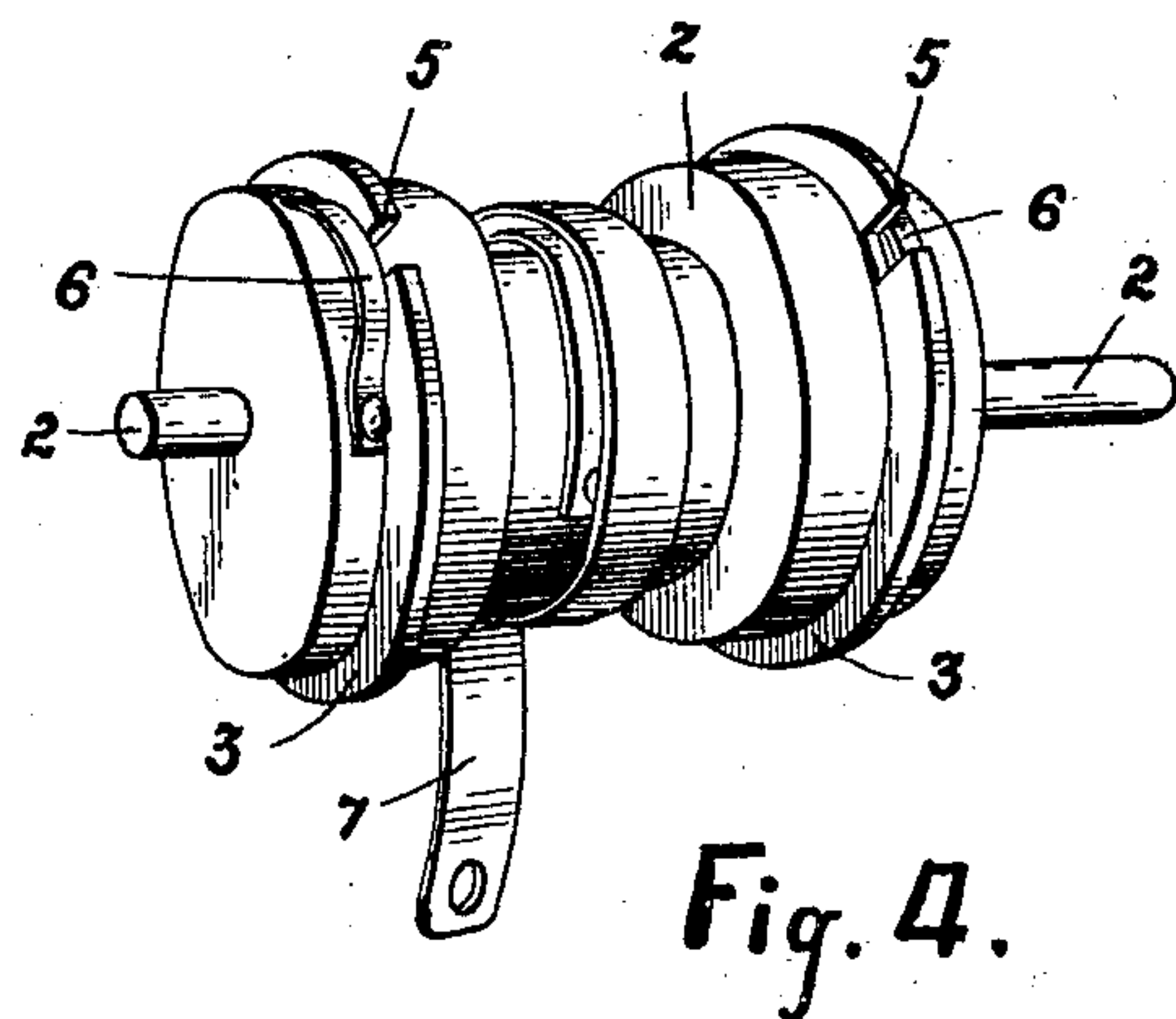
