

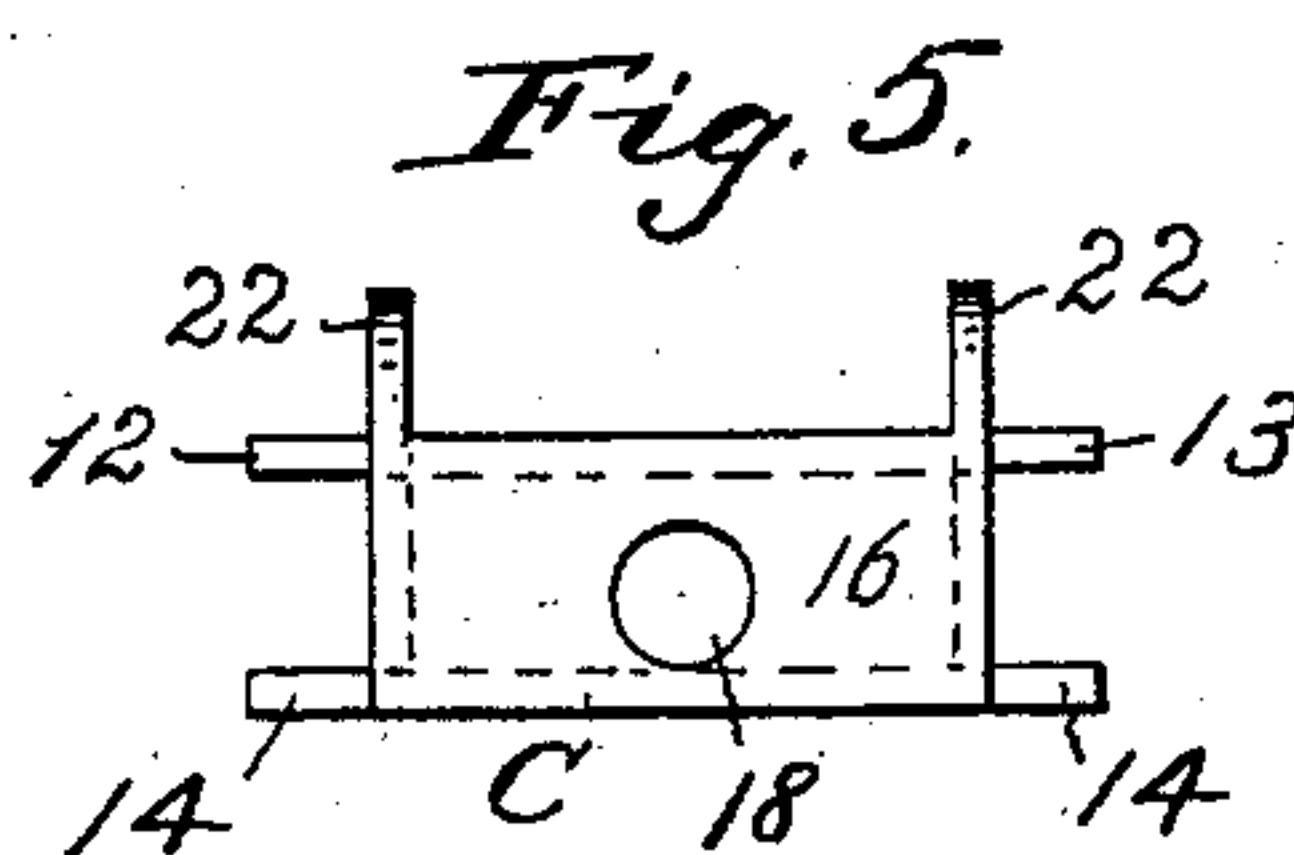
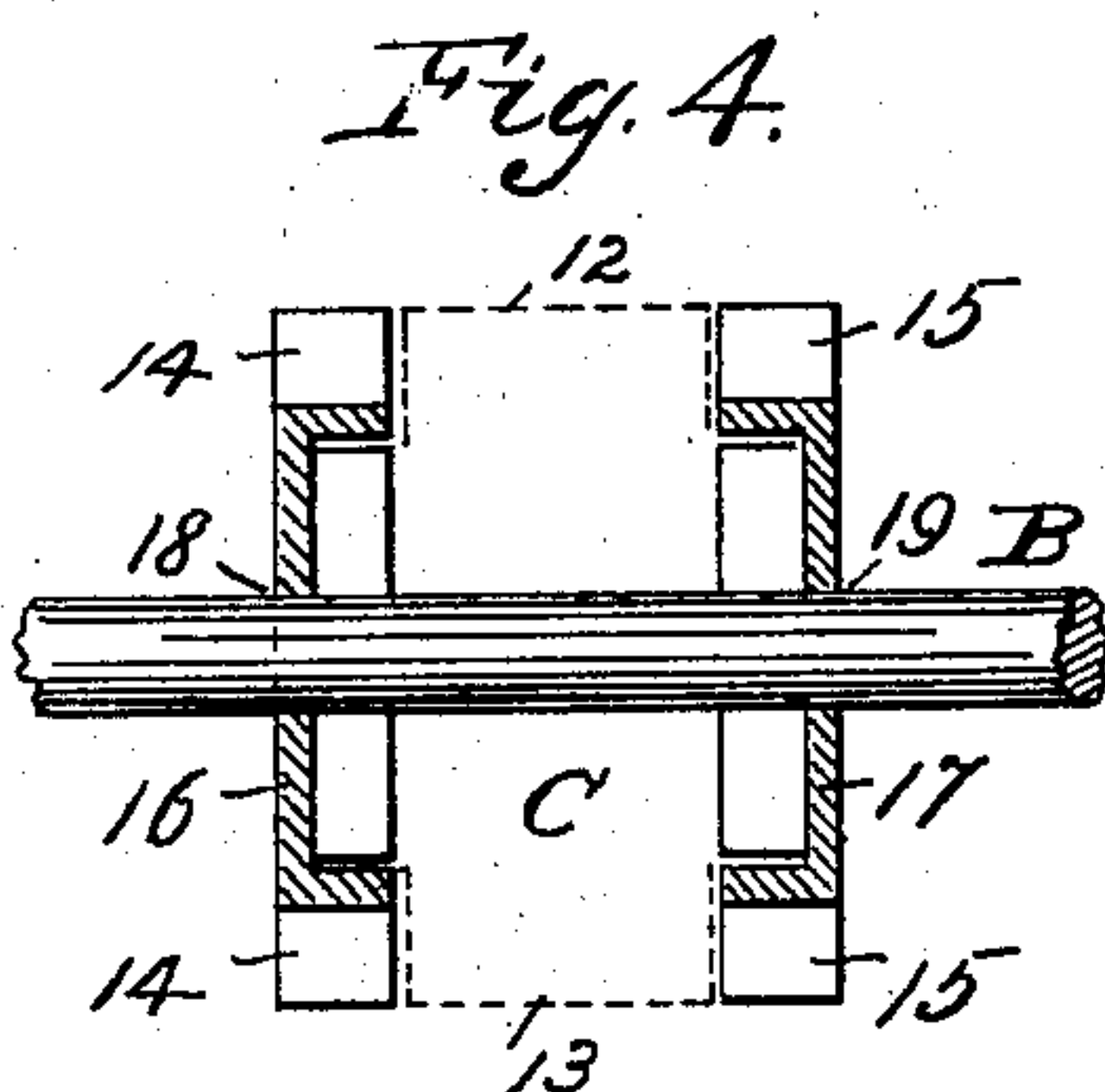
