

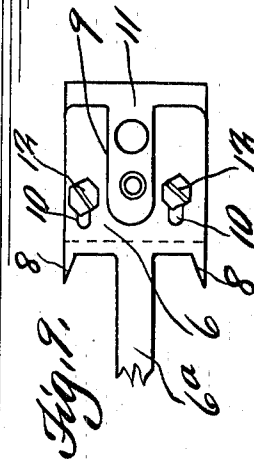
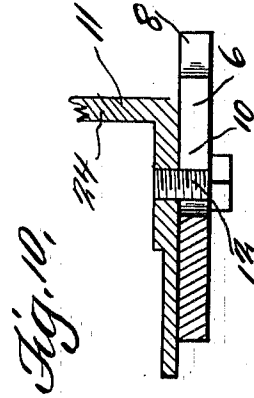
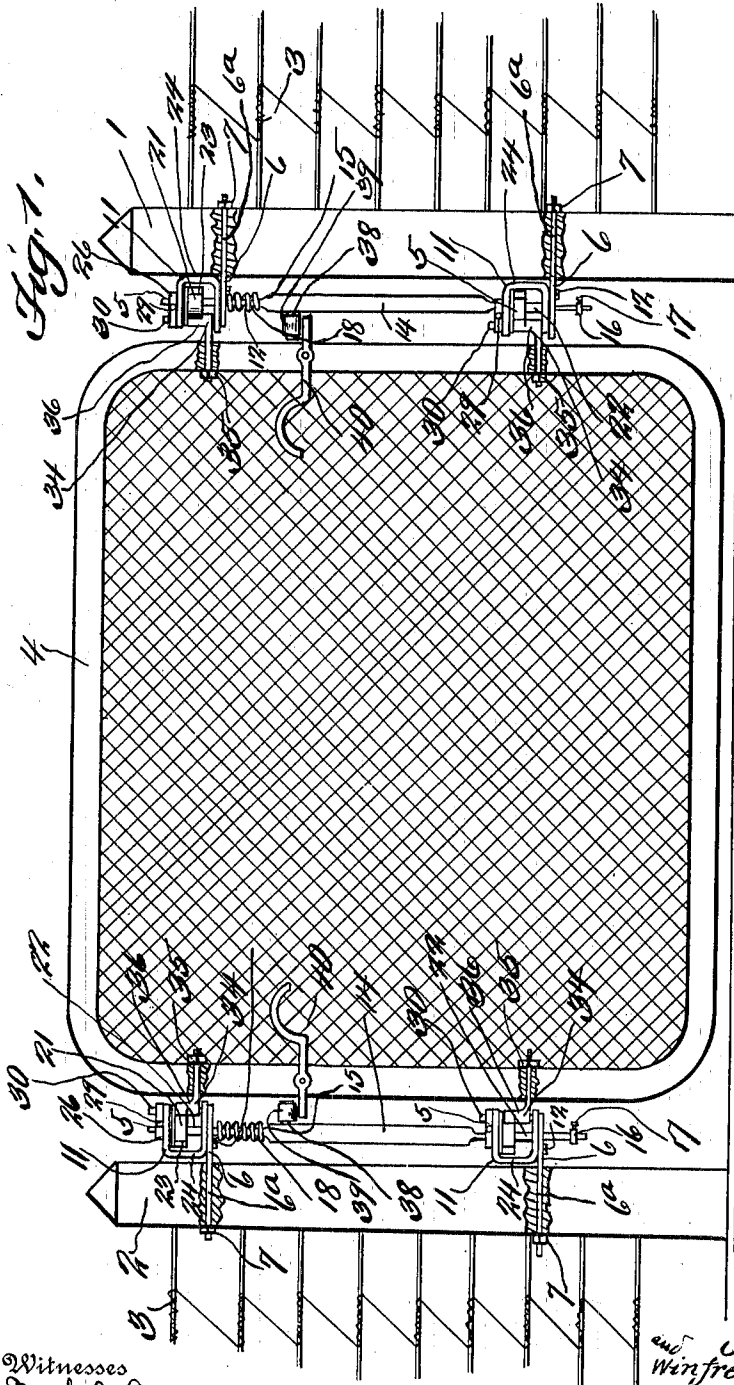
J. K. WATERS & W. C. WINCHESTER.
HINGE.