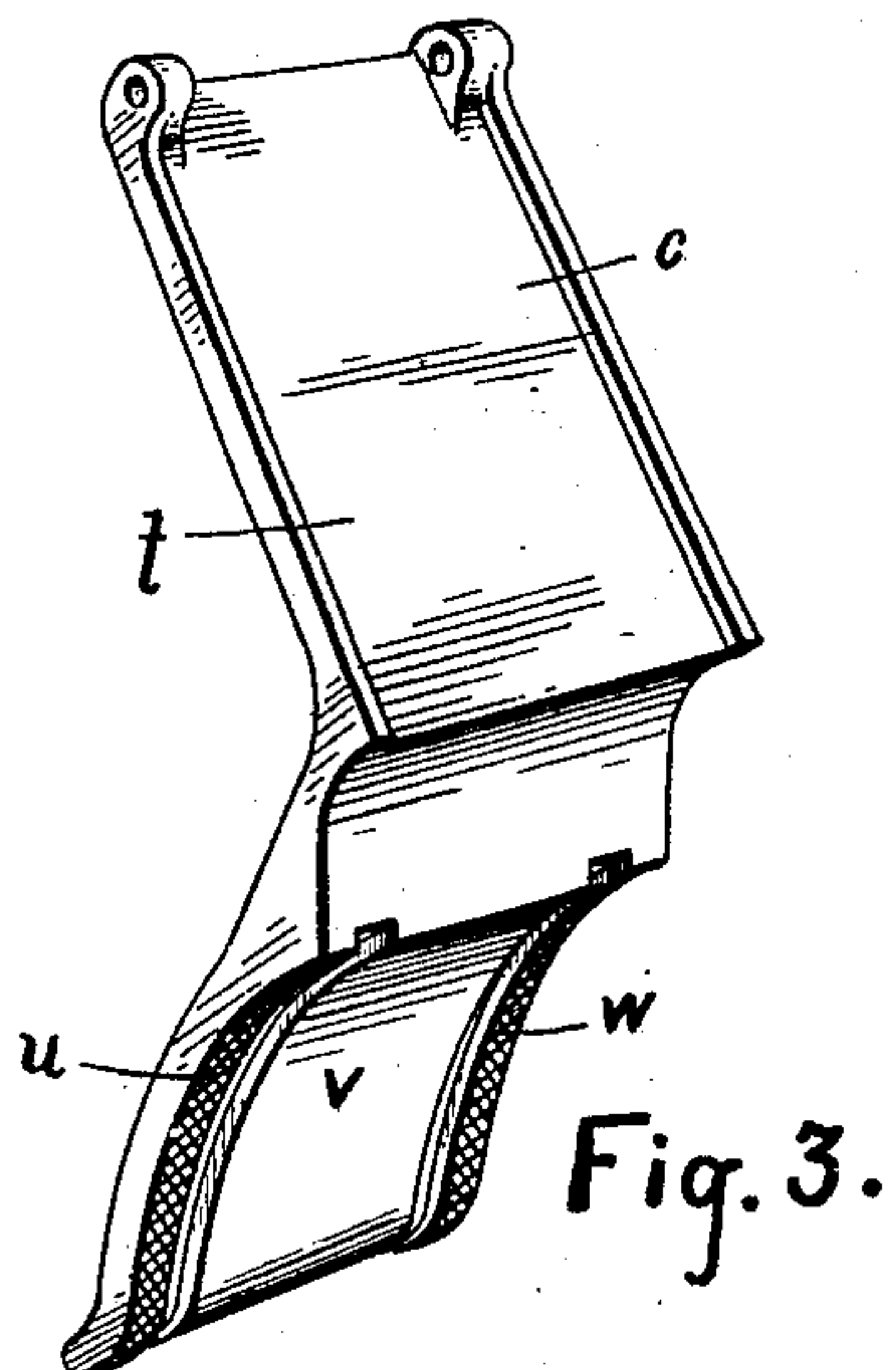
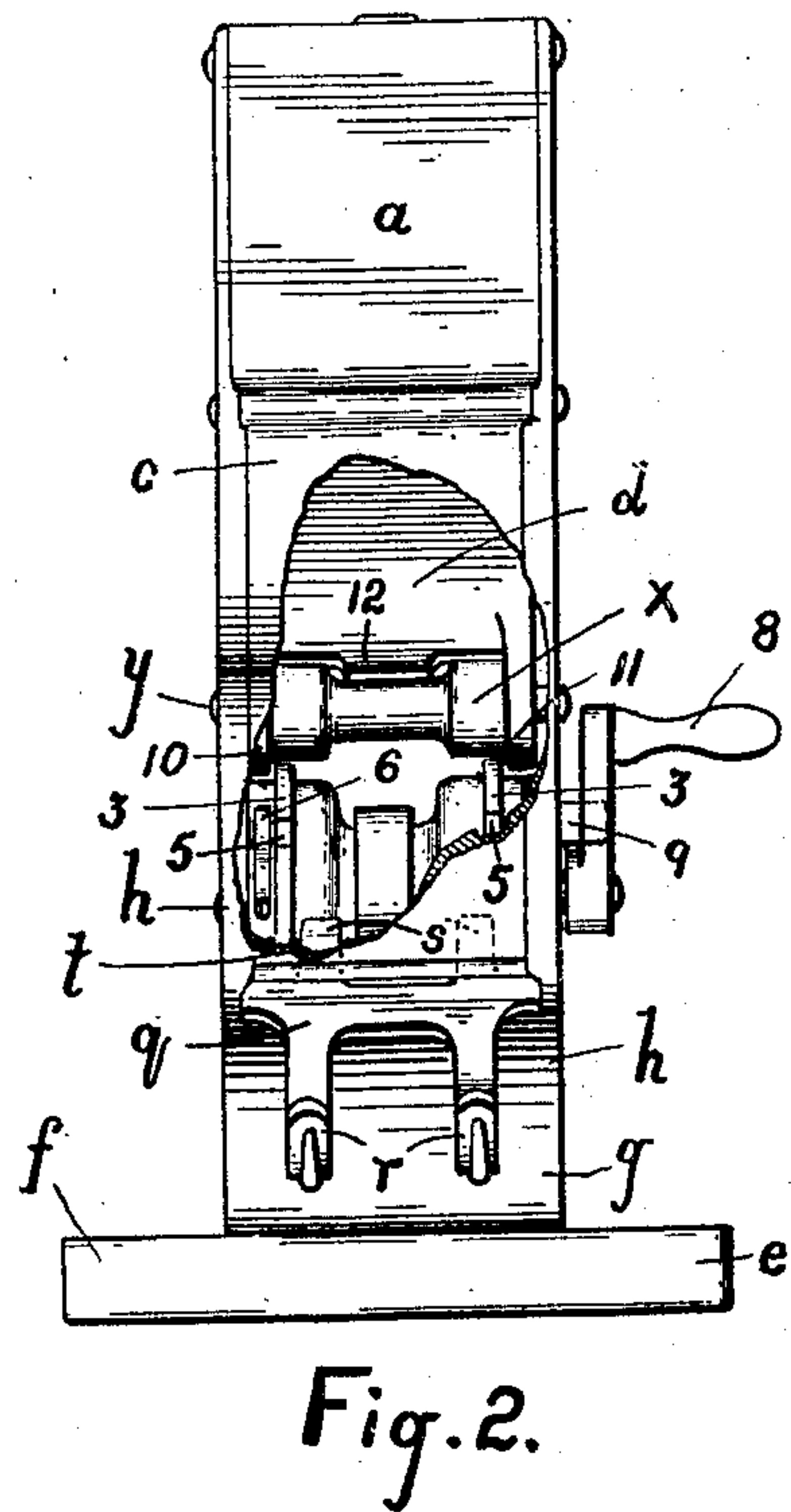
