No. 698,571. Patented Apr. 29, 1902.

C. E. SMITH.

FASTENING DEVICE.

(Application filed Feb. 19, 1902.

(No Model.)

Fig. 1.

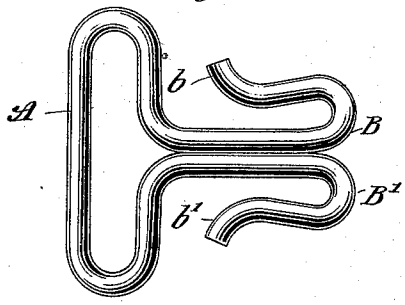


Fig. 2.

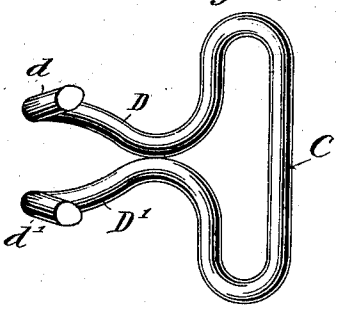


Fig. 3.

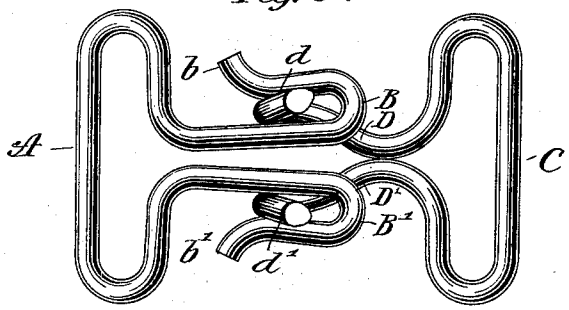


Fig. 4.

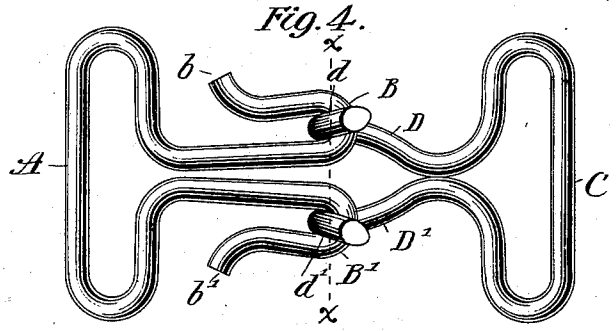
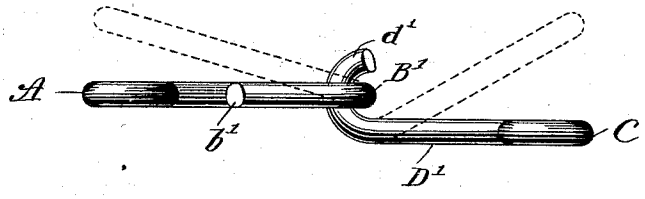


Fig. 5.



Witnesses

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CLARENCE E. SMITH, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO THE NORTH & JUDD MANUFACTURING COMPANY, OF NEW BRITAIN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

FASTENING DEVICE.

SPECIFICATION forming part of Letters Patent No. 698,571, dated April 29, 1902.

Application filed February 19, 1902. Serial No. 94,718. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE E. SMITH, a citizen of the United States, residing at New Britain, county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Fastening Devices, of which the following is a full, clear, and exact description.

My invention relates to a fastening device, and while especially applicable for use on horse-clothing it may be used to advantage as applied to articles of personal wearing-apparel—*e. g.*, belts.

Among the main objects of my invention are simplicity and durability of construction, effectiveness, and ease of operation.

The purpose of the invention is mainly to provide a simple and inexpensive and effective fastening formed of two parts, one of which may be engaged with the other in such manner that both are held from accidental disengagement.

In the drawings, Figure 1 is an elevation of one of the members. Fig. 2 is an elevation of the other member. Fig. 3 is an elevation of the two members shown in Figs. 1 and 2, said members appearing in the position in which they are first placed while connecting them together. Fig. 4 is an elevation showing the two members connected with one another. Fig. 5 is an edge view of the members as shown in Fig. 4.

The fastening device comprises two members, each of which is in the form of a hook having a plurality of hook-bills.

