

No. 652,744.

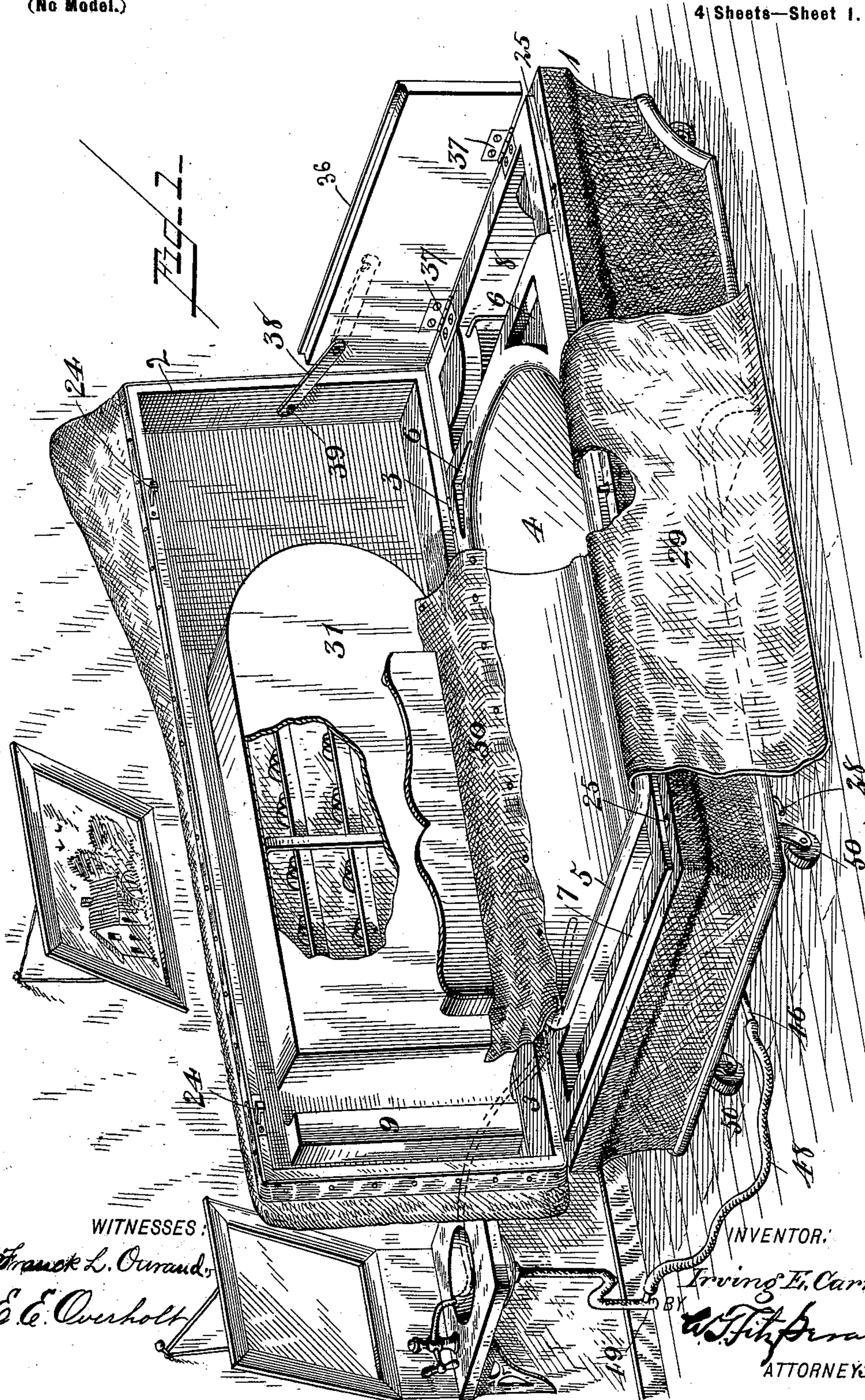
Patented July 3, 1900.

I. E. CARMAN.  
COMBINED COUCH AND BATH TUB.

(Application filed Oct. 28, 1899.)

(No Model.)

4 Sheets—Sheet 1.





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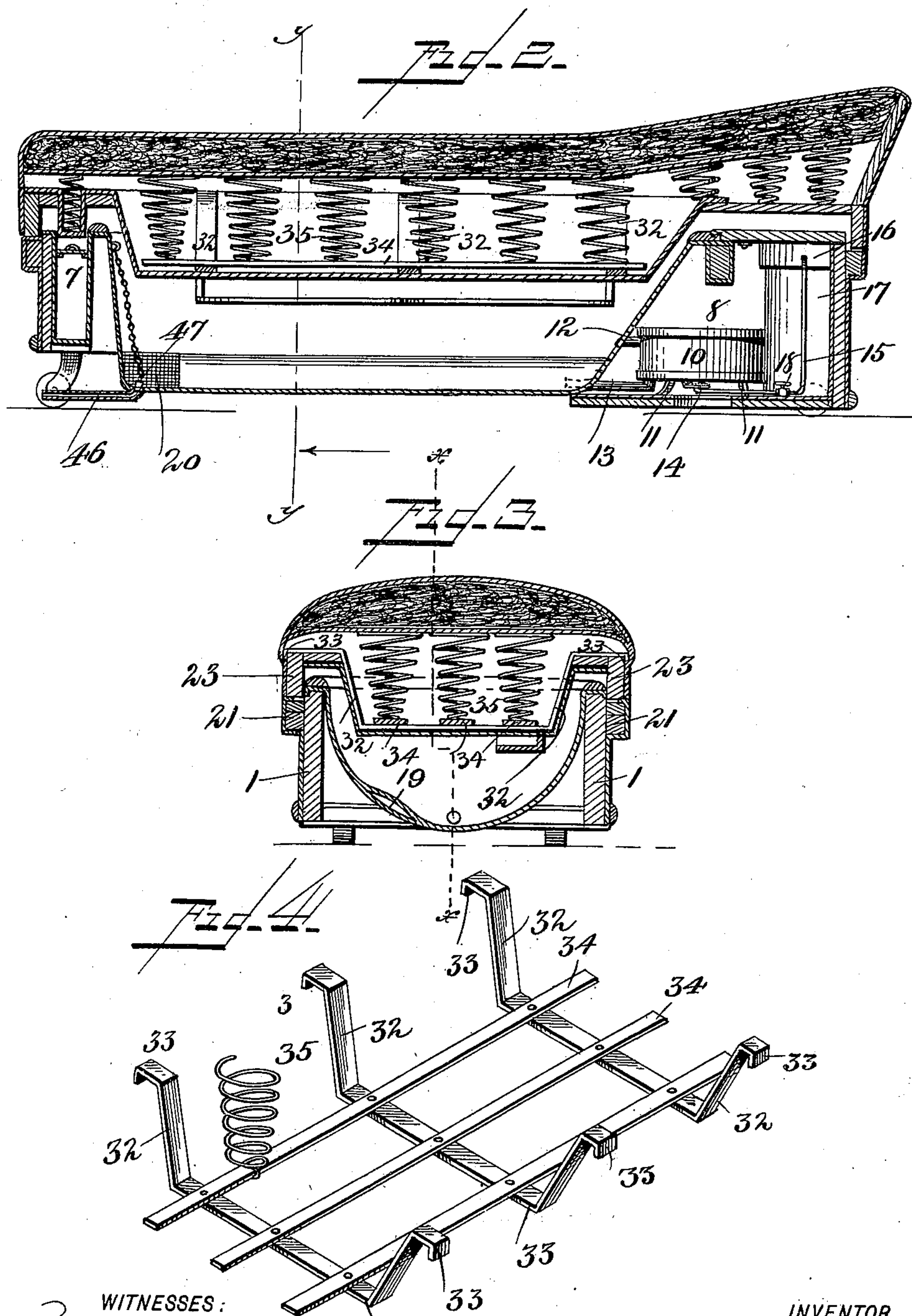
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4 Sheets—Sheet 2.



