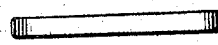
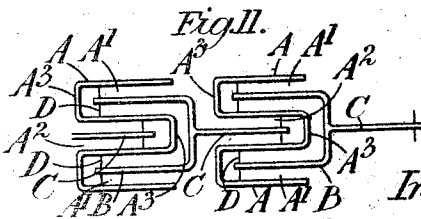
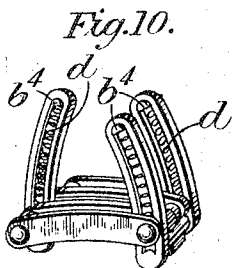
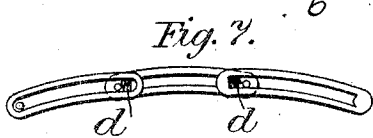
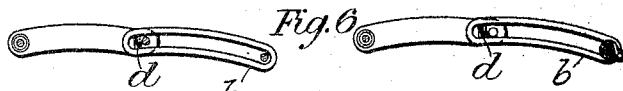
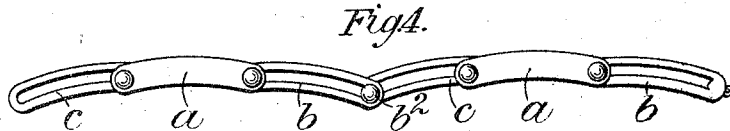
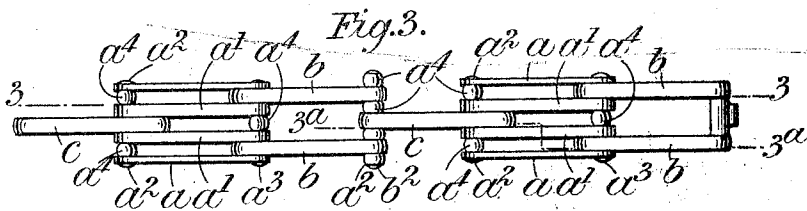
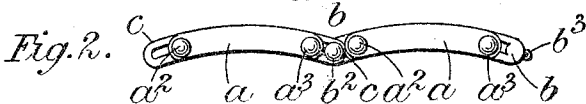
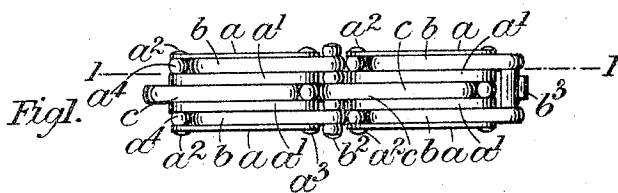


H. HARRIS.
BRACELET.

APPLICATION FILED JAN. 13, 1911.

1,000,804.

Patented Aug. 15, 1911.



Witnesses.

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BRACELET.

1,000,804.

Specification of Letters Patent. Patented Aug. 15, 1911.

Application filed January 13, 1911. Serial No. 602,464.

To all whom it may concern:

Be it known that I, HARRY HARRIS, a subject of the King of England, residing at 7 President street, Clerkenwell, in the city of London, England, have invented certain new and useful Improvements in or Relating to Bracelets or the Like, of which the following is a specification.

The present invention relates to articles of jewelry such as bracelets or the like of the spring or expanding type, wherein the article consists of a series of hinged or connected members, formed of more or less straight bars or links, provided with coil or spiral springs, so arranged as to normally draw the links together and reduce the bracelet to its smallest diameter, while allowing it to be expanded to pass over the hand of the wearer. In some cases where the size of the hand is large in comparison with the wrist, the limited amount of expansion of bracelets constructed in the known manner, is such that a bracelet which is sufficiently large to pass over the hand cannot contract sufficiently around the wrist of the wearer to provide a comfortable or snug fit. This is particularly the case as regards watch bracelets where it is desirable that the watch should always remain in the same position on the wrist and should not slip around, as it is liable to do under the circumstances above mentioned. In bracelets of this kind as hitherto constructed the members forming each link or section are so arranged that the expanding or movable members thereof usually abut one against the other or face one another endwise in the closed or contracted position within the non-expanding portion of the link so that the extent to which the movable members of the link can be expanded amounts to approximately only about the length of a section or non-expanding member even in those cases where the expanding portions can be simultaneously drawn out from the non-expanding member in opposite directions.

