F. S. CARR.

FASTENER.

APPLICATION FILED APR. 2, 1921.

1,433,786.

Patented Oct. 31, 1922.

Fig. 1.

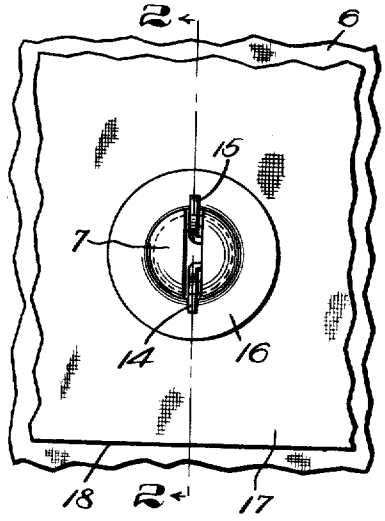


Fig. 2.

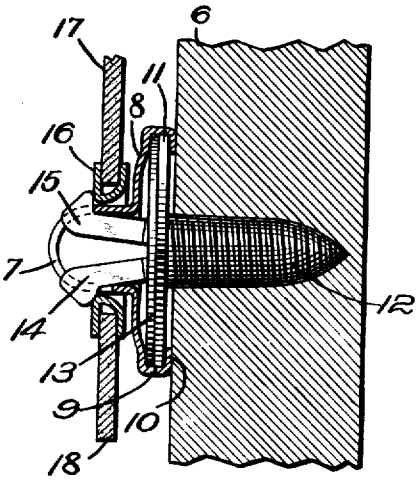


Fig. 3

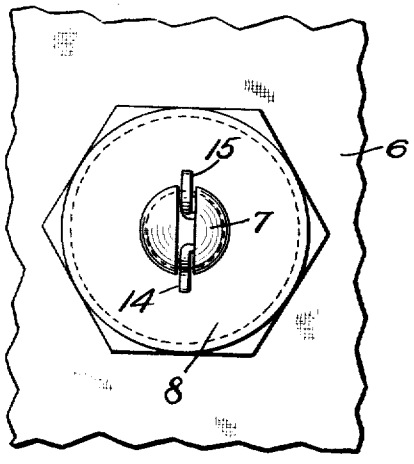


Fig. 4.

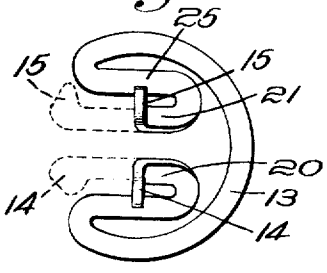
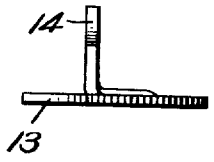


Fig. 5.



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1,433,786

UNITED STATES PATENT OFFICE.

FRED S. CARR, OF NEWTON, MASSACHUSETTS, ASSIGNOR TO CARR FASTENER COMPANY, OF CAMBRIDGE, MASSACHUSETTS, A CORPORATION OF MAINE.

FASTENER.

Application filed April 2, 1921. Serial No. 457,968.

To all whom it may concern:

Be it known that I, FRED S. CARR, a citizen of the United States, and resident of Newton, in the county of Middlesex and Commonwealth of Massachusetts, have invented an Improvement in Fasteners, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention pertains to improvements in separable fasteners, and more particularly, though not exclusively, to improvements in separable fasteners of the three-side lock type. It is among the objects of the invention to provide an improved fastener wherein the stud member is resilient, which is of superior holding power and of simple and rugged construction.

Referring to the drawings, which show a preferred embodiment of my invention:—

Figure 1 is a front elevation of a preferred form of fastener and its mounting;

Fig. 2 is a section on the line 2—2 of Fig. 1;

Fig. 3 is a front elevation of the preferred form of stud member;

Fig. 4 is a front elevation of the preferred form of spring used in the stud member; and

Fig. 5 is a side elevation of the spring illustrated in Fig. 4.

