

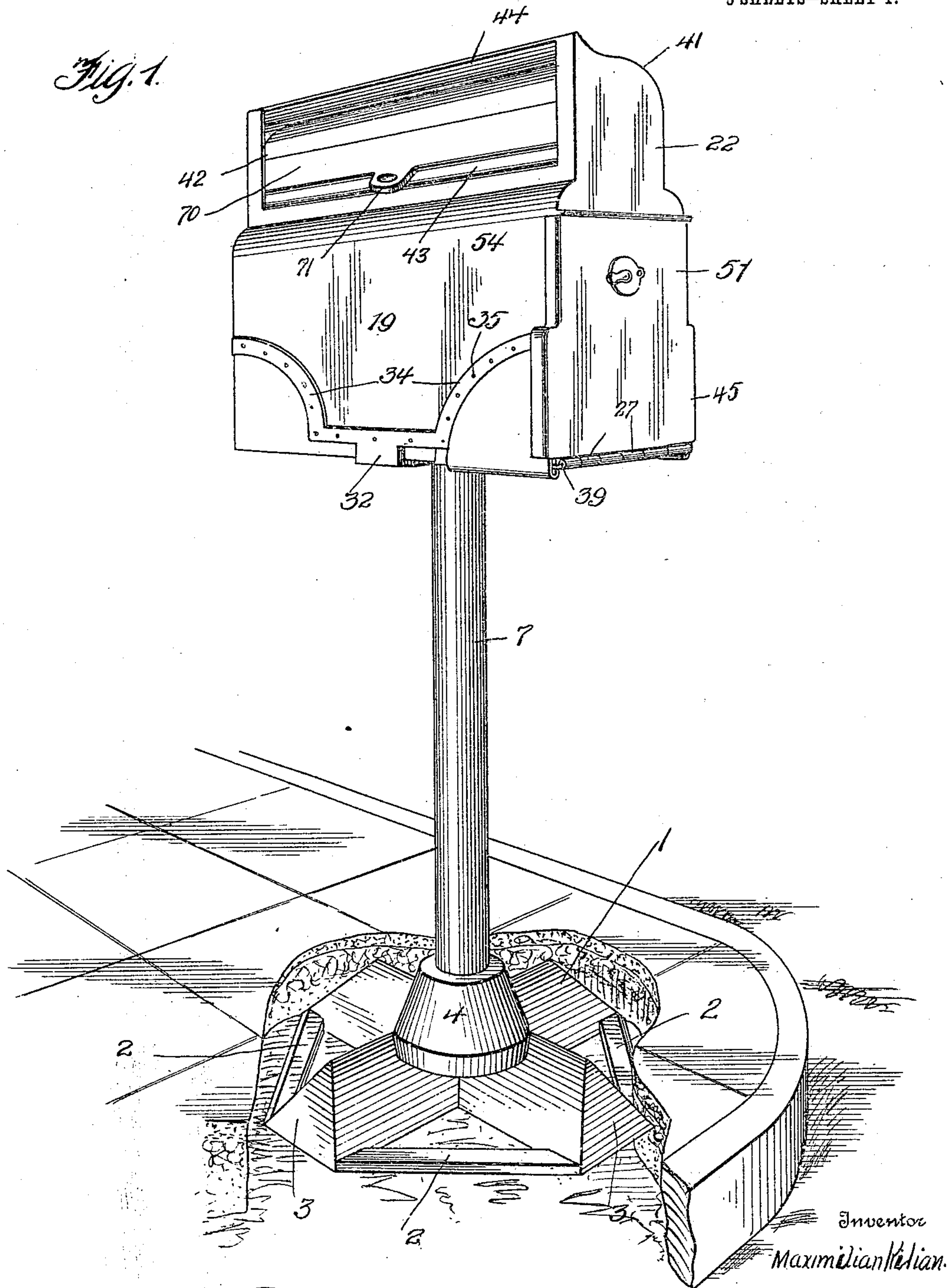
M. KILIAN.
MAIL BOX.

APPLICATION FILED APR. 27, 1909.

951,090.

Patented Mar. 1, 1910.

5 SHEETS—SHEET 1.



Witnesses
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W. H. Butler

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Attorneys

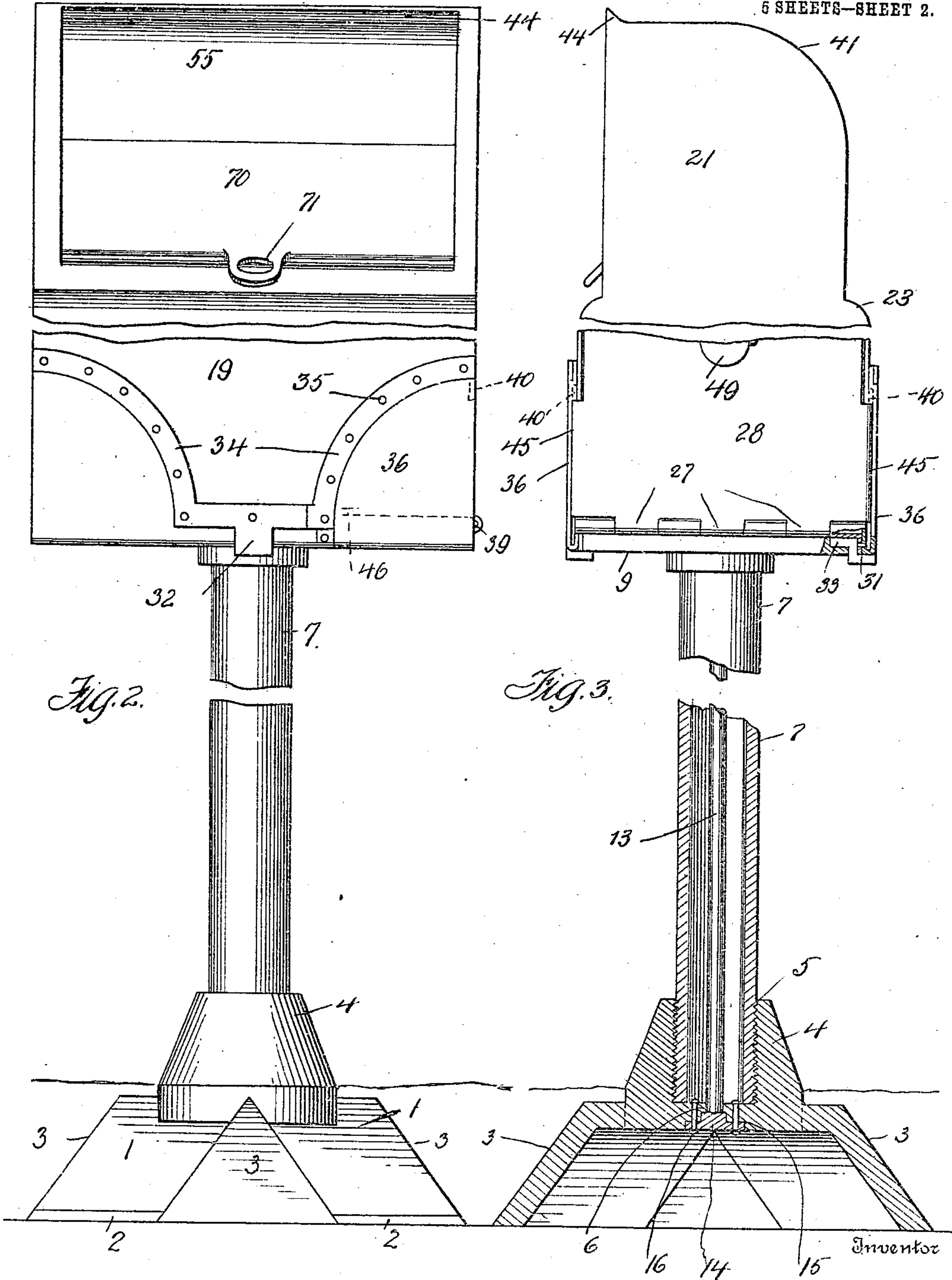
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5 SHEETS—SHEET 2.



