

A. D. FIELD.
FASTENING DEVICE.
APPLICATION FILED NOV. 10, 1908.

950,802.

Patented Mar. 1, 1910.

Fig. 1.

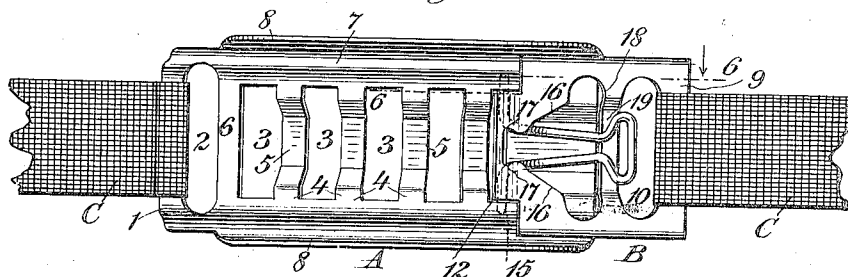


Fig. 2.

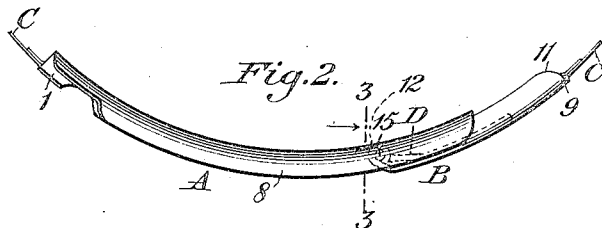


Fig. 3.

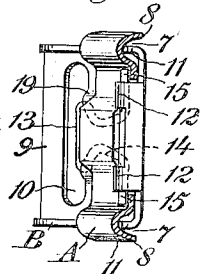


Fig. 4.

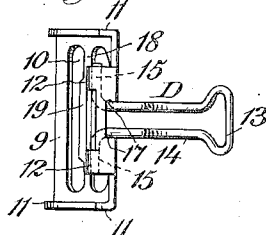


Fig. 5.

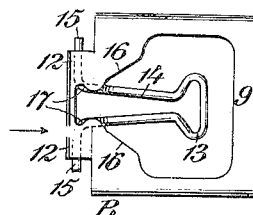
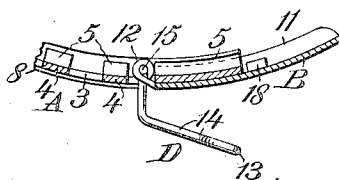


Fig. 6.



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UNITED STATES PATENT OFFICE.

ALBERT D. FIELD, OF WATERBURY, CONNECTICUT.

FASTENING DEVICE.

950,802.

Specification of Letters Patent.

Patented Mar. 1, 1910.

Application filed November 10, 1908. Serial No. 461,892.

To all whom it may concern:

Be it known that I, ALBERT D. FIELD, citizen of the United States, and resident of Waterbury, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Fastening Devices, of which the following is a specification.

My invention relates to fastening devices or clasps for belts, apparel or other articles, and one of the objects of said invention is to provide a simple, cheap and efficient fastening device of the character specified, and which will overcome many of the disadvantages heretofore encountered in such devices.

To the above and other ends which will hereinafter appear, my invention consists of the features of construction, arrangements of parts and combinations of devices herein-after described and claimed.

In the accompanying drawing, Figure 1 is a front face view of the fastening device shown applied to a belt and with the members of the device locked together. Fig. 2 is an edge view of the same. Fig. 3 is a transverse sectional view of the clasp; the section being taken on the line 3—3 of Fig. 2 and looking in the direction of the arrow in said figure. Fig. 4 is a detail end view of the latch or lock carrying member of the clasp, the view looking in the direction of the arrow in Fig. 5, and with the lock shown withdrawn to the releasing position. Fig. 5 is a detailed front face view of a slightly modified form of lock carrying member; the view illustrating the lock in its extended or locking position; and Fig. 6 is a longitudinal sectional view of the clasp taken on the line 6—6 of Fig. 1 and looking in the direction of the arrow at said line.