WITNESSES:  
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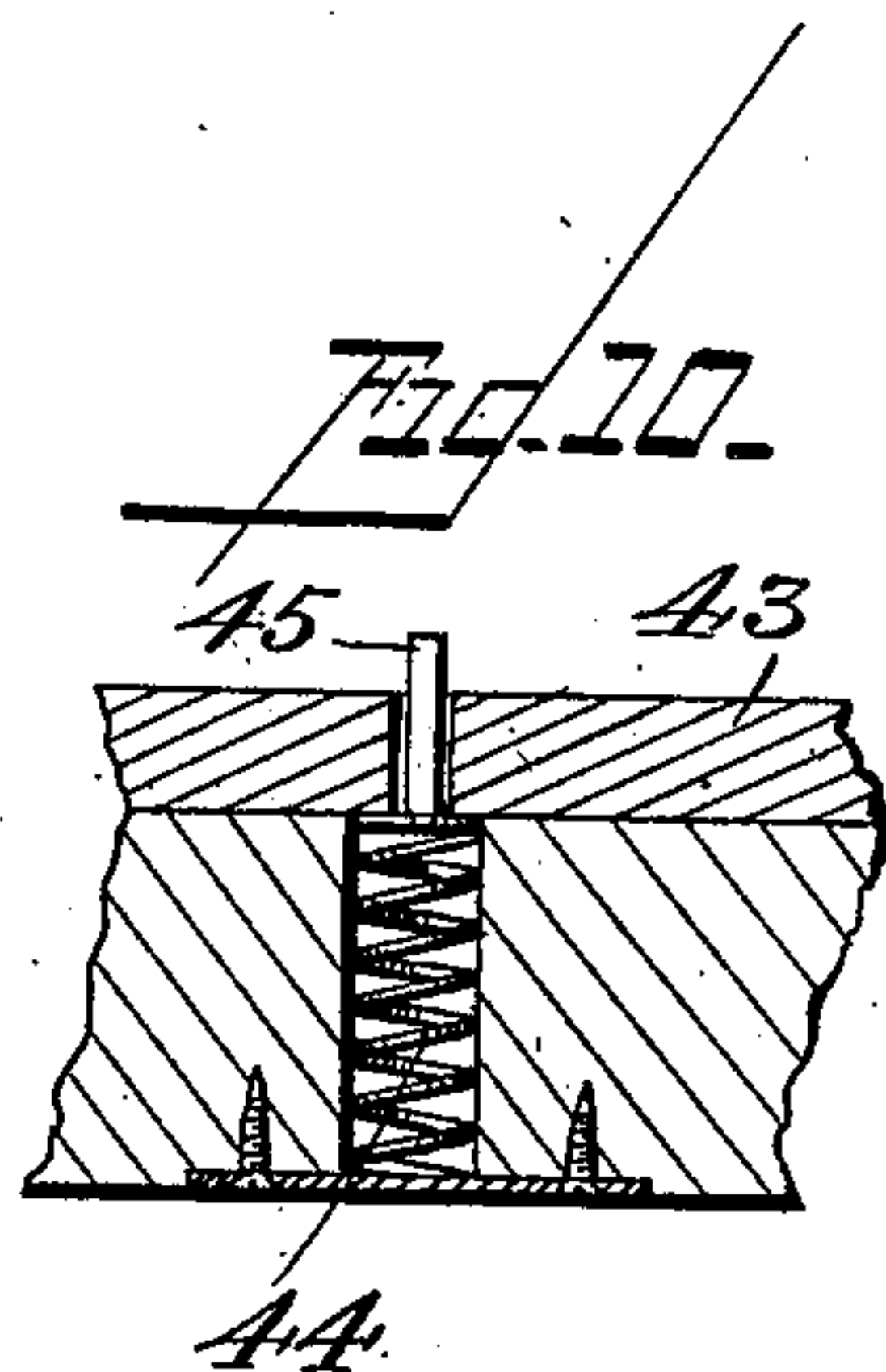