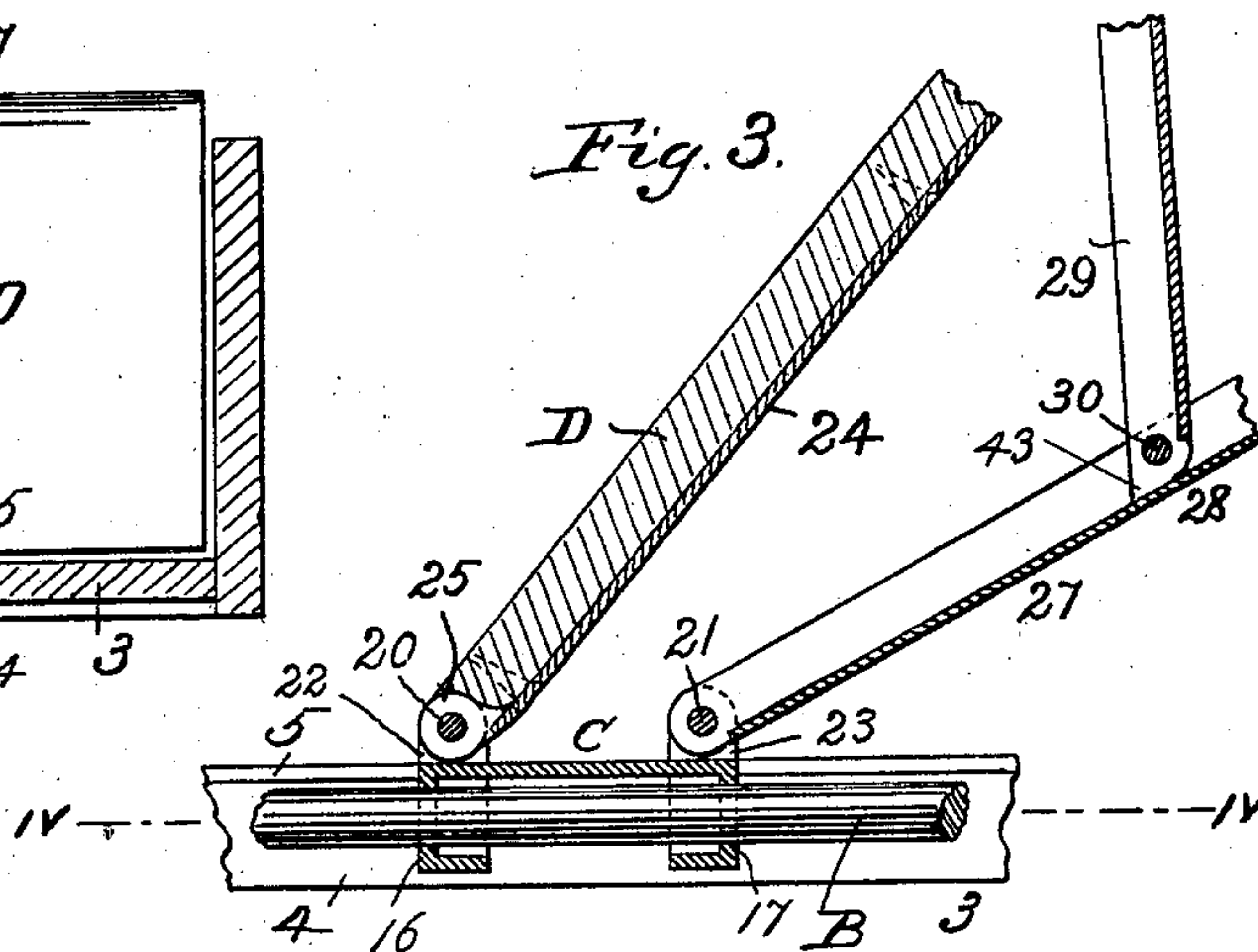
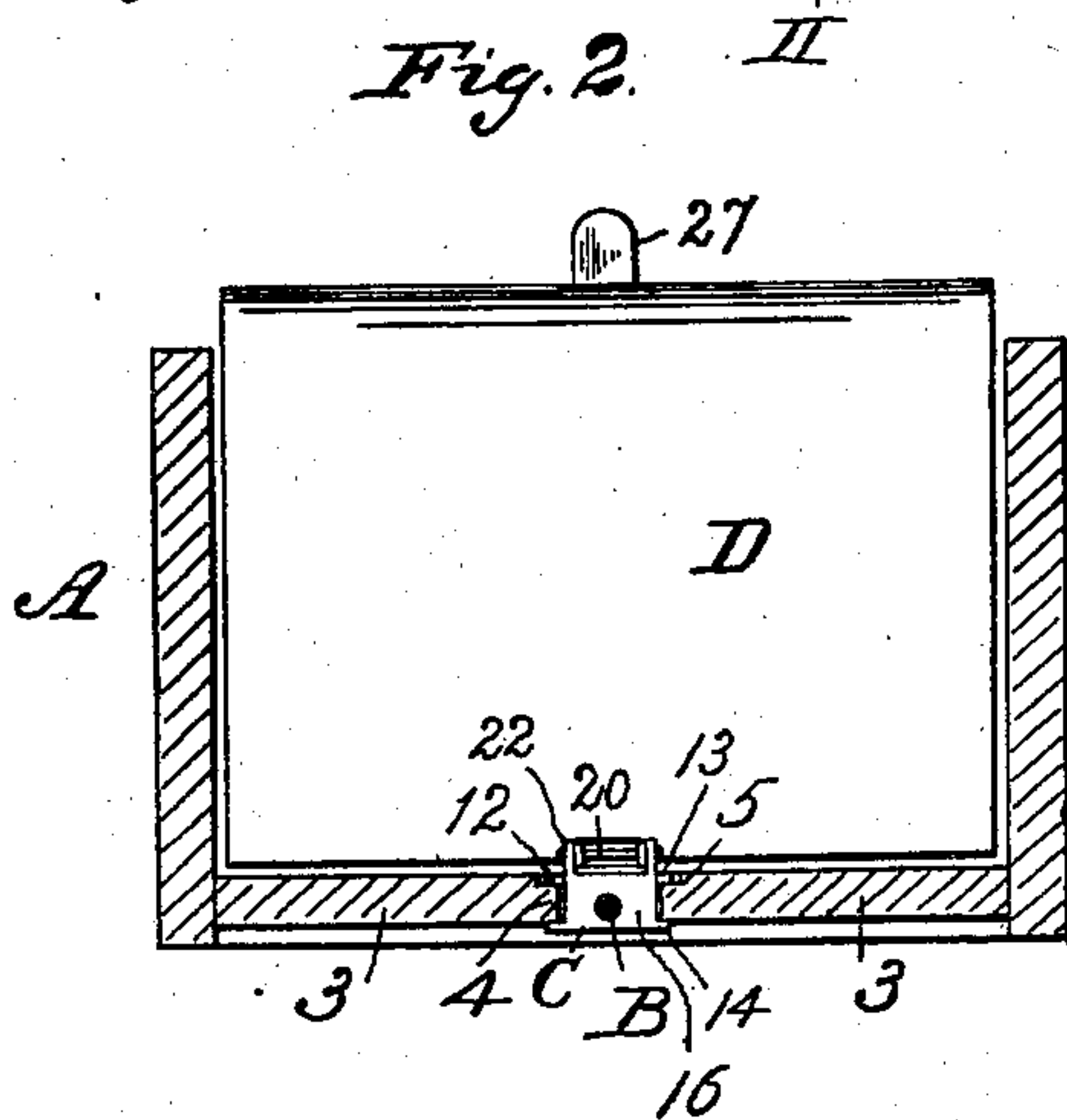
