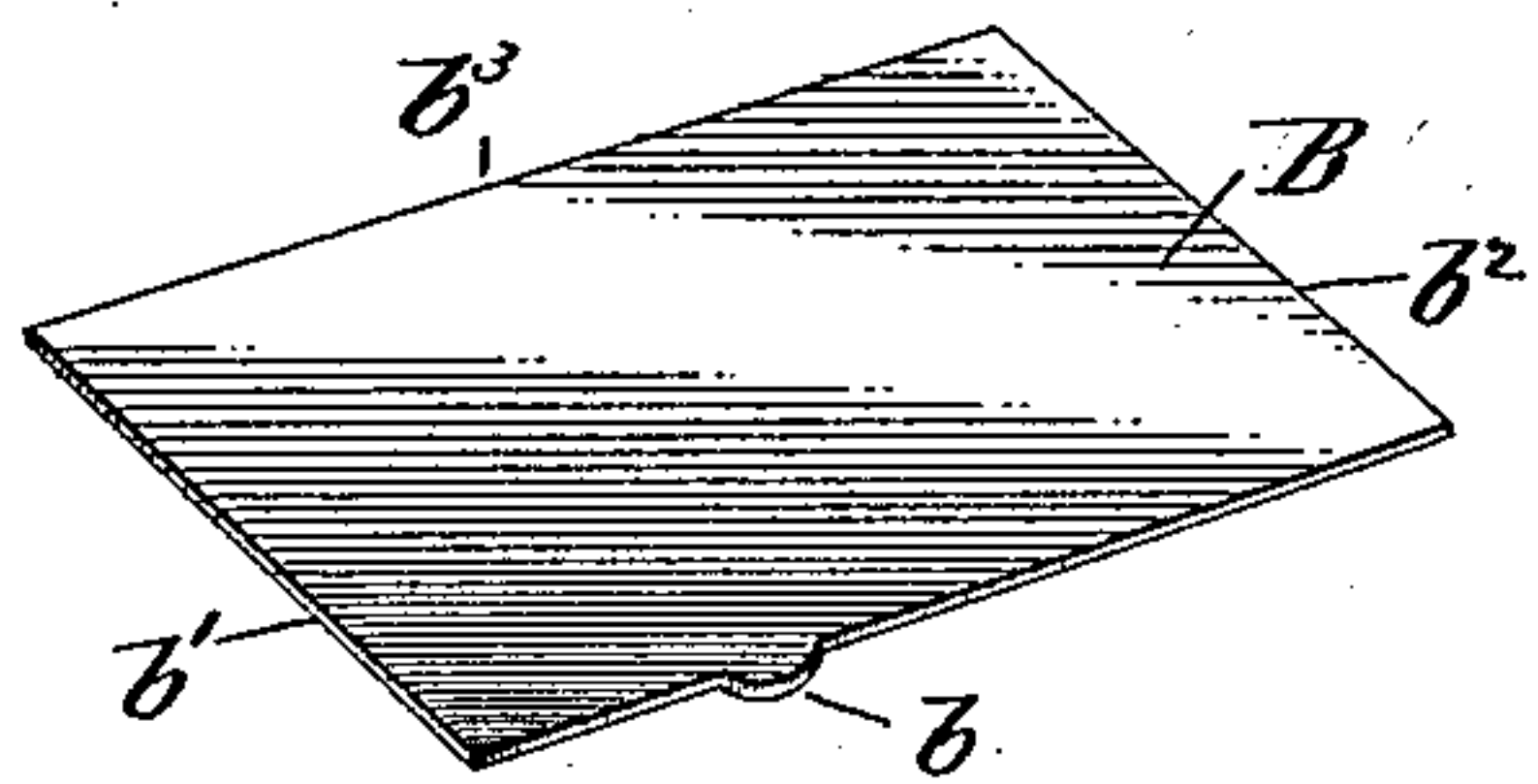


Fig. 4.