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5 SHEETS—SHEET 3.

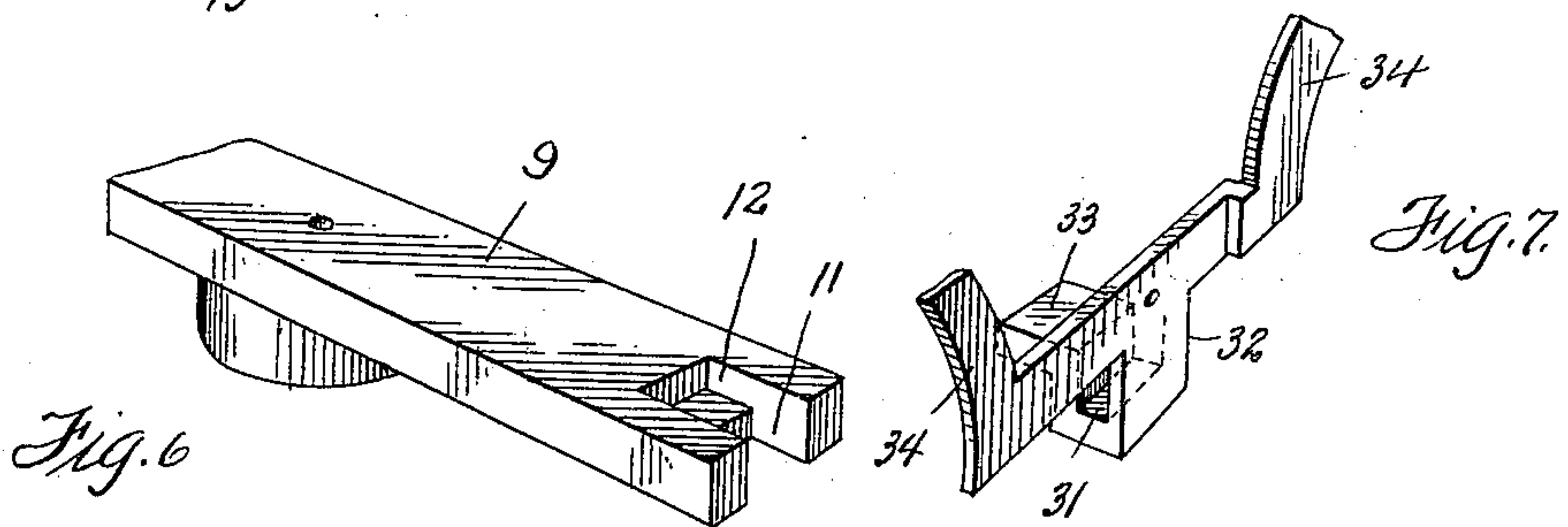
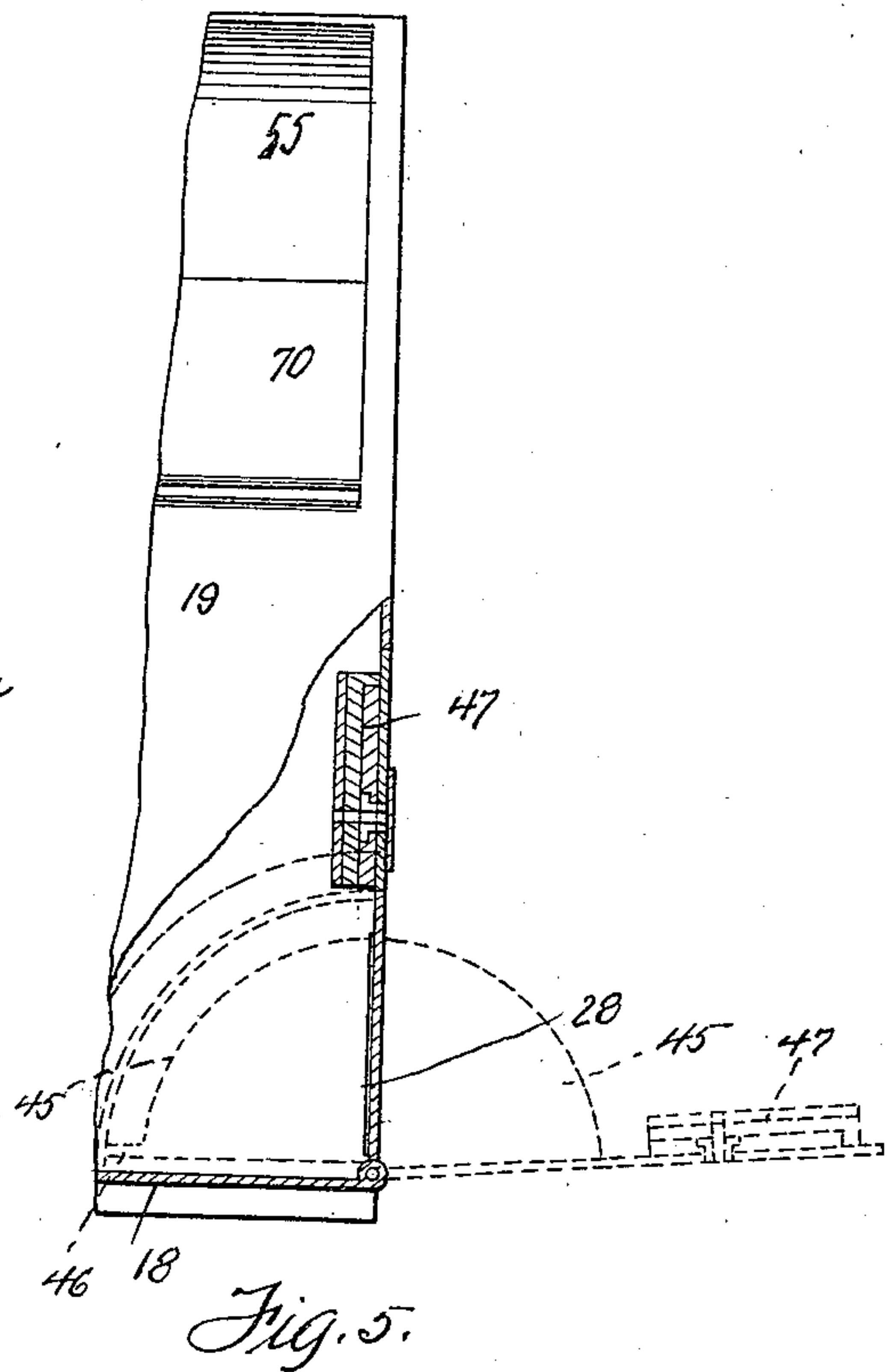