Referring to the drawings and to the preferred form of my invention selected for illustrative purposes, I have shown a stud support 6 which, where the fastener is used for securing automobile curtains, may be the body or any other appropriate part of the automobile. The preferred form of stud illustrated includes a hollow body portion 7 having a base 8 provided with a rim 9 and base flange 10. Between the base 8 and the base flange 10 may be secured the head 11 of a stud screw 12, and also a spring plate 13 which in the preferred form of my invention is formed of brass or other suitable material providing resiliency and having punched therefrom upstanding resilient socket-engaging parts 14, 15, these parts having their ends projecting through a slot or other suitable aperture or apertures in the hollow body portion 7. In the preferred form of my invention, the hollow body portion 7 is slotted entirely across its end. The preferred form of resilient socket-engaging means illustrated includes a part 14 which is rounded on its lower side to present a sloping shoulder and an opposite socket-engaging part 15 which, as illustrated, preferably presents an abrupt socket-engaging shoulder. The outer ends of the parts 14 and 15 are preferably rounded or sloped so that a socket, which may be a simple socket or grommet 16, may be readily slipped on over the hollow body portion 7, pressing the resilient portions 14, 15 toward or into the stud body during the engaging operation. The socket or grommet 16 may be secured to any suitable carrying medium typified by the fabric 17 which, as illustrated, represents a portion of an automobile curtain, having its lower edge at 18. After the grommet or socket has been completely engaged with the stud, the parts assume the position best shown in Fig. 2. The abrupt shoulder on the part 15 will prevent separation of stud and socket occasioned by any ordinary strain exerted against that portion of the fabric 17 which lies above the stud. On the other hand, the socket may be readily separated from the stud by an outward pull on that portion of the curtain or fabric which lies below the stud, as by a pull on the edge 18. The spring plate 13 may be, as illustrated, round in contour and have struck up from it the parts 14 and 15, as heretofore described. A considerable portion of the resiliency may come from portions of the spring which lie generally in the plane of the spring plate 13. To permit free play of the resilient portions 20 and 21 of the spring plate, the stud base 8 is preferably somewhat spaced away from the outer face of the spring plate, while the outer marginal portion of the spring plate and the outer marginal portion of the screw head 11 may be gripped between the stud base flange 10 and the outer marginal portion of the stud base 8. To facilitate screwing of the stud screw 12 into the carrier 6, the head 11 of the stud is preferably of non-circular shape, as illustrated hexagonal, while the rim 9 may conveniently be shaped to fit the periphery of the stud head, so as to preclude turning of the stud proper relative to its screw and so as to permit easy application of a wrench to the rim 9.

While I have shown and described a preferred form of one embodiment of my invention, it will be understood that changes

involving omission, substitution, alteration and reversal of parts, and even changes in the mode of operation, may be made without departing from the scope of my invention, which is best defined in the following claims.

Claims:

1. A resilient stud for separable fasteners comprising a casing, a spring metal plate in said casing, and a resiliently movable portion integral with and upstanding from said plate and projecting through said casing.

2. A resilient stud for separable fasteners comprising a casing, a spring metal plate in said casing, and resiliently movable portions integral with and upstanding from said plate and projecting through said casing.

3. A resilient stud for separable fasteners comprising a casing, a spring metal plate in said casing, and a resiliently movable portion upstanding from said plate and projecting through said casing, said resiliently movable portion presenting a rounded shoulder exterior to said casing and toward the inner end of said casing.

4. A resilient stud for separable fasteners comprising a casing, a spring metal plate in said casing, and resiliently movable portions upstanding from said plate and projecting through said casing, one of said resiliently movable portions presenting a relatively abrupt shoulder toward the inner end of said casing and the other of said resiliently movable portions presenting a less abrupt shoulder toward the inner end of said casing.

5. A resilient stud for separable fasteners comprising a casing having a base, a spring plate having resilient portions beneath said base and resiliently movable jaw means integral with and upstanding from said base and projecting through said casing, said stud base spaced away from the resilient portions of said spring plate.

6. A resilient stud for separable fasteners comprising a casing having a base, a spring plate having resilient portions beneath said base and resiliently movable jaw means upstanding from said base and projecting through said casing, said stud base spaced away from the resilient portions of said spring plate, and said stud base gripping the peripheral portions of said spring plate against the head of a stud-securing screw.

7. A spring for the resilient stud of a separable fastener formed from a single sheet of metal and presenting a spring plate having two upstanding resiliently movable portions.

8. A spring for the resilient stud of a separable fastener formed from a single sheet of metal and presenting a spring plate having two oppositely disposed upstanding resiliently movable portions.

9. A spring for the resilient stud of a separable fastener formed from a single sheet of metal and presenting a spring plate having two upstanding resiliently movable portions, said spring plate slotted adjacent the juncture therewith of said upstanding portions to provide increased resiliency of said upstanding portions.

In testimony whereof, I have signed my name to this specification.

FRED S. CARR.

Certificate of Correction.

It is hereby certified that in Letters Patent No. 1,433,786, granted October 31, 1922, upon the application of Fred S. Carr, of Newton, Massachusetts, for an improvement in "Fasteners," an error appears in the printed specification requiring correction as follows: Page 2, line 22, claim 3, before the word "upstanding" insert the words *integral with 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 5th day of December, A. D., 1922.

[SEAL.] KARL FENNING,

Acting Commissioner of Patents.