

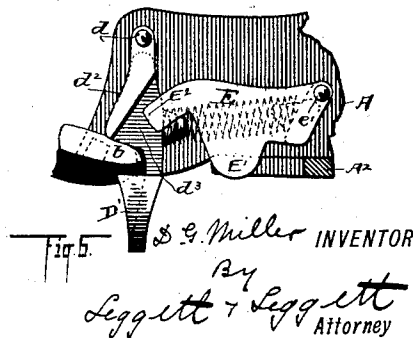
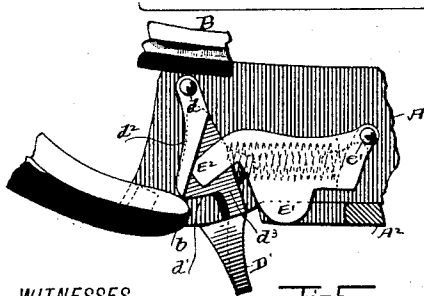
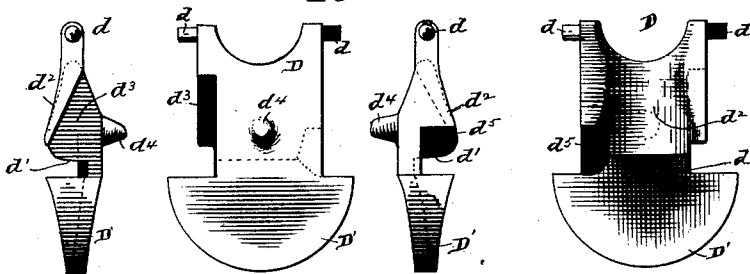
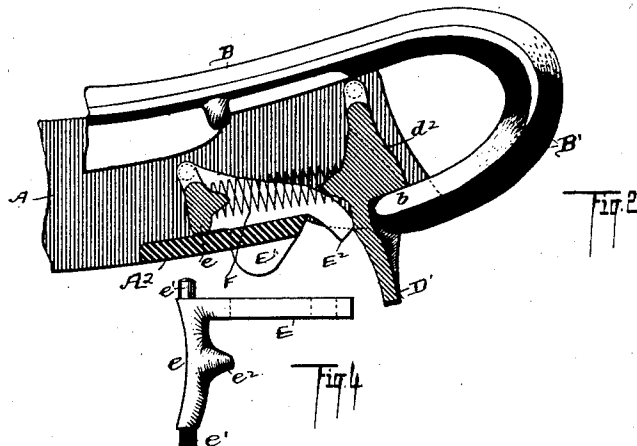
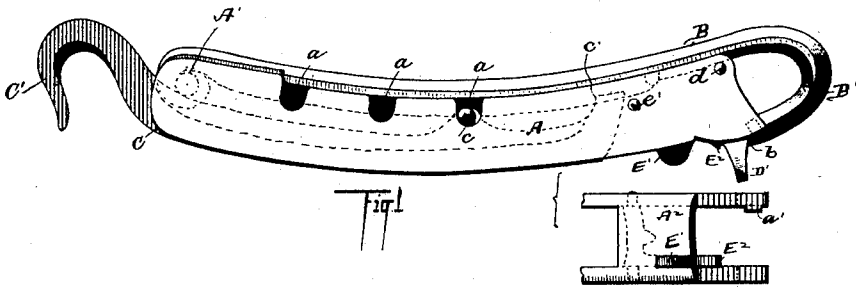
(No Model.)

D. G. MILLER.


HAME FASTENER.

No. 367,652.

Patented Aug. 2, 1887.



WITNESSES
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DAVID G. MILLER, OF CLEVELAND, OHIO.

HAME-FASTENER.

SPECIFICATION forming part of Letters Patent No. 367,652, dated August 2, 1887.

Application filed December 6, 1886. Serial No. 220,822. (No model.)

To all whom it may concern:

Be it known that I, DAVID G. MILLER, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Hame-Fasteners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in hame-fasteners in which a spring-catch is employed for locking the device with a spring-actuated tumbler for locking the spring-catch, the same spring being made to operate the catch and tumbler, and the two latter being made to tilt in different directions and in given order, to the end that a cheap, simple, and convenient hame-fastener is had that is absolutely secure as against being unfastened by accident.

A hame-fastener, to be of any commercial value, must be of such construction that it can be easily and quickly manipulated by hand, otherwise the old-time hame-strap would be likely to remain in general use. In view of the fact that in driving over rough roads and pavements there is imparted to the tongue of the vehicle an almost endless succession of jerky movements that are likely to bring the neck-yoke or pole straps or chain in frequent and violent contact with the hame-fastener, such blows being given at about all possible angles, and that the horse in rubbing is likely to press the hame-fastener in any direction, it is not surprising that the various hame-fasteners heretofore devised by myself and others should in practice be found unsafe, by reason of such devices being sometimes unfastened by accident. In view of these difficulties I have therefore devised a hame-fastener that is provided with a double-locking device—to wit, a spring-catch and a spring-actuated tumbler—the movement of these two parts in unlocking the hame-fastener being substantially at right angles to each other, with the arrangement such that the tumbler must first be depressed and held, after which the spring-catch is moved laterally and held to unfasten the device, these movements, and in the required order, being quickly and easily made with the fingers, but are of such a nature that they could not occur accidentally.

