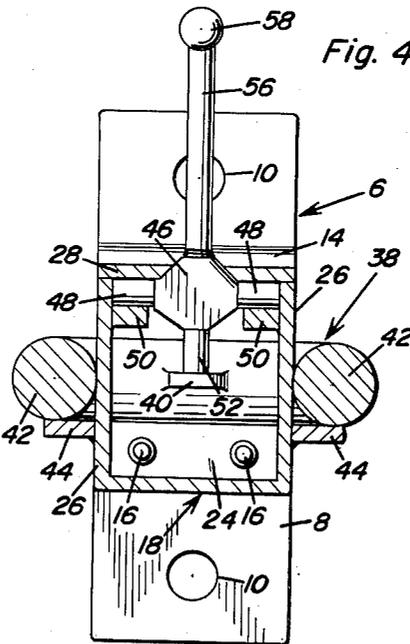
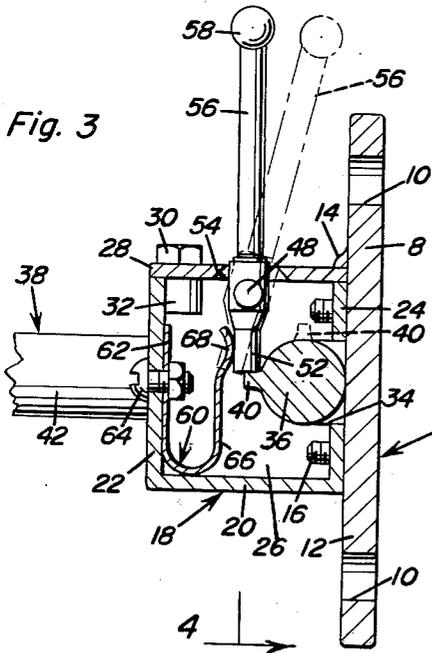
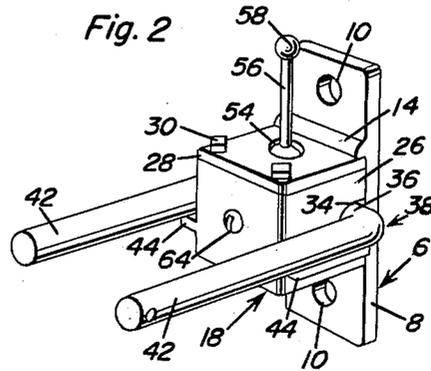
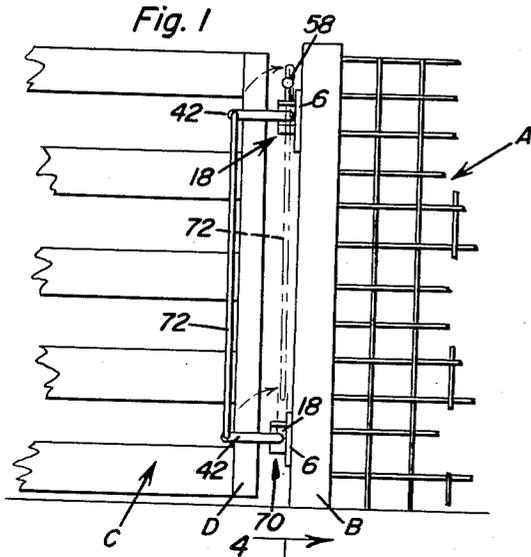


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M. A. WIESELER ET AL
SELF-LOCKING GATE LATCH

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SELF-LOCKING GATE LATCH

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This invention relates to improved gate latching means which, as the title suggests, is novel in that the liftable and lowerable latch may be said to be self-locking whether up or down.

The latch itself is U-shaped and has its central or bight portion hingedly mounted on a gate post fixture whereby it may be swung up and down in the same manner as similar prior art forked-type and U-type gate straddling latches. But unlike prior latch constructions, it is capable of being locked or retained in its normal "down" position as well as being retained in its "up" out-of-the-way position. This accomplishment, so far as is known to the applicants, is a significant advance in the art.

To be sure pad locks and the like have been used to lock a gate latch down. Similarly, a so-called lock is used as holddown means in Patent 2,510,178. Then, too, a construction for retaining a U-latch in a vertical out-of-the-way or safety position is revealed in Patent 2,074,759. However, and by way of distinction, the instant achievement has to do with a bracket or fixture for the gate post, a pivoted or hingedly mounted U-latch, and means which not only mounts the vertically liftable and lowerable latch, but retains it "down" in its usual gate-latching position and also "up" close to the gate post in the desired out-of-the-way position.

