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CLOSURE FOR BRACELETS AND THE LIKE

Filed Sept. 11, 1929

Fig. 1.

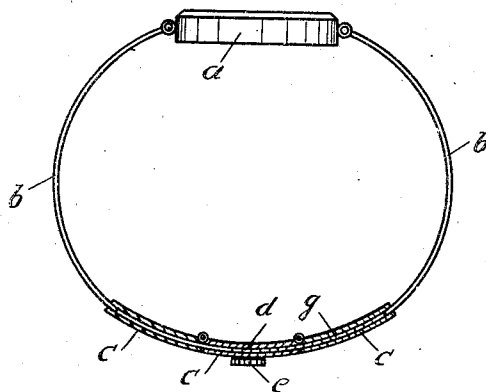


Fig. 2.

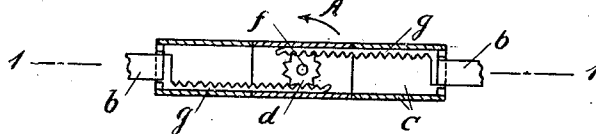


Fig. 3.

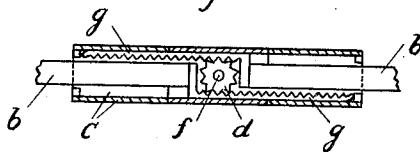


Fig. 5.

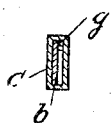
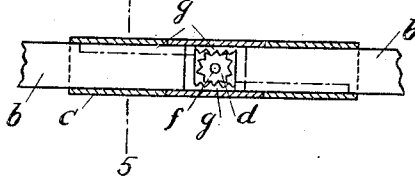


Fig. 4.



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UNITED STATES PATENT OFFICE

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CLOSURE FOR BRACELETS AND THE LIKE

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This invention relates to a closing arrange-ment for bracelets, specially watch bracelets. The well known closing devices for bracelets are either with snap spring or with spring controlled flaps. The snap spring closures possess the inconvenience that they have to be secured again by means of a rear eye, so that the handling of the same is complicated. The flap closures form thickenings and require, same as the snap spring closures, the special adaptation of the length of the bracelet band to the arm of the user as at the closing they do not adjust the length of the bracelet band.

It has been proposed to avoid the inconveniences of these known closures by making the band entirely or partly extensible. The pull-link bracelets show however the defect that the wire spiral springs inserted in them get slack very soon so that the band does no longer encircle the arm tightly enough; they are further expensive to make.

All these inconveniences are obviated by this invention. The novelty consists in that at each end of the bracelet band formed by two sides, a rack is arranged, said racks meshing with a common pinion so that the band ends can be moved towards or away from each other by rotating the pinion, the bracelet being either closed or opened.

Two embodiments of the invention are illustrated by way of example in the accompanying drawings in which:

Fig. 1 shows a complete watch bracelet in elevation and partly in longitudinal section on line 1—1 of Fig. 2.

Fig. 2 is a top plan view showing the closure open.

Fig. 3 is a top plan view showing the closure closed the cover plate of the casing being removed in both Figs. 2 and 3.

Fig. 4 is a similar view as Fig. 3 showing the box of the closure the inner width of which is adapted to the width of the band.

Fig. 5 is a cross section on line 5—5 of Fig. 4.

On either side of the watch case *a* one of the sides *b*, *b* of a band is hingedly fixed, the other ends of the two band sides extending from opposite sides into a housing composed of three

elements *c*, *c*, *c*. In the middle element *c* a pinion *d* is keyed on an axle *f* journaled in the walls of the housing and carrying a knob *e* on its end projecting from the top side of the housing. With this pinion *d* mesh two oppositely arranged racks *g*, *g* to which the corresponding ends of the sides *b*, *b* of the band are attached.

By rotating the knob *e* in the direction of the arrow line *A* the racks *g*, *g* are moved from the position shown in Fig. 2 into the position shown in Figs. 3 and 4. The sides *b*, *b* of the band are thereby pulled into the housing *c* from both sides simultaneously. The opening of the band is carried out quite so speedily by rotating the knob *e* in the opposite direction as before.

When the gear elements are built so that by rotating the knob *e* an adjusting of the width of the band by 60 to 65 mms. is obtained, it is possible to widen a bracelet tightly fitting on the arm in such a manner that it can be easily slipped over the hand without being opened. It is not necessary to provide a special device designed to separate the band sides.

In order to adapt to the curvature of the arm the racks *g*, *g* and the elements *c*, *c*, *c* of the housing which are hingedly connected with one another they are preferably made as thin as leaf springs. In this case they extend, as shown in Figs. 4 and 5, at the closing of the band under the opposite band end extending into the housing from the opposite side so that the width of the band may be the same as the inner width of the housing.

The closure according to the invention presents in comparison with the commonly used closures the advantage that the band can be tightened at will on the arm at the closing without special adjusting manipulations.

The closure is cheap in manufacture as the gear elements are all punched and as the housing consists only of drawn tubular elements.

I claim:—

1. A closure for bracelets, comprising in combination with a central casing, two band sides hingedly connected each to said central casing, a rack at the outer end of each band

side, a pinion with which said racks mesh, and a flat tubular housing composed of several elements hingedly connected with one another.

- 5 2. A closure for bracelets, comprising in combination with the central casing, two band sides hingedly connected each to said central casing, a rack in the form of a leaf spring at the outer end of each band side,
10 a pinion with which said racks mesh, a flat tubular housing in which said pinion is journaled and said racks are guided so that at the tightening of the two band sides said racks move under the opposite band sides.

15 In testimony whereof I affix my signature.
EMIL BECKER.

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