Jan. 29, 1957 G. P. HAMMOND 2,779,617

GATE LOCK

Filed April 11, 1955

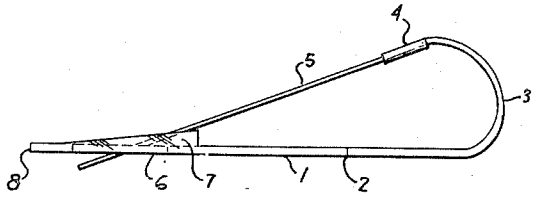


FIG. 1

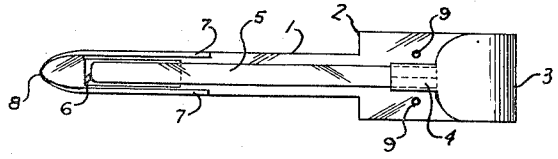


FIG. 2

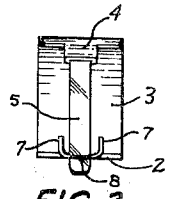


FIG. 3

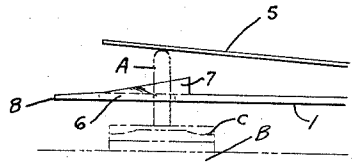


FIG. 4

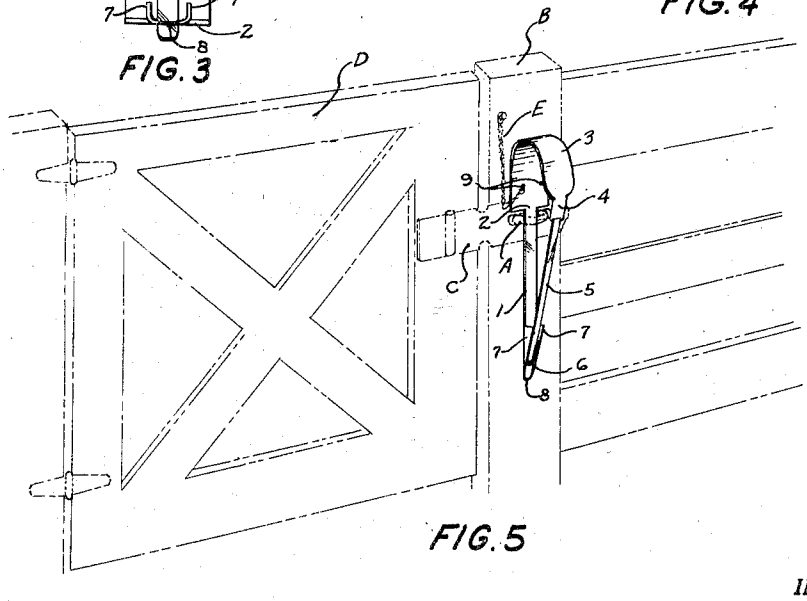


FIG. 5

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GATE LOCK

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3 Claims. (Cl. 292—288)

Generally speaking, the present invention relates to the gate-closure art and, more particularly, pertains to an improved gate lock, adapted for use with a hasp-and-staple fastener, which cannot be removed from the staple of said fastener by a farm animal but can easily be removed and replaced by a person.

An important problem to those who keep livestock in pens, barns, or fields is the necessity of providing gates and doors (herein referred to in general as gates) with rugged, inexpensive closure means which may be readily opened by a person, but not by an animal. Ordinarily a gate is provided with a hasp-and-staple fastener, which requires the placement of some type of retaining lock in the staple to keep the hasp in position thereon. Pegs, spikes, horseshoes, and odd bits of scrap wood or metal are often used for this purpose, but are easily dislodged by an active and persistent animal. Padlocks require the person opening the gate to have a key and may be made inoperative from corrosion in a short time—initial and replacement expense is high. Thus all such prior gate locks, known to me, have suffered from numerous disadvantages.

