June 9, 1953 A. E. BURRIS 2,641,494

GATE LATCH

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Fig. 1.

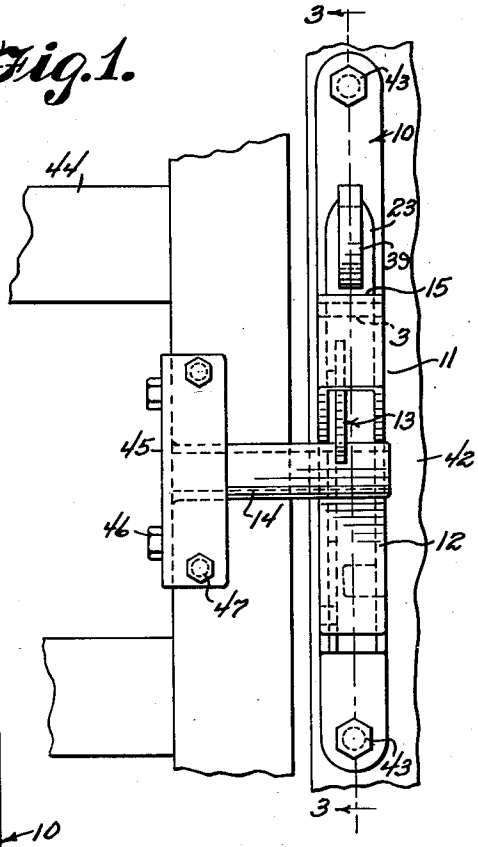


Fig. 2.

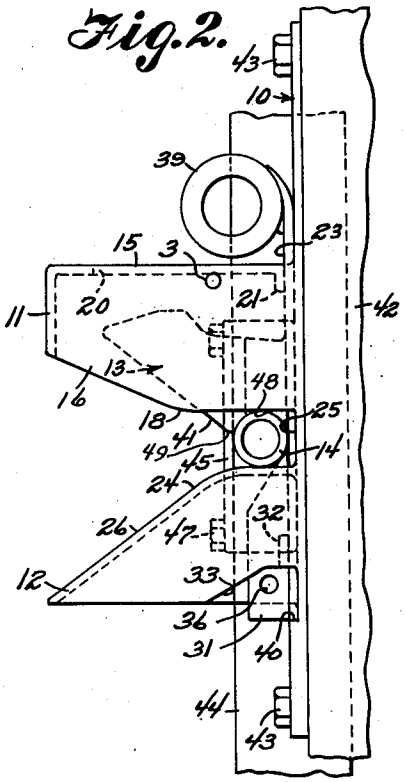


Fig. 8.

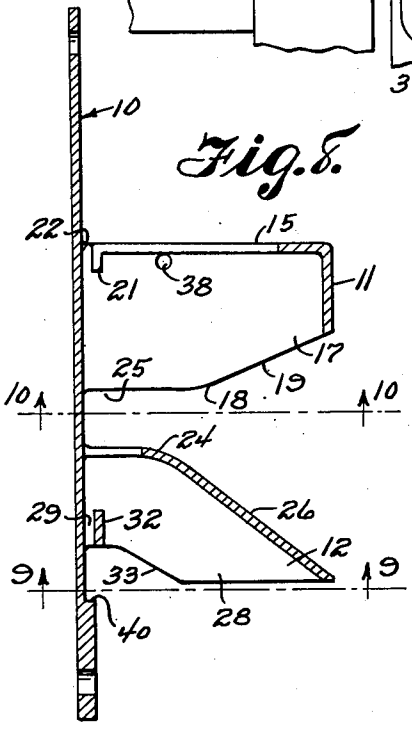


Fig. 9.

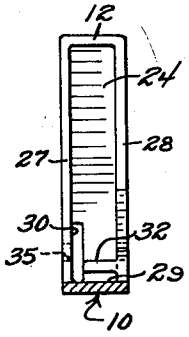
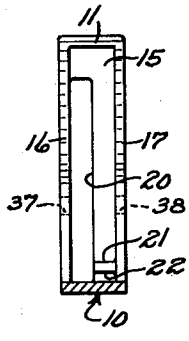


Fig. 10.



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Fig. 3.

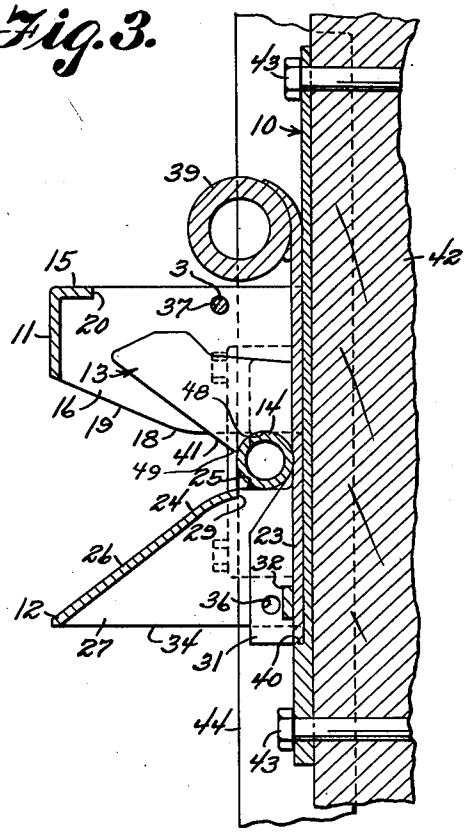


Fig. 4.