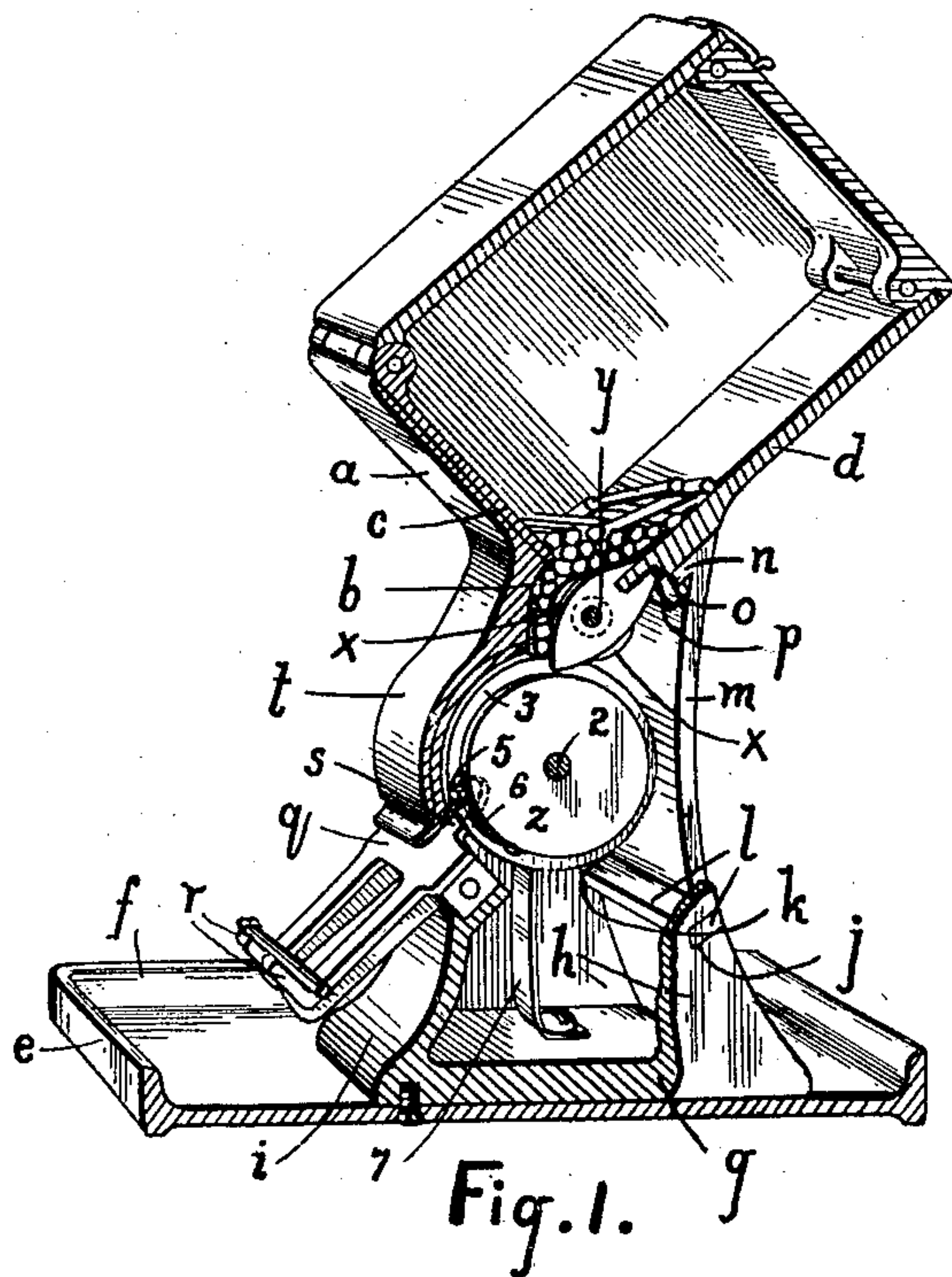


