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3,400,435

FASTENING DEVICE

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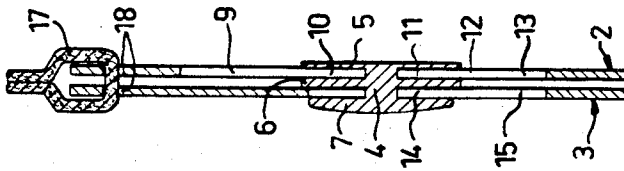


FIG. 3

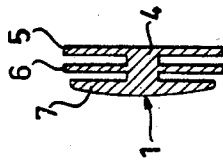


FIG. 2

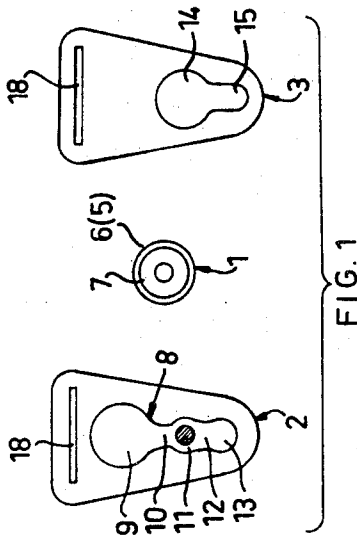


FIG. 1

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3,400,435

FASTENING DEVICE

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4 Claims. (Cl. 24—247)

ABSTRACT OF THE DISCLOSURE

A fastening device preferably for use with garters to secure the stockings thereto, comprising three individual members, viz. a locking member including a central pin and three spaced disks mounted thereon, a holder member with a transverse slot for securing said holder member to a garter and with a longitudinal opening including a portion of large area and two constricted portions with an intermediary wide portion, and an engagement member with a transverse slot for securing the engagement member to the garter and with a keyhole opening. In the assembled state of the fastening device the locking member is inserted with the central pin through the wide portion of the keyhole opening in the engagement member and moved to the narrow portion of said opening so that the locking member will be received by the engagement member with two of its disks interleaved with said engagement member, while the third disk or head of the locking member with the stocking margin placed thereon is inserted in the large area portion of the longitudinal opening in the holder member and moved past the constricted portions of said longitudinal opening so as to be received in an end portion of said opening which surrounds the pin with some clearance.

The invention has for its object to provide a fastening device which compared to previously known fastening devices for the purpose indicated is of considerably reduced thickness, of simple use and of reliable function.

The principal characteristic features of the fastening device according to the invention reside in that the locking member is movably associated with a holder member which like the engagement member is made of a relatively rigid sheet material and which is provided with a longitudinal opening for receiving the pin element of the locking member which projects beyond the abutment member and has its end provided with a projection, the surface of the abutment member facing away from the head being arranged to abut one side of the edge portions defining the opening in the holder member, while the surface of the projection facing the head-carrying end of the locking member is arranged to abut the other side of said edge portions, and that the opening in the holder member has a portion that in the assembled state of the fastening device is opposite the enlarged portion of the opening in the engagement member which conforms to the head of the locking member, an end portion which in the assembled state of the fastening device is opposite the outer end of the slot-shaped portion of the engagement member, and a constriction located between these portions and having a lateral extension that at the displacement of the locking member in the opening of the holder member opposes said displacement of the locking member past said constriction by engaging the pin element passing through said opening and serves as a fixation means for the locking member.

These features of the invention and the advantages gained thereby will become apparent from the following description in which reference is made to the accom-

panying drawing illustrating an embodiment, chosen by way of example, of the fastening device.

In the drawing:

FIGURE 1 is an exploded plan view of the constituent details of the device;

FIGURE 2 is a section on a larger scale of the locking member of the device;

FIGURE 3 is a section likewise on a larger scale of the device as seen from the side.

In the drawing, 1 denotes the locking member, 2 the holder member and 3 the engagement member of the fastening device. The locking member 1 comprises a central pin 4 carrying three spaced disks 5, 6 and 7. In the preferred embodiment shown the central disk which is to serve as an abutment is equally large as one outer disk 5 while the disk 7 constituting the head of the locking member is somewhat smaller than the other two disks. The holder member 2 which like the engagement member 3 is a thin disk or plate has an opening 8 substantially extending throughout the length of the member. At one end the opening is enlarged at 9 into a shape corresponding to that of the outer disk 5 and in the preferred embodiment also to that of the central disk 6 of the locking member 1. The enlarged portion merges with a first constriction 10 of smaller transverse extension than the section of the locking member 1 so that the pin can be urged past said first constriction only by the exertion of force thanks to a certain resilience of the material constituting the holder member. The first constriction 10 merges with a slightly wider portion 11 in which the pin 4 of the locking member 1 can run freely, and the last-mentioned portion 11 merges with a second constriction 12 past which the pin 4 can be moved against a certain resistance to an end portion 13 which surrounds the pin 4 with some clearance. The engagement member 3 has an opening with a portion 14 conforming to the disk 7 constituting the head of the locking member, and in the assembled state of the device said portion 14 is opposite the wider portion 11 located between the constrictions 10 and 12 of the holder member. The portion 14 of the opening in the engagement member 3 merges into a slot-shaped portion 15 extending toward the extreme end of said engagement member and having a width slightly exceeding the cross section of the pin 4 of the locking member 1 and the end 16 of said slot-shaped portion being located in the assembled state of the parts opposite the end portion 13 of the opening 8 in the holder member.