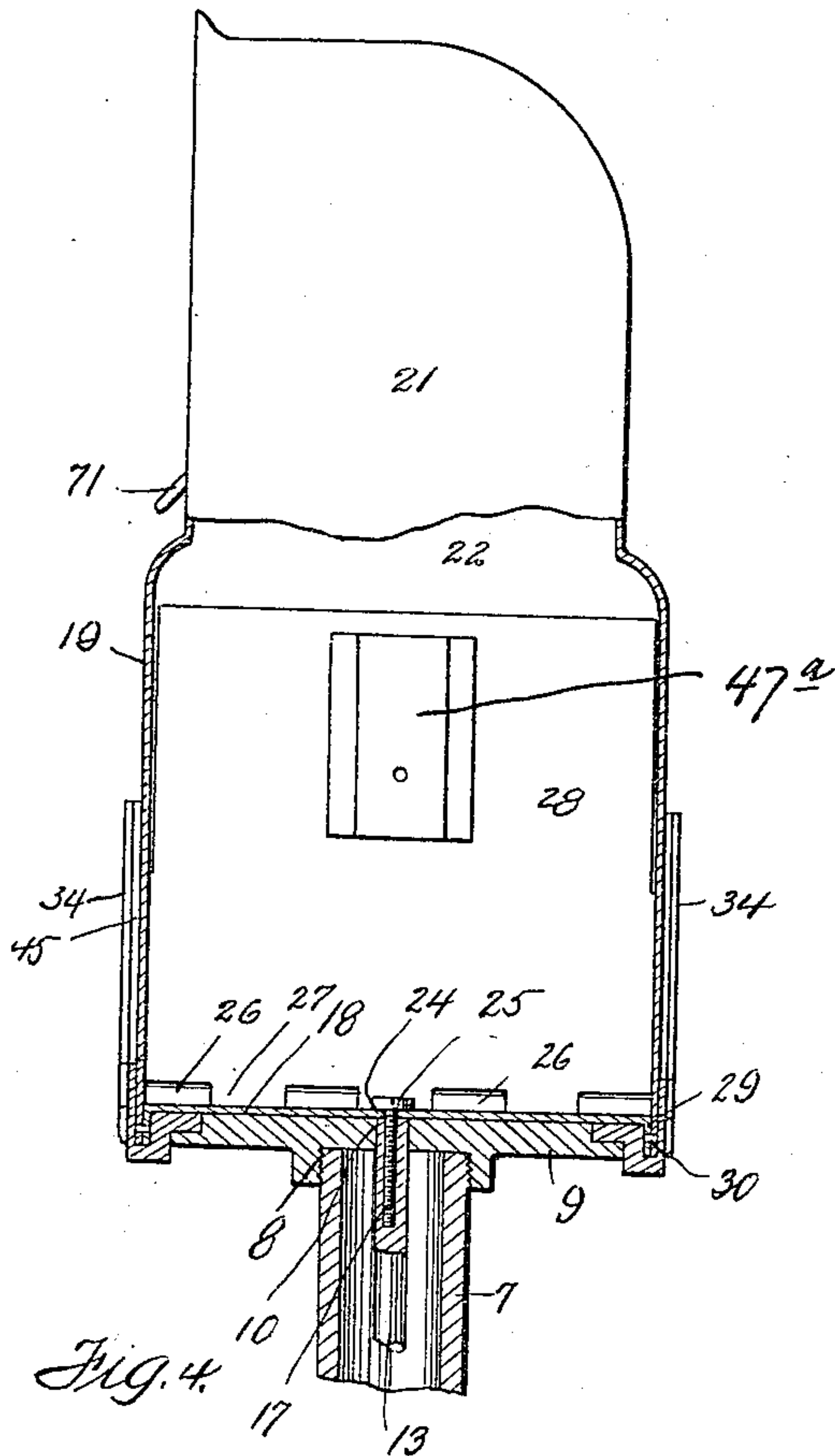
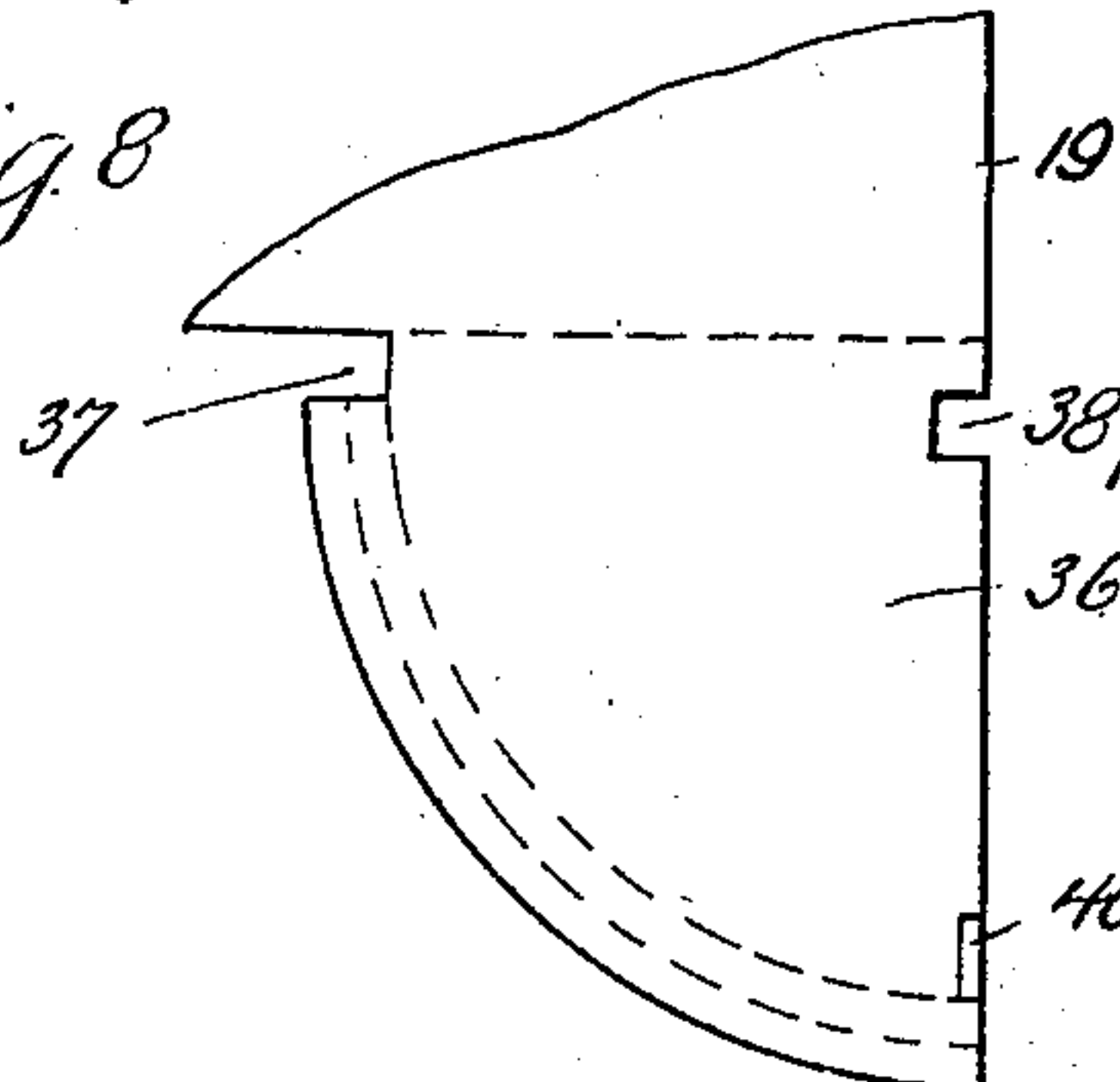


Fig. 8



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5 SHEETS—SHEET 4.

