Sept. 11, 1923. 1,467,465

M. H. WIEDMANN

SEPARABLE FASTENER AND LOCK

Filed Oct. 11, 1922

Fig. 1.

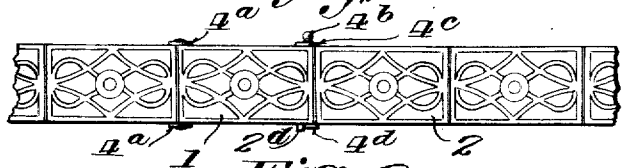


Fig. 2.

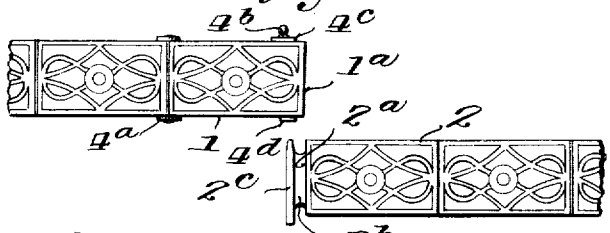


Fig. 3.

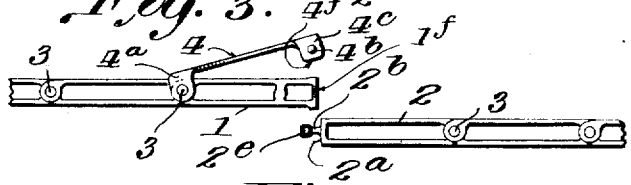


Fig. 4.

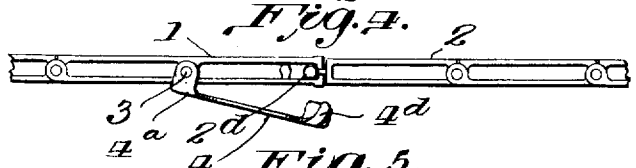


Fig. 5.

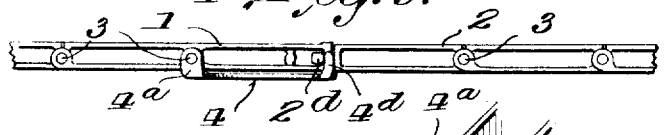
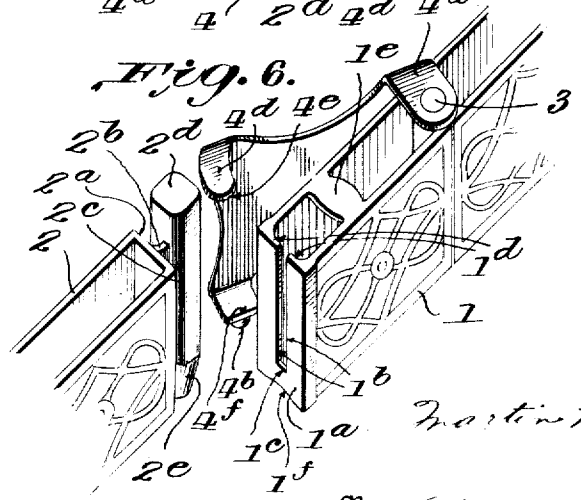


Fig. 6.



Inventor

Martin H. Wiedmann.

By Curtis, Stoiz & Boyden.

Attorneys.

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UNITED STATES PATENT OFFICE.

MARTIN H. WIEDMANN, OF NEWARK, NEW JERSEY.

SEPARABLE FASTENER AND LOCK.

Application filed October 11, 1922. Serial No. 593,725.

To all whom it may concern:

Be it known that I, MARTIN H. WIEDMANN, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Separable Fasteners and Locks, of which the following is a specification.

This invention relates to combined latch and lock for separable fasteners and pertains particularly to fasteners for securing the opposite ends of flexible articles such as bracelets, belts and chains.

One object of the invention is to provide a safety catch and lock therefore which may be used for joining two separable members and which may not be opened or separated accidentally.

The device is peculiarly adapted for use as a bracelet clasp because of the arrangement of the parts in which the locking member is mounted on the inside curve of the encircling band and is held in the locked position next to the arm of the wearer. Chance of loss is thus reduced to a minimum. Removal by a sneak thief is equally difficult because the opening of the lock against the arm of the person wearing the bracelet must necessarily attract the attention of the owner.

