

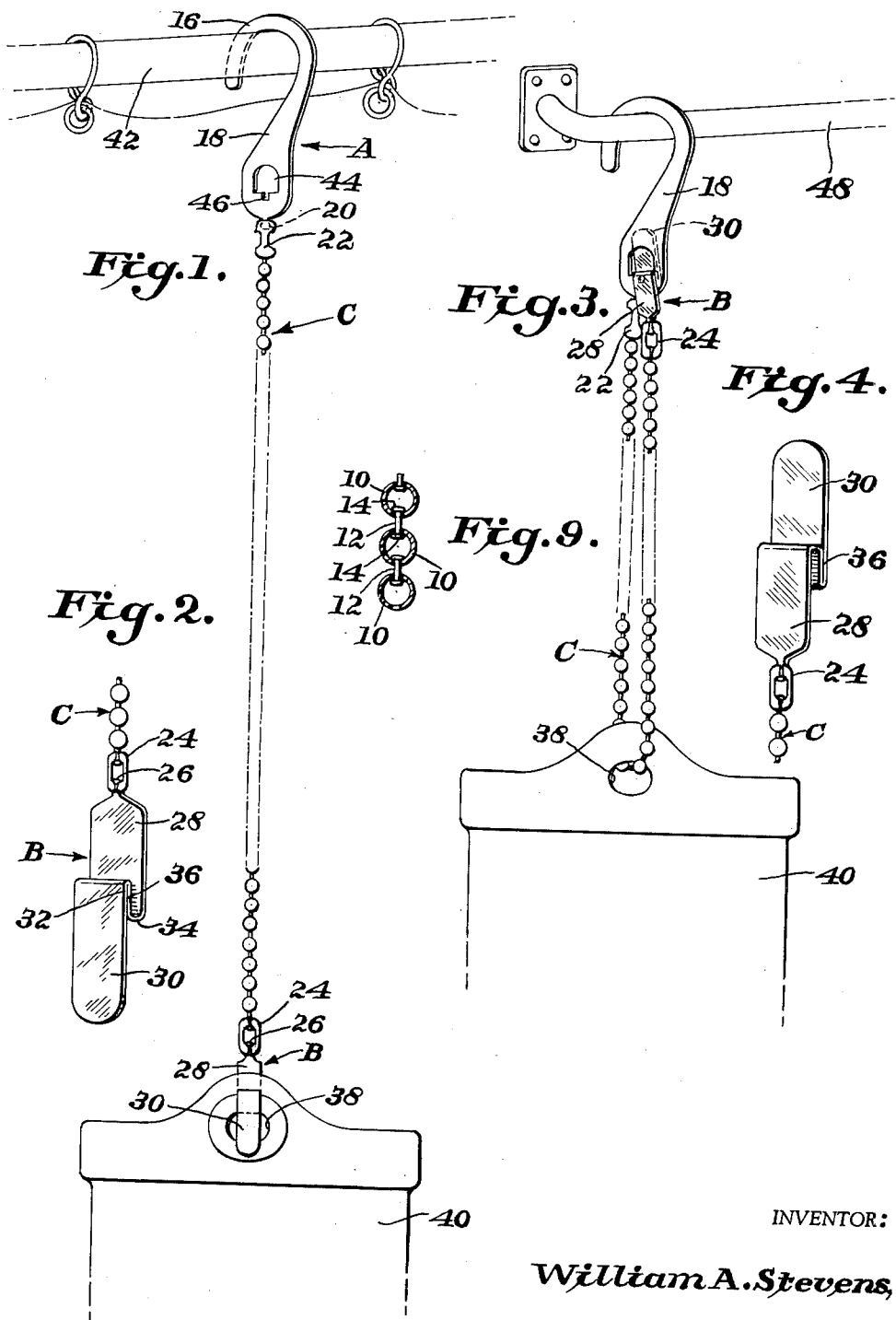
July 3, 1962

W. A. STEVENS
ADJUSTABLE SUPPORT

3,042,355

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2 Sheets-Sheet 1



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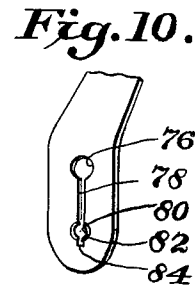
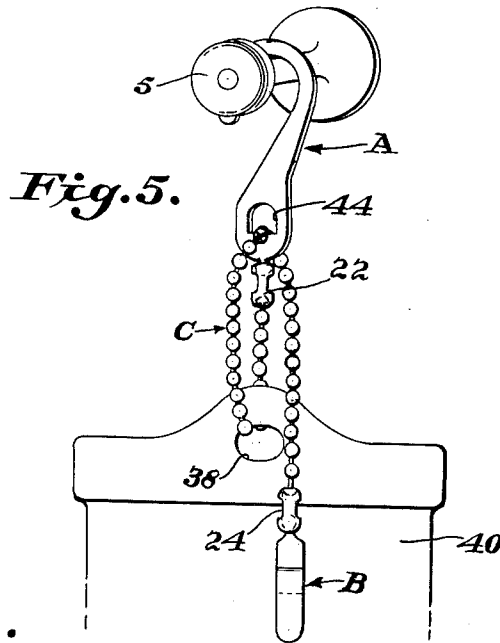


Fig. 6.

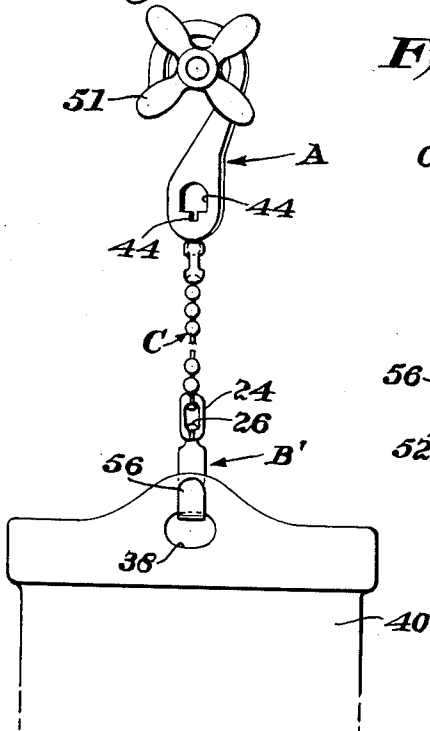


Fig. 7.

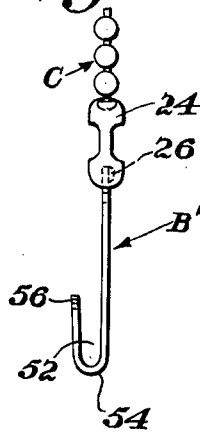
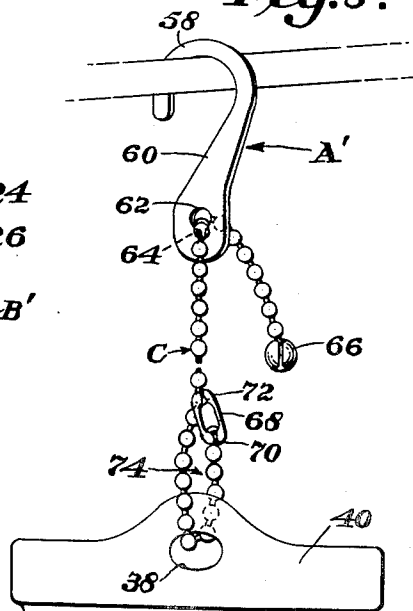


Fig. 8.



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ADJUSTABLE SUPPORT

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1 Claim. (Cl. 248-328)

The principal object of the invention is to provide a simple portable assembly designed to support a fountain syringe or similar device from whatever fixture or means of support is available in the room or at the site where the device is required to be used. Similarly, it is an object of the invention to provide such a portable assembly which is adjustable, in order to support the fountain syringe or the like, incident to its use, at any desired vertical position with relation to the suspension point or to the patient or user. While the use with fountain syringes is emphasized herein, it will be understood that the device may be used to adjustably support other devices which may operate on the gravity flow principle, such as blood plasma or intravenous feeding devices and the like.

Another object of the invention is to provide such a portable assembly of simple construction, and which may be readily stored without occupying any substantial space in a valise, hand bag or the like. Incident to this objective, it is a purpose of the invention to provide such a portable assembly which is so simple in construction that it may be readily packaged in an envelope or on a card or the like, for convenient counter marketing.

Other objects and advantages of the invention will be apparent as the description progresses. In the drawings:

FIGURE 1 is a view showing the manner in which the assembly may be employed to suspend a fountain syringe or the like, from a bathroom shower curtain rod.

FIGURE 2 is an enlarged view of the lower suspension member of the embodiment of FIGURE 1.

FIGURE 3 is a view of the embodiment of FIGURE 1, showing the manner of adjusting the assembly so that the fountain syringe may be supported a shorter distance from the room fixture which, in this instance, is a towel rack.