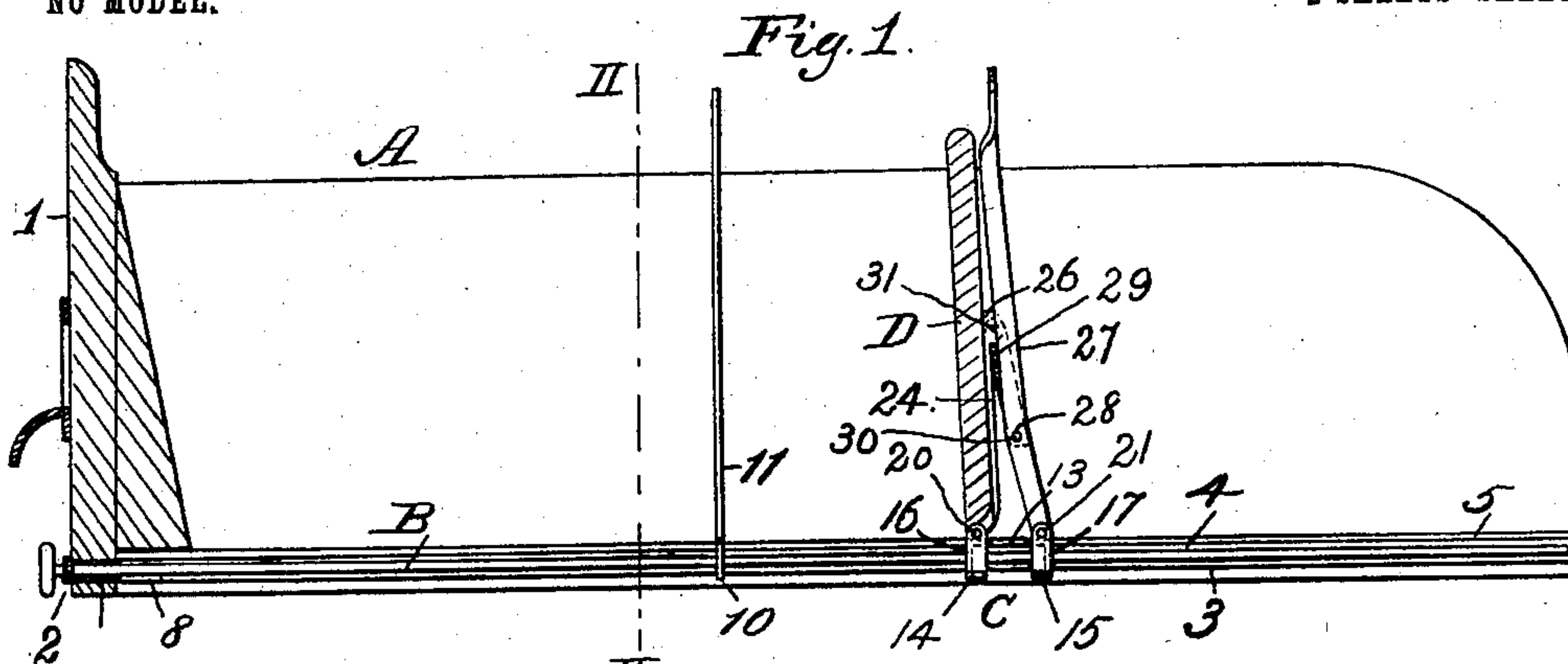
No. 732,807.