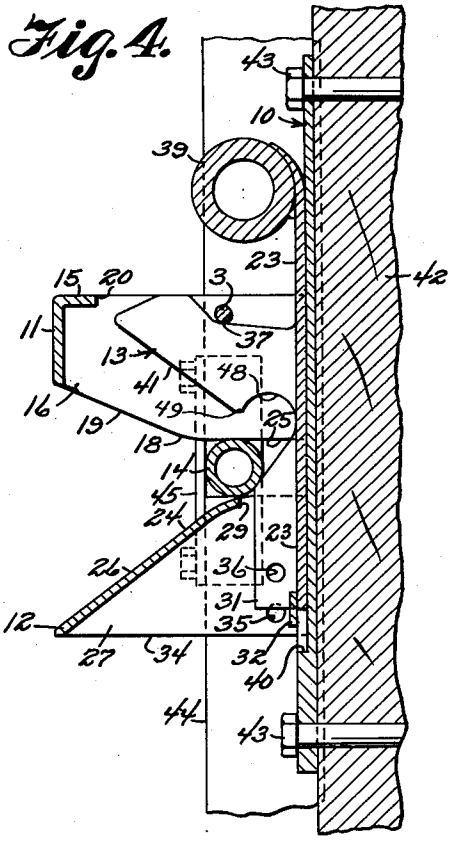


Fig. 5.

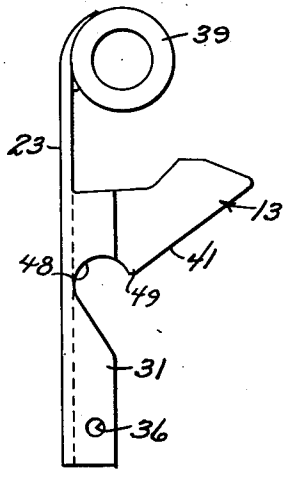


Fig. 6.

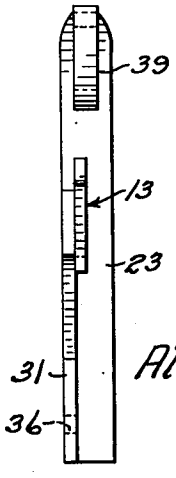
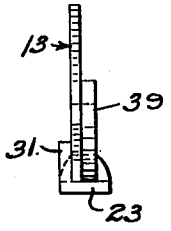


Fig. 7.



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GATE LATCH

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Application September 7, 1949, Serial No. 114,365

3 Claims. (Cl. 292—189)

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This invention relates to latches for gates and particularly farm gates, barn doors, and the like, and in particular includes a latch having a pin receiving groove positioned between upper and lower guides with beveled surfaces leading to the groove and with a sliding trigger positioned to retain a pin in the groove.

The purpose of this invention is to provide a latch that readily snaps to the closed position for retaining a pin therein and which may readily be manually actuated to release the pin.

Various types of latches have been provided for holding farm gates, doors, and the like in closed positions but it is difficult to provide a latch that may be relied upon to automatically lock over a pin or latch element as the gate is closed and in which the gate may readily be released. With this thought in mind this invention contemplates a latch in which a pin on a gate passes directly into a pin receiving groove between two guide elements and in which the pin is locked in the groove by an automatically actuated trigger.

The object of this invention is, therefore, to provide means for constructing a latch for farm gates, doors, and the like in which a pin readily passes into a groove where it is automatically retained by a trigger element.

Another object of the invention is to provide a latch for gates and the like that may readily be installed on gates without changing the structure thereof.

A further object of the invention is to provide a gate latch that automatically snaps to the closed position and that may be readily manually released which is of a simple and economical construction.

With these and other objects and advantages in view the invention embodies a latch for gates and the like having a pair of outwardly extended guides mounted on a base plate with a trigger having a finger gripping ring on the upper end slidably mounted in the guide, and a pin positioned to pass into a slot between the guides and actuate the trigger to the locking position.

Other features and advantages of the invention will appear from the following description taken in connection with the drawings wherein:

Figure 1 is a front elevational view showing the latch in the closed position with parts of a gate and gate post illustrated in combination therewith and with parts broken away.

Figure 2 is a side elevational view of the latch as illustrated in Figure 1.

Figure 3 is a vertical section through the latch

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taken on lines 3—3 of Figure 1 showing the latch elements in the locking position.

Figure 4 is a similar section showing the trigger of the latch in the released position.

Figure 5 is a detail showing a side elevational view of the trigger.