In the accompanying drawings, Figure 1 is a side elevation and detached bottom plan of a hame-fastener embodying my invention. Fig. 2 is an elevation in longitudinal section through the center of the hame-fastener. Fig. 3 shows front and rear elevations of edge views of the catch. Fig. 4 is a side elevation of the tumbler. Figs. 5 and 6 are side elevations, partly in section, showing, respectively, different working positions of the tumbler and catch.

A represents the casing of the device, the two sides of which are connected by cross-bars A' and A². The former, being round in cross-section, serves as a pivot for the link B, the end of the latter being bent around the bar, as shown in dotted lines in Fig. 1. The link C has laterally-projecting lugs c, set in line, that are adapted to fit in the different notches a of the casing, by means of which the device can be lengthened or shortened. The links are provided with hooks B' and C' for engaging the hames. The inner end of the link C extends some distance beyond the lugs c, and at c' is engaged by the link B and held in the position shown in Fig. 1 when the link B is in its closed position, all of which has been more fully described in a former application for Letters Patent made by me.

D is a catch for fastening the hook B', and E is a tumbler for locking the catch. The catch has laterally-projecting lugs d, that enter holes in the respective sides of the casing, forming a pivotal bearing for the catch, by means of which the catch may swing lengthwise of the casing. The catch has a thumb-piece, D', extending below the casing, and has a shoulder, d', for engaging the point b of the hook B' in securing the same. The catch has also an incline, d², leading to the shoulder d', by means of which the catch is snubbed back by the point of the hook when the latter is being closed. The tumbler E consists of a flat arm extending lengthwise of the casing and lying flatwise against the inner one side of the casing. This arm has a thumb-piece, E', extending below the casing, and the extreme end of the arm, at E', is made to abut the thumb-piece D' of the catch for locking the latter when the parts are in the closed position shown in Fig. 2. The catch has a recess, d³, that receives the point E' in turning back the catch when the tumbler is depressed. The tumbler

has a cross-bar, *e*, terminating in lugs *e'*, the latter being made to enter holes in the casing and forming a pivotal bearing in the tumbler. The cross-bar *e*, below the line of the pivotal bearing, has a teat, *e'*, and the catch has a teat, *d'*, the two teats presenting toward each other for entering the respective ends of the spring *F*, to hold the latter in position. The spring is compressed in turning back the catch to unfasten the hook, and is compressed in depressing the tumbler to unlock the catch. The spring is of light wire, may be compressed by the fingers, and removed or placed in position. The recoil of the spring presses the catch toward the hook-point *b*, and presses the point *E'* to an engagement with the thumb-piece *D'*. In attaching the hame-fastener, the hooks *B'* and *C'* having been hooked into the hame-bails, the tumbler is pressed in to unlock the catch, after which the hook *B'* is pressed down until the point *b* forces back the catch, when the return of the catch locks the device. In unfastening the device the tumbler is first pressed inward and held, after which the catch is swung away from the hook-point, releasing the latter. The thumb-pieces of the catch and tumbler being located in close proximity and moving substantially at right angles to each other, and the tumbler having first to be depressed and held while the catch is being moved back to release the hook, it is not probable that any accidental force brought to bear would cause such a complication of movements, and so timed, as to unfasten the device. The device, however, is quickly and easily manipulated by the fingers, and it is believed has all essential features of a safe and desirable hame-fastener.

A lug, *a'*, made on the inner face of one side of the casing, fits in a corresponding recess, *d'*, of the catch, the said lug forming a stop to limit the outward movement of the catch when the hook *B'* is open, the recess *d'* allowing the catch to swing outward far enough to engage and lock the hook in the closed position of the latter.

What I claim is—

1. In a hame-fastener, the combination, with a suitable casing, links pivoted to the casing, said links having hooks at their respective ends for engaging the hames, said links being made to overlap each other, so that the outer link holds the inner link in position, the parts being arranged substantially as indicated, of a spring-catch for locking the outer link, a spring-actuated tumbler for locking the catch, and a spring made to engage and hold in their closed position both catch and tumbler, all substantially as set forth.

2. In a hame-fastener, the combination, with a casing and links pivoted to the casing, substantially as indicated, of a spring-catch for locking the links, and a spring-actuated tumbler for locking the catch, the catch and tumbler being pivoted to the casing, substantially as shown, and made to move in different directions in unfastening the links, substantially as and for the purpose set forth.

3. The combination, with a casing and links pivoted to the casing, the latter having hook ends and arranged substantially as indicated, of a spring-catch, the same having a shoulder for locking the outer link, an incline for forcing back the catch by engaging the end of the outer link, and a tumbler for locking the catch, the tumbler and catch being pivoted to the casing and made to swing in different directions, substantially as shown, in unfastening the links, substantially as set forth.

4. The combination, with a casing and hook-links pivoted to the casing and arranged substantially as indicated, of a catch for locking the outer link, a tumbler for locking the catch, and a stop made on the casing to limit the outward movement of the catch, all substantially as and for the purpose set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 25th day of October, 1886.

DAVID G. MILLER.

Witnesses:

CHAS. H. DORER,
ALBERT E. LYNCH.