PATENTED JULY 7, 1903.

E. W. WOODRUFF.
FILE FOR PAPERS OR CARDS.
APPLICATION FILED NOV. 24, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



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By

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2 SHEETS—SHEET 2.

Fig. 6.

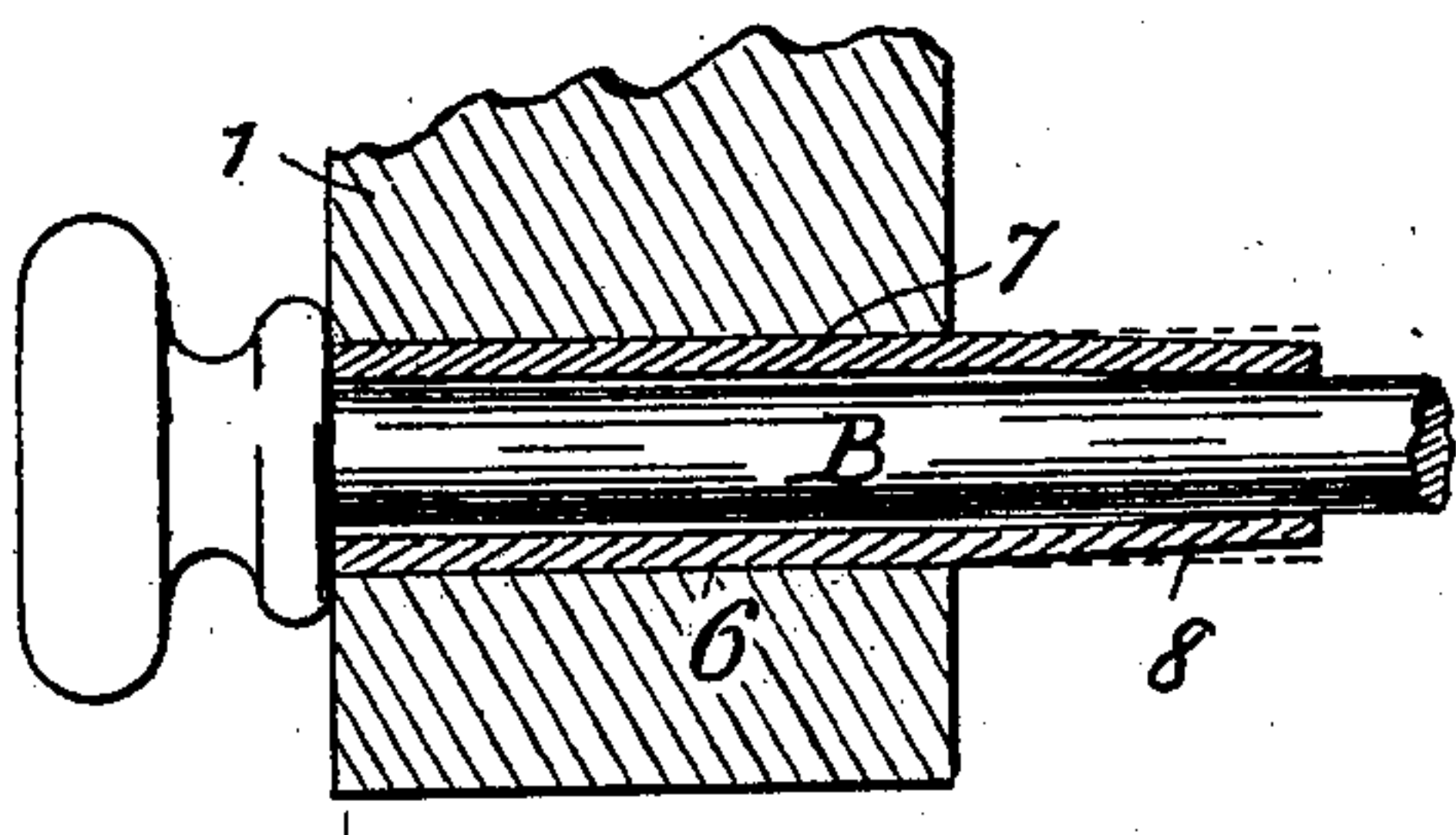


Fig. 7.

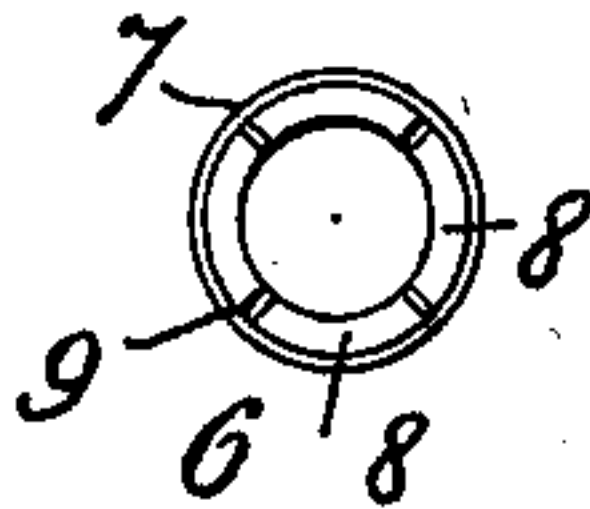


Fig. 8.

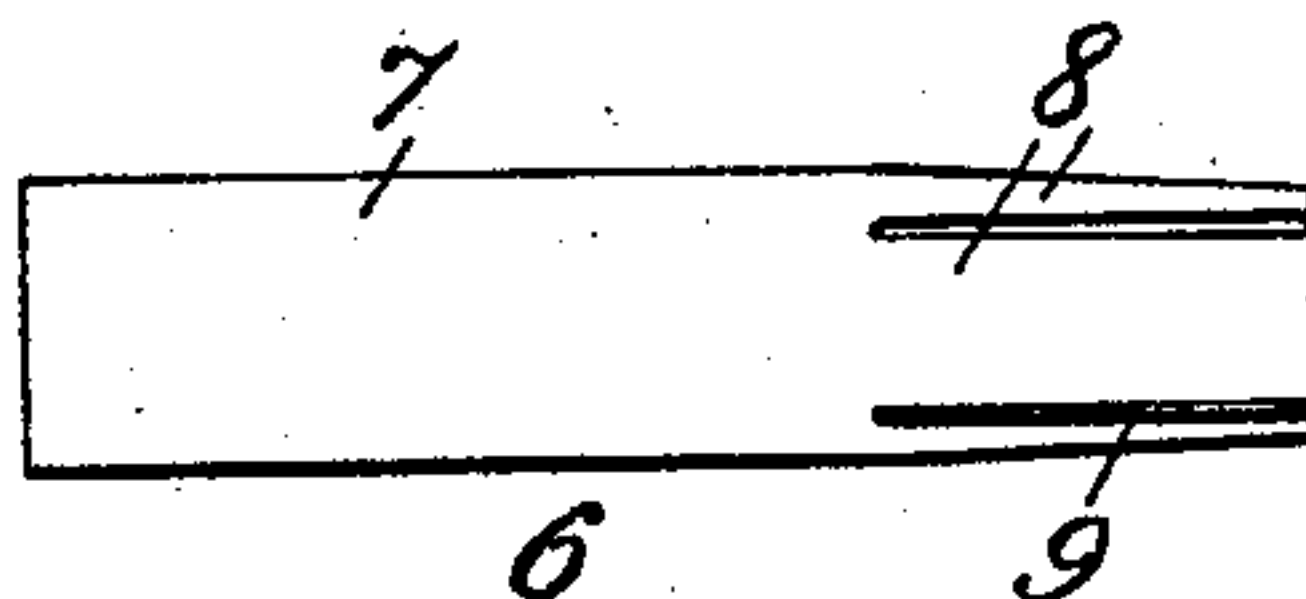


Fig. 9.