Generically speaking, the gate lock of the present invention comprises a longitudinal engagement member insertible through the staple of a hasp-and-staple fastener, having a first end and a second, free, end; a generally U-shaped base member having a first arm continuous with the first end of said engagement member and forming a shoulder retainable against said staple (being wider than the diameter of the staple), and having a second arm spaced from said first arm in an outward (from the gate surface) direction, said second arm having a terminal connection portion; a longitudinal locking strip member (lying outside the staple) having a first end attached to said terminal connection portion, and having a second, free, end engageable with said engagement member near the latter's second end—said engagement member usually having an aperture therein spaced from said first end, through which said locking strip member passes when in locked position; and flange means attached to said engagement member (usually adjacent said aperture), projecting in said outward direction—when in said locked position said locking strip member cooperates with said flange means to retain said engagement member in said staple against (an animal's) upward or outward force on the gate lock; of said locking strip and base members, one of said members forms a spring biasing said locking strip member toward said engagement member, and thus allows the manual separation of said locking strip member from said engagement member to then allow the second end of the engagement member to be passed through the staple to unlock the gate. When the gate lock is locked in position on the staple, an animal's forcing the lock upward results in the staple's being forced, by the locking strip member, against the flange means. In one generic form of the present invention, said base member forms the spring and the locking strip member is rigid; in a second generic form, the locking strip member forms the spring. A chain may be attached to the base member to secure the gate lock to the gate when the lock is not in use; in a preferred form of the gate lock, the base member is provided with chain-attachment means.

In a preferred form of the present invention, said flange means is a pair of laterally spaced flanges whose upper edges (those likely to encounter the staple) are bluff; the flanges are tapered downward in the direction of the second end of the engagement member, and the aperture is spaced from said second end, for convenience in removing the lock from the stable and to prevent injury to an animal investigating the lock.

From the above description of the basic form and various preferred forms of the present invention, it will be apparent to those skilled in the art that the hereinbefore-mentioned disadvantages of prior gate locks are virtually entirely eliminated and overcome in and through the use of the present invention.

The present invention is simple, inexpensive, rugged, and non-dislodgable by an animal, and will remain operative even after extensive damage and corrosion.

With the above points in mind, it is an object of the present invention to provide a gate lock, cooperable with a hasp-and-staple fastener to form an animal-proof gate closure.

It is also an object of the present invention to provide a gate lock, as provided in the above object, which may be quickly and easily opened by a person, which is of simple, rugged construction, and which is unlikely to be rendered inoperative in long use.

Other and allied objects of the present invention will occur to those skilled in the art after a careful study of the present specification, and accompanying illustrations, and the appended claims.

To facilitate understanding, reference will be made to the hereinbelow-described drawings, in which:

Fig. 1 is a side elevation of a preferred form of the gate lock of the present invention (in Figs. 1–4, the gate lock is shown on its side, displaced 90 degrees from its use position, for which see Fig. 5)—parts invisible from this vantage being indicated by the dashed lines;

Fig. 2 is a top plan view of the device of Fig. 1;

Fig. 3 is an end elevation of the device of Fig. 1;

Fig. 4 is a side elevation of a portion of the device of Fig. 1, showing how the device may be removed from or placed on the staple of a gate closure; and

Fig. 5 is a perspective view of the device of Fig. 1 as it appears in use-position, locking the hasp-and-staple closure of a gate.

As an example of the use of the present invention, it is shown, in Fig. 5, passing through a staple A, which is attached to gatepost B, to maintain hasp C on the staple. The hinged hasp C is attached to hinged gate D and cooperates with the staple to hold the gate closed. A chain E is shown attaching the gate lock of the present invention to the gatepost to retain the lock ready for use when it is disengaged from the staple.

In the illustrated form of the present invention, the longitudinal engagement member takes the form of rigid bar 1, which at its first end, indicated at 2, broadens to form a shoulder as it joins the first arm of U-shaped base member 3. The base of the U may in one form of the gate lock be so tempered as to form a spring. The second arm of the base member has a terminal connection portion 4 in which is firmly held a locking strip member, indicated at 5—in the above-mentioned form of the gate lock this strip member 5 is rigid; in another form it is flexible to form a spring. Both forms are of a similar appearance and are equally well represented by the illustrations; the only difference is in the location of the region of flexibility. When the device is in use position, member 5 passes through an aperture 6 in the bar 1;

adjacent the aperture are the oppositely placed flanges 7, which taper toward the free end 8 of bar 1. When the hasp-and-staple closure is locked by the present invention, the staple encounters the shoulder at 2, or if the gate lock is moved upward the staple is forced by member 5 against the bluff edges of the flanges 7. To remove the gate lock, member 5 and bar 1 are separated so that bar 1, flanges included, can pass through the staple as shown in Fig. 4. To maintain the gate lock in a convenient position when it is not in use, the chain E is attached to the gate lock at 9.