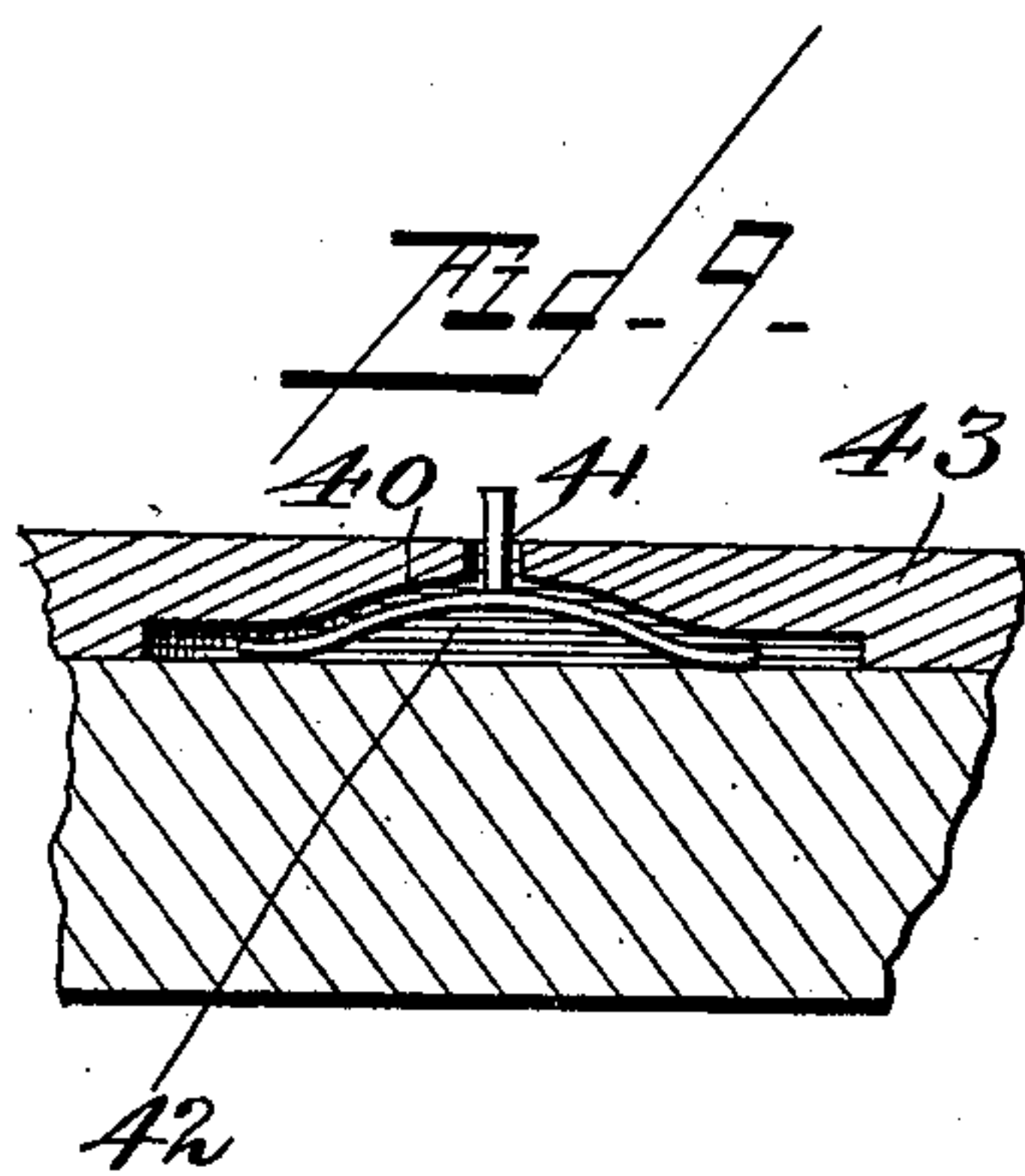
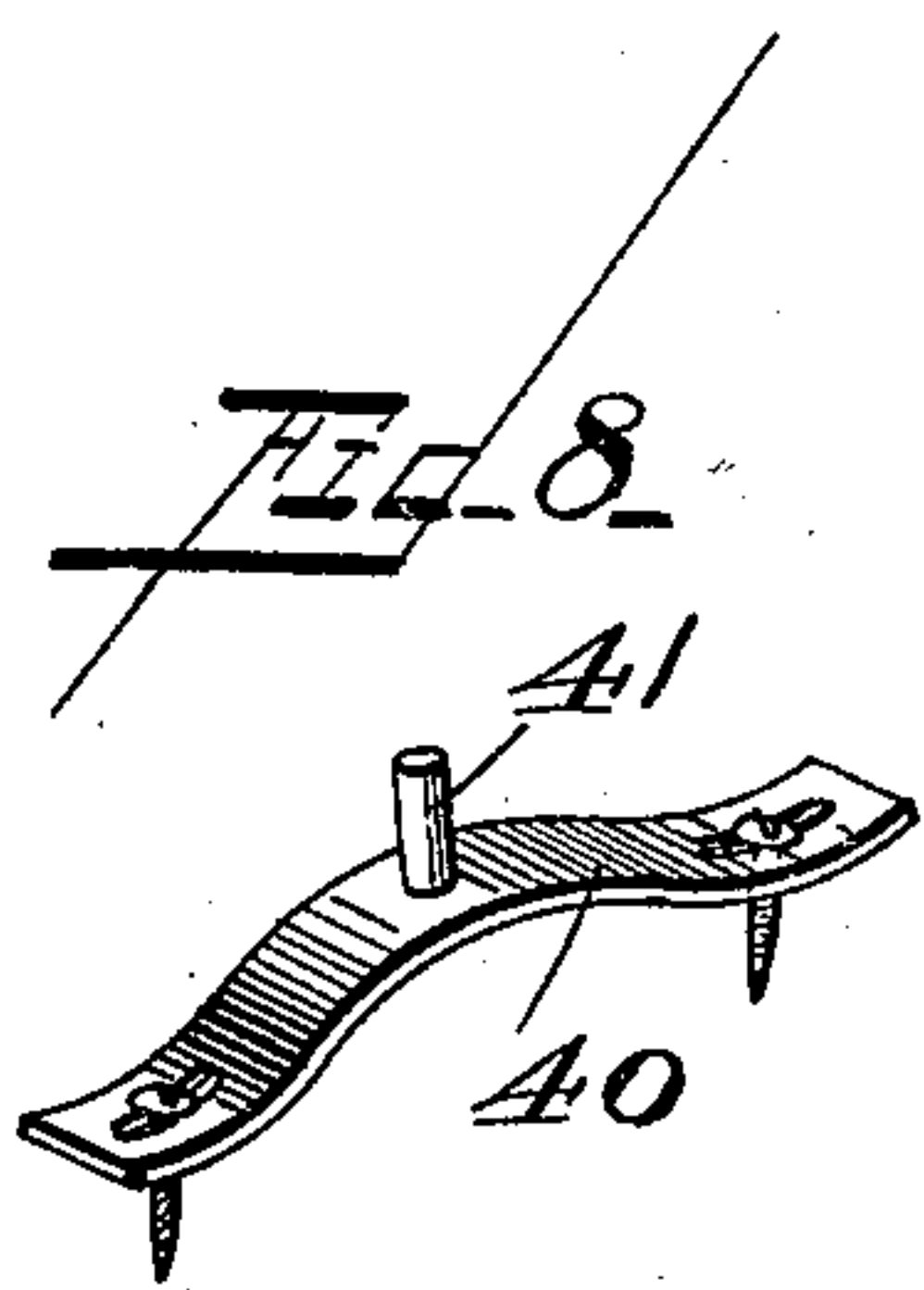
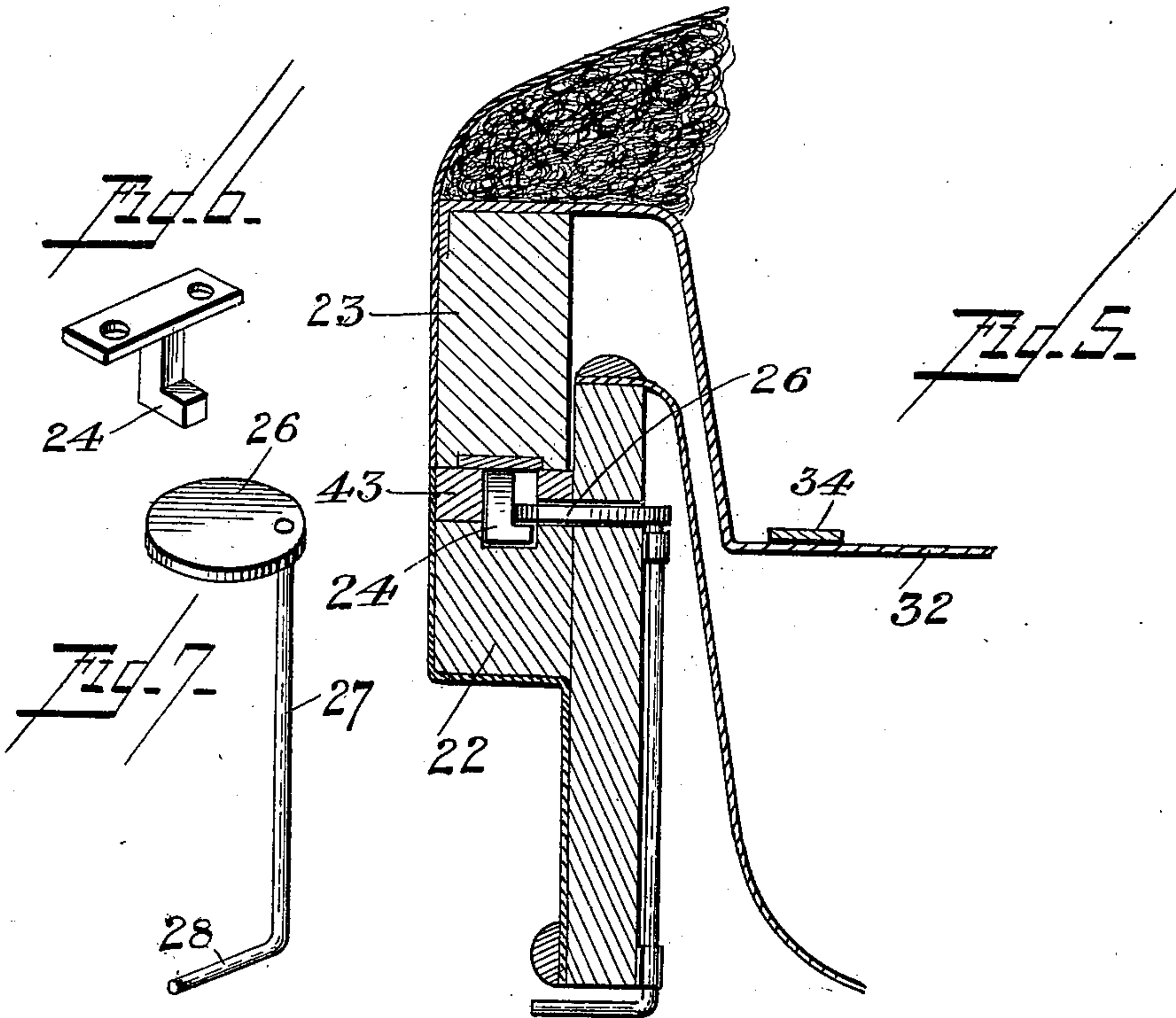
I. E. CARMAN.