No. 836,927.

PATENTED NOV. 27, 1906.

W. T. IVES.
MATCH BOX.

APPLICATION FILED MAR. 19, 1906.



Witnesses.

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WALTER TRACY IVES, OF MONTREAL, QUEBEC, CANADA.

MATCH-BOX.

No. 836,927.

Specification of Letters Patent.

Patented Nov. 27, 1906.

Application filed March 19, 1906. Serial No. 306,894.

To all whom it may concern:

Be it known that I, WALTER TRACY IVES, a subject of the King of Great Britain, residing at 214 St. James street, in the city of Montreal, in the district of Montreal, in the Province of Quebec, in the Dominion of Canada, have invented certain new and useful Improvements in Match-Boxes, of which the following is a specification.

My invention relates to improvements in match-boxes; and the object of the invention is to devise a safe receptacle for a quantity of matches in which lighted matches may be extracted from the box singly and not interfere with the remaining matches, and whereby only one match may be extracted at an operation; and it consists, essentially, of a base, a standard rising from said base and rigid therewith, a casing forming a receptacle supported on said standard and having inclined ways therein converging to an egress-opening, a movable member supported by said standard immediately beneath said receptacle and slotted to receive the match from the aforesaid receptacle, and striking means interposed in the way of the match-head in proximity to said movable member, as hereinafter more particularly set forth in detail.