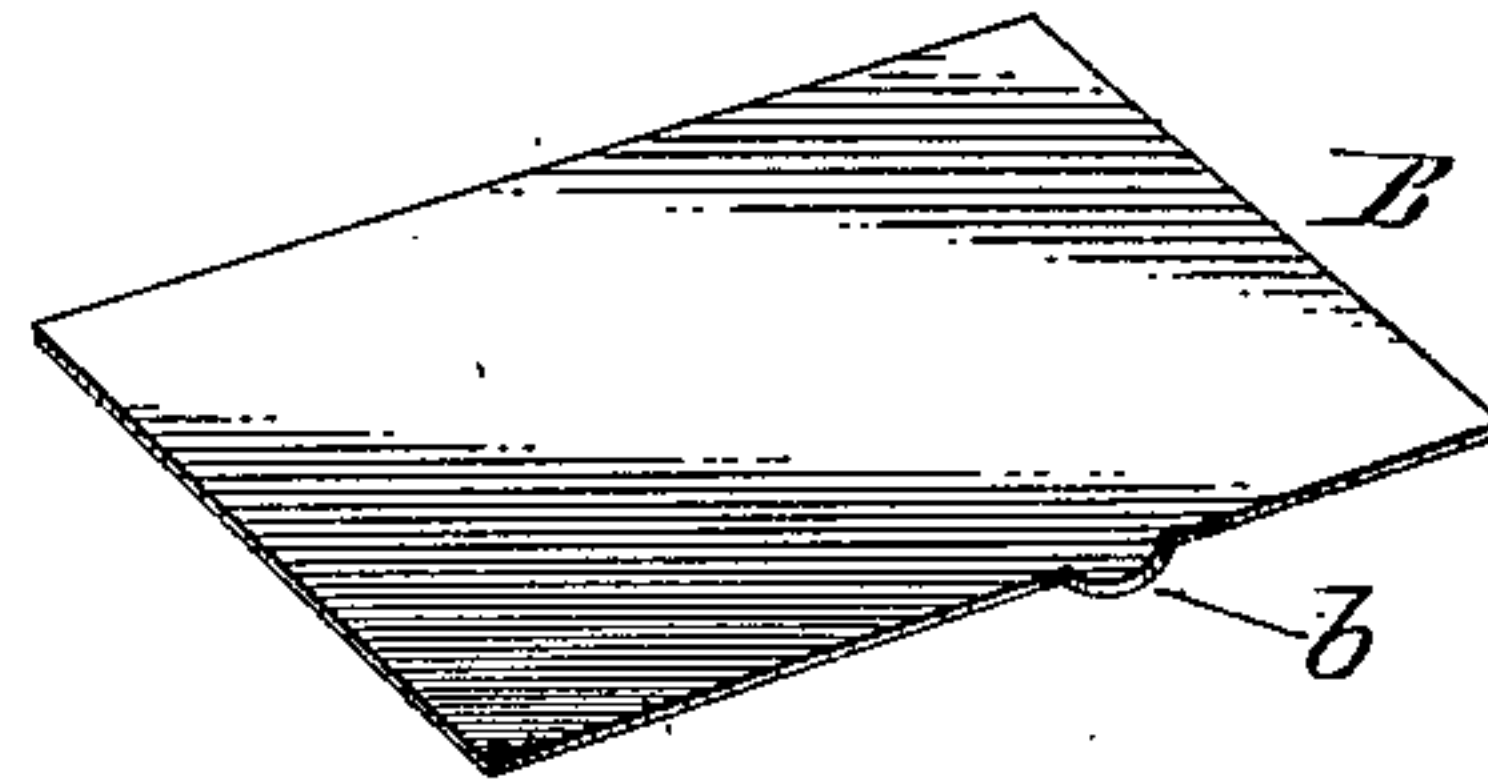


Fig. 5.

WITNESSES

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DIE FOR CUTTING CARDS FROM PAPER-STOCK.

SPECIFICATION forming part of Letters Patent No. 711,752, dated October 21, 1902.

Application filed May 5, 1902. Serial No. 105,872. (No model.)

To all whom it may concern:

Be it known that I, FRANK K. ARNOLD, a subject of Edward VII, King of Great Britain, residing in Everett, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Dies for Cutting Cards from Paper-Stock, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

It is desirable for many purposes that a card otherwise generally rectangular or square should have extending from one edge a projection more or less narrow and which is generally used as a means for selecting or finding a card forming one of a pack or number having similar projections, but differently located with respect to the ends of the cards.

I will now describe the invention in conjunction with the drawings forming a part of this specification, where—

Figure 1 is a view of my improved die. Fig. 2 is a view in cross vertical section thereof and also representing in cross vertical section the punch employed therewith. Fig. 3 is a view in side elevation of the punch, and Figs. 4 and 5 illustrate cards having edge projections.