APPLICATION FILED SEPT. 7, 1912.

1,059,415.

Patented Apr. 22, 1913.

3 SHEETS-SHEET 1.



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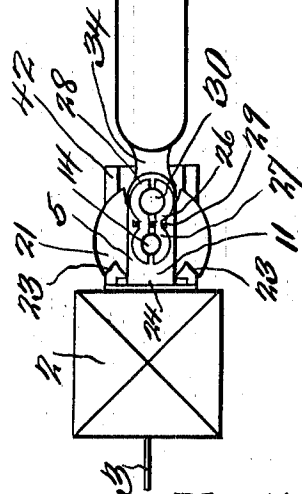
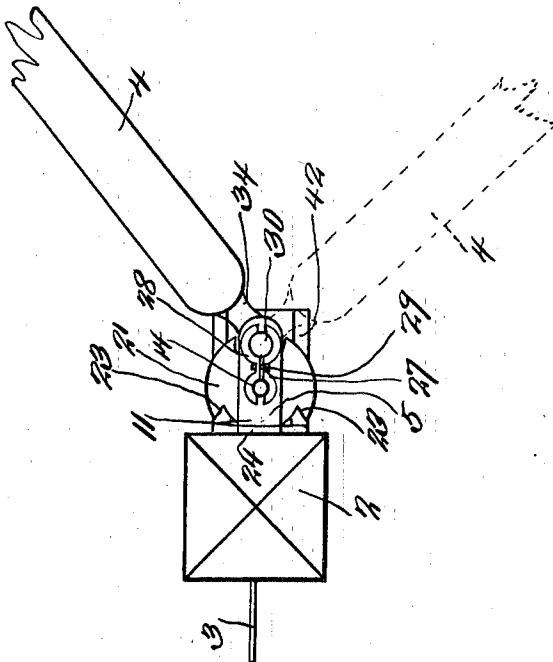
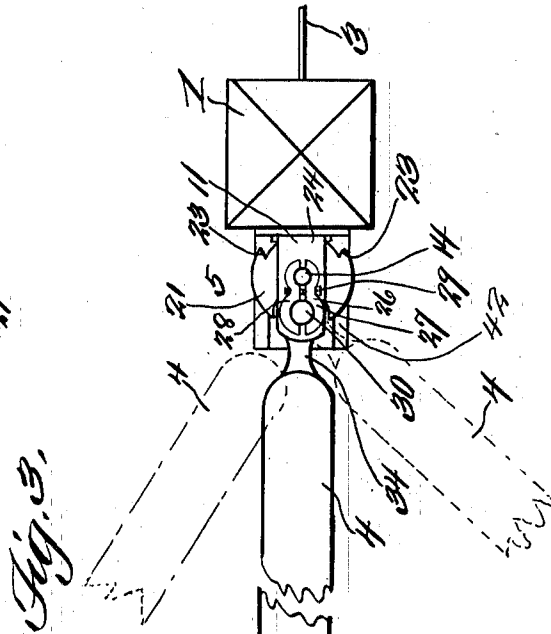
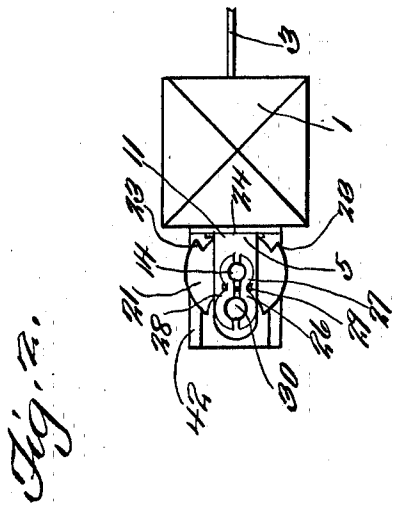
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3 SHEETS-SHEET 2.