In the drawings, Figure 1 is a perspective view of the device having one complete side removed and showing the interior mechanism. Fig. 2 is a view showing the front elevation of the device having a portion of the casing and the face-plate broken away. Fig. 3 is a perspective detail of the face-plate, showing the striking means. Fig. 4 is a perspective detail of the movable member.

Like characters of reference indicate corresponding parts in each figure.

a is the casing, here shown as rectangular and as having a corner thereof cut away to form the egress-slot *b*, thus making two of its sides the inclined ways *c* and *d*, the latter terminating at each side thereof in the arc-shaped guides 10 and 11 and in the center in the tongue 12; but it must be understood that without departing from the spirit of my invention the casing may be of any suitable shape, particularly a shape susceptible to ornamentation, and the inclined ways installed therein quite apart from the sides of the casing; but for convenience sake I shall describe the invention in a simple form.

e is the base, herein shown as rectangular in shape and having the upturned flange *f* completely therearound, thus forming a tray.

The base may, however, be made of any suitable shape and formation, according to the design of the device.

g is the standard rising from the base *e* and securely fixed thereto or forming part therewith and having the sides *h* supporting the casing *a* and the front portion *i* cut away slightly above said base.

In the sides *h*, *j*, and *k* are slots, in which is inserted the lower turned end *l* of the back plate *m*. The back plate *m* at its upper end has a downwardly-extending flange *n* correspondingly formed and fitting into a recess *o*, made in the boss *p* from the outside of the casing *a*. The back plate *m* is thus readily removable for the purpose of getting at the interior mechanism of the device. The front portion of the standard *g* has securely bolted to it, at the top thereof, the runway *q*, and the said runway at its lower end has the upturned fingers *r*, and extending upwardly from the sides of said runway and forming part therewith are the guiding-rods *s*, reaching in an upward direction and curved.

The casing *a* is supported cornerwise on the standard *g*, or it may form part with the said standard, though in the construction herein shown and described one side of the casing *a*, forming the way *c*, extends downwardly and forms the front plate *t*. The front plate *t* has an arc-shaped interior surface extending downwardly and secured to the sides *h* of the standard *g*. The said front plate *t* reaches at its lower end to just over the runway *q* outside of the curved rods *s* of said runway.

u, *v*, and *w* are ribs secured to the inner arc-shaped surface of the front plate *t* or forming part therewith. The ribs *u* and *w* at the extreme side edges of said inner surface are roughened, while the middle rib *v* is smooth.

x is a roller forming the agitator within the casing *a* for sorting the matches and delivering them through the slot *b*. The roller *x* is hollowed and rests over the slot *b*. *y* is a pin-secured in the ends of the casing *a* and passing through said hollow roller, so that it will be impossible to throw the said roller too much out of place. The said roller *x* is of such dimensions that it would bulge slightly through the slot *b*.

z is a hub having a central stud 2 projecting from each end thereof and journaled in the sides *h* of the standards.

3 represents disks mounted on the hub *z*, toward the end thereof or forming part therewith and having the slots 5 in alignment.

6 represents flat springs secured to the hub outside of the disks 3 in proximity to the slots 5 and reaching thereacross above the bed of said slots, so as to form a spring-cushion for a match when resting in said slots.

7 is a band-spring caught to the hub z and wound therearound and caught onto the inner surface of the lower end of the standard or at any other suitable place. This spring need not necessarily be a band-spring—in fact, it may be any suitable form of spring. A spiral spring would work equally well.

8 is a handle, preferably of the crank-lever type, secured to the end of one of the studs 2 to turn the rotor or disks 3 against the pull of the spring 7.

