

Jan. 18, 1949.

I. SEIDEN

2,459,546

BABY BOTTLE HOLDER

Filed Feb. 3, 1947

2 Sheets-Sheet 1

Fig. 1.

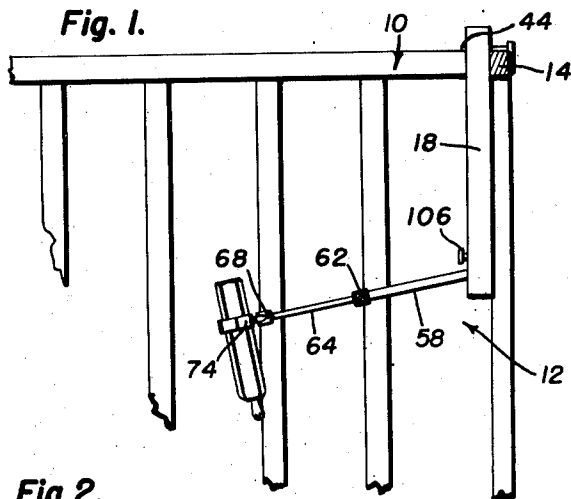


Fig. 2.

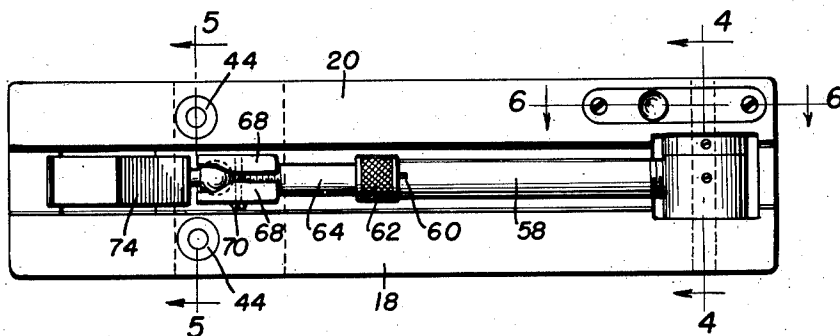
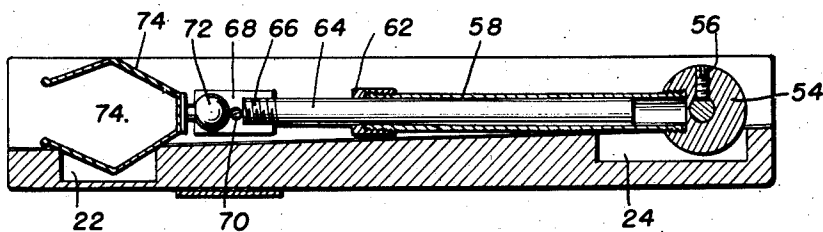


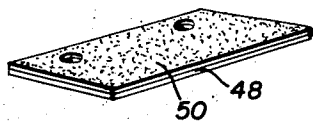
Fig. 3.



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Fig. 7.



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Fig. 4.

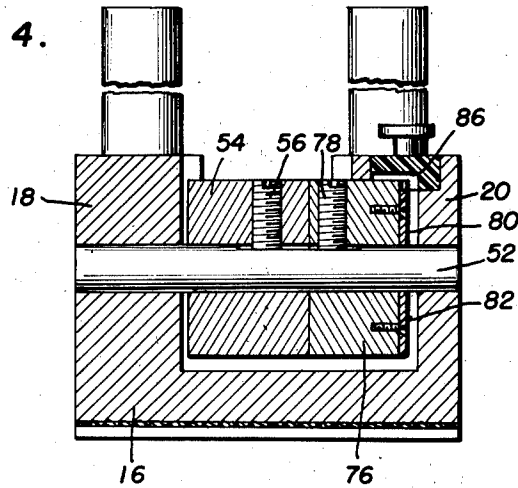


Fig. 5.

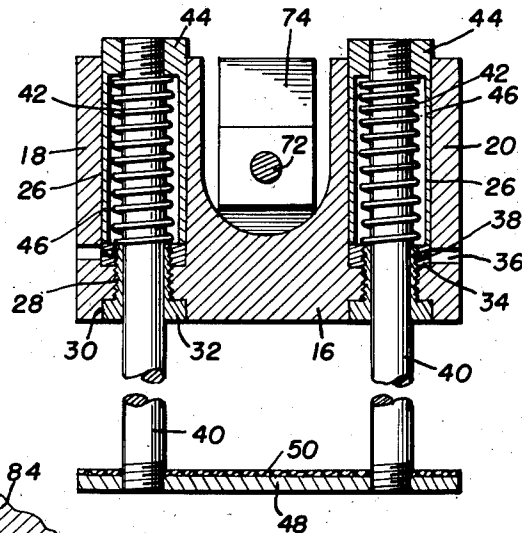
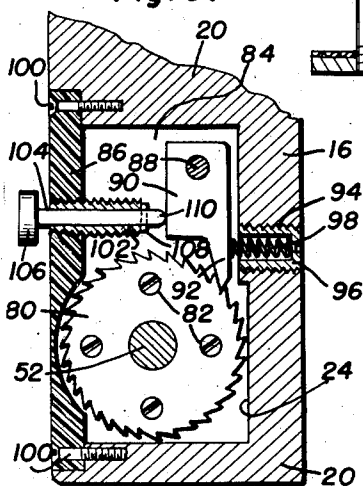