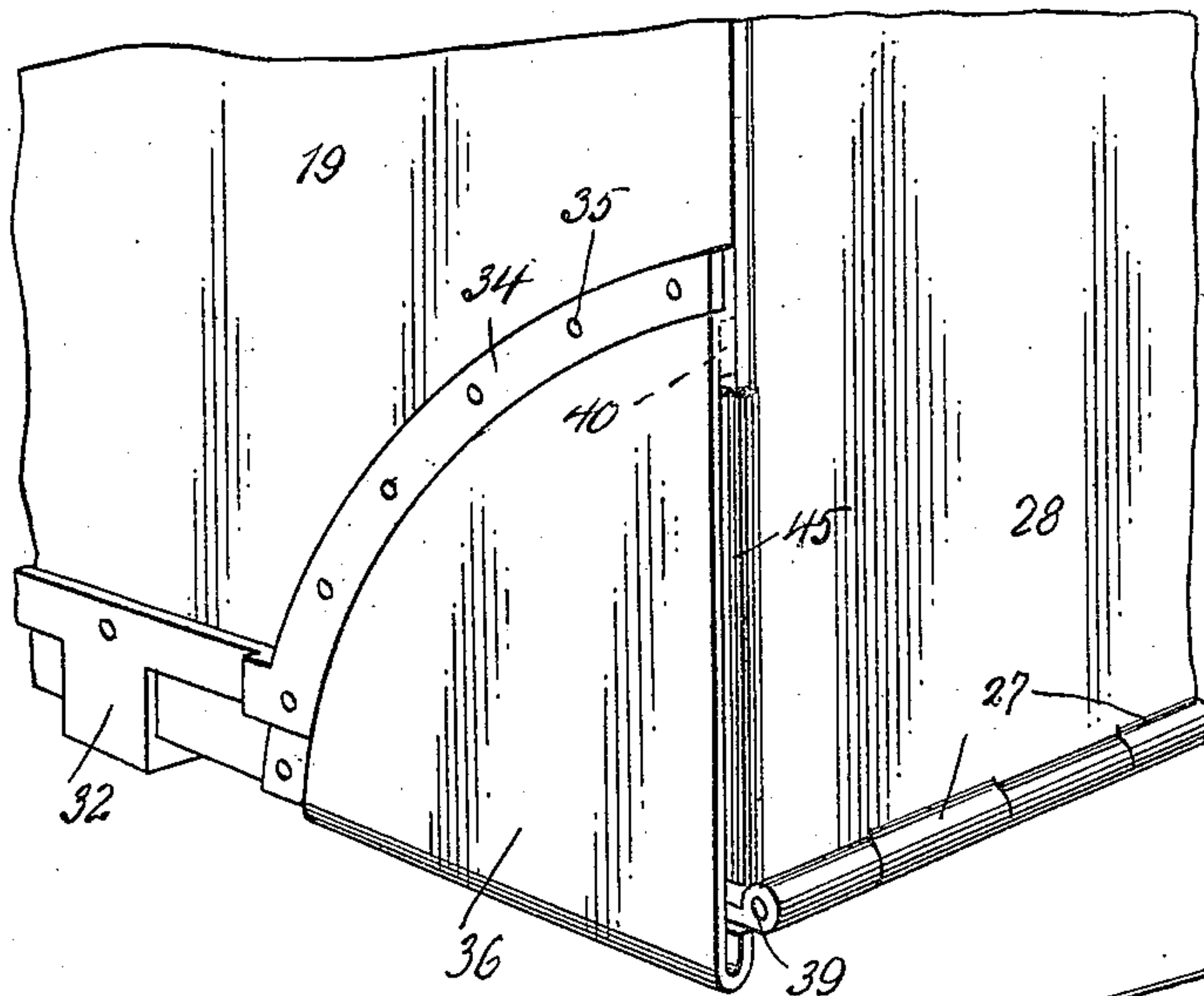


Fig. 9.

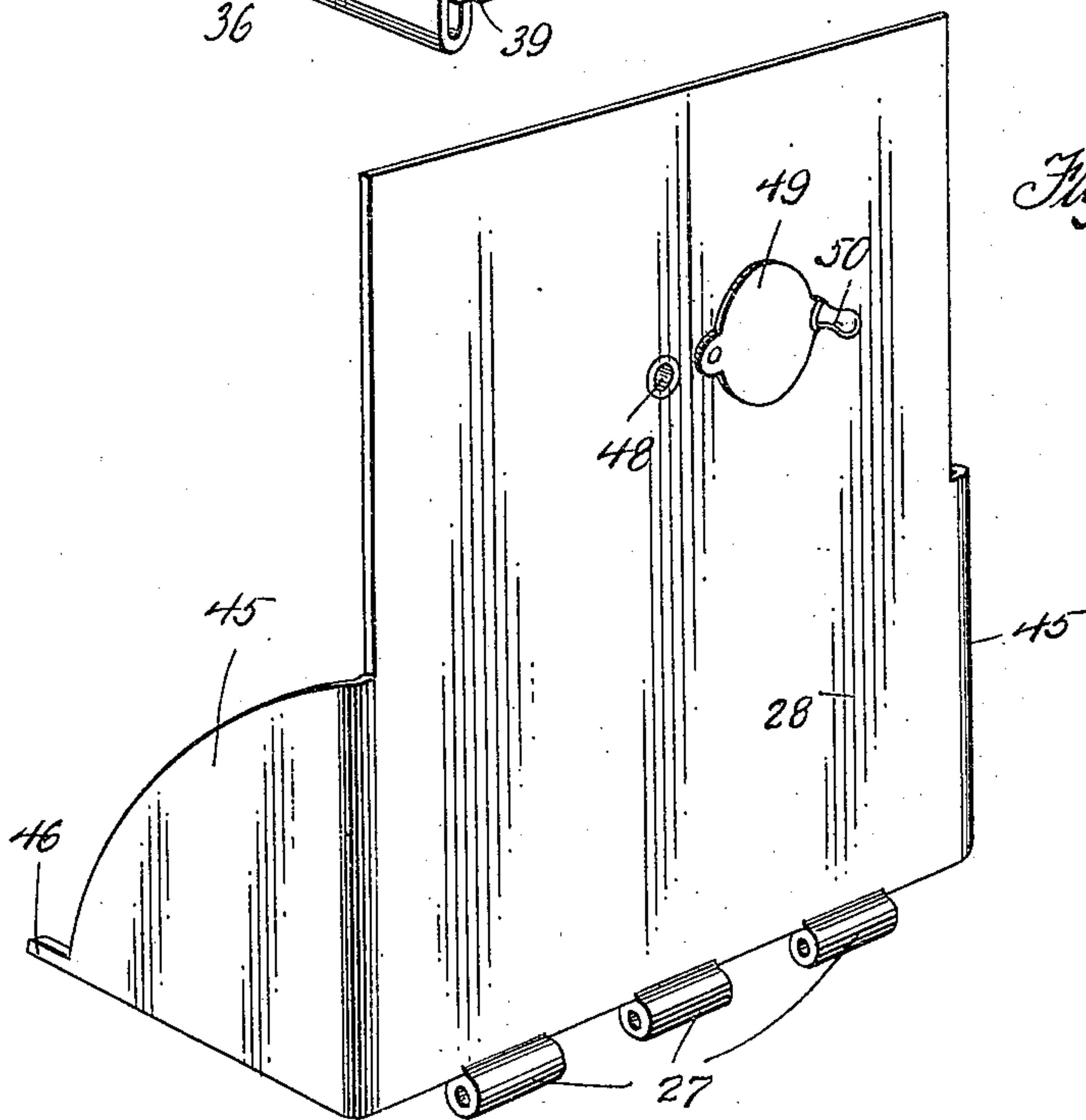


Fig. 10.