Now according to my invention a double expansion of approximately twice the ordinary extent is obtained by so constructing the links or members of the article that the expanding portions thereof are adapted to overlap or dovetail into each other when in contracted or normal position so as to form a link of comparatively short length and to move or to be drawn out in opposite direc-

tions simultaneously whereby the length of the link is approximately trebled.

In order that my invention may be clearly understood I will now describe an expanding bracelet constructed in accordance therewith, reference being had to the accompanying drawings, in which like reference letters refer to like parts in the various figures.

Figure 1 is a plan view of two complete sections or links of the bracelet with the parts in their normal or closed positions; Fig. 2 is a side view of Fig. 1; Fig. 3 is a plan view showing the links in their expanded position; Fig. 4 is a side view of Fig. 3; Fig. 5 is a section on the line 1-1 of Fig. 1 showing the springs in the members *b* in their expanded state. Fig. 6 is a section on the line 3-3 of Fig. 3 showing the springs in the members *b* in their compressed state; Fig. 7 is a section on the irregular line 3'-3' showing the springs *c* *d* in their compressed condition; Fig. 8 is a view of one of the members *b* (or *a*) showing the spring in position; Fig. 9 is a plan view of Fig. 8; Fig. 10 illustrates in a perspective view the constituents of a link turned about their hinges and Fig. 11 is a diagrammatic plan view of two links to illustrate the principle of the present invention and which will first be explained.

In principle and as shown in Fig. 11 each link consists of a non-expanding portion or frame A and of two movable or expanding parts B and C. The non-expanding portion or frame A forms a female part or double guide so shaped as to form spaces A' A' and A² which are open in opposite directions and within which the expanding or movable parts B and C are so guided and movable under the influence of traction springs (not shown in Fig. 11) of opposite traction force that normally the movable members B and C are drawn into the spaces A' A² so that their shanks overlap each other as shown, and the link is contracted to its minimum size, while when a pull is exerted on the links or bracelet the parts B and C are simultaneously drawn out in opposite directions from the spaces A' A² thereby forming a link of more than double its normal length. By preference the frame A consists of a triple crank shaped member, as shown, made up of individual bars or parts of any appropriate form, and connected together by rivets or the like and held apart

and in parallelism or braced by transverse parts A^3 of any desired construction, so as to form the guide spaces, closed at opposite ends as above mentioned. In these spaces the expanding members B C are suitably guided by cross pins D or the like within slots provided in the walls of the frame members or in any other suitable manner. It will of course be understood that the frame members A need not, of necessity, have the form shown in the drawing, for it is obvious that the fork-shaped member B could be guided in the same manner on the outer faces of the walls confining the central portion A^2 of each frame member A, while the link C is guided within it in opposite direction, thereby dispensing with the outer shanks of the frame members, although the construction as shown is more preferable and best adapted for practical purposes. In this way a bracelet can be formed which in size can be made to snugly fit over the wrist of the wearer and has the advantage of being capable of being drawn out to more than double its length so as to easily slip over even a large sized hand.