Fig. 6.



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BABY BOTTLE HOLDER

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7 Claims. (Cl. 248—103)

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This invention resides in novel and useful improvements in a baby bottle holder and more specifically pertains to an apparatus for holding an article such as a baby bottle at a predetermined angle and at any predetermined position.

The principal objects of this invention reside in providing an article support which may be quickly and easily attached or removed from various supporting objects such as baby cribs or the like; which is provided with resilient means which may securely and yieldingly hold various sizes and shapes of articles; which is widely adjustable as to the angle and position at which the article is supported; which may readily be extended to vary the distance of the article from its point of support; which is capable of collapse into very small space; which is provided with an extremely efficient position adjusting and latching means together with a novel and easily operable releasing means therefor; and which is withal highly efficient for its intended use, of simple and inexpensive construction, and dependable in its use.

These, together with various ancillary objects of the invention which will later become apparent as the following description proceeds, are realized by this invention, one embodiment of which has been illustrated, by way of example only, in the accompanying drawings, wherein:

Figure 1 is an elevational view of a portion of a baby crib or bed showing the manner of attaching the device thereto;

Figure 2 is a top plan view of the device;

Figure 3 is a central vertical longitudinal sectional view through the device of Figure 2;

Figure 4 is a vertical transverse sectional view taken substantially upon the section line 4—4 of Figure 2;

Figure 5 is a transverse vertical sectional view taken substantially upon the section line 5—5 of Figure 2;

Figure 6 is a vertical longitudinal sectional view taken substantially upon the section line 6—6 of Figure 2; and

Figure 7 is a perspective view of a portion of the clamping means for the support.

Attention is now directed more specifically to the accompanying drawings, wherein like numerals indicate similar parts throughout the various views and wherein 10 designates generally a portion of an article to which this holding means is adapted to be attached and which in this instance is shown as a baby's crib or the like. The device itself is indicated gen-

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erally at 12 and in Figure 1 is shown attached to a side rail 14 forming a part of the crib, although it will be understood that the device may be secured in various manners to diverse types of supporting surfaces.

As shown in Figures 2, 3, 4 and 5, the article holder comprises a generally elongated or rectangular shape base plate 16 having upstanding marginal walls 18 and 20 forming therewith a channel shaped member. Adjacent each end thereof, the channel shaped base has depressions 22 and 24 respectively, see Fig. 3, in its channeled surface for a purpose to be later set forth.

At one end thereof, which we may call the upper end for convenience, the channel shaped base is provided with a clamping means indicated best in Figure 5, by means of which the device may be readily attached to a supporting surface as shown in Figure 1.

Each of the side walls 18 and 20 of the channel shaped base is provided with a bore 26 extending therethrough which bore has a reduced diameter portion 28 adjacent the lower surface of the base plate 16 which reduced portion has a countersunk bore 30 for the reception of a headed and screw threaded bushing 32. This bushing is received in the lower and reduced portion of the bore 26 and is engaged and retained by a nut 34 seated in the bore 26 and engageable with the threaded portion of the bushing. Suitable apertures 36 are positioned to give access to the bore 26 and to the nut 34, in order to adjust a set screw 38 in the nut for retaining the latter upon the threaded bushing 32. A pair of rods 40 are slidably received in axial bores of the bushings 32, and are guided and slidable therein, said rods extending beyond both ends of the bore 26, and are threaded at their opposite extremities. A coiled compression spring 42 is seated in each bore 26 and surrounds the rod 40 extending therethrough, the spring being compressed between the inner end of the bushing 32 and the nut 34 secured thereon, and a closure cap and plunger button 44 screw threadedly engaging the forward or upper extremity of the rod 40 and having a sleeve 46 slidably engaging the walls of the bore 26 and adapted to surround and enclose the spring 42.

