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K. S. HAYWOOD

2,257,683

TICKET STACKING DEVICE

Filed June 29, 1939

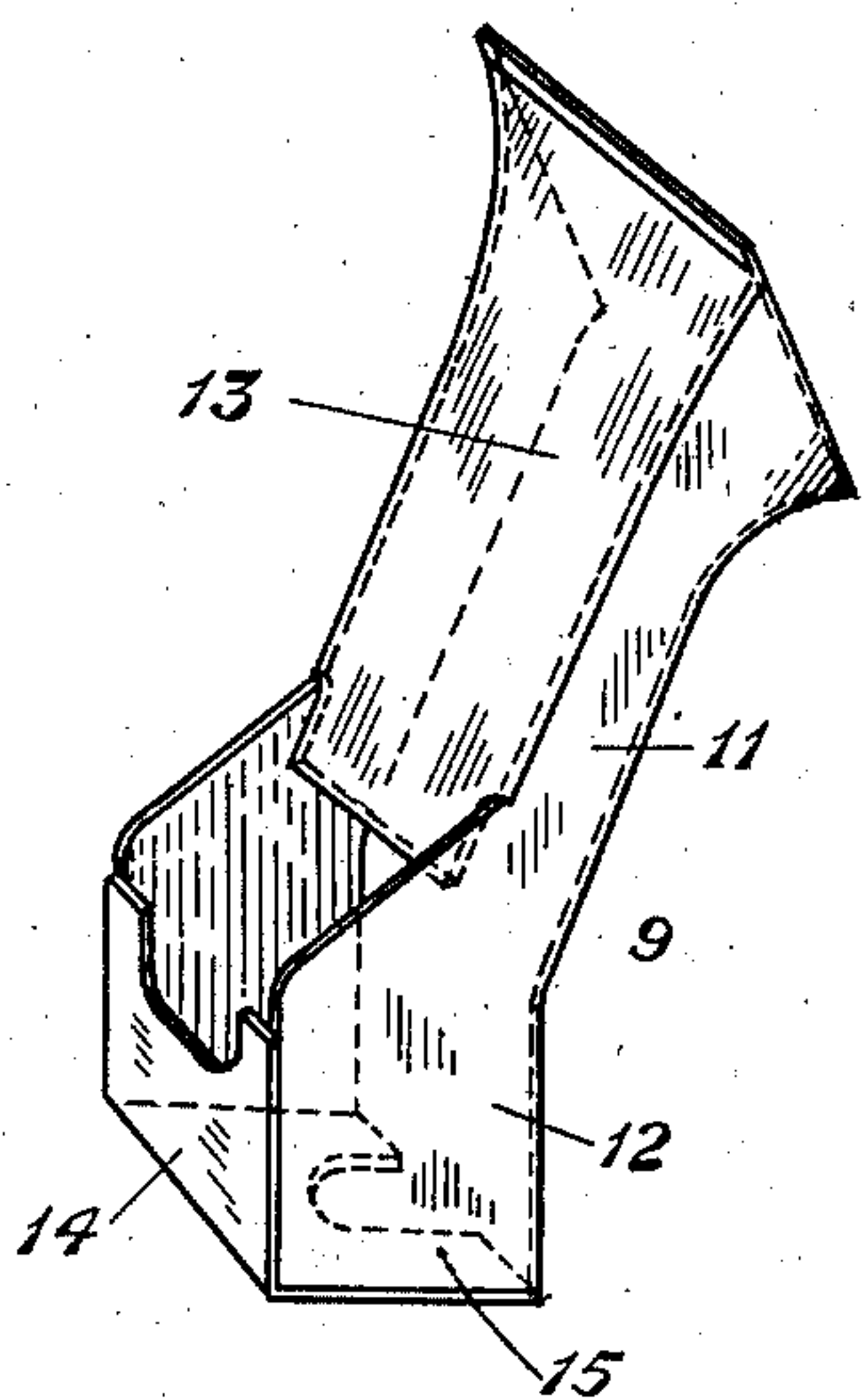


Fig. 1

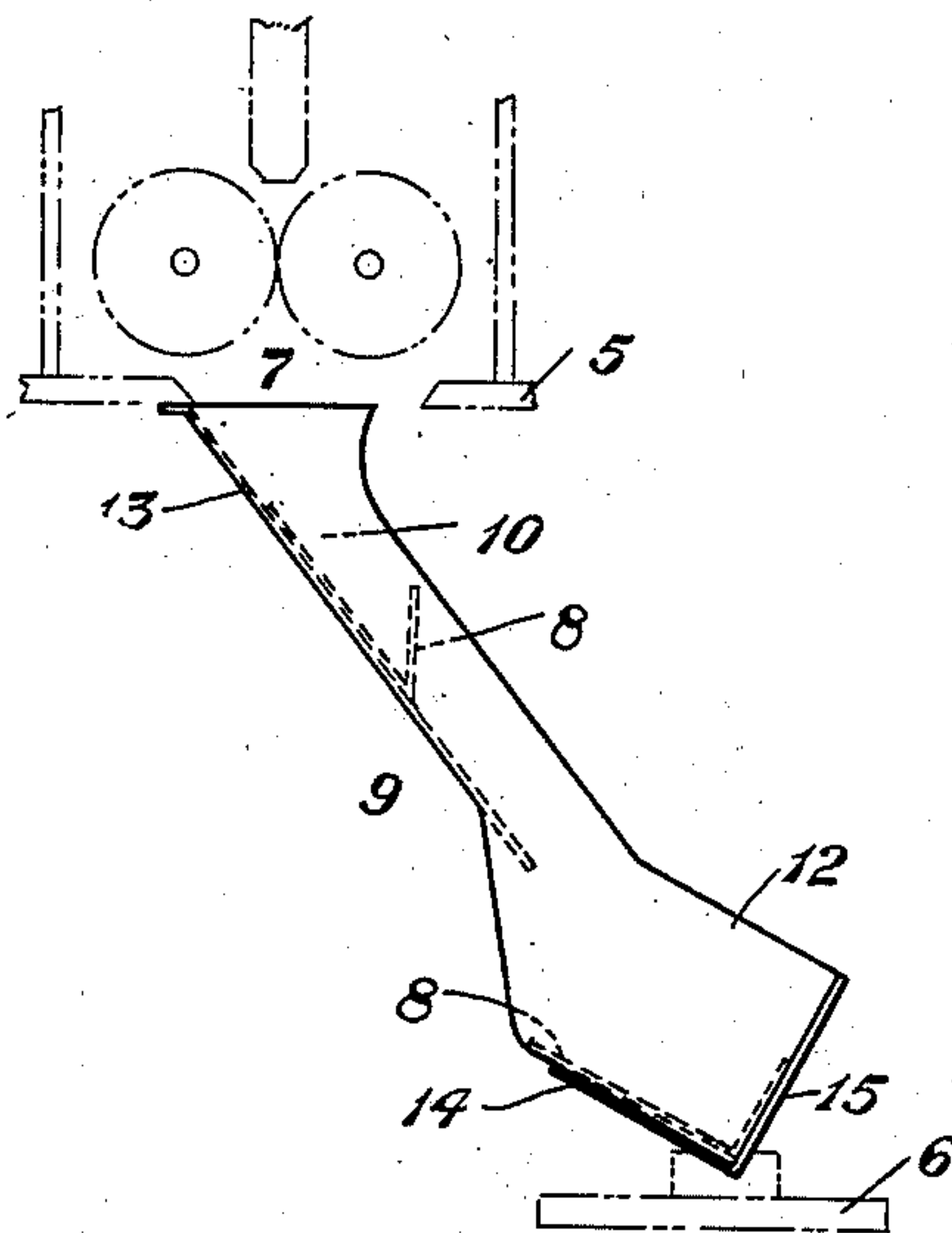


Fig. 2

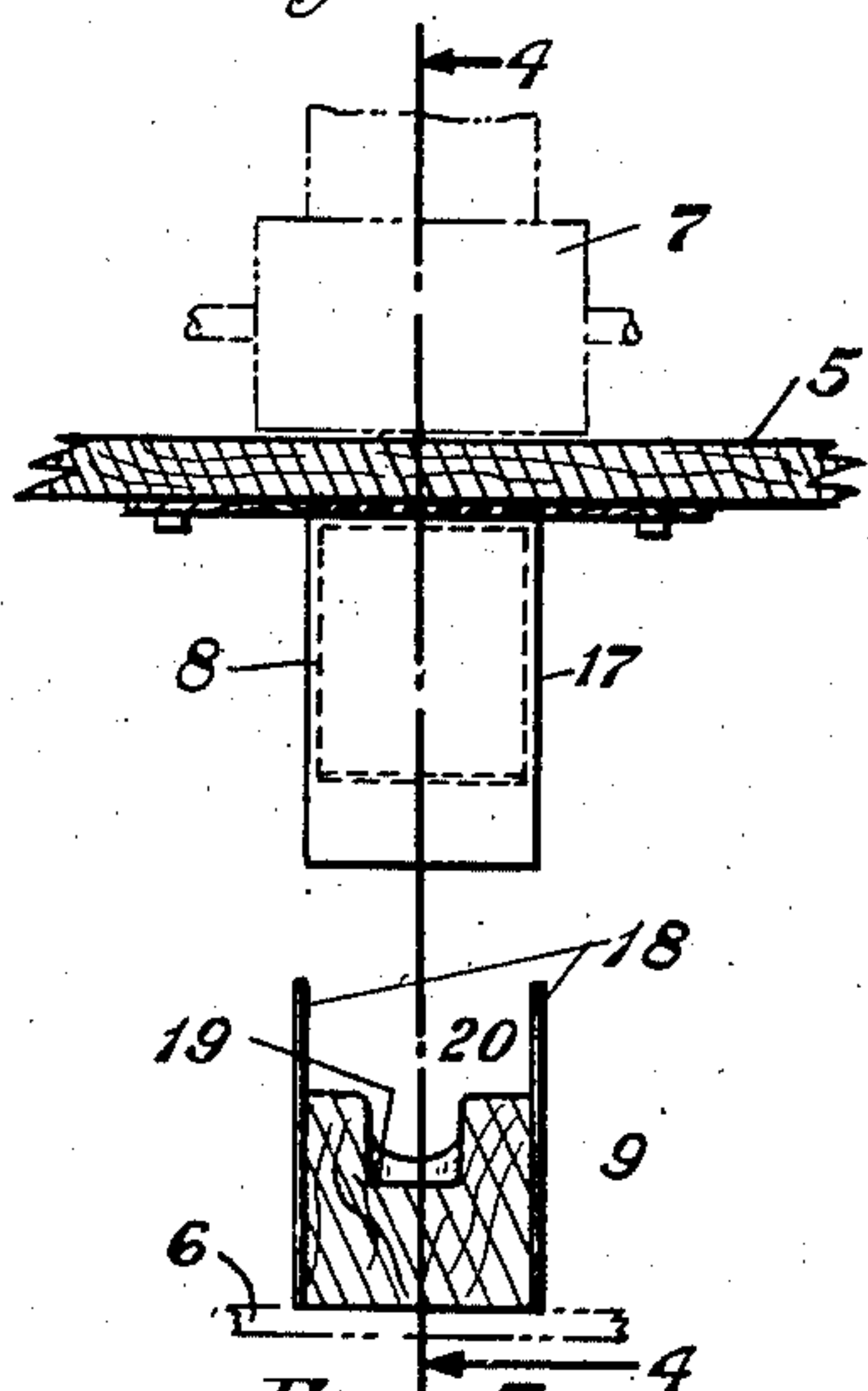


Fig. 3

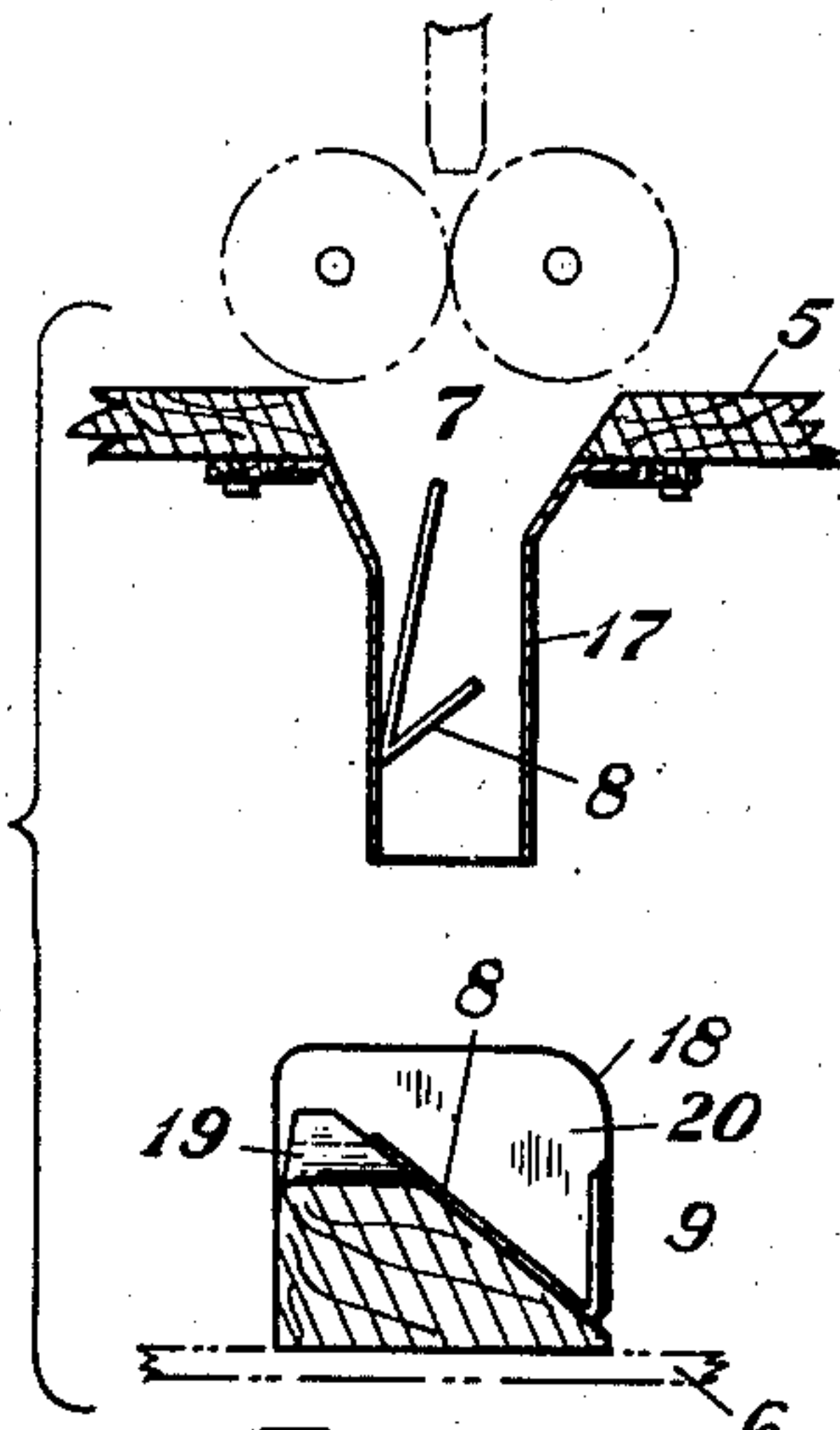


Fig. 4

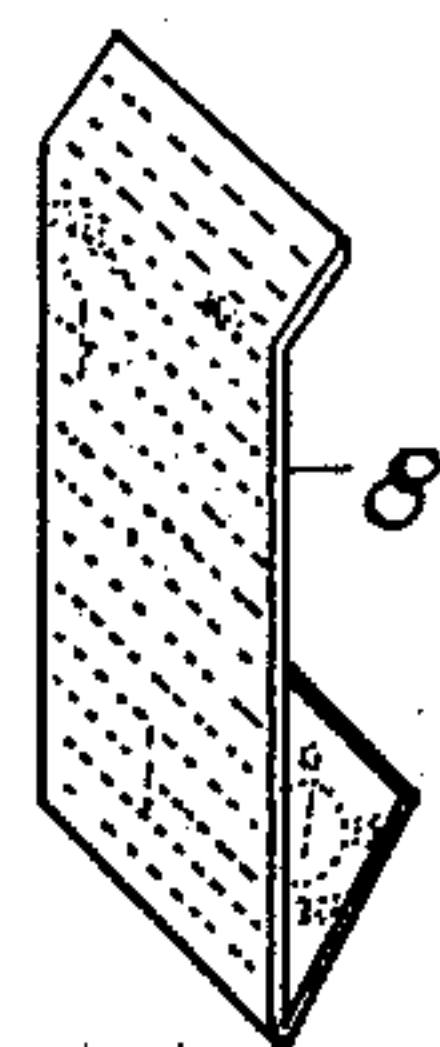


Fig. 5

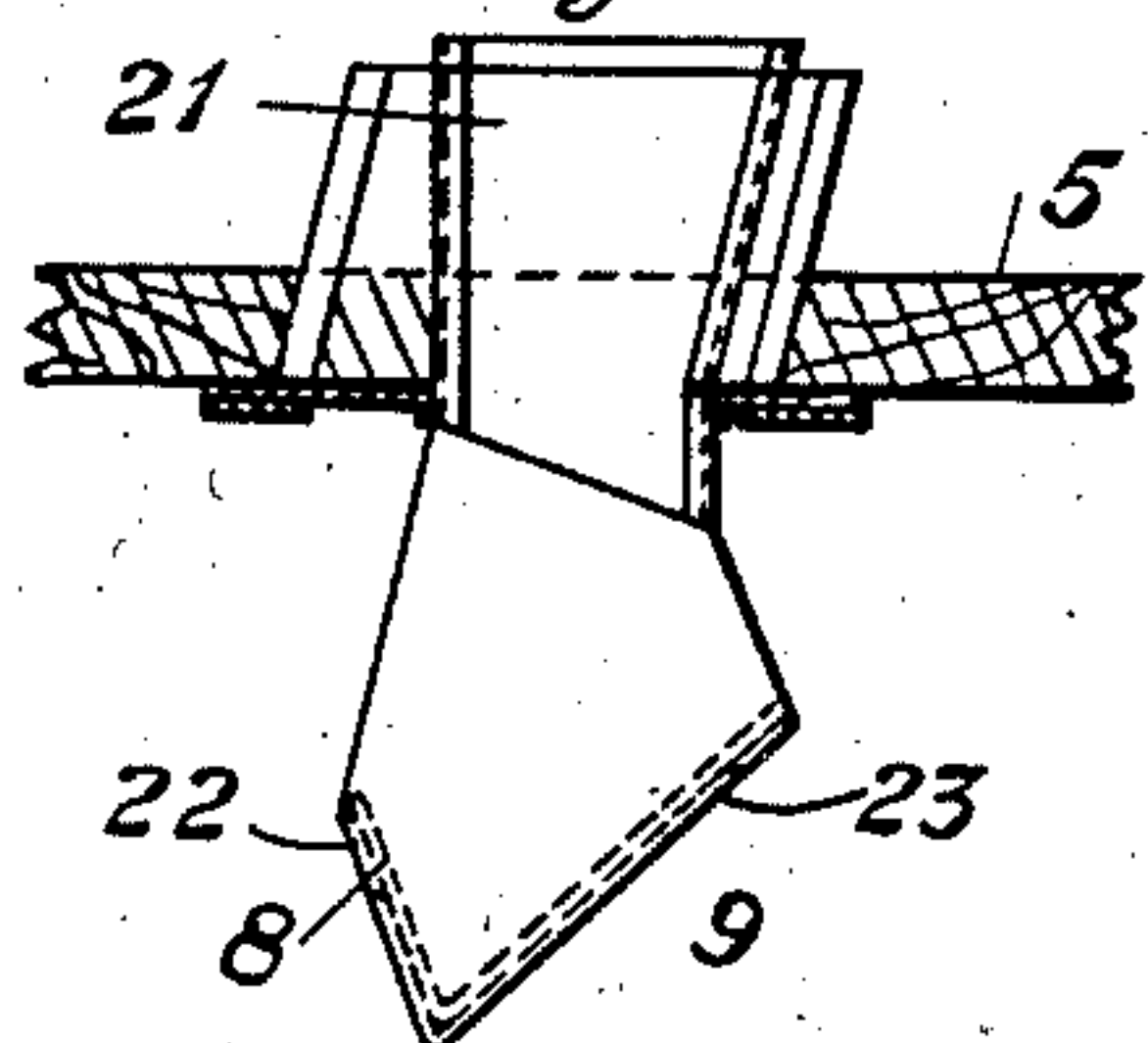


Fig. 6

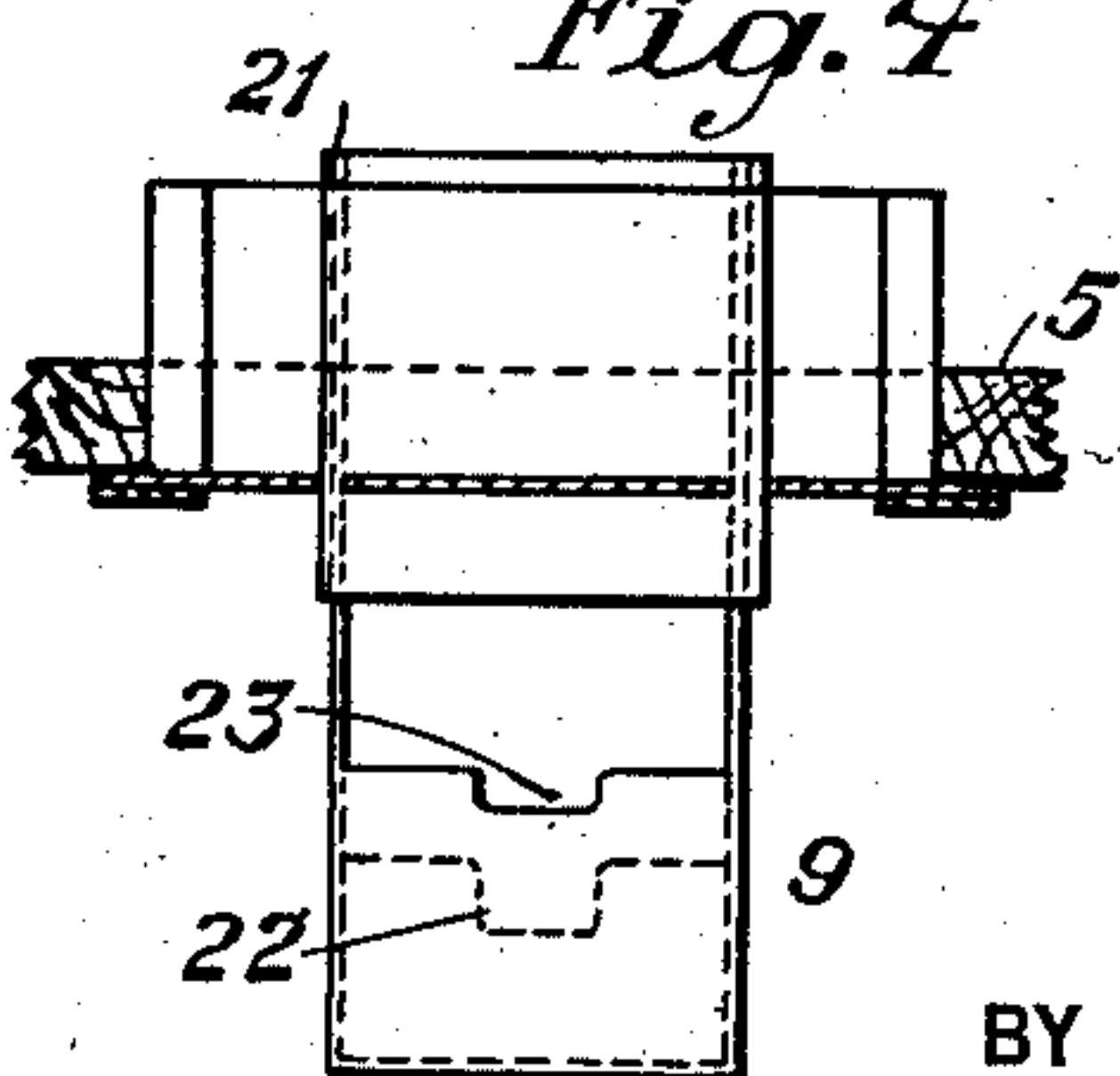


Fig. 7

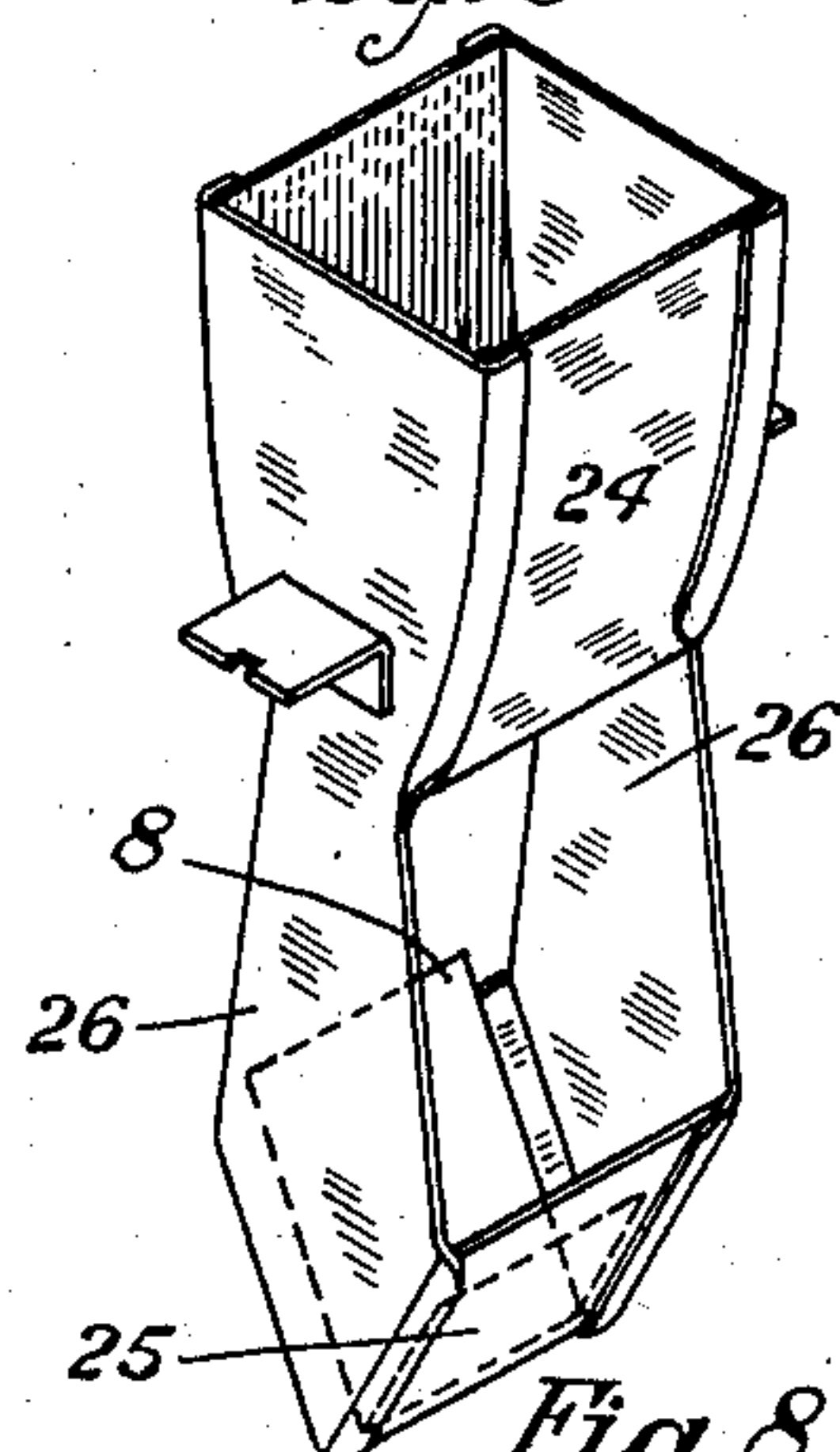


Fig. 8

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TICKET STACKING DEVICE

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3 Claims. (Cl. 302—2)