FIGURE 4 is another view of the lower suspension member, generally showing its position when it is hooked to the upper suspension member, as in FIGURE 3.

FIGURE 5 is a view, showing a further adjusted arrangement of the assembly, in order to support the fountain syringe or the like at a relatively shorter distance below another type of room fixture, in this instance, an ordinary door knob.

FIGURE 6 is a view of a modified form of the invention, where a different design of lower suspension member is employed. In this view, the assembly is shown suspended from a faucet fixture.

FIGURE 7 is a side elevational view of the lower suspension member of the embodiment of FIGURE 6.

FIGURE 8 is a view showing how one of the suspension members may be used in association with a simple ball chain.

FIGURE 9 is an enlarged sectional view of several of the links of the conventional ball chain, showing the manner in which the hollow bar links are flexibly connected to one another.

FIGURE 10 is a partial side elevational view of the lower neck portion of another form of hook arrangement, showing a further modified form of the chain opening therein.

Referring to the drawings, particularly FIGURE 1, the assembly comprises an upper suspension member, generally designated as A, a lower suspension member, generally designated as B, and an elongated flexible ball chain, generally designated as C. The ball chain is of well known construction, as shown in FIGURE 9, com-

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prising the hollow metallic spheres 10, flexibly connected by pins 12, the pins having enlarged heads 14 within the spheres, and passing loosely through openings in the walls of the spheres, so that the adjacent spheres or balls of the chain, may have limited movement from and toward one another.

The upper suspension member A has a relatively large hook portion 16 and a flat and enlarged neck portion 18, and at the lower end of the neck there is a depending bead 10 20, to which is permanently but flexibly connected one end of a conventional ball chain clasp 22. The end ball of the chain, is connected into the lower end of the clasp 22, in a manner well known in the art.

At the lower end of the chain, there is a similar conventional ball chain clasp 24 and the lower end of this clasp is swivelly connected to a head or bead 26 which extends upwardly from the inner end of the lower suspension member B.

The lower suspension member B comprises a flat upper 20 part 28 and a flat lower part or footpiece 30, the latter being bent back upon itself as at 32, and being again reversely bent as at 34 where it joins with the upper part 28, providing an open hook slot 36 in which the upper edge of the eyelet 38 of a fountain syringe 40 may be disposed, as shown in the lower part of FIGURE 1, to suspend the fountain syringe from any supporting fixture, such as the shower curtain rod 42, over which the hook portion 16 is engaged.

In FIGURE 1, the syringe is shown supported using the full length of the chain C. Referring to the upper part of FIGURE 1, the neck portion 18 of the upper suspension member is provided with an opening 44. The lower side of this opening has a relatively narrow slot 46, which is of size to receive the pins 12 which connect the spheres of the ball chain. The opening 44 is large enough to freely pass the entire chain, as well as the entire upper suspension member B.

In the event it is desired to shorten the chain, as when suspending the syringe from a towel rack 48 as shown in FIGURE 3, the entire lower suspension member B may be passed through the eyelet 38, so that the hook portion 36 may be positioned or hooked over the lower edge of the opening 44, with the foot portion 30 of the suspension member extending upwardly on the opposite side of the neck portion 18 as shown in dotted lines in FIGURE 3, in order to lock the suspension member in its hooked position in the opening 44. This arrangement thus provides for the suspension of the fountain syringe substantially at a half chain's length, below the permanent room fixture 44, an important feature of the assembly being the provision whereby the footpiece 30 of the suspension member serves to securely hold the end of the chain locked in the opening 44.

In the event it is desired to further shorten the distance at which the syringe is suspended, the lower suspension member may be passed entirely through the opening 44, taking up the chain to the desired extent as shown in FIGURE 5, at which time any one of the pins between the balls of the chain may be pulled down into the slot 46 (FIGURE 1) which depends from the opening 44, in order to lock the chain to the upper suspension member at that point, with the lower end of the chain and the lower suspension member hanging free, as shown in FIGURE 5. This arrangement may be found convenient or desirable, for instance, when the syringe is suspended from a relatively low fixture, such as the door knob 50.