As shown clearly in Figure 5, the rods 40 and their push button caps 44 are yieldingly urged upwardly in the bore 26 by the spring 42 in a direction which is adapted and designed to engage a clamping bar 48 attached to the other end of the rod with the supporting surface. As will readily be seen, the rods 40 are screw thread-

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edly engaged with the clamping bar 48, whose construction is clearly shown in Figure 7, and which is further provided with a cushioning surface 50 for preventing marring of the supporting surface by engagement of the clamping bar.

As so far described, it will be seen that the tube caps 44 are depressed against the action of the spring 42, thereby causing the clamping bar 48 to move away from the lower surface of the channel shaped base 16, whereby these two latter members may be caused to embrace the supporting surface as shown in Figure 1.

When the push buttons 44 are released, the springs 42 urge the rods 40 in a direction to cause the clamp 48 and its cushioning pad 50 to engage the supporting surface and clamp the members 16 and 48 thereon.

Attention is next directed to Figures 2, 3 and 4 for an understanding of the adjustable arm structure of the supporting device. Rotatively journaled in the channel shaped base 16 between the side walls 18 and 20, is an axle or pivot pin 52 which is mounted above the above mentioned recess 24. Rigidly secured or keyed upon the axle 52 is a preferably cylindrical drum 54 fastened thereon as by a set screw 56. Screw threadedly engaged in the drum 54 is a tube 58 whose outer end is longitudinally split as at 60 to provide radial resiliency thereto and which receives an internally threaded gland 62 adapted to compress the split end of the tube 58 by longitudinal movement thereon for a purpose to be now set forth.

Telescopingly received and longitudinally slidable in the tube 58 is a rod 64 whose outer end is screw threaded as at 66 for threaded engagement by the end of a split clamp consisting of a pair of parallel members 68 adjustably clamped together by a transversely extending adjusting screw 70. The outer ends of the members 68 have semispherical recesses adapted to constitute a socket or seat for a ball 72 to which is rigidly secured as by welding or other suitable means a pair of resilient fingers 74 constituting gripping or retaining means for securing a bottle or the like therein as shown in Figure 1.

As shown in Figure 3, the parts are so proportioned and arranged that when the rod 64 is telescoped within the tube 58 one of the resilient fingers 74 is adapted to be received in the recess 22 whereby the telescoping rod assemblies 64 and 58 may be received in the longitudinally extending channels between the side walls 18 and 20 in a compact manner.

As will be readily understood, the telescoping members 58 and 64 may be rotated through 180° about the axle pin 52 as desired; while the resilient fingers may be swiveled throughout 360° by means of the ball and socket engagement of the ball 72 in the socket seat of the member 68. At the same time, the rod 64 may be longitudinally adjusted of the tube 58 and then retained in adjusted position by means of the frictional engagement of the split end of the tube and the securing gland 62.

As so far described, it will be seen that the finger 74 may be positioned through a wide variety of positions for holding the article in any desired manner as for instance a baby bottle in a baby crib. In order to maintain the holder in the desired position, a latching means is employed, to be now described.

Referring again to Figure 4, it will be seen that a collar 76 is secured upon the axle 52 closely

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adjacent the drum member 54 as by a set screw 78. To the outer surface of the collar 76 is secured a ratchet member 80 as by fastening screws 82. As shown in Figure 4, the ratchet 80 and the collar 76 extended to a chambered portion 84 in the wall 20 and the top of this wall is cut away and the chamber closed by a removable cover plate 86 preferably of a suitable plastic. Oscillatably mounted in the chamber 84 upon a pivot pin 88 is a pawl 90 having a detent 92 engageable with the teeth of the ratchet 80. Extending through the base 16 into the chamber 84 is an aperture 94 receiving a screw threaded axially bored plug 96, containing a spring 98 seated therein and bearing against the detent 92 to urge the same into engagement with the ratchet wheel 80.

Extending through the cover plate 86, which may be detachably engaged upon the wall 20 by means of fastening screws 100, is a screw threaded bushing 102 slidably receiving a pin 104 therethrough. The pin 104 extends exteriorly of the cover plate 86 and is provided with a push button head 106 for convenient engagement by the operator of the device, while its other extremity is provided with a transversely extending pin 108 preventing complete withdrawal of the pin 104 from the bushing 102, and having an extremity 110 adapted to engage the pawl 90 upon the opposite side from the spring 98.

From an inspection of Figures 4 and 6, it will be readily seen that the spring engaged detent 92 permits clockwise but prevents counter clockwise movement of the axle 52 and the arms 58 and 64 secured thereto. However, by means of the push button 106, the rod 104 and its engagement with the pawl 90, the latter may be caused to disengage the ratchet whereby the arms of the supporting holder may be moved in any desired position.