This invention relates to ticket stacking devices which are more particularly adapted for use in connection with pneumatic ticket distributing systems.

It is common practice in pneumatic tube systems to forward tickets from a sending point to a receiving point. These systems have been used in connection with telephone service and especially for toll services. Record of the elapsed time of a call and other information is made upon the ticket by an operator, and the ticket is then dispatched through a pneumatic tube system and through a terminating roller valve thereof from which it is dropped upon a receiving tray, shelf or the like. The tickets when thus received lie in disordered and scattered formation, and it is necessary that they be gathered and properly stacked by hand before disposition of the tickets is made. This work involves considerable time and effort on the part of the operator.

It is an object of this invention to overcome the above mentioned undesirable features by providing a device which will receive and automatically stack the tickets as they arrive at the receiving end of the pneumatic tube system.

Another object is to effect a savings in time and simplify the operator's work.

These and further objects will be apparent from the following description, when considered in connection with the accompanying drawing in which certain embodiments of the invention are illustrated.

Referring to the drawing,

Figure 1 is a perspective view of one form of the device in which the tickets are adapted to be received and stacked.

Fig. 2 is a side elevation of the device showing it mounted upon a support and in attached position to a pneumatic tube system to receive tickets as they are dropped from the roller valves of the system.

Fig. 3 is a sectional view showing the roller valve and associated chute at the receiving end of a pneumatic tube system beneath which a modified form of the ticket stacking device is mounted in operative position.

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 3.