FIGURE 6 shows a modification of the assembly of FIGURE 5 suspended from a faucet handle 51. In this modification, the lower suspension member B' is of simple hook shape, as shown in FIGURE 7, leaving a space 52

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where the lower end of the member is bent upwardly as at 54, in order to support the syringe in the manner shown in FIGURE 6, with the simple hooked end 56 extending through the eyelet 38 of the syringe. With this design, the syringe may also be suspended at a half chain's length, as in FIGURE 3, by passing the lower suspension member B' entirely through the eyelet 38, and then hooking the end 56 of the member into the opening 44 in the upper suspension member A, in the same manner as is indicated in FIGURE 3. However, this embodiment does not have the advantage afforded by the foot-piece 30 of FIGURES 1 through 4, which serves to lock the hook in position, as shown in FIGURE 3. The embodiment of FIGURE 6 may also be adjusted to further shorten the chain as was described in connection with FIGURE 5, by passing the lower suspension member B' entirely through the opening 44, and locking any selected portion of the chain in the slot 46.

FIGURE 8 illustrates a manner in which a simple ball chain may be used to support a fountain syringe or the like, from an upper suspension member A' of slightly modified design. This modified member has an upper hook portion 58, a lower neck portion 60 with a circular opening 62 and having a depending chain locking slot 64, generally as described in connection with the other embodiments, but the opening 62 is only slightly greater than the balls of the chain, no lower hook suspension member being employed in this embodiment. At one end of the chain, there is an enlarged retaining sphere 66, and at the opposite end of the chain there is an enlarged ball chain clamp 68. One end 70 of the clamp 68 receives the end ball of the chain, and the other end 72 of this clamp may lock over any selected ball of the chain after the chain has been passed through the center opening of the clamp 68, with a loop 74 thus formed of any desired size. As previously stated, the opening 62 in the upper suspension member A' is large enough to freely pass the balls of the chain, in order to adjust the distance at which the syringe is suspended from the room fixture.

FIGURE 10 shows a modified arrangement for adjustably securing a chain which has the enlarged sphere 66 at its end, as described in connection with FIGURE 8. In this embodiment, there is an upper opening 76 in the neck portion of the upper suspension member which is large enough to freely pass the balls of the chain, but which is not large enough to pass the enlarged ball 66 on the end of the chain, as shown in FIGURE 8. In assembly, the end of the chain would be passed through the opening 76, before the enlarged ball 66 is applied to the end of the chain, and after it is applied, it will not be possible to withdraw that end of the chain through the opening 76.

Depending from the opening 76, there is a slot 78 which leads to a smaller opening 80, the latter opening being sufficiently restricted in size so that the balls of the chain will not pass through this opening. With this construction, the chain may be adjusted by moving its balls through the opening 76, and when adjusted to the desired length, the pin extending between the balls of the chain may be dropped downwardly through the slot 78, positioning the ball of the chain against the opening 80. In this connection, the metal of the neck portion may be indented or chamfered somewhat as at 82 around the opening 80, to provide a socket for the

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ball of the chain when it is in its adjusted position. When it is in this position, the strain will be taken off of the connecting pin or dumbbell portion of the chain. The slot 78 is sufficiently small, so that mechanical manipulation of the chain will usually be required to move it upwardly into the opening 76. Even if it should accidentally move upwardly into this opening, it will be understood, as previously mentioned, that the larger sphere 66 will retain the chain against complete dislodgment. If desired, a further slot 84 may be provided depending from the opening 80, of size capable of receiving the pin which connects the balls of the chain.

The above arrangement has the advantage of providing for the secure adjustment of the bead chain at any position, with the bead or ball of the chain positioned in the indentation 82, supported in such manner as to take the strain off of the connecting pin portions of the chain. The chain is securely held in its adjustable position, until it is moved by hand into the upper opening, where it may be adjusted. Complete withdrawal of the chain is precluded.

The adjustable supports which I have provided for the particular use described are simple and economical for manufacture. They may be entirely detached from the article to be supported and placed in an envelope, and carried conveniently and unobtrusively in a handbag. The devices described may be used to support other objects, but they have particular utility where it may be necessary to suspend objects such as a fountain syringe, blood plasma or intravenous feeding containers and the like, at a desired height from whatever wall supporting fixture that is available.

I claim:

A flexible and adjustable support for a syringe or the like, comprising: an upper suspension member including an integrally extending arcuate hook for engagement with a horizontal rod, and merging into a downwardly extending neck portion having an aperture and a slot therethrough, in a plane generally parallel to the plane of said arcuate hook; a first depending bead joined to the bottom of said neck portion; a ball-chain joined to said depending bead; a second depending bead joined to the opposite end of said ball-chain; and a second hook joined to said second depending bead, said second hook being engageable with said aperture and including an offset foot piece integral therewith, said foot piece having a sufficient length to engage a face of said neck portion of said upper suspension member when said foot piece is passed through said aperture of said upper suspension member, and said ball-chain being engageable with said slot, whereby an article carried thereby can be selectively elevated to a desired vertical position.

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