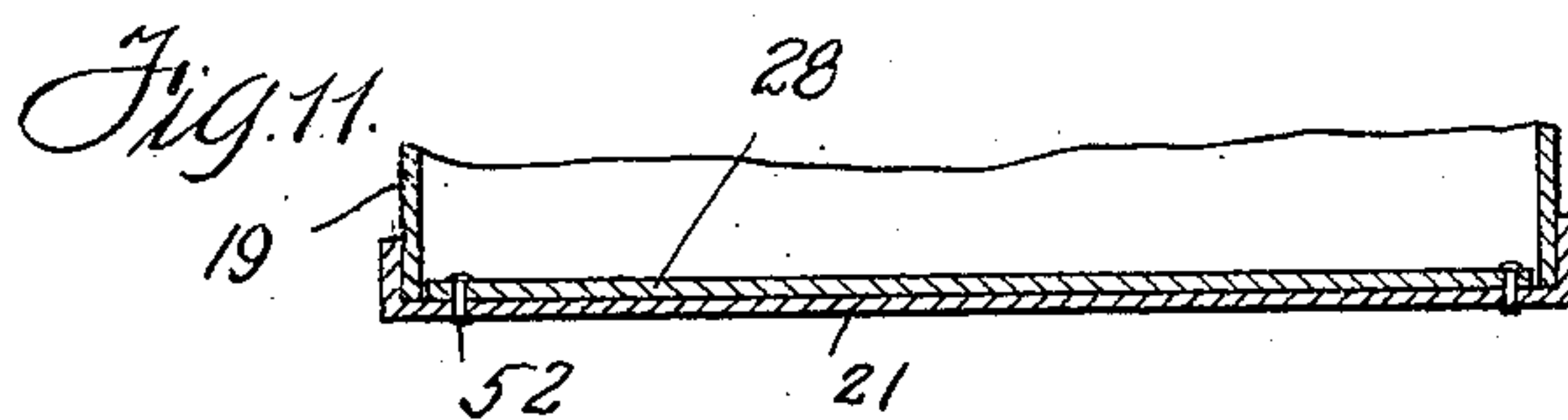


Fig. 11.

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5 SHEETS—SHEET 5.

Fig. 12.

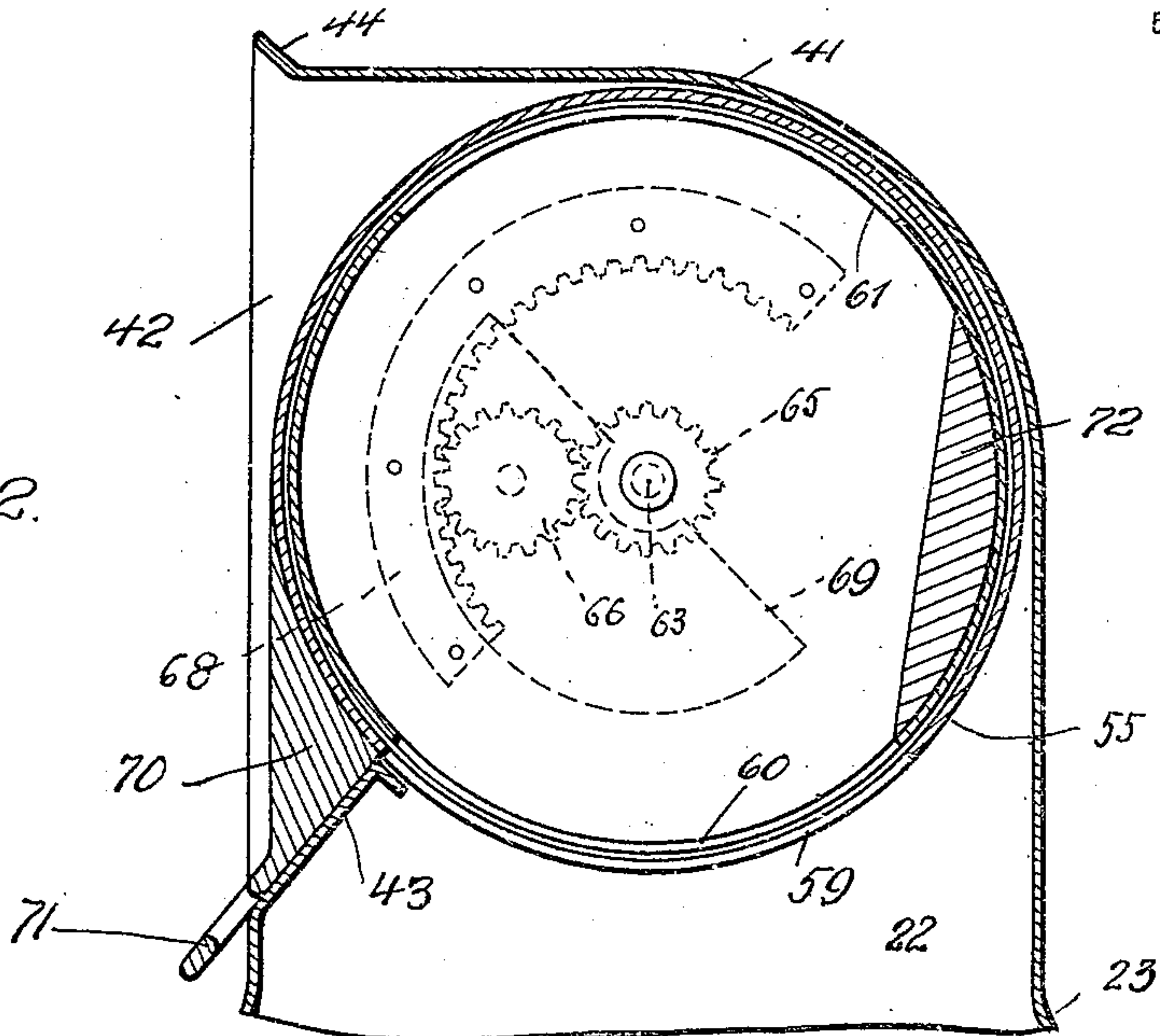


Fig. 13.