The clasp comprises the members A and B, the latter constituting what may be termed a latch or lock carrying member or plate whereas the former constitutes what may be termed a fastening member or plate, and comprises a device that is preferably struck up from a single piece of sheet metal, with any suitable fastening means, such for instance, as the cross bar 1 and opening 2, to afford means by which the member may be attached to one end of a belt C or to the article to which the clasp is to be secured. The member A has one or more slots, recesses or openings 3 that form cross bars 4 between them, which latter preferably have central depressed portions as indicated at 5, so as

to form a continuous longitudinally extending channel in the central portion of the member A between them, though the cross bars may be straight across and devoid of any depression like the cross bar 6. Along each side of the member A is a depressed channel or groove 7; an upturned or forwardly extending flange 8 at each edge of the member constituting one wall of the associated groove 7. Thus it will be seen that the grooves or channels at the sides of the member A extend throughout the length thereof and are parallel to each other, for purposes which will be hereinafter described. The lock carrying member B is also preferably struck up from a single piece of sheet metal and is formed with suitable means for securing it to the belt C or other article to which it is to be attached, and in the present instance the member B has a cross bar 9 and opening 10 that affords means for uniting the member or section to one end of the belt. Each side edge of the member B is formed as a depending flange 11 that is received within a groove 7 in the member A, as shown in Figs. 1, 2 and 3 to afford a compact union of the two members; to present a fastening device having but a slight and uniform thickness, as shown in Fig. 2, and to prevent a lateral or sidewise displacement of one member relatively to the other. The free end of the member B has a depending bearing 12, or one that is preferably in the nature of a barrel bearing formed from the member or plate B, the bearing extending therefrom on the same side as the flanges 11, and the length of the bearing extending transversely of the plates or members A and B and being of a length and diameter that will permit the bearings to be readily received in any of the openings 3 in the plate A, according to the adjustment desired and as indicated in Figs. 1, 3 and 6.

A locking device D preferably consists of a single piece of spring wire bent to form a finger piece 13, two spring arms 14 and combined pivots and locking members or fingers 15, the latter being received in the pivot bearings 12 and adapted to turn and to move longitudinally therein. The side arms 14 cooperate with means for effecting a longitudinal movement of the pivots in their bearings when the device D is turned on said pivots. In the present instance these means comprise cams or inclined edges 16 formed

as parts of the body of the plate B, so that when the finger piece is in the lowermost position, shown in Figs. 1, 2 and 5, the cams will permit the spring pressure of the arms 14 to expand the device and force the fingers longitudinally to their projected positions where they extend beyond the pivot bearings and interlock with the plate A at the underside thereof, as shown in Figs. 1 and 3, thus positively locking the two plates or members together. When the finger piece 13 is turned to the releasing position shown in Figs. 4 and 6, the spring arms 14 will be cammed toward each other by the cams 16 and the locking fingers or pivots 15 will be withdrawn from the engaging positions and into their bearings 12 and the two members or plates A and B may be separated.

Slight indentations or recesses 17 may be provided in the plate B to receive the side arms 14 of the locking device at the last portion of the releasing movement thereof, and the spring pressure of the arms will seat them in said depressions, as shown in Fig. 4, and will prevent the locking device from being accidentally moved from the releasing to the locking position. The pressure thus exerted by the arms 14 to hold the locking device in the releasing position may be easily overcome by merely swinging the finger piece 13 toward the locking position and this will be effective to cam the arms toward each other on the sloping edges of the recesses 17 and afford the displacement of the arms therefrom.

The plate B shown in Fig. 1 has a cross bar 18 with a central depressed portion 19 that constitutes a support below the upper surface of the plate B for the finger piece of the locking device. The plate B shown in Fig. 5 is the same as that illustrated in the other figures, except that in the construction shown in Fig. 5, the cross bar 18 is omitted entirely, allowing the finger piece to pass down into the channel formed by the depressed portions 5 in the cross bars of the plate A and to rest on said cross bars. The depressed portions 5 in the plate A also allow the finger piece to assume a lower position in the normal or locking position thereof, than would be the case if the cross bars 4 were straight like the bar 6, and this is true whether the plate B shown in Fig. 1 or that shown in Fig. 5 is employed.

It will be observed from an inspection of Figs. 1, 3 and 6 that when the bearings 12 are received in the openings in the plate A, there is an interlocking between said parts and that any pressure exerted to separate the plates longitudinally is not borne by the locking fingers 15 but is borne by the pivot bearings 12 and by the plate A, whereas the interlocking flanges 11 and grooves 7 prevent lateral or sidewise displacement of the plates one relatively to the other and none of

the lateral strain on the parts is borne by the fingers 15.