Upon assembly of the parts constituting the fastening device the garter 17 is passed through the slots 18 at the inner ends of the holder portion and engagement portion, respectively, whereupon the two parts of the garter 17 are interconnected. The locking member is mounted to the holder member 2 in that the outer disk 5 is passed through the widened inner portion 9 of the opening in the holder member 2 and is moved toward the other end portion 13 of said opening with the outer disk 5 and the central disk 6 situated each on one side of the holder member plate so that the pin of the locking member penetrates through the first constriction 10 into the wider portion 11. In this position the fastening device is ready for use. When a stocking is to be fastened the edge portion thereof is placed over the holder member 2 and the locking member head 7 slightly projecting therefrom and located opposite the portion 14 of the opening in the engagement member 3, whereupon the edges defining said portion 14 are pressed down over the head so that the intermediary stocking material will be stretched over the head 7. The locking member 1 is then moved in the direction of the slot 15 and the stocking material will thereby be clamped between the underside of the head 7 and the upper side of the engagement

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member, between the pin 4 of the locking member 1 and the edges of the slot 15, and between the underside of the engagement member and the upper side of the central disk 6 which serves as an abutment. At the displacement of the locking member 1 the pin 4 will go past the second constriction 12 of the opening in the holder member 2 and enter into the end portion 13 of said opening where it is fixed by the resistance that the restricted portion 12 offers against a displacement.

While the invention has been described in a preferred embodiment elucidated in the foregoing and shown in the accompanying drawing it is readily understood by those skilled in the art that various modifications can be resorted to within the scope of the appended claims.

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

1. A fastening device preferably for use with garters to secure the stockings thereto, comprising a locking member with a head having an inner engagement surface and connected by an intermediary pin element to means serving as an abutment and having an engagement surface facing the first-mentioned engagement surface, said locking member being arranged to cooperate with an opening which is provided in an engagement member associated with the garter and which has an enlarged portion of greater area than the head but of smaller area than the abutment member, and a slot-shaped portion interconnected with and extending outwardly from the first-mentioned enlarged portion of said opening and having a width substantially corresponding to the transverse extension of the pin element of the locking member, wherein the locking member is movably associated with a holder member which like the engagement member is made of a relatively rigid sheet material and which is provided with a longitudinal opening for receiving the pin element of the locking member which projects beyond the abutment member and has its end provided with a projection, the surface of the abutment member facing away from the head being arranged to abut one side of the edge portions defining the opening in the holder member, while the surface of the projection facing the head-carrying end of the locking member is arranged to abut the other side of said edge portions, and the opening in the holder member has a portion that in the assembled state of the fastening device is opposite the enlarged portion of the opening in the engagement member which conforms to the head of the locking member, an end por-

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tion which in the assembled state of the fastening device is opposite the outer end of the slot-shaped portion of the engagement member, and a constriction located between these portions and having a lateral extension that at the displacement of the locking member in the opening of the holder member opposes said displacement of the locking member past said constriction by engaging the pin element passing through said opening and serves as a fixation means for the locking member.

2. A fastening device in accordance with claim 1, wherein the opening of the holder member has a further constriction beyond that portion of the opening which is located opposite the widened portion of the engagement member, said further constriction merging with a widened portion having a shape permitting the end projection of the locking member to be passed therethrough for mounting of the locking member to the holder member, and said constriction has a lateral extension so dimensioned in relation to the pin element of the locking member that when the locking member is moved past said constriction the pin element of the locking member engages said constriction whereby displacement of the locking member is counteracted.

3. A fastening device in accordance with claim 1, wherein both the head, the means serving as an abutment and the end projection are constituted by very thin disks which are arranged on the pin element of the locking member spaced apart distances substantially conforming to the thickness of the holder member and the engagement member which are also of insignificant thickness.

4. A fastening device in accordance with claim 1, wherein the constituent parts of the fastening device are made from synthetic plastics, metal or rubber material.

References Cited

UNITED STATES PATENTS

359,616	3/1887	Kyle	24—247
542,805	7/1895	Pilkington	24—247
1,424,801	8/1922	Byers	24—243
2,745,163	5/1956	Van Buren	24—246

FOREIGN PATENTS

368,628	10/1906	France.
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