Briefly, the invention is characterized by a self-contained and self-locking gate latch comprising a fixture adapted to be fixed in ready-to-function position on the gate post, a latch for the gate adapted to assume a horizontal down position for cooperation with said end member and a vertical up position when released from said end member, said latch being pivotally mounted on the fixture in a manner to swing vertically on a horizontal turning axis, and manually actuatable self-locking means operatively mounted on said fixture, said means coacting with the pivoted portion of the latch and serving to retain the latch in its "up" and "down" positions until intentionally released from either position by hand.

In carrying out a preferred embodiment of the invention a novel bracket or fixture is utilized. This fixture comprehends the use of an attaching plate provided with a box-like housing having top, bottom, front, rear, and side walls, said top wall being removable, said side walls having aligned openings providing bearings, said side walls also having exterior outstanding flanges providing limit stops; and a U-shaped latch having a bight portion journaled for angular rotation in said bearings and spaced parallel arms arranged to operate exteriorly of the side walls and normally resting atop the limit stop flanges.

A median part of the bight portion of the U-shaped latch is provided with a radially projecting lug which constitutes a detent. Further, the side walls of a housing or box are provided interiorly with extra or additional bearings. A novelly constructed retainer is operable in the housing and has axially aligned journals which rotate in the last-named bearings. It also has a depending finger releasably cooperable with the lug. Furthermore, the top wall has an opening affording access to the retainer and a portion of the retainer extends up into and operates within the confines of the top opening. This portion of the retainer is equipped with a simple lever-like handle which is operated in a manner to apply and remove the retainer in relation to the lug or detent.

These together with other objects and advantages which

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will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIG. 1 is a view showing fragmentary portions of a fence having a gate post, a portion of the horizontally swingable gate related to the post, and, on a small scale, the improved gate latching means;

FIG. 2 is a view in perspective of the improved self-contained ready-to-install gate latch, the latch being shown in its normal down position;

FIG. 3 is a view in section and elevation and on a larger scale and which shows the spring-biased retainer and the manner in which it is constructed and utilized; and

FIG. 4 is a section on the vertical line 4-4 of FIG. 3.

In FIG. 1 the fence is denoted at A and the stationary gate post at B. The horizontally swinging gate is denoted at C and the vertical gate-end or frame member at D opposed, of course, to the post B in cooperable relationship.

With reference again to FIG. 1 it is to be pointed out that upper and lower latches which are simultaneously operable are shown. However, the essence of the instant invention resides in the particularly improved gate latch shown in FIGS. 2 to 4, inclusive.

The fixture or bracket comprises a heavy duty rectangular or an equivalent attaching plate 6. The body portion of the plate is denoted at 8 and it is intended to fit firmly against the gate post. The upper and lower end positions are provided with bolt holes 10 permitting the plate to be bolted, screwed or otherwise fastened to the post. The front 12 of the plate is provided near the top with a transverse rib 14 constituting a shoulder. The plate is also provided on the front side with outstanding screw-threaded studs 16 which serve to support the aforementioned housing or casing 18. This housing is of hollow box-like form and has a bottom wall 20, front wall 22, back wall 24 and side walls 26. There is also a top wall but this is in the form of a cover and is denoted at 28 and it is removably secured by headed fasteners 30 which screw into sockets 32 provided therefor at the upper part of the front wall 22 (FIG. 3). The back wall 24 has holes therein which permit passage therethrough of the supporting studs 25. The box or housing may be said to be suspended on these studs and when the cover is applied and an edge portion thereof is engaged beneath the stop shoulder 14, a satisfactory mounting of the housing on the plate 6 is had. The side walls are provided with notches 34 properly aligned with each other and they constitute bearings for the hingedly or pivotally mounted bight portion 36 of the U-shaped latch 38. This bight portion as shown in FIG. 3 is provided on a periphery thereof with an outstanding or radially projecting stop lug or detent 40. The co-planar spaced parallel arms 42 straddle the side walls and normally rest on the ledge-like flanges or rests 44.

The retainer as shown in FIGS. 3 and 4 comprises a suitably shaped body 46 located in the box and having diametrically opposite axially aligned journals 48 mounted for angular rotation in interior bearings 50 on the side walls. This body has a depending retainer finger 52 which cooperates with the detent 40 in the manner shown. An upper portion of the body 46 protrudes into a suitably shaped hole or opening 54 which provides the desired clearance. This portion is provided with a screw-threaded socket to accommodate the screw-threaded shank 56 forming the lever-like handle. The handle is provided on its upper end with a grip or ball 58. The purpose in having the handle removable is to permit access to be had to the upper bolt hole 10 in the plate 8.

