This invention relates to flexible bands as, for example, straps for wrist watches, bracelets, ornamental neck bands or other articles of jewelry and relates more particularly to an improvement in a strap of the character shown and described in copending application. Serial No. 319,856, filed October 27, 1928, and assigned to the present inventor.

Although the present invention may have a variety of useful applications it is shown and described herein as employed to hold a wrist watch in position.

Wrist watches have attained considerable popularity and many types of bands or straps have been devised, beginning with the leather strap and developing into numerous straps constructed of metal.

The metal strap has gained favor, being free from the disadvantage of stretching and becoming damp from absorbed perspiration.

In the making of a wrist watch strap it is necessary to have flexibility so that the strap will take the shape of the wrist to the comfort of the wearer. It is also important to provide a strap of a smooth symmetrical appearance so as to make a pleasing addition to the watch which it secures in place.

In the above mentioned copending application a strap is shown composed of a plurality of tubular members secured in flexible relation by internal locking members. These members as shown and described include inter-locking means whereby they are held in a given relation to attach adjacent tubular members.

It has been found that although this construction is satisfactory and has been used in practice, that the construction is improved by providing the internal locking members with an additional or auxiliary locking means.

The invention will be more fully understood by reference to the accompanying drawing in which:

Fig. 1 is a plan view of a strap made in accordance with the present invention attached to a wrist watch;

Fig. 2 shows a portion of a strap with a partly broken away section to show the locking elements;

Fig. 3 shows a tubular section with the locking members about to be inserted;

Fig. 4 is an edge view of a strap having a connector or fastener and Fig. 5 is a modified form of the locking elements.

An embodiment of the invention may comprise a strap 10 composed of a plurality of tubular sections 11 which in the present construction are of sheet metal and of rectangular transverse cross section. The sections 11 are disposed in close adjacent relation to constitute a strap or band and are held in such relation by pairs of locking members 12 and 13. These locking members 12 and 13 which may be termed a latch and latch-piece respectively, serve to hold the sections 11 in flexible relation. The latch 12 is provided with a hook portion 14 and the latch-piece 13 is provided with a hook portion 15.

These hooks are arranged to extend over the edges of and to embrace adjacent walls 16 and 17 of adjacent tubular sections and the locking members are so proportioned and arranged that when moved into place within a tubular section a lip 18 on the latch 12 will engage with a lip 19 on the latch-piece 13.

For the purpose of holding the locking members in locked relation their combined width is so proportioned that surface 20 of the latch-piece 13 will engage wall 16 of a tubular section while the latch 12 is held against the wall 17. By reason of the construction and material of the members they are sufficiently elastic to permit a slight spring so that the lips 18 and 19 may be snapped into engagement and by reason of the opposing walls of the tubular section, such relation is maintained.

Each of the locking members may occupy only a portion of the space within its tubular section, the remaining space being provided for the entrance of the hook portions 14 and 15, thus it will be evident that if the tubular sections are made just sufficiently wide to admit the locking members the opening at the ends thereof will be entirely filled and a smooth symmetrical appearance will result.

Although the locking relation of the lips 18 and 19 serves to retain the locking members 12 and 13 together it has been found
that greater resistance to separation or displacement of the members is attained by providing each of the members with a depression or recess and a head or projection disposed in opposite relation. The member 12 has a depression 12' and a head 12' while the member 13 has a depression 13' and a head 13''. When the members are in position to lock a plurality of tubular sections together the projection 12'' is disposed in the depression 12'' and the projection 13'' is disposed in the depression 13''. The projections and depressions are so proportioned that one fits the other and when the members are inserted into place the projections snap into the depressions by a flexure of the walls of the tubular sections and are thus held in place by reason of the resilient nature of the tubular walls. It will be evident that the locking members by reason of their lips are held in place whereas the hook portions of the said members have a tendency to tip outwardly.

When the projections and depressions are provided as above set forth the hook portions are locked from relative movement and an additional or auxiliary lock is provided by the reason of these members.

A plurality of tubular sections 11 have been secured by a plurality of pairs of locking members, a slight relative movement of each of the sections may be had with the result that the strap so constructed is of a flexible nature and when used as a band for a wrist watch will take the contour of the wrist and serve as a leather strap without the disadvantages above mentioned.

As shown in the drawing, a strap composed of a plurality of tubular sections may be readily attached to a watch 21 since each sections 11' and 11'' may have tubular extensions 22 and 22'' to provide apertures to receive pins 23 and 23' as commonly provided for securing a metallic strap to a watch. The free ends 25 and 26 may also be provided with sections having similar tubular extensions 27 and 28. The extensions 27 may be attached to a latch plate 29 adapted to engage with a notched member 30. The latch plate is provided with flanges 31 and 32 having serrations on their inner surface to grip the notched member 30. This lock or connector is more clearly shown in the above mentioned copending application.

As shown in Fig. 5 the locking members may be modified and as illustrated, the same may include parts 33 and 34 having hook portions 35 and 36 respectively to secure sections 11. The member 34 may be provided with a head 37 adapted to be engaged by spring jaw 38 and 39 on the member 33. The actions and function of the latch members 33 and 34 are the same as the members indicated by the numerals 12 and 13 and provide a latch for securing the sections 11 in flexible relation. When the members 33 and 34 are inserted into opposite ends of a section 11 they are moved toward each other until the jaws 38 and 39 snap over the head 37, thus securing them against removal since it will be evident that the jaws are held from movement away from the head by the walls of the enclosing section 11.

When the locking members or parts 33 and 36 are modified as above set forth they may be provided with projections 35' and 35'' respectively and with depressions 36' and 36'' respectively so as to give the desired opposition to relative movement of the said parts.

From the above it will be evident that the present invention provides a simple and effective construction for a chain or strap wherein the various parts may be quickly and easily assembled and at relatively low cost.

Although a preferred embodiment of the invention is shown and described herein is to be understood that modifications may be made therein without departing from the spirit and scope of the invention as set forth in the appended claims.

What is claimed is:

1. A device of the class described comprising a plurality of tubular sections, pairs of locking members disposed in said sections, means for interlocking said members, said members having arms for embracing walls of adjacent tubular sections and a head on one member and a depression on the opposite member for securing said members against relative movement.

2. A device of the class described comprising a plurality of tubular sections, pairs of locking members extending into and embracing the opposite ends of each of said sections, means for interlocking said members, offset projections on said members, pairs of said offset projections being disposed in the ends of said tubular sections, means on said offset projections and means on adjacent members cooperating to maintain said members against relative movement.

3. A device of the class described comprising a plurality of tubular sections, pairs of locking members extending into opposite ends of each of said sections, means for interlocking said members, said members having offset projections, pairs of said offset projections being disposed in the ends of said tubular sections, a depression on one member and a bead on the other member, said depressions and beads of adjacent projections being arranged to engage and hold the projections against relative movement.

In testimony whereof I affix my signature.

SIMON BRUNER.