The above and additional advantages and features of the invention are described and claimed in the following specification and claims and illustrated, as used in the bracelet, in the accompanying drawing, in which:

Figure 1 represents a front elevation of a section of a bracelet showing the appearance of the fastening device from the outside curve of the bracelet;

Figure 2 is a front view similar to that of Figure 1 but showing the two end portions separated with the parts in position for the latching movement;

Figure 3 is a top plan view of the construction shown in Figure 2.

Figure 4 is a bottom view looking upward, illustrating the two separate ends in their fastened or latched position, but with the lock member open;

Figure 5 is a view similar to that of Figure 4 but illustrating the lock in the fastened position; and

Figure 6 is an enlarged perspective view looking toward the receiving end member and lock.

Like numerals refer to like parts in different figures of the drawing. Referring in detail to the construction illustrated in the drawing, 1 indicates one block section of a bracelet which is formed of a plurality of rectangular sections pivotally connected for limited movement. 1 constitutes one end of a bracelet and hereinafter will be termed the receiving end member because of its peculiar construction which will be described. 2 is a corresponding link section for the opposite end of the bracelet and hereinafter will be termed the latch end member because of its cooperation with the member 1 in completing the coupling action. 1 has an end edge or face 1^a next abutting a corresponding end face 2^a on the end member 2. The ultimate purpose of the construction is to bring the abutting faces 1^a and 2^a together and to lock them in the abutting position.

Referring to Figure 6, this enlarged view illustrates clearly the peculiar construction of the receiving end member 1. In addition to the end face 1^a there is provided a slotted opening 1^b extending inwardly from one side edge of the face 1^a substantially the width of the section 1 and terminating with a closed end slot at 1^c. In the construction illustrated the block or link sections of the bracelet are hollow, and this construction provides a space between the opposite faces of the link elements which may be reached through the opening 1^b. On either side of the slotted opening 1^b and on the inside of the link element 1 are the walls 1^d comprising the inner or rear face of the end wall 1^a. In order to strengthen the opposite faces of the member 1 on the side thereof in which the receiving slotted opening 1^b is formed, a cross brace bar is provided at 1^e.

The construction of the latch end member 2 and its details will now be described. Projecting from the abutting end face 2^a is a web member 2^b which has a thickness slightly less than the width of the slotted opening 1^b so that web 2^b may be moved slidably into position within the side walls of the opening 1^b. The web portion 2^b carries an enlarged end portion 2^c preferably formed as a bar member having its length substantially parallel to the surface of the end wall 2^a. The bar 2^c has a diameter greater than the width of the opening 1^b and the bar is adapted to engage the inner

surfaces 1^d to prevent the withdrawal of the web member and the two abutting members from the latched position. The bar 2^c has a projecting end 2^d extending on one side of the web member slightly beyond the edge of the link 2 for engagement with the lock as will be described. At the opposite end of the member 2^c the bar is slightly reduced as at 2^e providing a tapered point which may readily be inserted in the space within the receiving link member 1.

The lock device for securing the parts in their fastened position will now be described. Each of the links of the chain or bracelet is provided with pivot pins 3. The particular pivot pin 3 which connects the member 1 to the remainder of the chain or bracelet also is used as a pivot pin for the particular lock of the present invention. This lock is illustrated as having a flat plate portion 4 provided with laterally projecting arms 4^a which embrace the top and bottom of the opposite end edges of the member 1 and through which the pivot pin 3 projects and is riveted. At the end of the plate 4 opposite to the arms 4^a are arms 4^c and 4^d, at the top and bottom respectively of the arrangement as shown in Figure 1. The arms 4^c and 4^d are adapted to be moved into position over the receiving opening 1^b and to lock the web 2^b and the bar 2^c within the receiving member 1 as will be described. A knob 4^b projects upwardly from the arm 4^c and constitutes grip means by which the lock may be pulled open from its fastened position. The extreme outer ends of the arms 4^c and 4^d are curved slightly toward each other to provide the points 4^f and 4^e, respectively, to assist in fastening the lock securely on the member 1 in the closed position. The member 1 has a depression 1^f formed in the edge wall opposite to the receiving opening to serve as a detent notch for the reception of the projecting portion 4^f. The edge of the arm 4^d next adjacent to the arm 4^a is adapted to engage the projecting end 2^d of the bar 2^c as will be described.