Figure 6 is a view showing a front elevational view of the trigger.

Figure 7 is a view looking upwardly toward the lower end of the trigger.

Figure 8 is a vertical section through the latch structure taken on line 3—3 of Figure 1, looking in the opposite direction and with the movable element removed.

Figure 9 is a cross section through the base plate of the latch taken on line 9—9 of Figure 8.

Figure 10 is a similar section taken on 10—10 of Figure 8.

Referring now to the drawings wherein like reference characters denote corresponding parts the improved gate latch of this invention includes a base plate 10 having upper and lower guides 11 and 12, respectively, extended outwardly therefrom, a trigger 13 and a tubular pin 14.

The base plate 10 is formed particularly as illustrated in Figures 1 and 8 with the guides 11 and 12 formed thereon and extended outwardly therefrom. The guide 11 is channel shaped in cross section having an upper web 15 with side flanges 16 and 17 extended downwardly therefrom and the lower edges of the flanges 16 and 17 slope upwardly from a point 18 providing inclined front pin guiding surfaces 19. The web 15 is provided with an elongated opening 20 to receive the trigger mounting elements and a flange 21 is provided at one side of the web leaving a slot 22 through which the plate 23 of the trigger 13 slides. A pin 3 is positioned in the guide and mounted in the flanges 16 and 17 after the trigger 13 has been installed in the latch, and as shown in Figure 4, the pin 3 limits upward movement of the trigger.

The lower guide 12 includes a horizontally disposed web 24 which slopes downwardly from an open slot or groove 25 and provides a sloping or inclined surface 26 upon which the pin 14 rides as it enters the latch.

This guide is also channel shape in cross section having sides 27 and 28 with a slot 29 for the plate 23 of the trigger, and a slot 30 for an outwardly extended flange 31 of the trigger is provided in the web 24. A guide partition 32 extends outwardly from the side 28 to retain the lower edge of the trigger base in the guide. The lower edge 33 of the side 28 of the lower

guide 12 extends upwardly as shown in Figure 8 and the lower edge 34 of the side 27 extends straight across, and an opening 35 is provided in the inner part thereof which is positioned to register with an opening 36 in the flange 31 of the trigger so that the trigger may be locked in the downward or locking position, by inserting the bale of a lock through the openings 35 and 36. The sides 16 and 17 of the upper guide 11 are provided with openings 37 and 38 in which the pin 3 is mounted.

The trigger 13 is slidably mounted in the guide through the plate 23 and the upper end of the plate 23 is provided with an eye 39 by which the trigger may be raised to release the pin 14. The lower end of the trigger normally engages the shoulder 40 on the base plate 10. The trigger member has a notch 48 therein which has a lip portion 49 extended downwardly therefrom to form a hook portion adapted to receive the tubular pin 14. The beveled surface 41 extends upwardly from the lowermost portion of the lip member. In the normal position, the beveled surface 41 of the trigger is located in the slot 25 so that it is adapted to be engaged by the tubular pin 14. When the tubular pin 14 strikes the beveled surface 41 of the trigger, the trigger is moved upwardly to permit the pin to enter the slot 25 and engage behind the lip portion of the notch in the trigger member.

The base plate 10 of the latch may be bolted to a post or to the side of a barn or other building, as indicated by the numeral 42 by bolts 43 and the pin 14 may be mounted on a gate 44, or the like through a base member 45 with bolts 46 and 47.

It will be understood that modifications may be made in the design and arrangement of the parts without departing from the spirit of the invention.

What is claimed is:

1. A gate latch comprising a base plate, an upper and lower guide arranged in spaced apart relation adapted to receive a pin therebetween, each of said guides having an upper and lower portion, said guides extending from one side of said base plate, the upper portion of said upper guide including a web and the lower portion of said upper guide having an inclined guiding surface, said web being provided with an elongated opening to receive a trigger, there being registering slots in said upper and lower guides, said trigger including a plate slidably positioned in said slots, flanges on said guides arranged contiguous to said slots for guiding said trigger, the upper portion of the lower guide including a web, and having an inclined guiding surface, the said inclined guiding surfaces extending inwardly toward each other from the outer ends of the upper and lower guides, said trigger being provided with a notch having a lip portion extending downwardly therefrom to form a hook portion adapted to receive a pin, there being a beveled surface on the trigger extending upwardly from the lowermost portion of the lip portion so that said pin strikes the beveled surface to move the trigger upwardly to permit the pin to engage behind the lip portion of the trigger.

2. The apparatus as described in claim 1, and further including a pin mounted in said upper guide for limiting upward movement of said trigger.

3. The apparatus as described in claim 1, and further including an eye member mounted on the upper end of said trigger for raising said trigger.

ALLEN EUGENE BURRIS.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
87,065	Redhead	Feb. 16, 1869
521,045	Rohrbach	June 5, 1894
1,177,487	Clements	Mar. 28, 1916
1,297,221	Mikkelsen	Mar. 11, 1919