From the foregoing description it will be seen that I have provided a simple, cheap fastening device which may be made of three pieces; that the plates A and B may each be struck up from a single piece of sheet metal; that the clasp may be made thin and compact and may be curved, as shown in Fig. 1, to fit that portion of the body or the article to which it is applied; that there are no sharp edges or projections to catch into garments, such as ladies' dresses, and tear them; that even the finger piece for releasing the lock is below the surface of the locking plate that carries it when said finger piece is in the locking position and that there is no liability of the finger piece being accidentally displaced or moved to the releasing position; that the locking plates are securely and positively united when locked together; that the rear or contact side of the clasp presents an even surface for contact with the body of the wearer; that there are no levers or projecting parts of the clasp which bear upon or are forced against the body of the wearer of the clasp at any time, either in locking or releasing the clasp or while the clasp is maintained locked in place; that the only relative movement of the plates afforded when they are locked together, is a pivotal movement of the plate B around the pivots or locking fingers 15 to allow a slight relative movement of the plates in order that they may conform to that portion of the body of the wearer to which the clasp is applied and so as not to unduly press thereon with an unresisting pressure; that such relative movement as is afforded the plates can in no way effect a release of the locking means; that pressure or strain exerted on the members of the clasp, no matter in what direction, is ineffective to disconnect them; that the members of the clasp can only be disconnected by turning the locking device on its pivots; that this can be readily done since none of the pressure on the locked plates is borne by the locking device, and that the parts can be readily assembled by merely placing the plate B of the clasp on top of the plate A and inserting the bearing 12 through an opening in the plate A from above and locking them together in the manner hereinbefore described, and that it is unnecessary to connect the parts together by inserting one member through the other from beneath or next to the wearer, which would render the clasp difficult to manipulate.

The foregoing and other advantages are presented by a clasp or fastening device embodying my invention, and while I have described with considerable detail one form of device embodying my invention, I desire to have it understood that many changes in

construction may be made without departing from the spirit of my invention.

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

5 1. A clasp comprising two separable members that are adapted to be brought into interlocking engagement, one member formed with a bearing adapted to limit the lateral movement of either, and an independently
10 formed lock mounted in said bearing in which it is adapted to be turned and in which it is adapted to be moved transversely to positively engage the other member when the two members are brought into interlocking engagement.

2. A clasp comprising two separable members that are adapted to be brought into interlocking engagement, one member having a depending bearing to limit lateral
20 movement of either of the two members, and expansible locking fingers separate from either of said separable members but carried by one of them and adapted to engage with the other member when the separable
25 members are brought into interlocking engagement.

3. A clasp comprising two separable members that are adapted to be brought into interlocking engagement, expansible locking
30 fingers separate from, but carried in bearings formed on one of said separable members and adapted to engage and interlock with the other member, said one member formed with a cam for effecting the expansion and contraction of said fingers.

4. A clasp comprising two interlocking members, expansible locking fingers carried by one of said members which is adapted to hook and interlock the fingers with the other
40 member, a finger piece connected to said fingers, the member carrying the locking fingers formed with means for effecting the expansion and contraction of the fingers when the finger-piece is actuated and while
45 the two members are hooked together.

5. A clasp comprising two interlocking members one formed with a bolt bearing, a locking bolt carried in said bearing and adapted to interlock with the other member
50 to unite the two, a swinging finger-piece con-

nected to the bolt, the member carrying the bolt formed with a cam for effecting the movement of the bolt when the finger-piece is actuated.

6. A clasp comprising two members adapted to be interlocked, one formed on opposite
55 sides with channels or grooves, the other member formed with bearings, transversely movable fingers in said bearings and adapted to lock the two members when in interlocking engagement.

7. A clasp comprising two members adapted to be interlocked, one formed on opposite sides with channels or grooves, the other
60 member formed with bearings and with cam surfaces, fingers in said bearings and formed with a finger-piece adapted to coact with said cam surfaces for withdrawing the fingers.

8. A clasp comprising two interlocking members one formed with an opening and a
70 central depression, the other member formed with bearings and cam surfaces, fingers mounted in said bearings and formed with a finger-piece adapted to coact with said cam for withdrawing said fingers.

9. A clasp comprising two interlocking members one formed with a series of openings and a central depression, the other
75 member formed with a depending bearing and cam surfaces, fingers mounted in said bearings and formed with a finger-piece adapted to coact with said cam for withdrawing said fingers.

10. A clasp comprising two interlocking members, one formed with a series of transverse openings, a central depression and a longitudinal channel or groove on opposite
85 sides, the other member formed with depending bearings and cam surfaces, fingers mounted in said bearings and formed with a finger-piece adapted to coact with said cam for withdrawing said fingers.

Signed at Waterbury, in the county of New Haven and State of Connecticut this
4 day of February A. D. 1908.

ALBERT D. FIELD.

Witnesses:

LAWRENCE L. LEWIS,
MARY R. E. LEE.