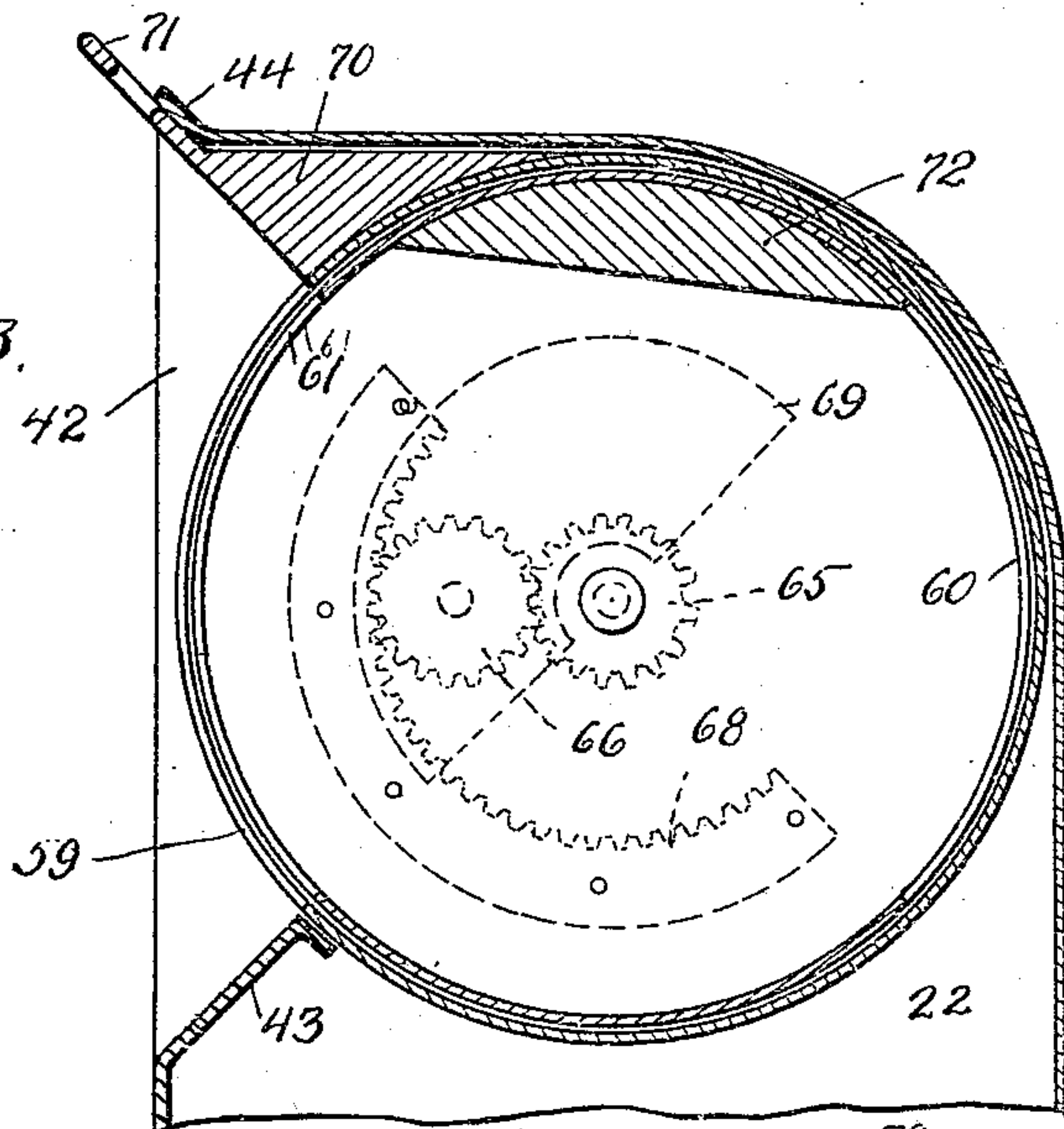
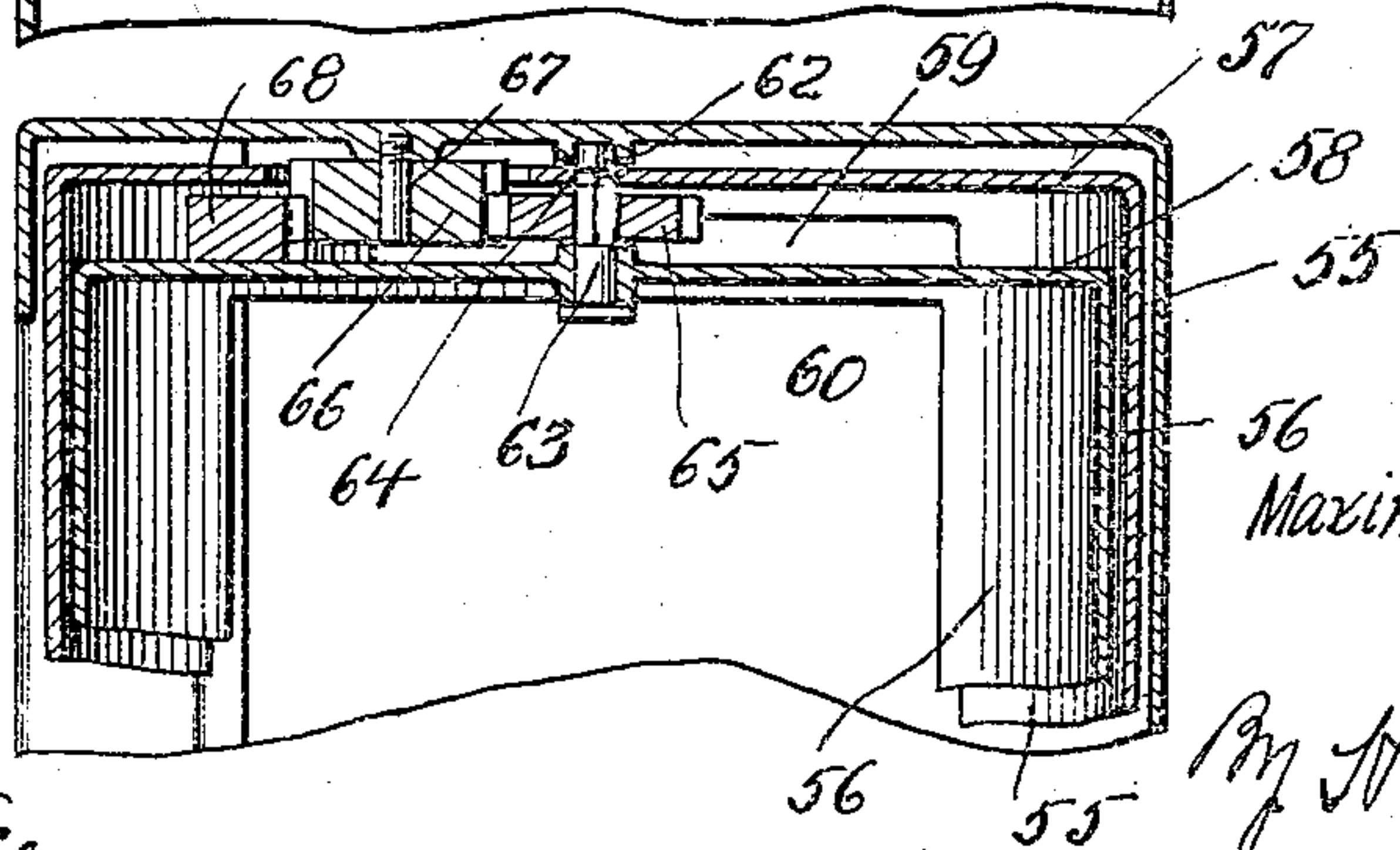


Fig. 14.



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UNITED STATES PATENT OFFICE.

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MAIL-BOX.

951,090.

Specification of Letters Patent.

Patented Mar. 1, 1910.

Application filed April 27, 1909. Serial No. 492,468.

To all whom it may concern:

Be it known that I, MAXIMILIAN KILIAN, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Mail-Boxes, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to mail boxes, and more particularly to that type of box made of sheet metal and adapted to be stationed upon a street or at the intersection of streets to receive mail to be collected by a postman.

15 The invention has for its primary object to provide a mail box with a novel shutter adapted to be manually opened to permit of mail being deposited in the box, after which the shutter is adapted to close automatically to protect the contents of the box from the forces of nature, also from persons that might try to rifle the box through the opening provided by the shutter.

20 Another object of the invention is to provide a strong and durable mail box having a hinged door permitting of a postman provided with a key opening the box and easily obtaining the contents thereof, the door in an open position forming a shelf or ledge for the accumulation of mail removed from the box preparatory to the postman placing the same in the collecting bag or wagon.