Fig. 5 is a perspective view of a type of ticket, with its bent-over end and trailing edge bend, which is adapted for use with the present system.

Fig. 6 is a side elevation in section of another modification of the invention,

Fig. 7 is an elevation of one side of the arrangement shown in Fig. 6, and

Fig. 8 is a perspective view of another modification of the invention.

In the drawing, the receiving end of the pneumatic tube system is shown as supported upon a base 5. This base is positioned above a shelf 6 on which the receiving receptacle is mounted. The pneumatic tube system may be of the well known type, and includes the usual roller receiving valves 7 which discharge the tickets 8 (Fig. 5) into a depositing receptacle 9.

In Figs. 1 and 2 of the drawing, this receptacle is shown as having a chute portion 10 which is substantially rectangular in cross-section and is open at its top. The width of this chute is substantially equal to the width of the ticket. This top portion may be somewhat flared and is attached to the base 5 of the pneumatic tube system in any suitable manner. The chute 10 is provided with parallel side walls 11 which extend downwardly, and also form parallel side walls 12 for the portion of the depositing receptacle between which the tickets are stacked. The wall 13 of the chute extends downwardly from the top of the chute to a point just below the junction of the beveled top edges of the side walls 12 with the corners of the chute. A cut-away portion 14 as more clearly indicated in Fig. 1, is provided on the rear side of the ticket compartment, and a space between the top of this portion and the bottom of the wall 13 is sufficient to permit the insertion of fingers to remove the stacked tickets from the rear side of the compartment. The portion 14 is connected to a like portion 15 and these form an angular abutment against which the tickets lie in stacked formation as they are received from the discharge rollers 7. The tickets may be withdrawn from the other or front side of the compartment by the insertion of the fingers in the open front of the chute.