COMBINED COUCH AND BATH TUB

(Application filed Oct. 28, 1899.)

(No Model.)

4 Sheets—Sheet 3.



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4 Sheets—Sheet 4.

Fig. 11.

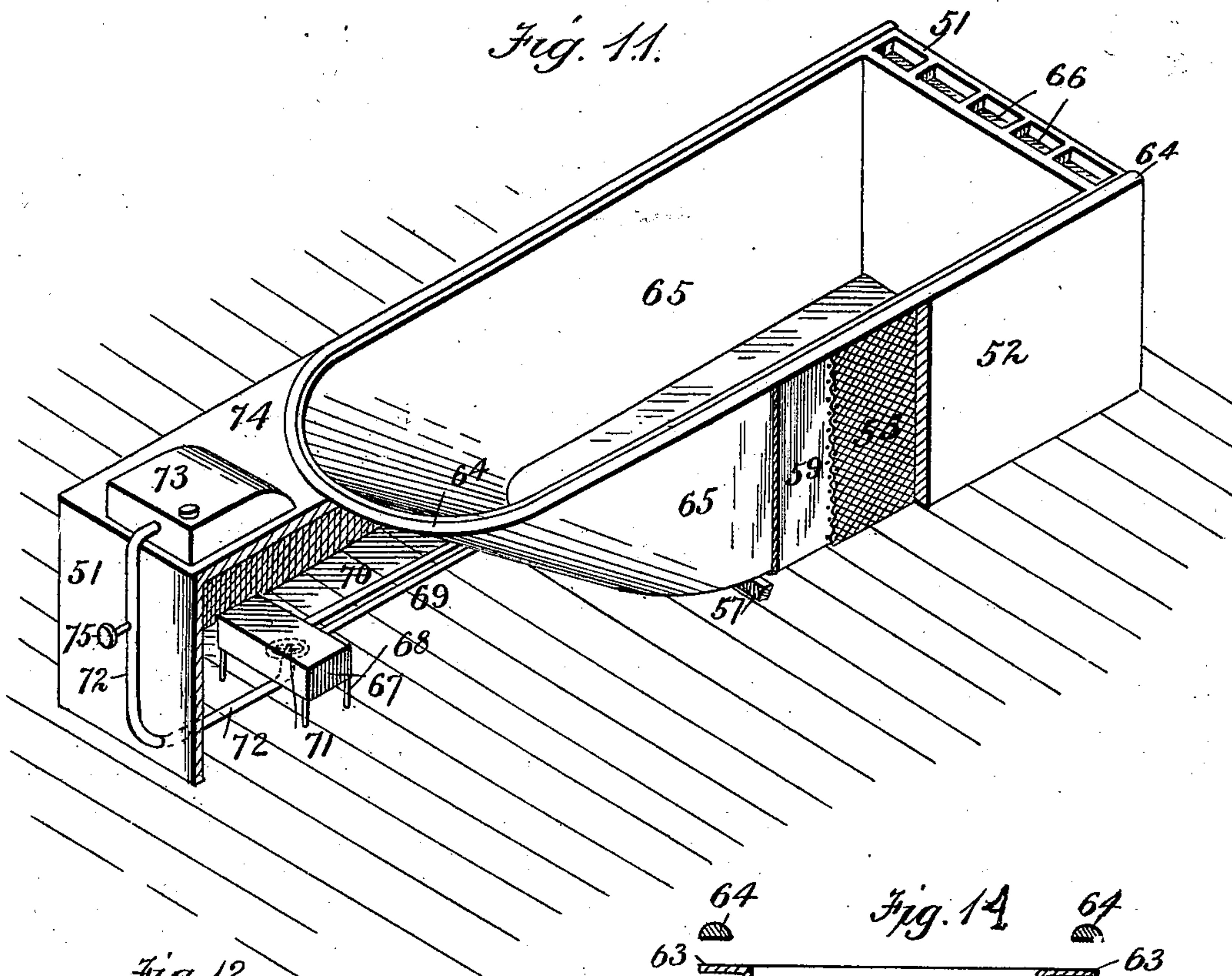


Fig. 12.