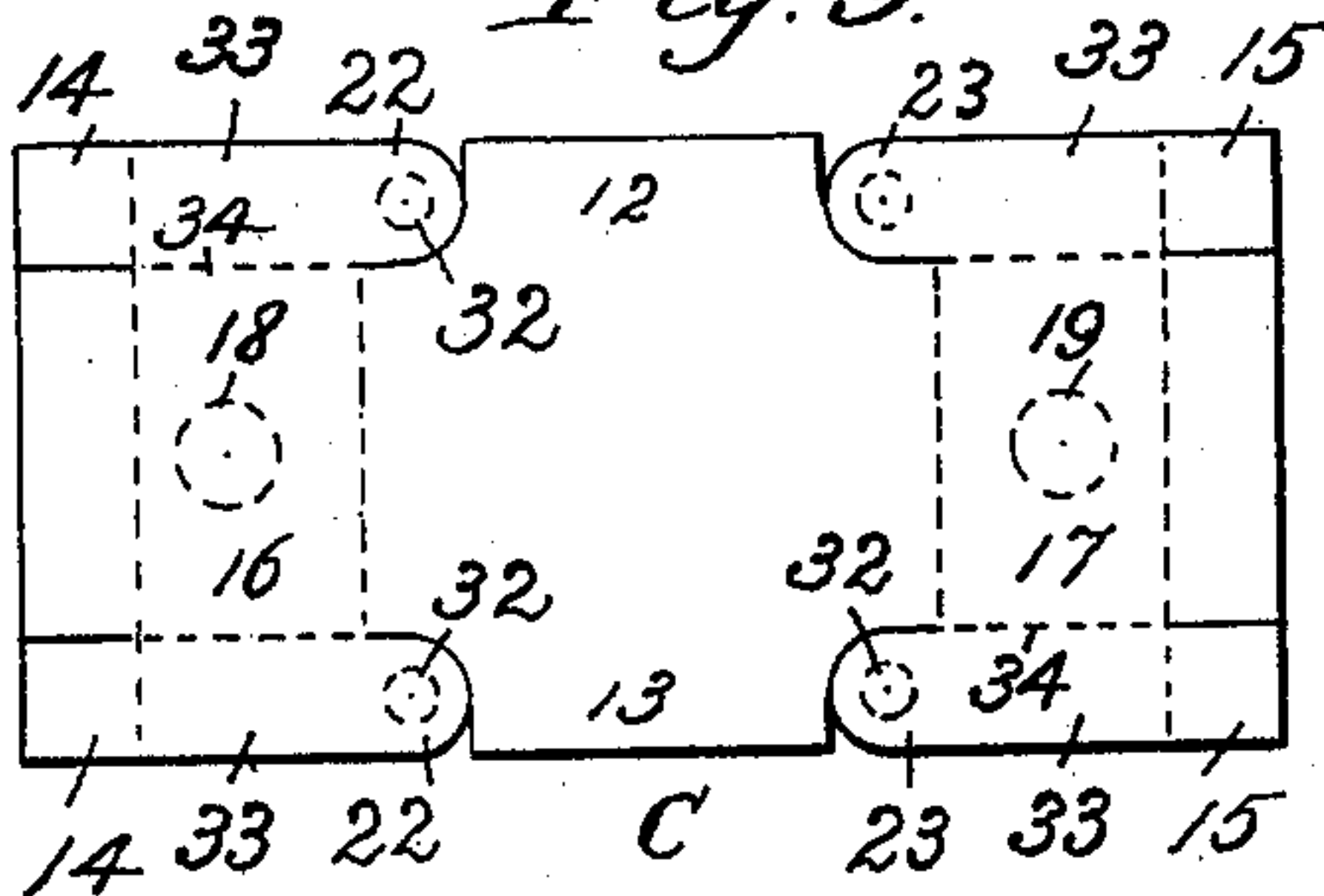


Fig. 10.