The manner of latching the device and locking it will now be explained. Referring to Figure 2, the receiving member is shown directly above the bar 2^c of the latch member 2. Movement of the parts 1 and 2 into alignment with each other will bring the bar 2^c into the position illustrated in Figure 4 and will cause the web portion 2^b to slide inwardly between the walls 1^b of the slotted opening until the two end members are in perfect alignment and the faces 1^a and 2^a directly abut each other. The inward movement of the web 2^b is limited by the end wall 1^c. In this position the end 2^d projects beyond the edge of the member 1 so that when the lock plate 4 is moved to position shown in Figure 5, parallel to the faces of the member 1, the arm 4^d will engage the projecting end 2^d on the side thereof next to the abutting face 2^a, or in other words on that face opposite to the pivot point of the lock. This engagement of the parts 2^d and 4^d serves to strengthen the device by removing any tendency on the part of the rod 2^c to spread the side walls of the receiving opening 1^b. The cooperation of the parts 2^d and 4^d also serves to lock the parts in their latched position. In the closed position described the projecting tip 4^e tends to lie in the open end between the sidewalls of the receiving opening 1^b.

To disconnect the device it is necessary to swing the lock member open and to slide the latch member 2 with its bar 2^c sidewise from the position within the receiving member 1. As used on the bracelet the views of Figures 1 and 2 represent outside or front views, and by referring to the other views it will be seen that in order to open the lock it will be necessary to swing the lock inwardly and toward the arm of the person wearing the bracelet before the abutting end members could be moved sidewise away from engagement with each other. Such a motion of the lock member, within the limited space between the arm and the bracelet must necessarily depend largely on the direct and intentional movement of the wearer of the bracelet.

I claim:

1. A combined clasp and lock for connecting two separable end members having a connection therebetween to the opposite ends of which they are secured, comprising a receiving member having an end and sides and a receiving opening extending inwardly from one side in a direction at right angles to the plane of said connection when its ends are connected, a latch member having a projecting portion adapted to be moved into said receiving opening, and a lock positioned to be moved in a plane at right angles to the line of said receiving opening over said receiving opening to prevent the outward movement therefrom of said projecting portion of said latch.

2. A combined clasp and lock for connecting two separable end members, comprising a receiving member having an end and sides and a receiving opening extending inwardly from one side, a latch member having a projecting portion adapted to be moved into said receiving opening, and a pivotally mounted lock connected to said receiving member and adapted to be moved over said receiving opening to prevent the withdrawal of said latch and to engage said latch on the side thereof opposite to the pivot point of said lock.

3. A combined clasp and lock for connecting two separable end members, having a flexible connection therebetween to the opposite ends of which they are secured, compris-

ing a receiving member having an end and sides and a receiving opening extending inwardly from one side in a direction at right angles to the plane of said connection when its ends are connected, a latch member having a projecting portion adapted to be moved into said receiving opening, and a lock pivotally mounted for movement only in a plane at right angles to the line of said receiving opening and positioned to be moved over said receiving opening to prevent the outward movement therefrom of said projecting portion of said latch.

4. A combined clasp and lock for connecting two separable end members having a flexible connection therebetween to the opposite ends of which they are secured, comprising a receiving member having an end and sides and a receiving opening extending inwardly from one side, a latch member having a projecting portion adapted to be moved into said receiving opening, and a pivotally mounted lock connected to said receiving member and adapted to be moved over said receiving opening to prevent the withdrawal of said latch and to engage said latch on the side thereof opposite to the pivot point of said lock.

5. A combined clasp and lock for connecting the ends of a chain, comprising a receiving member having an end and sides and a receiving opening extending inwardly from one side in a direction at right angles to the plane of said chain when its ends are connected, a latch member having a projecting portion adapted to be moved into said receiving opening, and a lock mounted on said receiving member and positioned to be moved in a plane at right angles to the line of said receiving opening over said receiving opening to prevent the outward movement therefrom of said projecting portion of said latch.

6. A combined clasp and lock for connecting the ends of a chain, comprising a receiving member having an end and sides and a receiving opening extending inwardly from one side, a latch-member having a projecting portion adapted to be moved into said receiving opening, and a pivotally mounted lock mounted on said receiving member and connected to said receiving member and adapted to be moved over said receiving opening to prevent the withdrawal of said latch and to engage said latch on the side thereof opposite to the pivot point of said lock.

7. A combined clasp and lock for connecting the opposite ends of a bracelet band, comprising a receiving member having an end and sides and a receiving opening extending inwardly from one side, a latch member having a projecting portion adapted to be moved into said receiving opening, and a lock positioned for movement on the inner curve of said bracelet band for movement over said receiving opening to prevent the outward movement therefrom of said projecting portion of said latch.