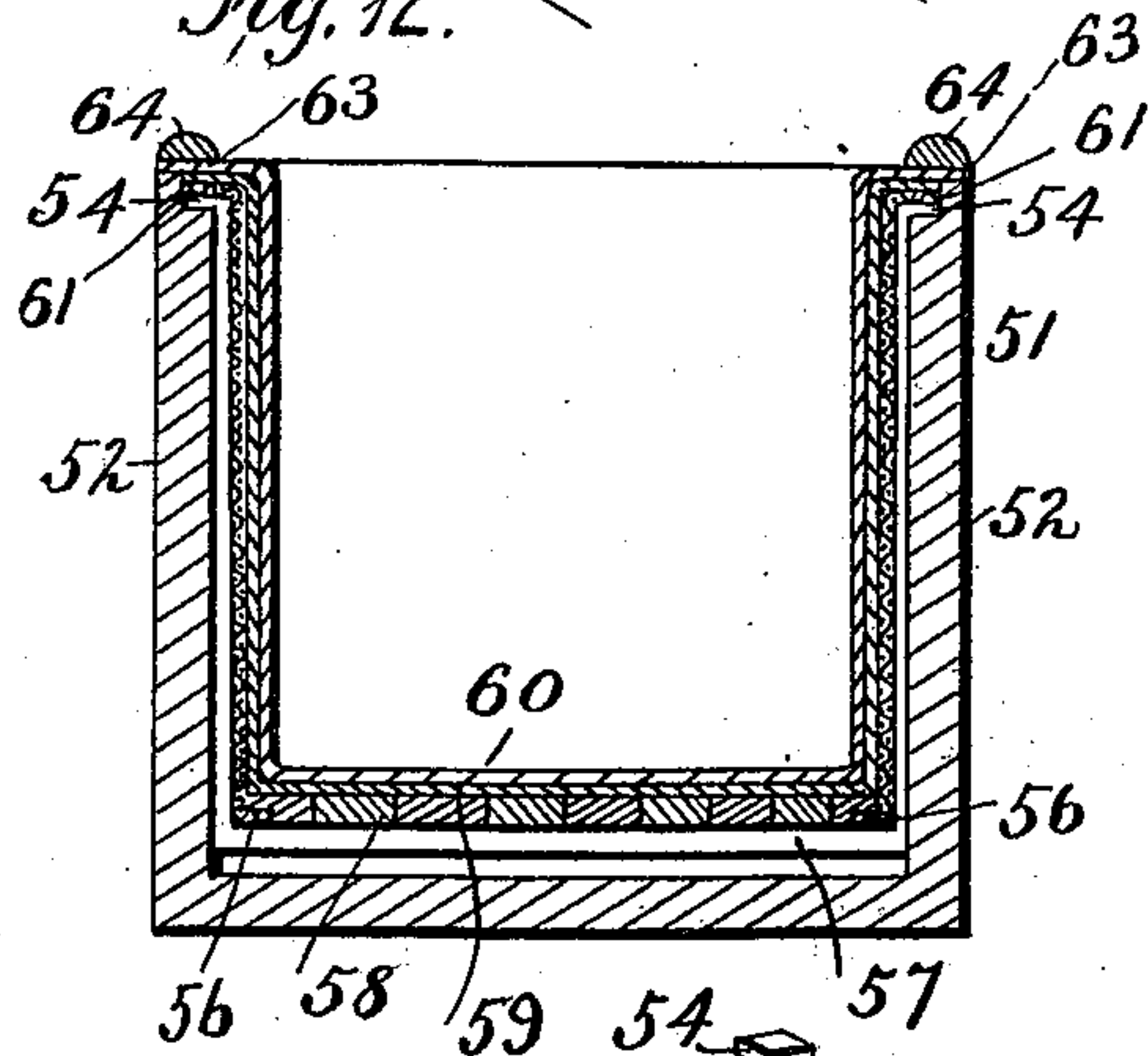


Fig. 14

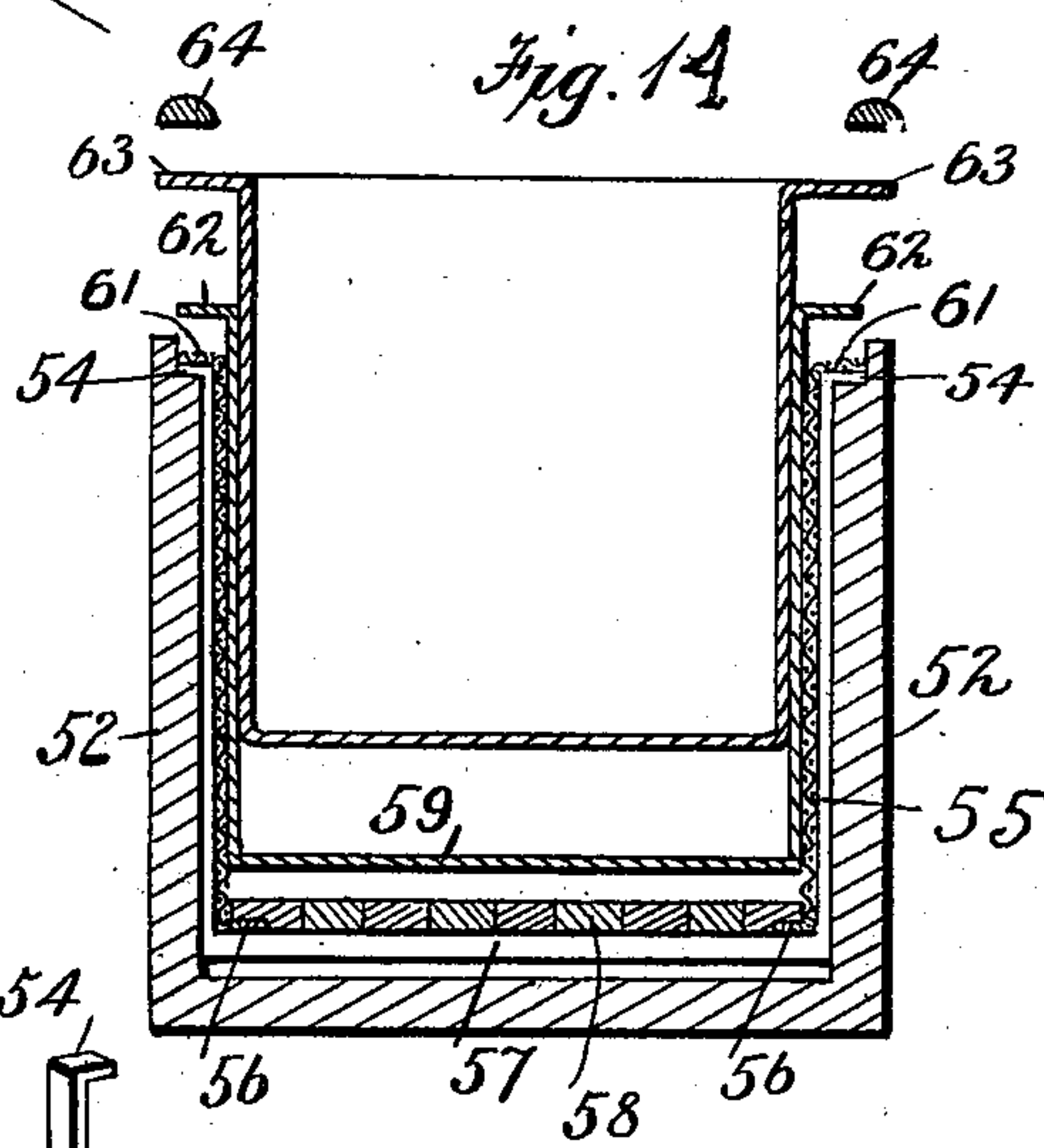
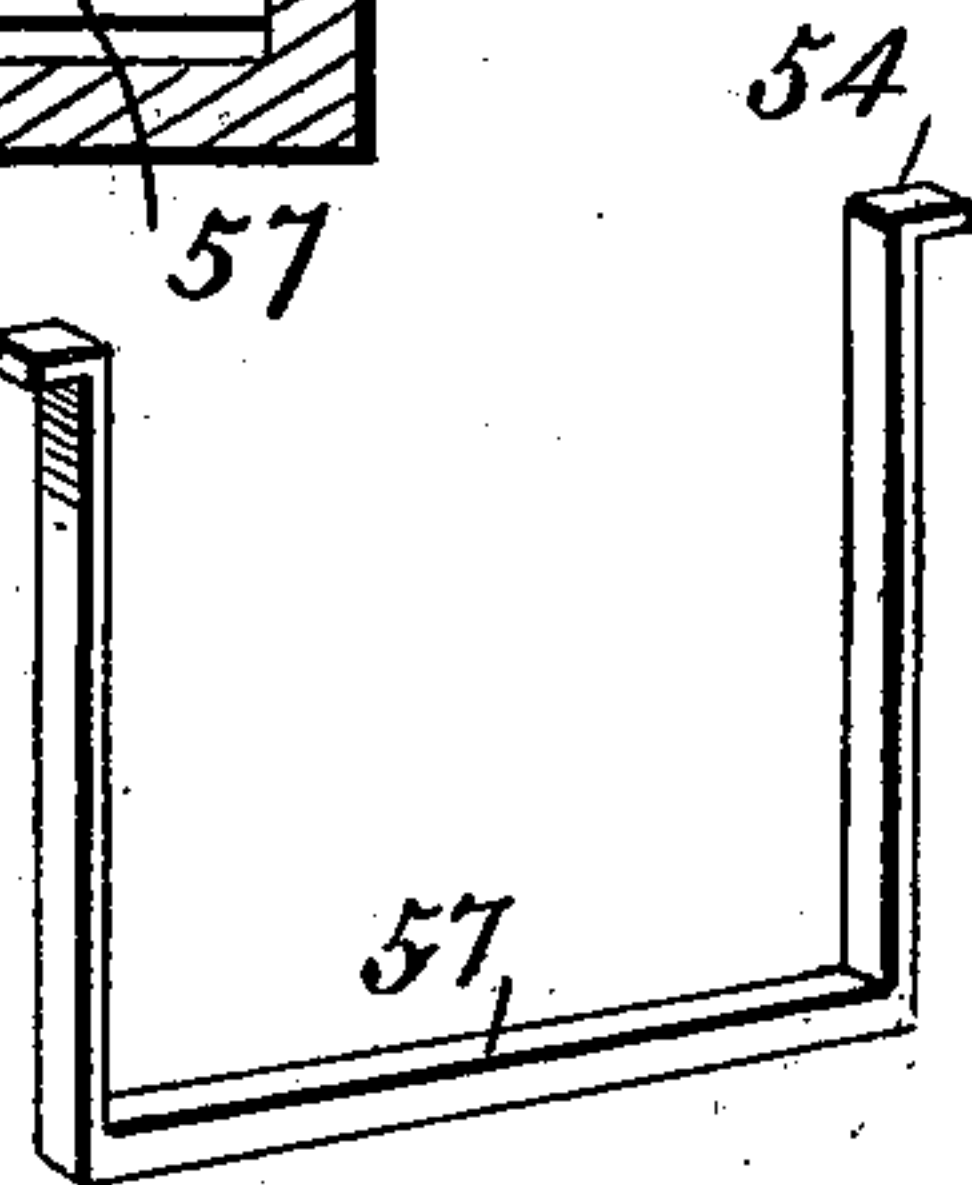


