May 23, 1933. K. H. BAKER 1,910,739

EXTENSION DEVICE

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Fig. 1.

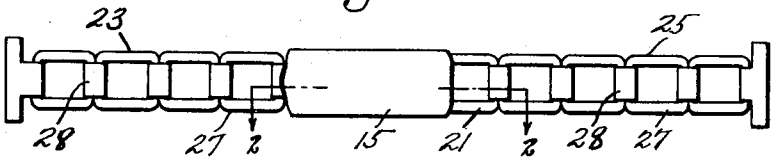


Fig. 2.

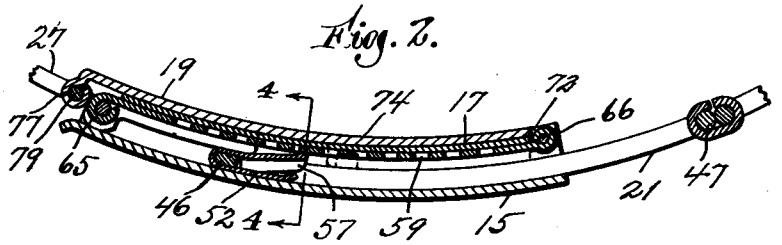


Fig. 3.

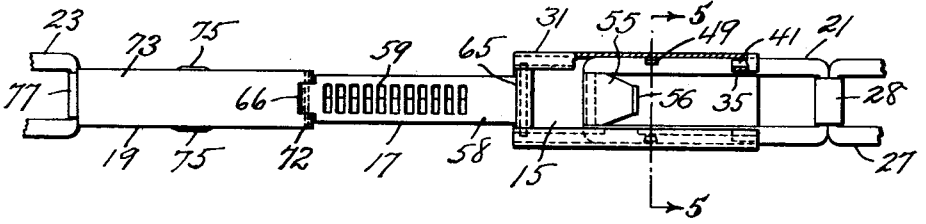


Fig. 4.

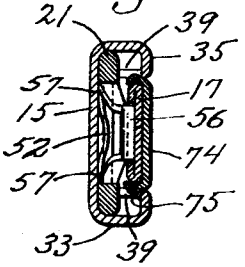
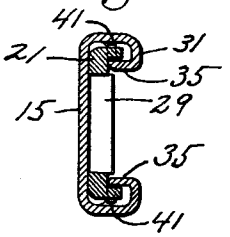


Fig. 5.



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EXTENSION DEVICE

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Fig. 6.

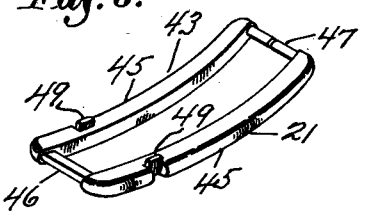


Fig. 7.

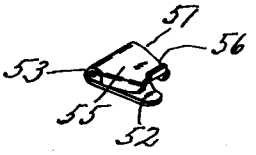


Fig. 8.

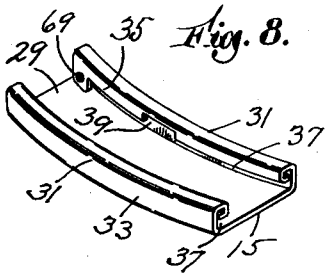


Fig. 9.

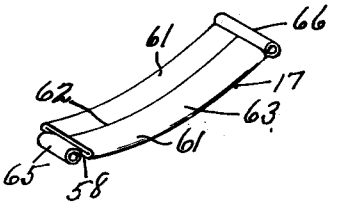
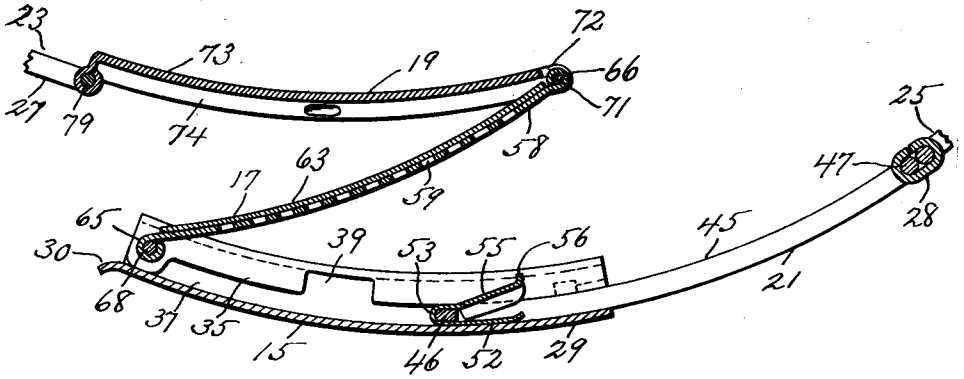


Fig. 10.