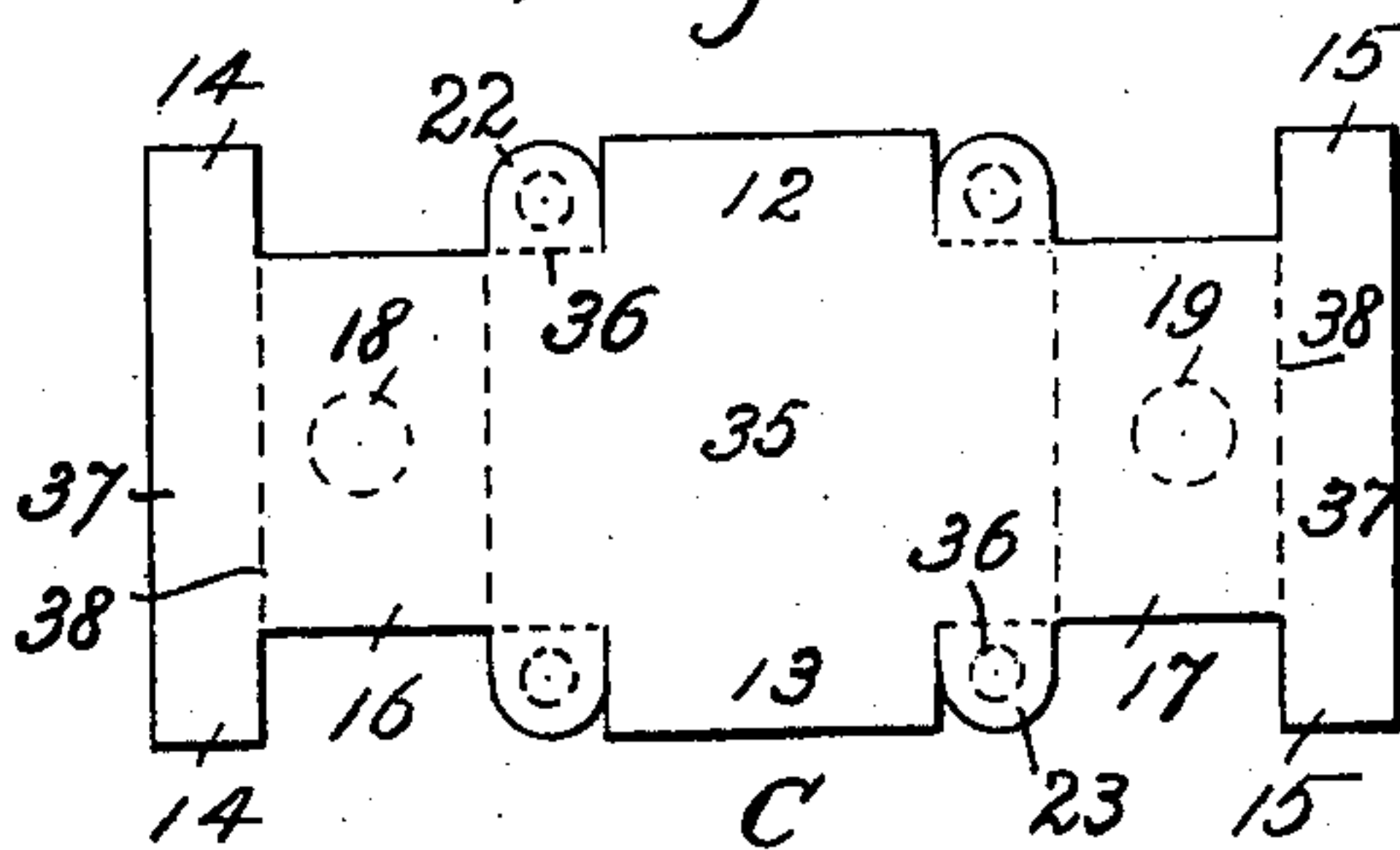
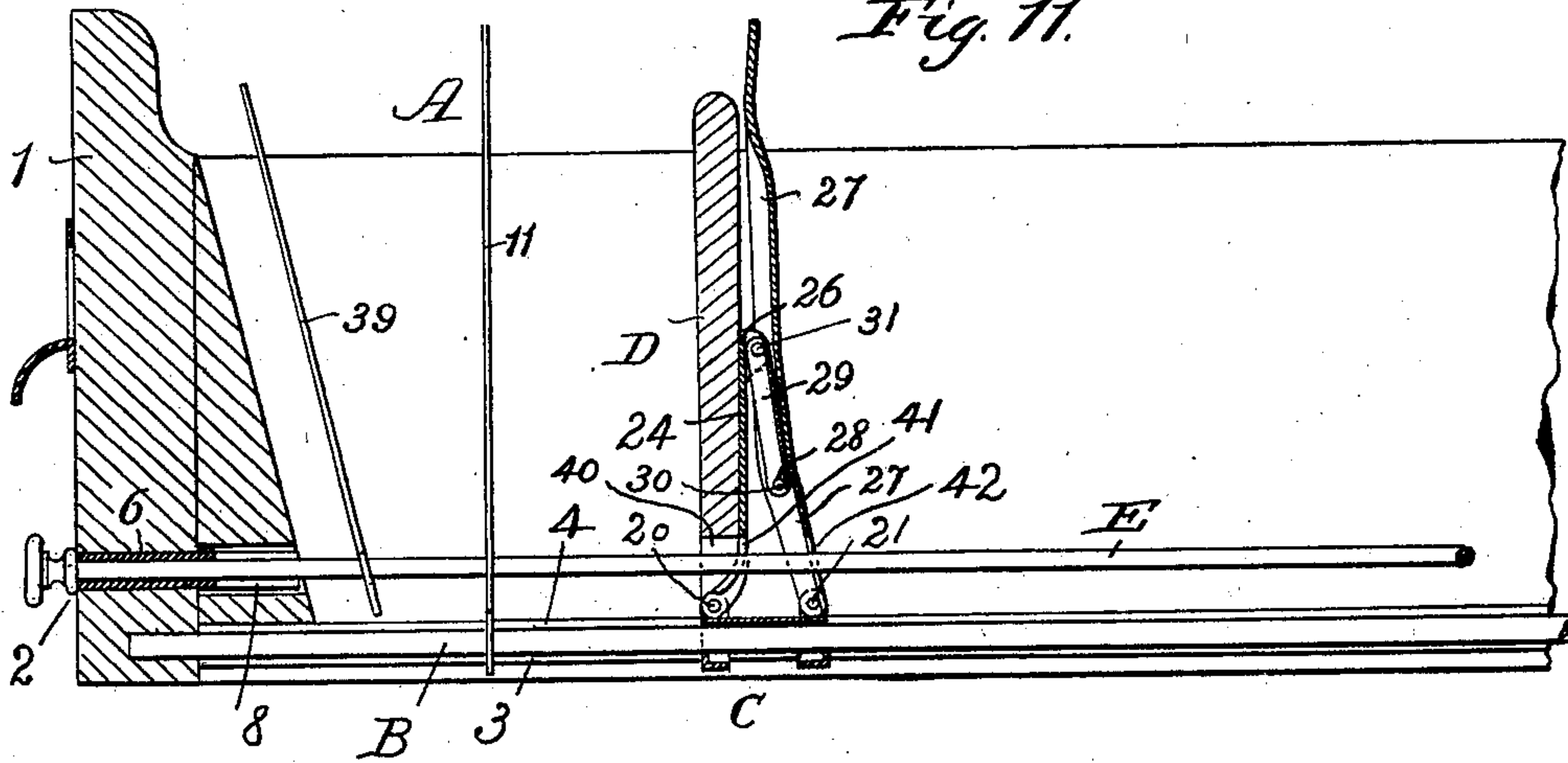


Fig. 11.



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UNITED STATES PATENT OFFICE.

EDMUND W. WOODRUFF, OF WASHINGTON, DISTRICT OF COLUMBIA.

FILE FOR PAPERS OR CARDS.

SPECIFICATION forming part of Letters Patent No. 732,807, dated July 7, 1903.

Application filed November 24, 1902. Serial No. 132,593. (No model.)

To all whom it may concern:

Be it known that I, EDMUND W. WOODRUFF, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Files for Papers or Cards, of which the following is a specification.

My invention relates to filing devices comprising a suitable receptacle having a guide-rod and a follower movable along such rod for the supporting or clamping of the contents of the receptacle. Such receptacle is adapted for receiving and containing in order in vertical position bills, letters, index-cards, and papers generally and may be a desk-tray, cabinet-drawer, or box.