25 A further object of this invention is to provide a novel pedestal that can be positively anchored in a side walk for rigidly and safely supporting a mail box, which can be detached from the pedestal by authorized persons, when it is necessary to renew or repair the box.

30 The invention in its broadest aspect involves simple and efficient means for facilitating the operation of depositing matter in the box and safely protecting the contents of a box whereby the contents cannot be surreptitiously moved through the depositing opening of the box. To this end, I have devised a mailing box embodying a plurality of structural elements which when combined provide a safe and easily manipulated box from the standpoint of the mail depositor and mail collector.

35 The preferred embodiment of my invention is illustrated in the accompanying drawings, but I desire it to be understood that the structural elements thereof are sus-

ceptible to various changes without departing from the scope of the invention.

Reference now being had to the drawings forming part of this application, Figure 1 is a perspective view of the mail box, illustrating the manner in which the pedestal of the box is anchored in a side walk, Fig. 2 is a front elevation of the box partly broken away, Fig. 3 is an end view of the box partly broken away and partly in section, Fig. 4 is a similar view of a portion of the box partly broken away and partly in section, illustrating the inner side of the hinged door, Fig. 5 is a front elevation of a portion of the box partly broken away and partly in section, illustrating in dotted lines the hinged door in an open position, Fig. 6 is a perspective view of a portion of the transverse support forming part of the box, Fig. 7 is a perspective view of a portion of one of the side frames of the box, Fig. 8 is an elevation of a portion of a piece of material adapted to be bent to form one of the side walls of the box, Fig. 9 is an enlarged perspective view of a portion of the box with the protecting plate thereof removed, Fig. 10 is a perspective view of a detached hinged door forming part of the box, Fig. 11 is a horizontal sectional view of a portion of the hinged door, illustrating the protecting plate thereof, Fig. 12 is a vertical sectional view of a portion of the box showing the revoluble coöperating shutters thereof in a closed position, Fig. 13 is a similar view with the shutters thereof in an open position, and Fig. 14 is a horizontal sectional view of a portion of a box showing the coöperating mechanism of the shutters of the box.

The mail box in its entirety is constructed of strong and durable metal, consisting of casings and sheet metal parts pressed and shaped to provide a box having a large capacity for letters and parcels, the metallic parts of the box being assembled to provide a rigid equi-balanced structure that will present a neat appearance upon the street.

An important characteristic of the invention is the revoluble shutters controlling the deposit of mail in the box, these shutters conforming to drums having openings adapted to register when mail is being deposited in the box, and adapted to automatically move out of registration after the shutters have been released, whereby the contents of the box will be fully protected.

The arrangement of the operating mechanism between the revoluble shutters of the box, together with the stability of the box, permits of a person easily manipulating the shutters to deposit mail, and by virtue of a hinged door located at one end of the box, a postman can expeditiously remove matter therefrom.

Considering the various features of the invention in detail, reference will first be had to the pedestal.

Box pedestal.—The box pedestal comprises four radially disposed and equally spaced arms 1, said arms being of an equal length with the outer ends thereof connected by angularly disposed webs 2. Each arm is of an inverted V-shape in cross section, with the outer ends of said arms slanting, as at 3, while the inner ends of said arms terminate in an integral socket 4, said socket having an interiorly screw threaded seat 5 and a central opening 6. Screwed into the seat 5 is a cylindrical metallic post 7 having the upper end thereof exteriorly screw threaded, as at 8. Screwed upon the upper end of the cylindrical post 7 is a transverse support 9 having a central vertical opening 10. The outer ends of said support are bifurcated, as at 11, and provided with recesses 12, the object of which will hereinafter appear. In connection with the cylindrical post 7, a tie rod 13 is used, said rod extending upwardly through the openings 6 and 10. The lower end of the tie rod 13 is provided with a head 14 adapted to seat in a recess 15 formed in the bottom of the socket 4 and surrounding the opening 6 thereof. The head 14 is retained within the recess 15 by rivets 16 or similar fastening means. The upper end of the tie rod 13 is provided with a threaded opening 17, the purpose of which will hereinafter appear.

As shown in Fig. 1 of the drawings, the base of the pedestal is adapted to be embedded in the side walk, and the shape of the arms 1 together with their connecting webs permits of the pedestal being firmly anchored to maintain the same in a firm upright position.

Box structure.—The box structure arranged upon and held by the transverse support 9, comprises a bottom plate 18, a front wall 19, a rear wall 20, and end walls 21 and 22. The front and rear walls 19 and 20 at a point approximately one half their depth are bent inwardly, as at 23, and the end walls 21 and 22 are shaped to close the space between the front and rear walls 19 and 20. The bottom plate 18 is provided with a central opening 24 to receive a screw 25 adapted to screw into the threaded opening 19 of the tie rod 13 and retain the bottom plate upon the transverse support 9. The bottom plate 18 at one end thereof is provided with hinged members 26 adapted

to longitudinally aline with hinged members 27 carried by the lower edge of a hinged door 28, said door closing that portion of the end of a box beneath the end walls 22 and the front and rear walls 19 and 20. This door will be considered more fully under another caption. The longitudinal edges of the bottom plate 18 are bent downwardly, as at 29, and riveted or otherwise secured, as at 30, to said bottom plate are the front and rear walls 19 and 20 of the box structure. The lower edges of these walls are adapted to seat in sockets 31 provided therefor in side frames 32 adapted to fit in the bifurcated ends of the transverse support 9, said side frames having extensions 33 adapted to protrude into and seat in the recesses 12 at the ends of the transverse support 9. The side frames 32 are provided with upwardly extending curved extensions 34 which are riveted, or otherwise secured, as at 35, to the front and rear walls 19 and 20 of the box structure. These extensions of the side frames add rigidity to the box structure and firmly hold the same relative to the transverse support 9 detachably mounted upon the upper end of the cylindrical post 7. To add further rigidity to the front and rear walls 19 and 20, and at the same time provide certain elements that are necessary in connection with the hinged door 28, the front and rear walls 19 and 20 are provided with corner pieces 36, these pieces being formed integral with the front and rear walls 19 and 20, when the same are stamped or sheared from sheet metal, and then bent upwardly into a plane parallel with the front and rear walls. The corner pieces 36 are substantially sector shaped and the curved edges of said corner pieces are offset, as at 37, to protrude under the extensions 34 of the side frames 32, whereby the rivets 35 will simultaneously secure the extensions to the side frames and the corner pieces to the walls 19 and 20. The corner pieces 36 are cut away, as at 38, to provide clearance for the pintles or pins 39 employed for hinging the door 28 to the bottom plate 18. The inner sides of the corner pieces 36 adjacent to the offset portion thereof are provided with inwardly projecting lugs 40, the purpose of which will presently appear in connection with the hinged door 28. The upper portion of the rear wall 20 is curved toward the front wall 19 to form a roof or cover 41 for the box structure, and the upper portion of the front wall 19 is cut away to provide an elongated opening 42, the material of the front wall 19 bordering upon the lower edge of said opening being bent inwardly, as at 43, to serve functionally as a stop, while the forward edge of the roof 41 is flared upwardly, as at 44, to permit of easy access being had to the opening 42.