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Patented May 23, 1933 1,910,739

UNITED STATES PATENT OFFICE

KENNETH H. BAKER, OF NORTH ATTLEBORO, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO HAROLD E. SWEET, DOING BUSINESS UNDER THE NAME AND STYLE OF R. F. SIMMONS COMPANY, OF ATTLEBORO, MASSACHUSETTS

EXTENSION DEVICE

Application filed April 6, 1932. Serial No. 603,546.

My invention relates to extension devices of the foldable section type incorporated in wrist-watch bands, bracelets, and the like.

The essential objects of my invention are to supplement the extension afforded by the foldable character of the device by an auxiliary extension member of a slidable character; to adjustably control the extent of movement of the slidable member; to enable the adjustment to be effected with facility; to insure an effective interengagement of parts in adjusted position whereby the interlocking elements will not readily become disengaged; to prevent excessive depression of the rack entrant member; to afford an effective stop against excessive expansion of the device; and to attain these ends in a strong and inexpensive structure.

With these and other objects in view, the invention consists in certain novel features of construction and combinations embodied in the appended claims.

In the accompanying drawings which form a part of this specification,

Figure 1 is a front elevation of my extension device embodied in a wrist watch bracelet,

Figure 2, an enlarged longitudinal section on line 2—2 of Figure 1,

Figure 3, a fragmentary rear elevation of the bracelet with the sections unfolded,

Figures 4 and 5, sections taken on lines 4—4 of Figure 2 and 5—5 of Figure 3 respectively,

Figures 6, 7, 8 and 9, detail views of the slide link, the locking catch, the housing, and the rack plate respectively, and

Figure 10, a section of the extension device partially unfolded taken on a line corresponding with line 2—2 of Figure 1.

Like reference characters indicate like parts throughout the views.

As herein shown my extendible fastening device includes a keeper or housing section 15, for the reception of the foldable intermediate and back sections 17 and 19 respectively, pivotally connected therewith, and an extension link 21 slidably mounted therein. The strap sections 23 and 25 as herein shown, composed of rectangular links 27 and tubular connectors 28, are pivotally attached to the outer ends of the foldable section 19 and the slide link 21 respectively.

The housing section 15, preferably longitudinally curved, includes a front wall 29 having a rail projection 30 upon one end, and rearwardly directed longitudinally disposed lateral guides 31 upon its top and bottom comprising integral outer wall portions 33 and transversely arched forwardly directed flanges 35. Throughout the major portions of their lengths the latter are cut away to form guideways 37. Intermediate their lengths the flanges have oppositely disposed recesses 39 extending from the guideways. At their outer end portions the flanges 35 have transversely disposed integral stop lugs 41 formed on their forward edges as shown in Figures 3 and 5.

Slidably mounted in the member 15 is an oblong link 43 comprising side bars 45, rectangular in cross section, and bars 46 and 47 upon their inner and outer ends respectively. The bars 43 are a sliding fit in the guideways 37. Upon the rear faces of the side bars near their inner ends are stop projections 49 adapted to engage the lugs 41 to limit the outward travel of the link 43.

A locking or catch member 51 comprises a bearing lip 52 in slidable engagement with the front wall 29 having an end loop 53 frictionally embracing the link end bar 46 and with which is integral an upwardly inclined resilient laterally tapering tongue 55 provided with a rearwardly turned broad tooth 56. Upon the tongue 55 are lateral forwardly directed stop flanges 57. The member 51 is intended to detachably engage the intermediate or rack section 17.

In detail the latter member is formed

from an oblong blank of thin metal, comprising a front thickness or body portion 58 provided with a plurality of transversely disposed longitudinally arranged oblong openings 59 previously cut therethrough. The lateral portions of the blank are folded over against the back face of the blank, as shown in Figure 9, with their edges abutting, as at 62, thus forming a backing or reinforcing rear wall 63. Projecting from the ends of the portion 58 are integral hinge sleeves 65 and 66. The former embraces a pintle 68 pivoted in perforations 69 near the inner end of the flange 35, while the latter embraces a pintle 71 in hinge sleeve 72 upon the inner end of the rear wall 73 of the back section 19, which wall has forwardly directed lateral flanges 74.