The invention is ordinarily embodied in a cabinet containing the desired number of such receptacles in the form of drawers in tiers or rows; but the invention may be sufficiently understood from the illustration and description of a single receptacle with its contained and attached parts.

The invention relates more particularly to the means for supporting, guiding, and holding the longitudinal rod of the receptacle, and this part of the invention is not dependent upon the use of any particular description of follower.

The invention also relates to the particular construction of follower for combination with a follower guiding and holding rod.

The invention consists in the parts and combinations thereof hereinafter set forth and claimed.

In order to make the invention more clearly understood, I have shown in the accompanying drawings means for carrying the same into practical effect without limiting my improvements in their useful applications to the particular constructions which for the purpose of illustration I have delineated.

In said drawings, Figure 1 is a longitudinal vertical sectional view of a file-drawer embodying the invention. Fig. 2 is a cross-section of the same on line II of Fig. 1. Fig. 3 is a longitudinal vertical section of the follower-carriage and contiguous parts, on a larger scale. Fig. 4 is a horizontal section of the same on line IV of Fig. 3. Fig. 5 is an end view of the follower-carriage. Fig. 6 is a longitudinal section of the bearing for the

guide-rod. Figs. 7 and 8 are side and end views of the same, the rod being indicated in dotted lines. Figs. 9 and 10 are plan views of the carriage-blank. Fig. 11 is a longitudinal vertical sectional view of a construction of file suitable for card-indexes having a card-rod in addition to and above the follower-rod.

Referring to the drawings, A indicates the receptacle, having a front piece 1, in which is formed a perforation 2, and having a bottom formed of pieces 3, spaced apart to leave a longitudinal slot 4. These bottom pieces may be rabbeted at their edges, as indicated at 5, to receive lateral extensions of the follower-carriage. Such rabbets may be dispensed with at the under side of the pieces 3 and the latter secured to the vertical walls of the receptacle at a slight distance above the bottom edges of said wall, which will leave a space sufficient for the lower lateral extensions of the carriage.

6 is a tubular bearing, of a metal which is slightly malleable and may be bent and will retain the form to which it is bent and also slightly elastic, such as brass. This bearing has a cylindrical portion 7, which is fitted tightly within the perforation 2, and fingers 8, formed with or attached to the portion 7 and extending inward, and preferably inward beyond the inner face of the part 1. The fingers 8 are conveniently formed integral with the rest of the bearing by sawing two or more longitudinal slits 9 from the inner end of the bearing a sufficient distance toward its front end, as seen in Figs. 7 and 8.

B is the guide-rod, mounted in and held by the bearing 6 and extending longitudinally of the receptacle A at or near the bottom of the same. As shown, it is situated in the bottom slot 4 in position to hold the follower-carriage and to pass through the perforated bottom extensions 10 of guide-cards 11; but it will be understood that the said bearing may be applied to an index-card rod of locking or unlocked character situated a little above the bottom of the receptacle, as is usual in card-indexes, to pass through perforations in the index-cards.

Heretofore difficulty has been experienced in fitting the tubular rod-bearing in the front 1 so as to be exactly in line with the position

which must be occupied by the rod B. A very slight deviation in the axial line of the bearing from its proper direction will carry the inner end of the guide-rod very materially out of position, so that the bearing often requires to be changed and refitted in the front 1 at considerable expense of time and trouble. My improved bearing obviates this difficulty. If it be found that the bearing after being driven into the front 1 is out of line, the imperfection is readily corrected by slightly bending the fingers 8, some outward and some inward, until they bear with the proper pressure on the guide-rod and hold the latter in a true longitudinal and parallel line in the receptacle A. It will be observed that this construction gives the bearing the function of a frictional holder for the rod, the pressure or tension of which holder is regulatable, the fingers 8 having some elasticity and tendency to maintain the position to which they are bent and adjusted, as already described.

C is the follower-carriage, mounted in the slot 4 and having lateral arms 12 and 13 adapted to move along and above the bottom pieces 3 in the rabbets 5 and having front and rear arms 14 15 engaging beneath said bottom pieces. These arms act to keep the carriage from tilting when the guide-rod is removed (as to release a guide-card or other card) and to keep the follower in proper position relative to the contents of the file. The carriage is also provided with front and rear vertical transverse flanges 16 and 17, having perforations 18 and 19, which neatly fit around the guide-rod and which bite or engage on the same to hold the follower against longitudinal movement when the follower is pressed backward by the contents of the file, the follower being moved backward when desired by pressure applied at its extreme lower part at or near the level of the rod. The carriage is further provided with front and rear transverse axes or pivots 20 and 21, connected with the carriage by pairs of ears 22 23.

D is the follower, pivotally connected with the carriage by means of the front axis 20, adapted to tilt into a forward clamping position substantially parallel with the papers in the file and into a rearward inclined position to leave the papers loose, but supported in position for inspection. The follower is provided with means acting between its upper part and the rear axis 21 for holding it in either of said two positions. The preferred construction for this purpose comprises a vertical plate 24, secured to the rear side of the follower and having at its lower end a bearing or bearings 25, adapted for connection with the axis 20 of the carriage, and having at its upper end a bearing or bearings 26.

27 is a hand-lever pivotally connected with the rear axis 21 of the carriage and extending up to a point at or near or slightly above the follower D, so that it may be conveniently manipulated to give the above-described po-

sitions to the follower as may be required in the use of the file. This lever is provided at a suitable point above the axis 21 with a bearing or bearings 28, and the latter are connected with the bearings 26 by a link 29. The parts 27 and 29 constitute a toggle having its pivotal points arranged in a known manner, so that when the follower is in vertical clamping position the pivot 30 will be slightly forward of the line connecting the pivot 31 with the axis 21, thus providing a locking-clamp for the follower. The clamping parts above described are preferably constructed of strong sheet metal bent to give the necessary stiffness to the parts and formed with perforated ears to serve for the described bearings.

A follower-carriage having the described characteristics may be variously constructed. I prefer that which is shown, in which the carriage has its various parts cut in a single piece or blank from a sheet of metal and is then bent into the desired form.

In Fig. 9 I have shown a blank suitably shaped to form the carriage shown in Figs. 3, 4, and 5. The reference-numbers applied to said blank indicate the same parts as in the latter figures, and the dotted lines show where the blank is bent to bring it to its finished shape. At 32 are indicated the points where the ears 22 23 are bored to form bearings or holding means for the axes 20 21. This blank also provides vertical longitudinal flanges 33 immediately continuous with said ears and joined by a right-angle bend at the line 34 with the transverse flanges 16 and 17, giving great rigidity and strength to the ears under the action of the toggle.