In the operation of this device the matches are dumped into the receptacle formed by the casing a , and no matter what position the said matches may assume the roller x within the casing will effectually sort them into a neat pile. The said roller normally rests on top of the disks 3, which project slightly into the match-receptacle through the slot b . Thus when the handle 8 is pulled downwardly the motion will disturb the roller or agitator within the casing and allow a match to pass down onto the disks and into the slots 5, which register with the slot b . The match thus resting in the slots when the handle is pulled rubs against the face-plate t , the head and end engaging the roughened surfaces of the ribs u and w , while the middle of the match passes along the rib v . The springs 6 forming a spring-cushion in the recesses for the match, the ribs u , v , and w may press quite firmly against said match without fear of crushing it; but in thus pressing firmly against it the head of the match is rubbed against one of the roughened surfaces, and this friction ignites the said head of the match, and said match passes along under the lower end of the face-plate and over the curved guides of the runway and so on down said runway to the upturned fingers at the bottom thereof, where it may be picked off ready for use. On releasing the handle the rotor part of the device springs back to its first position, when the handle engages the stop 9, leaving the slots 5 once more registering with the slot b . In this return of the rotor the agitator or roller within the casing again disturbs the matches and brings one down to the slots 5. In fact, the disturbance by the said agitator within the casing will bring a match down to the said slots 5, but never more than one can be carried by the disk beyond the end of the way c . It does not make any difference which way the match comes down—that is, head to one side or the other of the device—as either of the roughened surfaces u or w will engage said head on which it comes down.

One of the great advantages of this invention is the economy in providing matches for

the public in public places. It is usually considered by the public a hardship if they are not provided with quite a number of matches when asking for them at hotels and other places, whereas if this match-box is placed in a prominent position there can be no question of a quantity, as the device only supplies one at a time and that lighted, thus saving much time to the attendants in such public places and proving a convenience to the public which will be very much appreciated.

There may be other ways of making the moving member which transports the match from the receptacle to the receiving-tray; but the rotor motion as described in this specification is considered by me as preferable to a sliding movement.

What I claim as my invention is—

1. In a match-box, the combination with the base and a standard rising therefrom and rigid therewith, of a casing forming a receptacle converging in the interior to a suitable egress-opening, agitating means within said receptacle, a rotating member having a plurality of disks extending from its hub therearound and slots in alinement in said disks, springs secured in said hub and extending across said slots and forming a spring-cushion above the bed of said slots, and friction means interposed in the way of the head of the match transported by said rotating member, as and for the purpose specified.

2. In a device of the class described, in combination, a base, a standard rising therefrom and rigid therewith having a cut-away front portion, a runway having upturned flanges at its lower end thereof secured to the top of said front portion and upwardly-extending guiding-rods, a casing forming a receptacle having interior walls converging to an egress-opening, a spring-held rotating member journaled in the sides of the standards beneath said receptacle and having slotted disks extending from the hub thereof through said opening into said receptacle, an agitator within said receptacle supported on said disks, a curved face-plate closing in said standard beneath said casing and extending downwardly over the top portion of said runway and having friction means for striking said match-head in its travel with said rotating member from said receptacle, and a suitable handle for turning said rotating member, as and for the purpose specified.

3. In a device of the class described, in combination, a base having an upturned flange at the edge thereof and forming a tray, a standard rising therefrom and rigid therewith and having cut-away front and rear portions, a casing forming a match-receptacle supported on said standards and having in the interior thereof converging walls to an egress-opening, a rotating member journaled in the sides of said standard beneath said re-

ceptacle and having slotted disks extending from the hub thereof into said receptacle through said opening and springs secured to the hub thereof and extending alongside the
5 disks past the slots therein forming a spring-cushion above the beds of said slots, a spring encircling the hub of said rotating member and caught thereto and having its other end secured to the standard and normally hold-
10 ing said rotating member with its slot immediately beneath the aforesaid egress-opening, an agitator resting on the disks of said rotating member within said receptacle, a runway from the front portion of said standard hav-
15 ing upturned fingers at its lower end and suitable guides extending upwardly, a face-plate extending downwardly on the front of said standard over said rotating member to

the top of said runway and having a plurality of longitudinal ribs on its inner surface, two 20 of said ribs at the edges thereof having roughened surfaces engaging the match-heads on their travel from said receptacle in said rotating member, a removable back-plate secured to said standard, and a handle 25 abutting a suitable stop from said standard and secured to the axle of said rotating member, as and for the purpose specified.

Signed at the city of Montreal, in the district of Montreal, in the Province of Quebec, 30 in the Dominion of Canada, this 17th day of March, 1906.

WALTER TRACY IVES.

Witnesses:

LLOYD BLACKMORE,
G. H. TRESIDDER.