Fig. 13



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# UNITED STATES PATENT OFFICE.

IRVING E. CARMAN, OF ELLENVILLE, NEW YORK.

## COMBINED COUCH AND BATH-TUB.

SPECIFICATION forming part of Letters Patent No. 652,744, dated July 3, 1900.

Application filed October 28, 1899. Serial No. 735,098. (No model.)

*To all whom it may concern:*

Be it known that I, IRVING E. CARMAN, a citizen of the United States, residing at Ellen-  
ville, in the county of Ulster and State of  
5 New York, have invented certain new and  
useful Improvements in a Combined Couch  
and Bath-Tub; and I do hereby declare the  
following to be a full, clear, and exact de-  
scription of the invention, such as will enable  
10 others skilled in the art to which it apper-  
tains to make and use the same.

My invention consists of certain new and  
useful improvements involved in the con-  
struction and combination of parts necessary  
15 to provide a combined lounge and bath-tub.  
One object of my invention is to provide in  
compact, convenient, and readily-accessible  
form the two necessary household articles  
above mentioned.

20 A further object, among others, is to pro-  
vide easily-controlled and readily-accessible  
means for heating the water within the bath-  
tub in the absence of the usual range connec-  
tions.

25 A further object of my invention is to en-  
able almost any person to provide the neces-  
sary parts required to form a perfect bath-  
tub, which may be cheaply manufactured and  
readily assembled in their respective opera-  
30 tive positions, as will be hereinafter pointed  
out.

By reference to the following specification  
and the accompanying drawings it will be  
readily apparent that the parts of my com-  
35 bined lounge and bath-tub are so construct-  
ed and united that they will have the appear-  
ance when assembled of being a lounge when  
in a closed position, thereby making it pos-  
sible to entirely dispense with a separate and  
40 distinct room to be used solely as a bath-  
room, thereby enabling the space within the  
dwelling to be more perfectly economized.  
By properly utilizing the space within the  
upper part of the bath-tub I find that it is  
45 possible to reduce the height of the lounge to  
the desired point, inasmuch as I am enabled  
to so dispose the springs usually employed to  
support the top of the lounge that they, to-  
gether with the necessary supporting frame  
50 or casing therefor, will rest within the upper  
portion of the tub when the lid or upper por-

tion of the lounge is brought down in a closed  
position.

Briefly stated, my invention may be said to  
consist in the details of construction neces- 55  
sary to accommodate and harmonize the bath-  
tub and its accessories with the usual ad-  
juncts of a lounge in such a way that said  
parts will not in any wise conflict with each  
other. 60

In the accompanying drawings, Figure 1 is  
a perspective view of my combined lounge  
and bath-tub, showing the same in an open  
position. Fig. 2 is a longitudinal section of  
Fig. 3 on line *x x*. Fig. 3 is a transverse sec- 65  
tion on line *y y* of Fig. 2. Fig. 4 is a per-  
spective detail of the preferred means to be  
employed in providing a support for the  
springs used to reinforce the upper or up-  
holstered portion of the lounge. Fig. 5 is a 70  
sectional view, on an enlarged scale, illustrat-  
ing the lid in a closed position and showing  
how said lid is locked. Figs. 6 and 7 are the  
devices employed to lock the lid of the lounge  
in engagement with the body portion. Figs. 75  
8, 9, and 10 illustrate different forms of con-  
struction which may be adopted in providing  
the spring employed to throw the lid slightly  
upward when the catches are released. Fig.  
11 is a perspective detail view showing an- 80  
other form of heating device which may be  
employed to bring the water in the tub to the  
desired temperature. Fig. 12 illustrates in  
cross-section the several parts employed to  
form what I term my "built-up" tub, said 85  
parts being shown in an assembled position.  
Fig. 13 is a perspective detail view of the  
hanger or main support employed to hold the  
other portions of my built-up tub. Fig. 14  
is a sectional view illustrating the several 90  
parts shown in Fig. 12 slightly separated  
from each other.

The essential features of novelty of my in-  
vention and their necessary coöperating ac-  
cessories will for convenience be referred to 95  
by designating numerals, of which 1 indi-  
cates the body or base portion of my com-  
bined lounge and bath-tub, while 2 design-  
ates the lid thereof, said parts comprising  
the frame or outer portion of my combined 100  
lounge and bath-tub, the same being prop-  
erly secured together, as by suitable hinges



3, whereby the lid may be freely raised to expose the interior portion of the body, within which I mount the bath-tub proper, 4, which may consist of any preferred material—as zinc, tin, porcelain, or the like—and is held within the base portion by any suitable devices, as by the frame 5, which may be formed integral with the tub or separately constructed and is preferably provided at the head end of the tub with the recesses 6, designed for the reception of soap, brushes, or other desired accessories of the bath.

It will be observed that the base portion 1 is of sufficient extent to freely receive the bath-tub proper and at the same time leave the end receptacles 7 and 8. The receptacle 7 consists simply of a removable tray designed to receive the depending casing 9, secured to the contiguous part of the lid and adapted to contain a row of springs employed to support the contiguous upholstery. Since the tray 7 is removable, it follows that the space below the same may be shaped into a suitable receptacle for towels, clothing, &c., thereby enabling this space to be utilized.