In Fig. 10 I have shown another form of blank the bending of which is somewhat simpler, but which provides the carriage with the essential parts. In this blank the ears 22 23 are immediately joined with the top plate 35 of the blank by right-angle longitudinal bends on the lines 36, and the lower arms 14 and 15 are immediately joined by horizontal plates 37, which are immediately connected with the vertical flanges 16 and 17 by right-angle transverse bends on the lines 38.

It will be understood that with the follower-rod B may be combined an independent card-rod E, situated above the bottom of the receptacle in suitable position to pass through the perforations of ordinary index-cards 39, in which case the rod B may be made either removable or fixed in position and the bearing 6 may be applied to the card-rod E. In such construction the follower will have suitable means for the free passage of the rod E, such as openings or slots 40 41 42, in the follower and in its attached parts 24 and 27, this arrangement being shown in Fig. 11.

The invention as shown in Figs. 1 to 8 is specially suitable for what is known as "vertical filing" for letters and other papers. The construction and operation of the follower give great capacity to the receptacle, for the

latter may be filled with papers until the follower has been moved back to the extreme rear of the receptacle, in which case the papers may be still loosened and examined by tilting the follower rearward in the described manner to points beyond and outside of the receptacle, where it will still support the papers for examination.

Various means may be employed for sustaining the follower in its inclined position. I have designed for the purpose a toe 43 on the link 29, which engages the lever 27, limits the opening movement of the toggle, and sustains the follower, as shown in Fig. 3.

What I claim is—

1. In a file the combination of a receptacle having a perforation, a follower, a rod, and the bearing for said rod in line with said perforation, attached to the receptacle and having means adjustable toward and from the axis of the rod for guiding the rod, substantially as set forth.

2. In a file the combination of a receptacle having a perforation, the rod adapted to pass through the perforation and a bearing for the rod attached to the receptacle in line with the perforation and having adjustable guiding-fingers adapted to bear on the rod, substantially as set forth.

3. In a file, the combination of a receptacle having a perforation, the rod, and the rod-bearing fitting in the receptacle having bendable guiding and friction fingers, substantially as set forth.

4. In a file, the combination of a receptacle, a card-holding rod therein, a follower-carriage movable in said receptacle parallel with the rod and held from tilting, a follower hinged on said carriage and adapted to tilt rearward to an inclined position away from the filed contents of the receptacle, and a clamping means for forcing the follower forward against such contents, substantially as set forth.

5. In a file, the combination of a receptacle, a removable card-holding rod therein, a follower-carriage movable in said receptacle along the rod and engaging the latter to be held from tilting, a follower adapted to tilt on said carriage toward and from the filed contents of the receptacle, and means acting between the carriage and follower for holding the follower in clamping position against such contents, substantially as set forth.

6. In a file, the combination of a receptacle, a removable card-holding rod therein, a follower-carriage movable in said receptacle along the rod and engaging the latter to be held from tilting, said carriage having means for engaging the receptacle independently of the rod to be held from tilting when the rod is removed, a follower mounted on the carriage and adapted to tilt relative thereto, and means acting between the follower and the carriage to hold the follower in clamping position, substantially as set forth.

7. In a file the combination of a receptacle, a removable rod therein, a follower-carriage

movable along said rod and engaging the rod to be held from tilting, a follower hinged to the forward side of said carriage at the bottom of the receptacle, adapted to assume a vertical clamping position substantially parallel with filed papers and to tilt backward on its axis at the lower edge of such papers to an inclined position, and means acting between the follower and the carriage to hold the follower in its clamping position, substantially as set forth.

8. In a file the combination of a receptacle, a rod therein, a follower-carriage movable along the rod having forward and rear flanges engaging the rod to hold the carriage from tilting and having forward and rear transverse pivotal axes, a follower hinged on the forward axis, and a clamping-toggle hinged on the rear axis and to the upper part of the follower, substantially as set forth.

9. In a file the combination of a receptacle, a rod therein, a follower-carriage engaging the rod to be held from tilting, movable along the rod and having forward and rear transverse axes, a follower hinged on the forward axis, and clamping means acting between the follower and said rear axis, substantially as set forth.

10. In a file the combination of the follower-carriage cut and bent from a single piece of metal, having the upper and lower laterally-extending arms, the perforated vertical flanges 16 and 17 and the ears 22, 23, the follower, and the toggle connected with said ears 23 and with the follower, substantially as set forth.

11. In a filing device, the combination of a receptacle, a follower in the same, a follower guiding and holding rod, and a card-holding rod arranged above the follower-rod out of engagement with the follower and above the bottom of the receptacle, and a clamping-lever for the follower having an opening around said card-holding rod, the follower-rod being situated below the bottom of the receptacle, substantially as set forth.

12. In a file, the combination of a receptacle, a guide-rod therein below the bottom of the receptacle, a follower, means connecting the follower and rod whereby a biting engagement is had with said rod to hold the follower from rearward movement under the pressure of the contents of the file, and a separating means for said contents extending below the said bottom and also engaging the rod, substantially as set forth.

13. In a file the combination with the receptacle, of the follower mounted to slide in the same, the lever, the link pivotally connected with the follower and with the lever and the toe 43 on the link and engaging the lever to sustain the follower in an inclined position.

14. In a document-file, the combination of a receptacle, a rod therein, a carriage adapted to slide longitudinally on said rod and encircling the rod at the front end of said carriage and at the rear end of said carriage, a

file board or follower pivotally connected with the carriage, and means acting between said follower and carriage for forcing the follower into clamping position.

5 15. In a file the combination of a receptacle, a removable rod therein, a carriage slidable on said rod and adapted to engage the same against longitudinal movement, said carriage also having an engagement with
10 said receptacle independent of said rod, and a tilting follower on said carriage, substantially as set forth.

15 16. In a file, the combination of a receptacle, a removable rod therein, a carriage slidable on said rod and adapted to engage the same against longitudinal movement, said carriage having horizontal extensions engag-

ing said receptacle, and a follower mounted on and adapted to tilt relative to the carriage, substantially as set forth. 20

17. In a file the combination of a receptacle, a removable rod therein, a follower and means whereby the follower may engage said rod against longitudinal movement, and means independent of the rod whereby the
25 follower has an engagement with the receptacle when the rod is removed, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

EDMUND W. WOODRUFF.

Witnesses:

GEO. R. LINKINS,

H. N. LOW.