The hinged door.—This door as hereto-

fore referred to and designated 28 is provided with sector-shaped parallel side flanges 45, located at the lower side edges of the door and provided with projecting lugs 46. These lugs are adapted to engage the lugs 40 of the corner-pieces 36 of the front wall 19, and limit the outward or opening movement of the door 28, said lugs maintaining the door in approximately a horizontal position, when open, whereby the door will serve functionally as a shelf or ledge for the accumulation of mail matter removed from the box structure, prior to placing the same in a collecting bag or wagon. The door 28 adjacent to the upper edge thereof and upon the inner side is provided with a lock casing 47^a adapted to hold a conventional form of lock 47, preferably of that type at present used in connection with mail boxes. This lock is adapted to register with a key opening 48 formed in the door 28, and in order that the key opening or hole 48 can be closed to prevent foreign matter from entering the same, the hinged door 28 contiguous to the key opening or hole 48 is provided with a pivoted shutter 49 having a crank 50 to facilitate the operation of opening or closing the shutter 49. Since the hinged door 28 corresponds to the cross sectional area of the lower part of the box structure, easy access can be had to the interior of the box for removing letters and parcels, and with the side flanges 45 of said door extending between the front and rear walls of the box, and the corner-piece thereof, it is obvious that the door 28 cannot sag or shift by reason of the pintle or pivoted pin 39 thereof becoming loose in the hinged members of the bottom plate 18 and the door 28.

In Figs. 1 and 11, of the drawings, I have illustrated the door 28 as provided with a protecting plate 51, said plate being riveted or otherwise secured, as at 52, to the door 28. When this plate is used in connection with the door, said plate is provided with a key opening 53 adapted to register with the key opening 48 and in lieu of mounting the shutter 49 upon the door 28, said shutter is mounted upon the protecting plate 51. The protecting plate 51 is provided with side flanges 54 adapted to overlap the edges of the walls 19 and 20 of the box structure and exclude foreign matter that would otherwise have a tendency to enter the space between the front and rear walls 19 and 20 and the end piece thereof.

An important feature in connection with the hinged door 28 is the arrangement of the extensions of the corner pieces 36 which serve functionally as guides for the side flanges 45 of the door, the front and rear walls preventing the side flanges of the door from defacing or mutilating the contents of the box when the door is opened. Consider-

able trouble is at present experienced in connection with mail boxes by mail being injured when the door of the box is opened on account of the side flanges of the door contacting with the mail. This defect in the construction of the box is obviated by arranging the hinged door whereby the side flanges thereof will move upon the exterior of the front and rear walls and at the same time be fully protected by the corner pieces of the box.

The revoluble coöperating shutters.—In the upper end of the box structure there are located revoluble shutters adapted to normally close the opening 42 of the front wall 19, shutters protecting the contents and the interior of the box structure and at the same time permitting mail matter to be deposited in the box when the said shutters are manually manipulated to open the box. The revoluble shutters comprise an outer drum 55 and an inner drum 56, these drums having the ends thereof closed, as at 57 and 58 respectively, while the body of the drum 55 is provided with a longitudinal opening 59 and the body of the drum 56 with oppositely disposed longitudinal openings 60 and 61, the openings 59 and 60 of said drums registering when the shutters are closed, and the openings 59 and 61 registering when the shutters are open for the deposit of mail matter. For supporting the inner drum 56 within the outer drum 55 and both of said drums within the upper part of the box structure, the inner sides of the end walls 21 and 22 are provided with oppositely disposed bearings 62. Journaled in these bearings are shafts 63, the inner ends of said shafts revolubly supporting the inner drum 56, while the outer drum 55 is supported upon rectangular portions 64 of said shafts, said drum rotating with the shafts 63.

Mounted upon the rectangular portions 64 of the shafts 63 are gear wheels 65 meshing with gear wheels 66 revolubly carried by pins 67 fixed in the inner sides of the walls 21 and 22. The gear wheels 66 mesh with sector shaped racks 68 fixed to the ends of the inner drum 58, whereby when the outer drum 55 is moved in one direction, the inner drum 56 will be moved in an opposite direction, causing the openings 61 and 59 to register, when the outer drum 55 is moved, as will presently appear. The outer drum 57 is provided with a semi-circular opening 69 providing clearance for the gear wheels 66, when said outer drum is shifted, and in order that said drums can be easily moved, that portion of the drum exposed by the opening 42 is provided with an enlargement 70 having a suitable handle 71 permitting of a person easily gripping the outer drum 55 to move the same, whereby the opening 59 will register with the opening 61 and allow mail matter to be deposited in the inner drum 56.

The inner drum 56 between the openings 60 and 61 and at the rear inner side of the drum is provided with a weight 72 adapted to normally maintain the drums in the position shown in Fig. 12 of the drawings, with the openings 59 and 60 registering whereby the contents of the inner drum 56 will be deposited into the box structure. In connection with these drum like shutters I reserve the right to re-arrange the gear wheels 64 and 66 and the racks 68, without departing from the relative movement of the inner and outer drums.

To operate the cooperating closures of the box to deposit mail matter in the same, it is only necessary to elevate the handle 71, which moves the outer drum 55 to cause the opening 59 thereof to register with the opening 42, this movement of the outer drum causing the inner drum 56 to revolve whereby the opening 61 thereof registers with the opening 59. Mail matter can then be placed in the inner drum and immediately upon the handle 71 being released, the weight 72 of the inner drum returns the drums to their normal position, with the openings 59 and 60 registering, whereby the contents of the inner drum will be deposited into the box. The simultaneous movement of the inner and outer drums is automatically accomplished through the medium of the gears 65, 66 and the rack 68, these gears and rack causing the outer drum to move in a different direction from the inner drum, whereby in one position of said drums the openings 59 and 60 will register and in another position the openings 42, 59 and 61 will register, with the weight 72 in position to immediately cause the drums to revolve when the handle 71 is released.

The revoluble drums are made of a sufficient size to hold considerable mail matter and the opening 42 is sufficiently large to permit of considerable matter being placed in the drums. Since that portion of the box structure beneath the revoluble cooperating closures is free from mechanism, mail matter can be easily deposited in the box structure, and removed by opening the hinged door 28.

In mounting the box structure upon the cylindrical post 7, it is preferable to use right hand screw threads and to use a left hand screw threaded screw 25, whereby said

screw will prevent the box structure from being bodily removed from the post or pedestal, except by authorized persons having access to the interior of the box structure to first remove the screw 25.

Having now described my invention, what I claim as new, is;—

1. A mail box comprising a receptacle having one of the end walls thereof cut-away, each of the side walls of said receptacle provided with an extension adapted to be bent upon its respective wall to form an exterior pocket, a door hinged to said receptacle and adapted to close the cut-away portion thereof and further adapted when in a closed position to extend in said pockets, and means carried by a wall of each of said pockets and cooperating with means on the door for limiting the opening movement of the latter.

2. A mail box comprising a receptacle embodying a bottom plate, front, rear and end walls, sector-shaped corner pieces formed integral with the front and rear walls and bent to extend upwardly and in parallelism with the outer faces of the front and rear walls, each of said sector-shaped corner pieces at one end provided with an inwardly-extending lug, said lugs engaging the outer faces of the front and rear walls for spacing said pieces away from said walls and furthermore constituting a stop, curved members engaging with said corner pieces for securing the inner edges thereof to the front and rear walls, one of said end walls being cut away to provide an outlet opening for the receptacle, a door hinged at its lower end to said bottom plate and constituting a means for closing the said outlet opening, segment-shaped flanges formed integral with the door at the lower portion thereof and adapted to extend between said corner pieces and the front and rear walls of said box, protuberances at one corner of said side flange and adapted to engage said lugs whereby the opening movement of the door will be arrested, said front wall provided with an inlet opening.

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

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Witnesses:

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