Although it is within the purview of the invention to

use a coil spring to hold the retainer in the position seen in full lines in FIG. 3 wherein it locks lug 40, a U-shaped leaf spring 60 is shown and one limb 62 is fastened at 64 to the front wall and the other limb 66 has a bent upper end 68 engaging the finger 52. The spring 60 constantly urges finger 52 into frictional engagement with bight portion 36 so as to function as a continuous brake for holding arms 42 in a vertical position.

If desired, a similar latch, but of simpler construction (not detailed) may be used. This is designated at 70 and is mounted on the lower part of the gate post. The two latches are linked together for simultaneous operation by a linking rod 72.

With this construction it is obvious that the means serves to keep the latches down normally and also serves to permit latches to be held in an upright out-of-the-way position as shown in dotted lines in FIG. 1.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. For use in conjunction with a stationary gate post and a cooperating vertical end member of a swinging gate frame, a self-contained self-locking gate latch comprising a fixture adapted to be fixed in ready-to-function position on the gate post, a latch having spaced legs for receiving the end member therebetween, and said latch adapted to assume a horizontal down position for cooperation with said end member and a vertical up position when released from said end member, said latch being pivotally mounted on the fixture in a manner to swing vertically on a horizontal turning axis, said legs defining a plane parallel to said axis and manually actuable self-locking means operatively mounted on said fixture, said means being operated by resilient means so as to coact with the pivoted portion of the latch and serving to retain the latch in its "up" and "down" positions until intentionally released from either position by hand.

2. For use in conjunction with a stationary gate post and a cooperating vertical end member of a swinging gate frame, a self-contained self-locking gate latch comprising a fixture adapted to be fixed in ready-to-function position on the gate post, a latch having spaced legs for receiving the end member therebetween, and said latch adapted to assume a horizontal down position for cooperation with said end member and a vertical up position when released from said end member, said latch being pivotally mounted on the fixture in a manner to swing vertically on a horizontal turning axis, said legs defining a plane parallel to said axis and manually actuable self-locking means operatively mounted on said fixture, said self-locking means being operated by resilient means so as to coact with the pivoted portion of the latch and serving to retain the latch in its "up" and "down" positions until intentionally released from either position by hand, said latch being U-shaped, the bight portion thereof being of circular cross-section and pivotally mounted for oscillating movement

only on said fixture and having a detent with which a coating portion of said self-locking means is releasably engageable to retain the latch in one of said positions, said self-locking means also adapted to be urged into frictional engagement by said resilient means with the circular surface of said bight portion for holding the latch in the other of said positions.

3. A gate latch comprising a gate post fixture embodying an attaching plate provided with a box-like housing having top, bottom, front, rear, and side walls, said top wall being removable, said side walls having aligned openings providing bearings, said side walls also having exterior outstanding flanges providing limit stops; and a U-shaped latch having a bight portion journalled for angular rotation in said bearings and spaced parallel arms arranged to operate exteriorly of the side walls and normally resting atop the limit stop flanges.

4. A gate latch comprising a gate post fixture embodying an attaching plate provided with a box-like housing having top, bottom, front, rear, and side walls, said top wall being removable, said side walls having aligned openings providing bearings, said side walls also having exterior outstanding flanges providing limit stops; and a U-shaped latch having a bight portion journalled for angular rotation in said bearings and spaced parallel arms arranged to operate exteriorly of the side walls and normally resting atop the limit stop flanges, a median part of said bight portion having a radially projecting lug providing a detent, said side walls having additional bearings, a retainer operable in the housing and having journals rotatable in said last-named bearings and a depending finger releasably cooperable with said lug, said top wall having an opening affording access to the retainer, a portion of the retainer extending operatively into said opening, and an accessible upstanding operating handle in line with the opening and operatively connected with said portion of the retainer.

5. A latch as recited in claim 3 including lock means movably connected to said housing and selectively engageable with an abutment on said latch for positively locking said arms atop the limit stop flanges when said lock means is in one position, operating means connected to said lock means for selectively moving it into and out of engagement with said abutment.

6. A latch as recited in claim 5 wherein said lock means is urged towards said abutment by spring means.

7. A latch as recited in claim 6 wherein said bight portion is circular in cross-section, said abutment comprises a lug projecting radially from the surface of said bight portion, said lock means being urged frictionally into engagement with the surface of said bight portion by said spring means when said arms are spaced from said stop flanges.

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