Within the receptacle 8, which, as will be seen by reference to Fig. 2, is enlarged at its lower end, I dispose the heating-paraphernalia, comprising the water-tight chamber or reservoir 10, which is supported in any suitable way, as by the legs 11, and communicates with the interior of the bath-tub by the upper and lower pipes 12 and 13, respectively. Beneath the water chamber or reservoir 10 I locate the burner 14, which is connected by the pipe 15 with the oil-reservoir 16, properly supported, as by the bracket 17. The reservoir 16 may be employed to hold in reserve any suitable liquid fluid—as gasoline, coal-oil, or the like—which may be delivered to the burner through the pipe 15 by opening the valve 18. It will be further understood that I reserve the right to employ any desired means to heat the water within the reservoir, as ordinary illuminating-gas may be delivered to the burner 14 by suitable pipe connections. By disposing the pipes 12 and 13 one above the other, as shown in Fig. 2, it is obvious that a complete circulation is set up between the reservoir 10 and the water within the bath-tub, inasmuch as the hot water will pass out through a suitable vent provided for the pipe 12 and will return to the reservoir through the pipe 13 after passing through the preferably-elliptical tube 19, forming a portion of the bottom of the tub, and in order to prevent foreign matter from entering the pipe 13, and thereby clogging the same and fouling the reservoir 10, I prefer to cover the open end of the elliptical section 19 with closely-meshed wire-cloth, as indicated by the numeral 20.

In order to insure that there will be a complete circulation within the bath-tub, I locate the open end of the elliptical section 19 at the foot of the tub, while the pipe 12 will deliver the hot water at the head of the tub, and it is obvious that the cooler water will pass

down through the meshed covering 20 and thence through the elliptical tube 19 into the pipe 13 and into the reservoir. By this arrangement for a complete and rapid circulation of the water I am enabled to very quickly raise the temperature of the water within the tub to the desired point, as is obvious.

In order that the upper portion of the lounge may be of broad extent, sufficient to afford a convenient form of seat or lounge, I prefer to secure to the upper edge of the body portion and upon each side thereof the supporting-rims 21 and 22, the former being upon the rear side of the lounge and designed to accommodate the hinges 3, while the latter is secured to the front edge of the body and is designed to receive the weight of the forward edge 23 of the lid, and in order to afford convenient means for locking the lid in a closed position I provide upon the edge thereof the catches or hooks 24, each being designed to be received by a suitable recess 25, provided in the rim or flange 22, and designed to cooperate with said catches or hooks 24 is the locking device shown in Fig. 7 and consisting of the disk 26, eccentrically secured to the shaft 27, which latter is provided with the crank end 28, as clearly shown. Since the disk 26 is eccentrically mounted upon the shaft 27 and is provided with a recess of sufficient size in which to play freely to one side or the other, it is clear that the free edge of said disk may be thrown aside entirely out of engagement with the hook 24 or may be so disposed that it will engage said hook, and thereby lock the lid of the lounge in a closed position, as more clearly set forth in Fig. 5.

It will be understood that a suitable aperture is to be provided in the sides of the body portion 1 designed to receive the shaft 27, permitting said shaft to be easily rotated, and thereby actuate the disk and move it to the desired point. The crank portion 28 is so disposed that when the lid is in a locked position said crank will be directed inwardly, and thereby remain entirely out of sight. To insure that the upholstery and finish of the lounge will be fully protected, I provide that a suitable covering 29 and 30 will be so disposed as not to interfere with the operations of the bather or with the closing of the lid of the lounge when the tub is not in use.

I desire to call special attention to a certain feature of my invention whereby I am enabled to limit the height of my lounge to the normal point, and thereby avoid imparting an unduly high and unsightly appearance to the lounge, with its accompanying bath-tub. I am enabled to thus limit the height of my lounge, by providing the casing 31, which is secured to the inner side of the lid and is designed to fit within the upper portion of the bath-tub, thus making it possible to utilize said casing to house and hold in their assembled operative positions the necessary springs required to give proper support for the seat portion of the lounge. A depend-



ing frame or casing composed of a series of hangers 32, having hooked terminals 33 and bottom ribs 34, is shown in Fig. 4. This frame so constructed can be easily removed and replaced, carrying the springs with it, whereby if any part of the same should be broken or misplaced it could be easily repaired or restored without disturbance or injury to the other parts connected therewith. It is obvious that without employing the housing 31 it would be necessary to increase the height of the lounge, so as to accommodate said springs. It will be understood that the springs may be supported in various ways, though I prefer to employ the means illustrated in Fig. 4, which consists of a series of hangers 32, so shaped that they will extend downward in the housing 31, each of said hangers being provided with the hooked terminals 33, designed to hook into suitable recesses provided in the edges 23. It will be obvious that said hangers may carry any desired number of ribs 34, upon which any preferred number of springs 35 may be disposed.

The housing 31 may consist of any preferred material, as sheet metal, or may consist simply of a covering of oil-cloth or other preferred fabric adapted to impart finish and provide protection for the springs inclosed thereby.

The receptacle 8 should be provided with a suitable lid 36, properly held in place, as by the hinges 37, while the lid of the lounge may be held in an open position by the latch 38, pivoted to the lid 36 and provided with a hook designed to engage the lug or keeper 39, secured to the lid.

It will be observed that the exterior of my combined couch and bath-tub may be embellished in any preferred way, the object of the upholsterer being to so dispose the exterior covering that the line of union between the body and lid will be obscured as much as possible, and since for such reason it will not be desirable to provide a handle by which the lid may be raised, and since said lid will fit tightly down upon the body portion, thereby making it difficult for the lid to be opened, I provide means for slightly raising the free edge of the lid as soon as the hooks 24 are released by the disks 26, said means consisting of one of the devices illustrated in Figs. 8, 9, and 10.

In Fig. 8 I have shown the spring 40, which may be secured directly to the upper edge of the rim 22, preferably within a recess formed therein, so that said spring will rest flush with the surface thereof when the lid is closed. In the central part of the spring I provide the stem 41, designed to take into a suitable aperture provided in the contiguous part of the lid, and thereby sustain this part of the lid when the same is moved from place to place, inasmuch as the lid will be held against longitudinal movement, the stem 41 thereby reinforcing the hooks 24.

In Fig. 9 I have illustrated a different way

in which the spring 40 may be mounted, inasmuch as I have provided a recess 42, designed for the reception of said spring, said recess being formed in the under side of the finishing-strip 43, designed to be secured to the upper edge of the rim 22.

In Fig. 10 another form of spring (indicated by the numeral 44) is shown, which is seated in a suitable recess provided in the rim 22, the upper end of which is designed to bear against a disk attached to the stem 45, the office of said stem being the same as that of the stem 41. A suitable vent and pipe 46 therefor are provided in the foot end of the bath-tub, while the usual plug 47 is designed to close said vent. The pipe 46 extends outward parallel with the bottom of the tub and terminates near the end of the bath-tub or at a point where it will be out of sight, though readily accessible. The free end of the pipe 46 may be threaded, and thereby readily connected with any suitable form of delivery-pipe, or a simple flexible hose may be attached to said pipe, thereby enabling the water from the bath-tub to be delivered into the drain-pipe 49 or elsewhere, as desired.

It is clear that since the bath-tub may be located adjacent to a convenient sink the desired quantity of water may be introduced into the bath-tub, as by connecting the faucet with a section of hose, as indicated by dotted lines in Fig. 1. It will of course be obvious that in case it may be desirable to do so the tub may be permanently connected with the sewer or other drainage, or the contents of the tub may be withdrawn, as by siphoning the same with a section of flexible hose or otherwise.