A is a loop or other suitable means to secure the one member to the garment. This member includes, besides the loop A, the hooks B B′, having the outwardly-extending bills *b b′*. The bends are made so that these bills are located in practically the plane of the shank of the hook and are oppositely arranged, as clearly seen in the drawings. The extremities of the bills are preferably bent outwardly, as shown, to facilitate the engaging of the parts in the manner hereinafter described. The shanks of the bills *b b′* lie closely together, but are preferably not secured together, and consequently they may spring apart for the purpose hereinafter described.

C is a loop or other suitable means for fastening the other member to the garment, and the other member comprises not only the eye or loop C, but also the peculiarly-shaped hooks D D′. The hook-shanks D D′ are bent inwardly and then away from each other, as shown in Fig. 2, and the ends are not only turned up to form the bills *d d′*, but they are also turned inwardly before being turned into the bills, so as to form a compound curve, one of said curves lying in a horizontal plane, while the plane determined by the bill of each hook is perpendicular to said horizontal plane, or practically so.

By the double arrangement of hooks upon each of the members and by forming the member A of spring metal and proportioning the space between the bills *d d′* properly with respect to the spaces within the hooks B B′ when the parts are being placed together the hooks D D′ tend to separate the hooks B B′, while the tendency of the bills *d d′* is also to separate the bills *b b′* away from their shanks B B′. This action produces a tension between the parts, which tends to prevent any loose play and aids in holding the parts together. By extending the hook-bills *d d′* outwardly away from each other at an angle, as seen in the drawings, these bills *d d′* act as a wedge. Consequently the members cannot be disengaged until they are swung upon the axis conventionally illustrated by the line X X, Fig. 4. This swinging of one member upon the other upon this axis causes the hook-bills *d d′* to gradually become freed from engagement with the hooks B B′ by the spreading action of the hooks *d d′* and by the compressing action of the hooks B B′.

The parts are assembled by placing them in the position shown in Fig. 3, in which the bills *d d′* of the hooks on one member lie adjacent the entrance-passage into the hooks B B′ upon the other member. The space between the bills *b b′* is less than the space between the hooks on the other member. Consequently the shanks yield sufficiently to let

the hooks D D′ get past the obstruction presented by the hook-bills *b b′* and slide into the holding-pocket between said hooks adjacent to the forward end of the member A. The narrowness of the entrance-passage relatively to the holding-pocket serves as a further means of preventing the accidental disengagement of the hooks. When the parts are in the position as shown in Fig. 3, it is merely necessary to pull upon the loops A C until the hooks B B′ D D′ are snapped into the engagement shown in Fig. 4, wherein for the reasons hereinbefore stated accidental disengagement is practically impossible.

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

1. In a fastening device in combination, a pair of hook members one of said members providing two oppositely-arranged hooks having free ends and lying in the same plane, the width of the entrance-passage between said hooks being less than the width of the holding-pocket within said hooks, the other member carrying two hooks lying in different planes from the plane of the fastening device and from each other, the said hooks being offset and inclined at an angle to produce an opening-wedge.

2. In a fastening device in combination, a pair of hook members each of said members being provided with a pair of free-ended hooks, each of the hook-bills on one member being located in substantially the same plane relatively to the shank portion thereof, the width of the entrance-passage between said hooks being less than the width of the holding-pocket within said hooks, the other of said members being provided with a pair of hook-bills projecting laterally out of the plane common to the hook-shanks and inclining away from each other to form an opening-wedge to the other member.

3. A fastening device comprising two hook members adapted to coact with each other, one of said members having shanks, tending to spring toward each other, curved outwardly and the ends bent back, the width of the entrance-passage between said hooks being less than the width of the holding-pocket within said hooks, the other of said members having shanks provided with free-ended bills, curved outwardly and the ends bent up and offset from the common plane of said shanks, so as to make it necessary to separate the ends of said first member when disengaging the two.

4. A fastening device comprising a pair of hook members adapted to coact with each other, one of said members having shanks curved outwardly and the ends bent back, the width of the entrance-passage between said hooks being less than the width of the holding-pocket within said hooks, the other of said members having shanks whose ends are bent upwardly and outwardly, the two members being so proportioned that the ends of the first member are caused to be sprung outwardly when drawing the two members together and then will spring back to securely lock the two together, the ends of each pair of hooks being free.

Signed at New Britain, Connecticut, this 17th day of February, 1902.

CLARENCE E. SMITH.

Witnesses:

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