In Figs. 3 and 4, the pneumatic system is shown as having a discharge tube 17 extending below the supporting base 5, and the ticket receiving receptacle 9 is carried on a shelf 6 directly below the discharge tube 17. The receptacle is so arranged with respect to the tube that tickets discharged fall directly into the receptacle in properly stacked order. In Figs. 3 and 4 the side walls 18 of the receptacle are positioned on a block of suitable material having an inclined surface upon which the tickets lie in stacked position as they fall. The width between the inner sides of the walls is substantially the width of the tickets so as to prevent their lateral displacement. A rear view of the receptacle is

shown in Fig. 3 and the stacked tickets may be removed from this side of the receptacle by the insertion of the fingers between the walls 18 and through the groove 19. The tickets may be removed from the opposite side of the receptacle (Fig. 4) by the insertion of the fingers in the space 20 between the walls 18.

The modification of the invention shown in Figs. 6 and 7 illustrates the discharge tube 21 as being fastened to and extending upwardly through the supporting base 5 and into the pneumatic system. The ticket receiving receptacle 9 is integral with the chute and access may be had through the space above the partition 23, as indicated by full lines in Fig. 7.

The modification shown in Fig. 8 is somewhat similar to that disclosed in Figs. 6 and 7. In Fig. 8 the upper part of the chute portion 24 may be attached to the pneumatic tube system similarly to that shown in Figs. 6 and 7 or it may be flared and attached to the bottom of the base 5 to cover the opening thereon beneath the roller valves 7. In Fig. 8 the angular abutment against which the tickets rest, and which is formed by the walls 25 is substantially V-shaped in cross-section and symmetrically arranged. The side walls 26 which interconnect the abutment with the chute 24 similarly to like walls in other of the modifications is of a width substantially that of the tickets. The width of the depositing portion is likewise substantially the same width as that of the tickets. These dimensions not alone facilitate the proper passage of the tickets, but also cause them to assume a nested or stacked formation as they are dropped individually from the pneumatic system. The openings above the tops of the walls 25 on each side of the abutment provide sufficient space for the insertion of the fingers to withdraw the stacked tickets.

From the foregoing it is thought that the construction, operation and many advantages of the herein described and delineated invention will be apparent to those skilled in the art without further description. It will be understood that various changes in the size, shape, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention as defined in the appended claims.

What is claimed is:

1. In a pneumatic distributing system, a discharge device for tickets including a chute of substantially rectangular cross-section of such size that one dimension of the rectangle is sub-

stantially equal to the width of the ticket and the other dimension is large enough to freely pass the ticket without permitting it to turn over, and a depositing receptacle associated with the chute having oppositely and symmetrically arranged walls forming an angle in which tickets as they pass through the chute may come to rest in nested formation, said receptacle having closed side walls connected to the chute and having a width substantially equal to that of the tickets to prevent them from being displaced laterally.

2. In a pneumatic distributing system, a discharge device including a chute for tickets having a bentover end, said chute being of substantially rectangular cross-section of such size that one dimension of the rectangle is substantially equal to the width of the ticket and the other dimension is large enough to freely pass the ticket with its extended bent-over end without permitting the ticket to turn over, and a depositing receptacle associated with the chute having oppositely and symmetrically arranged walls of V-shaped cross section forming an angle in which tickets as they pass through the chute may come to rest in stacked formation with their bent-over ends lying adjacent each other, said receptacle having closed side walls connected to the chute and being of a width substantially equal to that of the tickets to prevent them from being displaced laterally and open portions between said walls to permit the stacked tickets to be removed by hand.

3. In a pneumatic tube system for dispatching tickets from a sending point to a receiving point, said tickets having a bent-over end to facilitate their dispatch through the tube, a chute of substantially rectangular cross-section of such size that one dimension of the rectangle is substantially equal to the width of the ticket and the other dimension is large enough to freely pass the ticket without permitting it to turn over, and a depositing receptacle connected with the chute having oppositely and symmetrically arranged walls of V-shaped cross-section forming an angle in which tickets as they pass through the chute may come to rest in stacked and nested formation with their bent-over ends lying adjacent each other, said receptacle having a width substantially equal to that of the tickets to prevent them from being displaced laterally and openings on each side to permit the stacked tickets to be removed by hand.

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