It is clear that the various parts of my invention and the elements designed to cooperate therewith may be very cheaply and expeditiously manufactured from any preferred material and that the complete article will be found to be a very desirable and valuable adjunct to any home. Inasmuch as I am enabled to very rapidly raise the temperature of the water to the desired point by the means I have illustrated, it will be possible to avoid the expense of connecting the tub with the range or other source of heat in the usual expensive manner. If deemed desirable to permanently connect the tub with the sewer or other drain, the body portion 1 may be permanently secured in position, though in case the drainage is to be effected by the use of a flexible hose it may be desirable to move the lounge to different parts of the apartment, and it will therefore be desirable to provide casters or carrying-wheels 50.

It is clear that when the shield 29 is not in use it may be thrown within the tub 4 and the lid closed down in position, thus giving the article of furniture the appearance of being a lounge only, and since it is possible to make the various parts of my invention very cheaply or form them more elaborately it is obvious that an article of furniture may be



provided to meet the wants of every one, both rich and poor.

To provide that the tub proper may be very cheaply though reliably constructed, so as to afford a tub which will meet the requirements of every purpose and may be built by almost any one, whether skilled in the art or not, attention is called to Figs. 11, 12, 13, and 14.

In order that a suitable supporting-frame may be afforded for the interior parts comprising the tub portion proper, I provide the outer casing 51, which may be made of any suitable material and should comprise end sections 51, sides 52, and a suitable bottom, properly held together in any desired way, and within the interior of the casing thus or otherwise formed I mount my improved bath-tub, first securing in position a suitable number of supporting members or hangers 53, which are each provided with the outwardly-extending terminals 54, designed to rest in suitable recesses provided in the edge of the casing, as shown in Fig. 12.

To properly sustain and reinforce the sides of the tub, I first place in position after the hangers have been adjusted the outer section, (indicated by the numeral 55,) properly formed of wire-cloth, it being understood that said reinforcement of wire may extend upon both sides and entirely across the bottom or may extend only partly across the bottom, as shown in Figs. 12 and 14, the inner edge 56 being bent inward sufficiently to rest upon the transverse section 57 of the hangers.

In order to provide a reliable support for my improved tub, I place upon the sections 57 a series of boards 58, or a single board of proper width may be employed in lieu thereof. After the side sections of wire have thus been disposed in their operative positions and the floor secured in place I locate thereon a covering of heavy paper or the like 59 in order to form a non-conductor for the heat of the water within the tub. After the several parts have then been disposed in their operative positions a covering 60, of zinc, tin, or the like, is placed over the layer of paper just referred to, it being understood that the upper edges 61, 62, and 63, respectively, of the wire, paper, and zinc coverings are bent outward, the edges 61 and 62 being designed to be received within a recess provided in the inner edge of the casing, while the edge of the zinc covering is of sufficient extent to cover said recess and the remaining portion of the casing, and thereby completely inclose the edges of the wire and paper, when all of said parts may be effectively secured in place by strips of molding 64, properly secured in place upon the edge of the casing, thereby completely hiding from view the edges 61 and 62.

It is desirable that the portion of the tub between the zinc and the casing should be strong, compact, and light and kept from adhering to the inner walls of the casing, as its removal might be necessary. For this reason I make the outer portion of wire netting or

cloth, which is firm but light, and being foraminous only a very small portion of the netting will come in contact with the inner walls of the casing. The netting also forms, as it were, an air-chamber, and thereby largely prevents moisture and consequent corroding of the parts.

In Fig. 11 I have illustrated how the water in the tub may be readily raised to the desired temperature, the means employed to effect such result being very simple, though efficient in character. The tub proper, 65, may be constructed in any preferred way or may consist of the usual commercial article and after being adjusted in the desired position is inclosed or housed by a suitable casing, as shown, having the series of compartments 66 at one end, while at the opposite end and below the usual inclined portion I locate the heating-reservoir 67, which in this instance consists of a metallic air-tight box properly supported by the leg-sections 68 and in communication with the bath-tub by means of the pipes 69 and 70, the latter being arranged above the former in order to insure a circulation of the water, as the colder water will of course pass to the heating-reservoir through the lower pipe, while the warmer water will pass back into the tub through the upper pipe, as will be readily understood. In order that the requisite supply of heat may be applied to the reservoir 67, I locate under the same the burner 71, as indicated by the dotted lines in Fig. 11, which is properly connected to the end of the supply-pipe 72, leading to the oil-tank 73, located at any convenient point, as upon the end or seat portion 74 of the casing. By the arrangement just set forth it will be observed that I have provided reliable means for heating the water in the tub to the desired degree, when, as will be readily understood, the supply of oil may be cut off by means of the valve 75, located in the supply-pipe 72. It will of course be understood that the casing, with its accompanying oil-tank, as shown in Fig. 11, may be neatly covered or upholstered and supplied with the top portion 2, as shown in Figs. 1, 2, and 3, in order to provide a combined lounge and bath-tub, in which case the oil-tank 73 should be located beneath the seat portion 74, and the supply-pipe 72 may be wholly hidden from view within the casing inclosing the bath-tub, it being understood that a suitable lid may be provided, by means of which said parts may be rendered readily accessible.

While I have described the preferred construction and combination of elements necessary to constitute a combined couch and bath-tub, it will be understood that I desire to comprehend in this application the substantial equivalents of such construction and combination as will fairly fall within the scope and purview of my invention, and I do not therefore wish to be confined strictly to the exact showing I have made.



It will be understood that I have provided a very desirable article which will be found to be a very useful adjunct to the home, both from the standpoint of comfort and from hygienic considerations. By means of the drain-pipe 46 the contents of the tub may be entirely withdrawn, thereby obviating any dampness which would otherwise result from imperfect drainage of the tub. If the heating attachment is not employed, the space otherwise occupied thereby and by the reservoir and oil-tank may be utilized as a convenient receptacle for clothing or the like which it may be desired to dispose of for future use.

15 Believing that the advantages and construction of my improved combined couch and bath-tub have been made fully apparent from the foregoing specification, considered in connection with the accompanying drawings, I will dispense with further reference to the details thereof.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

25 1. As an improvement in bath-tubs, the combination with a suitable outer casing of a series of hangers or supporting-brackets mounted in said casing; an outer support of wire; an inner support of paper or the like 30 and a covering of zinc or its equivalent, all combined in the manner specified and for the purpose set forth.

2. The herein-described bath-tub compris-

ing an outer casing having a recess in its inner edge; a series of hangers mounted in said recess; an outer incasement of wire-cloth; 35 an inner reinforcement of paper or the like; a flooring laid upon said hangers and under said paper and wire, and a covering of sheet metal resting on said outer casing and means 40 to secure the free edges of said wire, paper and metal covering in the manner specified and for the purpose set forth.

3. In an article of furniture of the character specified, a bath-tub provided with an elliptical pipe integrally formed in the bottom thereof whereby the smooth contour of the bottom of the tub is preserved, as set forth. 45

4. In an article of furniture of the character specified, the combination with the tub, 50 of a heating-reservoir; an inlet-pipe 12 leading from said tub to the upper portion of said reservoir and an elliptical tube formed in the bottom of the tub; a pipe 13 connecting said elliptical tube with said reservoir whereby a 55 circulation may be established through said elliptical tube and reservoir and thence back into the tub, all combined substantially as specified and for the purpose set forth.

In testimony whereof I affix my signature 60 in presence of two witnesses.

IRVING E. CARMAN.

Witnesses:

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TADOE S. STODDARD.