Referring to the drawings, A is the die, and A' the punch. The die has a base a in one piece and the top plate a' , of hardened steel. Both plates have the passage a^2 , through which the severed card is forced. The upper edges a^3 , a^4 , and a^5 of the upper plate a' form the portions of the die which sever, in conjunction with similar parts of the punch, the ends and one side of the card from the strip of paper or cardboard from which it is made. The edge a^6 of the die is formed by a movable slide a^7 , which is held in an undercut longitudinal recess a^8 , extending the full width of the plate a . A portion of this recess is against the die-cavity and a portion against the shoulders a^9 . The cutting edge a^6 of the slide a^7 is much longer than the die-cavity and practically of the length of the slide. The plate also overhangs by its inner edge the portion of the cavity or passage a^2 in the plate a . It also has in its overhanging edge an inward curve or other shaped die-recess a^{10} . The slide

is adapted to be moved lengthwise the fixed cutting-sections a^3 a^4 a^5 of the die to bring any portion of its cutting edge a^6 into position and to also move the die-recess a^{10} to any position between the ends a^3 a^5 desired, and the slide is fastened into any position to which it may be moved by set-screws a^{11} .

The recess a^{10} is the part which forms, in conjunction with a cooperating part upon the punch, the projection b from the edge of the card B, and by moving the slide the position which this projection b bears to the ends b' b^2 may be infinitely varied without adding a part to the die and without the removal of any part therefrom.

The punch A' is of a shape to cut by its ends a^{12} a^{13} one side a^{14} , in conjunction with the cutting edges a^3 a^4 a^5 of the die, the ends b' b^2 , and one side b^3 of the card. It carries upon its side a^{14} a cutting section or part a^{15} , which is of the shape of the recess a^{10} in the slide a^7 and which is laterally adjustable upon the said side to correspond with the lateral adjustment of the recess a^{10} by the slide a^7 . The said side of the punch has a longitudinal groove a^{16} , which receives and holds a rib a^{17} on the back side of the upper part of the movable section a^{15} of the die. This movable section is locked in its adjusted position to the side of the die with the rib in the groove by means of a screw. The groove a^{16} may be a dovetailed groove and the rib a^{17} a dovetailed rib to slide in the dovetailed groove, if desired.

The section a^{15} of the punch, in conjunction with the recess a^{10} of the slide, cuts the projection b upon the edge of the card, and the edge a^{14} upon either side of this die-section cuts the portion of the card between the projection b and its ends.

In Fig. 4 a cut card is shown in which the projection b bears the location it would have were it cut by the die with the slide adjusted as represented in Fig. 1. In Fig. 5 a card is shown in which the projection b from its edge is cut by the die when the slide and the punch have been moved from the position represented in Figs. 1 and 3 to the position necessary for so locking the projection with respect to the ends of the card.

It is of course apparent that the entire cutting edge of the slide a^7 is not operative at all times, but only as moved into position to form one side of the die.

5 Of course the shape of the die-recess a^{10} and of the removable part of the punch corresponding to it may have any other desired shape to form a projection upon the edge of the card of any required shape, and the slide
10 may have more than one recess and the punch more than one movable section for forming two or more projections from the edge of the card, if so required.

Having thus fully described my invention,
15 I claim and desire to secure by Letters Patent of the United States—

1. A die of the character specified having a fixed side, fixed ends and an adjustable side provided by a slide having a cutting edge
20 which extends beyond both ends.

2. A die of the character specified having a fixed side, fixed ends and an adjustable side provided by a slide having a cutting edge which extends beyond both ends and also hav-
25 ing a cutting-recess which is adjusted by the slide between the ends.

3. A die of the character specified having

a fixed side, integral fixed ends and an adjustable side provided by a slide supported by the die having a cutting edge which ex- 30 tends beyond both fixed ends and a cutting-recess which is adjustable by the slide between the ends.

4. A die of the character specified having a sliding side provided with a cutting edge, 35 and a cutting-recess in said edge which is laterally adjusted by the slide.

5. A die of the character specified having a fixed side, fixed ends and a recess along the side opposite the fixed side, and a slide mount- 40 ed in said recess to be adjustable lengthwise it having a cutting edge longer than the die-cavity, a cutting-recess in said edge and means for fastening the slide in its adjusted position.

6. A die of the character specified having 45 a sliding side provided with a cutting edge, a cutting-recess in said edge which is laterally adjusted by the slide, and a punch having upon one face an adjustable section to coöperate with the cutting-recess in the said slide. 50

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