It should be particularly noted that the caps 44 for operating the clamping bar 40 are conveniently located at the upper end of the device while the push button 106 for operating the latching means is conveniently mounted at the lower end thereof. Further, the base 16 of the attachment constitutes a flat plain surface which if desired may be covered by a cushioning member to prevent marring or scratching of the supporting surface by the attachment. Further, the upper bottom surface of the base plate constitutes one jaw of the clamping device for conveniently and quickly attaching the implement to a baby's crib or other supporting surface.

Owing to the swiveling engagement of the resilient finger member upon the supporting rod 64 of the extensible arm, the article supported by the device may be rotated through 360° about the longitudinal axis of the arm; while the arm itself may be rotated through 180° about the transverse axle 52 of the device. Finally, the provision for extensibility of the supporting arm permits complete adaptability of the device to various uses.

Since numerous embodiments of this inventive concept will be readily understood by those skilled in the art in view of the foregoing explanation and the annexed drawings, it is not desired to limit the invention to the exact construction shown and described, but all suitable modifications and equivalents may be resorted to falling within the scope of the appended claims.

What is claimed is as follows:

1. An article support comprising a channel shaped base, a telescoping arm, a pivot for se-

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curing said arm to said base, flexible fingers swiveled at one end of said arm and means for locking said arm in predetermined pivoted positions upon said base, said last named means including an axle rotatably journaled in said channel shaped base, a drum rigidly secured to said axle, said arm detachably connected to said drum.

2. An article support comprising a channel shaped base, a telescoping arm, a pivot for securing said arm to said base, flexible fingers swiveled at one end of said arm and means for locking said arm in predetermined pivoted positions upon said base, said last named means including an axle rotatably journaled in said channel shaped base, a drum rigidly secured to said axle, said arm detachably connected to said drum, a collar secured to said axle, a ratchet carried by said collar and a pawl carried by said base and engaging said ratchet to fasten said axle and arm in predetermined position.

3. An article support comprising a base, a telescoping arm, a pivot for securing said arm to said base, fingers swiveled at one end of said arm and means for locking said arm in predetermined pivoted positions upon said base, said last named means including an axle rotatably journaled on said base, a drum rigidly secured to said axle, said arm detachably connected to said drum, a collar secured to said axle, a ratchet carried by said collar and a pawl carried by said base and engaging said ratchet to fasten said axle and arm in predetermined position, a spring urging said pawl into engagement with said ratchet and a push button engaging said pawl for disengaging said pawl from said ratchet.

4. An article support comprising a channel shaped base, a telescoping arm, a pivot for securing said arm to said means for locking said arm in predetermined pivoted positions upon said base, said last named means including an axle rotatably journaled in said channel shaped base, a drum rigidly secured to said axle, said arm detachably connected to said drum, a collar secured to said axle, a ratchet carried by said collar and a pawl carried by said base and engaging said ratchet to fasten said axle and arm in predetermined positions, a spring urging said pawl into engagement with said ratchet and a push button engaging said pawl for disengaging said pawl from said ratchet, said push button being carried by a detachable cover plate overlying said collar, ratchet and pawl.

5. An article support comprising a channel shaped base, a telescoping arm, a pivot for securing said arm to said base, flexible fingers

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swiveled at one end of said arm and means for locking said arm in predetermined pivoted positions upon said base and a clamp for releasably attaching said support to a supporting surface, said clamp including a bar, slidable means for securing said bar to said base, resilient means biasing said bar towards said base, and releasing means for urging said bar from said base.

6. An article support comprising a channel shaped base, a telescoping arm, a pivot for securing said arm to said base, flexible fingers swiveled at one end of said arm and means for locking said arm in predetermined pivoted positions upon said base and a clamp for releasably attaching said support to a supporting surface, said clamp including a bar, slidable means for securing said bar to said base, resilient means biasing said bar towards said base, and releasing means for urging said bar from said base, said slidable means including a pair of rods secured to said bar, guides in said base for receiving said rods, said guides comprising bores extending through said base on opposite sides of the channel therein, bushings in said bores, said releasable means consisting of caps on said rods slidably guided in said bores.

7. An article support comprising a base, a telescoping arm, a pivot for securing said arm to said base, fingers swiveled at one end of said arm and means for locking said arm in predetermined pivoted positions upon said base and a clamp for releasably attaching said support to a supporting surface, said clamp including a bar, slidable means for securing said bar to said base, resilient means biasing said bar towards said base, and releasing means for urging said bar from said base, said slidable means including a pair of rods secured to said bar, guides in said base for receiving said rods, said guides comprising bores extending through said base, bushings in said bores, said releasable means consisting of caps on said rods slidably guided in said bores, said resilient means including springs surrounding said rods and received in said bores, said springs being seated in said caps and abutting said bushings.

IRVING SEIDEN.

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