8. A combined clasp and lock for connecting the opposite ends of a bracelet band, comprising a receiving member having an end and sides and a receiving opening extending inwardly from one side, a latch member having a projecting portion adapted to be moved into said receiving opening, and a pivotally mounted lock connected to said receiving member and on the inner curve of said bracelet band and adapted to be moved over said receiving opening to prevent the withdrawal of said latch and to engage said latch on the side thereof opposite to the pivot point of said lock.

9. In a separable fastener, a main member having ends to be detachably connected, a receiving end member on one end of said main member having an end portion provided with an opening extending inwardly from one side in a direction at right angles to the plane of said main member when its ends are connected and terminating short of the opposite side, a latch member on the end of said main member opposite to said receiving end member and having a projecting portion adapted to be inserted into said opening, and a lock connected to said receiving end member and adapted to be moved over said opening to prevent the removal of said projecting portion from said opening.

10. In a separable fastener, a main member having ends to be detachably connected, a receiving end member on one end of said main member having an end portion provided with an opening extending inwardly from one side in a direction at right angles to the plane of said main member when its ends are connected and terminating short of the opposite side, a latch member on the end of said main member opposite to said receiving end member and having a projecting portion adapted to be inserted into said opening, and a lock adapted to be moved over said opening to prevent the removal of said projecting portion from said opening.

11. In a separable fastener, a main member having ends to be detachably connected, a receiving end member on one end of said main member having an end wall and a slotted opening therein extending inwardly from one side and terminating with a closed end short of the opposite side, a latch member on the end of said main member opposite to said receiving end member having a projecting web portion capable of slidably fitting in said slotted opening and an enlarged end on said web portion having a width greater than the width of said slotted opening, and a lock connected to said receiving

end member and adapted to be moved over said opening to prevent the removal therefrom of said projecting portion.

12. In a separable fastener, a main member having ends to be detachably connected, a receiving end member on one end of said main member having an end wall and a slotted opening therein extending inwardly from one side and terminating with a closed end short of the opposite side, a latch member on the end of said main member opposite to said receiving end member having a projecting web portion capable of slidably fitting in said slotted opening and an enlarged end on said web portion having a width greater than the width of said slotted opening, and a pivotally mounted lock connected to said receiving member and adapted to be moved over said opening to prevent the withdrawal of said projecting web and to engage said enlarged end on the side thereof opposite to the pivot point of said lock.

13. In a separable fastener, a main member having ends to be detachably connected, a receiving end member on one end of said main member having an end wall and a slotted opening therein extending inwardly from one side and terminating with a closed end short of the opposite side, a latch member on the end of said main member opposite to said receiving end member having a projecting web portion capable of slidably fitting in said slotted opening and having an enlarged end in the shape of a bar secured to said web portion along the length of the bar, one end of said bar projecting from said receiving member when the latch member is inserted therein, and a pivotally mounted lock connected to said receiving member and adapted to be moved over said opening to prevent the withdrawal of said projecting web and to engage the projecting end of said bar on the side thereof opposite to the pivot point of said lock.

14. A combined clasp and lock for connecting the opposite ends of a bracelet band, comprising a receiving member having an end and sides and a receiving opening extending inwardly from one side, a latch member having a projecting portion adapted to be moved into said receiving opening, a pivotally mounted lock connected to said receiving member and on the inner curve of said bracelet band and adapted to be moved over said receiving opening to prevent the withdrawal of said latch and to engage said latch on the side thereof opposite to the pivot point of said lock, the side of said receiving member opposite to said receiving opening having a detent portion, and projecting fingers on said lock member having the extreme ends thereof curved toward each other and adapted to engage respectively the edge of said receiving opening and said detent portion to hold said lock in the locked position.

In testimony whereof I affix my signature.

MARTIN H. WIEDMANN.

Certificate of Correction.

It is hereby certified that in Letters Patent No. 1,467,465, granted September 11, 1923, upon the application of Martin H. Wiedmann, of Newark, New Jersey, for an improvement in "Separable Fasteners and Locks," an error appears in the printed specification requiring correction as follows: Page 3, lines 51 and 52, claim 6, strike out the words "mounted on said receiving member and"; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 23d day of October, A. D., 1923.

[SEAL.]

WM. A. KINNAN,
Acting Commissioner of Patents.