Numerous modifications and variations of the present invention will occur to those skilled in the art after a careful study hereof. All such properly within the basic spirit and scope of the present invention are intended to be included and comprehended herein as fully as if specifically described, illustrated and claimed herein.

For example, although for convenience of manufacture the locking strip 5 is, in the illustrated form, rigidly attached but not integral with the base member, it may also be an integral extension of the base member. Also, the chain-attachment means may take a variety of forms other than the holes shown. The flange means may be any structure providing a bluff edge extending outward as far as the locking strip from a position on the engagement member just above the aperture, instead of being the pair of flanges shown. The aperture may be eliminated in some forms, the second end of the locking strip simply pressing against the engagement member.

The exact compositions, configurations, constructions, relative positionings, and cooperative relationships of the various component parts of the present invention are not critical, and can be modified substantially within the spirit of the present invention.

The embodiment of the present invention specifically described and illustrated herein is exemplary only, and is not intended to limit the scope of the present invention, which is to be interpreted in the light of the prior art and the appended claims only, with due consideration for the doctrine of equivalents.

I claim:

1. A gate lock, adapted for use with a hasp-and-staple fastener, comprising: a longitudinal engagement member insertible through the staple of a hook-and-staple fastener, said member having a first end and a second, free, end; a generally U-shaped base member, having a first arm continuous with the first end of said engagement member and forming a shoulder retainable against said staple, and having a second arm spaced from said first arm in an outward direction, said second arm having a terminal connection portion; a longitudinal locking strip member having a first end attached to said terminal connection portion of the second arm of said base member, having a second, free, end, and lying outside said staple; said second end of said locking strip member being engageably cooperable with said engagement member at the second end thereof, in a locked position; of said base member and said locking strip member, one of said members being flexible to form a spring; said engagement member having an aperture therein spaced from said first end, through which said locking strip member passes when in said locked position; and flange means attached to said engagement member, projecting in said outward direction, adjacent said aperture, and cooperable with said locking strip member, when said member is in its locked position, to retain said engagement member in said staple against an upward or outward force on the gate lock as a whole; through the flexibility of said spring, said locking strip's second end being separable from said engagement member to allow the removal of said engagement member from said staple.

2. A gate lock, adapted for use with a hasp-and-staple fastener, comprising: a longitudinal engagement member insertible through the staple of a hook-and-staple fastener, said member having a first end and a second, free, end; a generally U-shaped base member, having a first arm continuous with the first end of said engagement member and forming a shoulder retainable against said staple, and having a second arm spaced from said first arm in an outward direction, said second arm having a terminal connection portion; a longitudinal locking strip member having a first end attached to said terminal connection portion of the second arm of said base member, having a second, free, end, and lying outside said staple; said second end of said locking strip member being engageably cooperable with said engagement member at the second end thereof, in a locked position; said base member being flexible to form a spring biasing said locking strip member toward said engagement member; said engagement member having an aperture therein spaced from said first end, through which said locking strip member passes when in said locked position; and flange means attached to said engagement member, projecting in said outward direction, adjacent said aperture, and cooperable with said locking strip member, when said member is in its locked position, to retain said engagement member in said staple against an upward or outward force on the gate lock as a whole; through the flexibility of said spring, said locking strip's second end being separable from said engagement member to allow the removal of said engagement member from said staple.

3. A gate lock, adapted for use with a hasp-and-staple fastener, comprising: a longitudinal engagement member insertible through the staple of a hook-and-staple fastener, said member having a first end and a second, free, end; a generally U-shaped base member, having a first arm continuous with the first end of said engagement member and forming a shoulder retainable against said staple, and having a second arm spaced from said first arm in an outward direction, said second arm having a terminal connection portion; a longitudinal locking strip member having a first end attached to said terminal connection portion of the second arm of said base member, having a second, free, end, and lying outside said staple; said second end of said locking strip member being engageably cooperable with said engagement member at the second end thereof, in a locked position; said locking strip member being flexible to form a spring; said engagement member having an aperture therein spaced from said first end, through which said locking strip member passes when in said locked position; and flange means attached to said engagement member, projecting in said outward direction, adjacent said aperture, and cooperable with said locking strip member, when said member is in its locked position, to retain said engagement member in said staple against an upward or outward force on the gate lock as a whole; through the flexibility of said spring, said locking strip's second end being separable from said engagement member to allow the removal of said engagement member from said staple.

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