Intermediate their lengths upon the flanges 74 are oppositely disposed rounded lateral projections 75 adapted to snap into the cavities 39 in the flanges of the housing section 15 when the parts are in folded position, as shown in Figure 4.

Upon the outer end of the wall 73 of the section 19 is a forwardly directed hinge sleeve 77 surrounding the side bar 79 of the end link 27 of the strap section 23.

In operating my extension device, while the parts are positioned in some such manner as shown in Figure 10, the operator slides the adjusting link 21 rearwardly in the guideways 37 such a distance as is required to fit the bracelet to the wearer's wrist, and then compresses the section 19 into locked engagement with the section 15 as already described, with the rack section 17 therebetween. As the latter section approached the front section 15 during the folding movement the tooth 56 registered in the nearest opening 59 of the member 17, whereby the tongue 55 was depressed until the stop flanges 57 abutted against the front wall 29 at each side of the bearing lip 52. Thus the tongue was depressed the required distance for the proper interpositioning of the folded sections, and the stop flanges 57 insured not only a uniform depression of the tongue, but prevented weakening of the member 51 by excessive compression of the parts 55 and 52.

The construction of the rack member 17 is such that each of the openings 59 are clearly cut, defined, and deep, so that the tooth 56 enters its opening positively and is seated deeply which insures against accidental slipping or sliding from the opening under great longitudinal strain upon the locked bracelet parts.

It will be noted that the described construction and arrangement of the stop means which include the projections 49 and lugs 41 is convenient, strong, and inexpensive.

I claim:

1. In an extension device of the type set forth, a keeper, pivotally connected sections foldable in the keeper, one of said sections being pivotally attached to one end of the keeper and provided with a plurality of holes, an adjusting link slidably mounted in the keeper longitudinally thereof, and a catch member comprising a loop embracing the forward end of the link, a bearing lip upon one end of the loop slidably engaging the keeper, an integral inclined tongue upon the other end of the loop, and a terminal lip upon the tongue engageable in one of the holes when the sections are in folded position.

2. In an extension device of the type set forth, a keeper, pivotally connected sections foldable in the keeper, one of said sections being pivotally attached to one end of the keeper and provided with a plurality of holes, an adjusting link slidably mounted in the keeper longitudinally thereof, and a compressible catch member comprising a loop frictionally engaging the forward end of the link, an inclined resilient tongue upon the loop, lateral stop flanges upon the tongue directed toward the keeper and engageable therewith when the tongue is compressed, and a terminal lip upon the tongue engageable in one of the holes when the sections are in folded position.

3. In an extension device of the type set forth, a keeper including a front plate and lateral walls, folded over flanges upon the walls with their edges spaced from the plate to afford guideways, and provided with oppositely disposed recesses, a link slidably mounted in the guideways, a foldable section pivotally attached at one end to the inner ends of the flanges and provided with a plurality of catch receiving means, a foldable back section pivotally attached to the other end of the first section comprising a rear wall and lateral flanges, lateral projections upon the last mentioned flanges registerable in the recesses of the first flanges, and a catch upon the link selectively engageable with the catch receiving means.

4. In an extension device of the type set forth, a keeper, a foldable section comprising an elongated body portion provided with a plurality of catch receiving means extending therethrough, an integral backing wall upon the body, one end of the body portion being pivotally attached to the keeper, and the other end of said body being pivotally attached to a back section foldable with the first section in the keeper, a link slidably mounted in the keeper, and a catch upon the slide selectively engageable with the catch receiving means.

5. In an extension device of the type set forth, a keeper including a front plate and lateral walls, folded over flanges upon the walls with their edges spaced from the plate to afford guideways, stop lugs upon the

rear ends of the flanges projecting transversely of the guideways, a link comprising end bars and side bars slidable in the guideways below the lugs, stop projections in the guideways upon the side bars engageable with said lugs, an intermediate section pivoted at one end to the inner ends of the flanges provided with a plurality of catch receiving means, a back section pivotally connected with the intermediate section and foldable therewith in the keeper, and a catch upon the forward end bar of the link selectively engageable with the catch receiving means.

In testimony whereof I have affixed my signature.

KENNETH H. BAKER.