In the construction shown in Figs. 1 to 10 by way of example, each section or link may be composed of seven parallel bars or members arranged side by side. The two outside members consist of flat plates or strips a while the inner members consist of flattened rings or loops or slotted bars b , a' , c , a' and b respectively. The members a , a' , a' , a forming the non-expanding frame A, are connected together at their ends by transverse pins a^2 , a^3 distance pieces or balls a^4 being employed to space the members apart. The transverse pin a^3 at one end passes freely through the second and sixth members or loops b , b which lie between the first, third and fifth and seventh members respectively. The outer ends of these loops are engaged by a cross bar b^2 serving as the connecting members between two adjacent links or sections, the end of the central loop c of the adjacent link being connected, preferably rigidly, to said cross bar b^2 . The central loop c which is also in the form of a flattened ring or slotted bar, is traversed by the cross pin a^2 at one end of the link, and is connected at its other end to the cross bar b^2 forming the connecting member to the next link on the left hand side. The second and sixth loops b b are each provided with a small spiral spring d located inside the loop, or flattened ring, between one end thereof and the transverse pin a^2 while the fourth or central loop c is also provided with a spiral spring d located inside the loop between the free end thereof, and the transverse pin a^2 . In this way it will be seen that the second and sixth bars or loops can be drawn out in one direction—to the right—against the action of their springs d ,

while the central bar or loop, c can be drawn out in the opposite direction *i. e.* to the left against the action of its spring, as shown clearly in Fig. 3, the total extension obtainable being therefore more than double or about three times that of the length of a bar or loop, less the extent occupied by the compressed springs and pins. Suitable distance pieces or perforated balls a^4 are mounted on the transverse pins a^2 a^3 and b^2 to keep the link members properly spaced apart. The contracting or adjacent longitudinal surfaces of the loops b , a' and c are preferably so shaped that they engage one within the other to a slight extent and thereby assist in maintaining the links in their correct flat state, but I preferably provide each loop b and c with a slight lateral projection or transverse lug b^4 at their inner ends which engage in the slots of the adjacent loops a , a' respectively. It will be seen that each link has two movements of expansion, to the left and to the right respectively, the members or loops b being capable of being drawn out to the right against the action of their springs, and the member c being capable of being drawn out to the left against the action of its spring. The members a , a' , a' and a with the cross bars a^2 a^3 can be regarded as a frame in relation to which the spring provided loops b , b and c can respectively be moved outwardly, in opposite directions, the loops b b being traversed by the cross bar a^3 and the loop c by the cross bar a^2 .

In the case of a watch bracelet, at the points where the watch holder is inserted instead of a cross bar b^2 a cross bar b^3 is provided having suitable means for attachment to the watch holder.

While I have described a bracelet, the links or sections of which consist of seven bars or members arranged side by side, it is obvious that the invention is not limited to such a construction, as a different number of members could, as previously indicated, be employed in such manner that one or more of the spring provided or expanding members or loops can be moved outward in relation to the non-expanding member, in one direction, while the other spring-provided members or loops can be moved outward in the other direction.

It is obvious that instead of straight flat links more or less curved links can be used, or tubes in which the springs are located, wires or the like being employed in connection therewith as means of joining one part or section to another.

If desired instead of a simple cross bar being employed for connecting two adjacent links or sections, a more or less fancy or elaborate connection may be employed to which the ends of the spring provided loops or members of the adjacent links are con-

5 nected. Moreover, links according to this invention can be easily attached to or substituted for links in bracelets or articles of the ordinary kind so as to make the latter more flexible or expansible, if desired.

What I claim and desire to secure by Letters Patent is:—

10 1. In an expanding link bracelet, the combination of stationary link members and movable fork shaped link members guided on said stationary members, each stationary member having side spaces receiving the forked end of the movable member and a central space receiving the single end of the following movable member, and means for normally holding the movable members in the stationary members.

2. In an expanding link bracelet, the combination of stationary link members having central and side spaces opening in opposite directions, and movable fork-shaped link members, each having its forked end guided in the side spaces of one stationary member, and its other end guided in the central space of the next stationary member, springs attached to said movable members and abutments oppositely located on the said stationary member all substantially as set forth.

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

HARRY HARRIS.

Witnesses:

STANLEY D. DICHER,
JUSTIN G. POLLAK.