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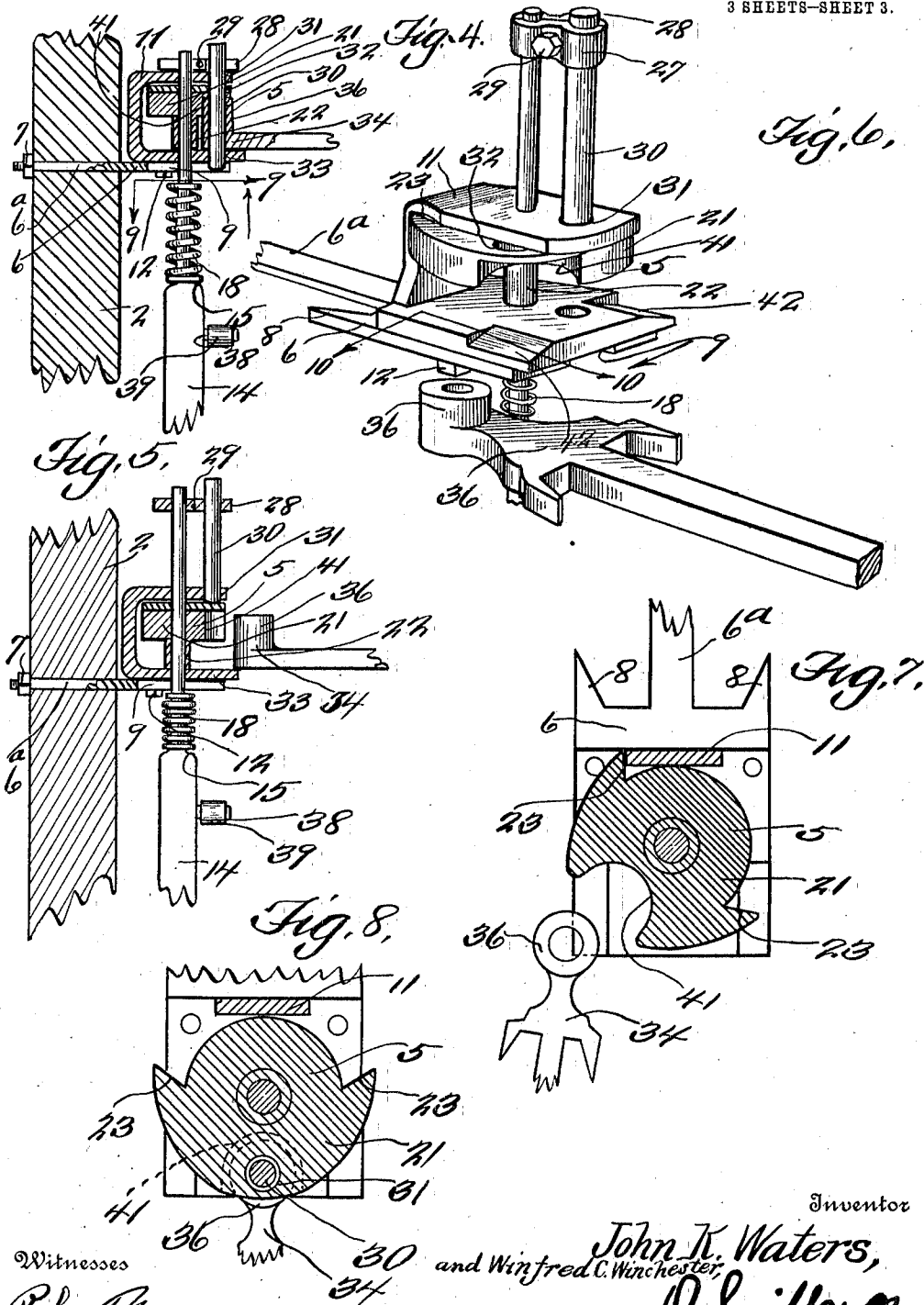
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

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HINGE.

1,059,415.

Specification of Letters Patent.

Patented Apr. 22, 1913.

Application filed September 7, 1912. Serial No. 719,111.

To all whom it may concern:

Be it known that we, JOHN K. WATERS and WINFRED C. WINCHESTER, citizens of the United States, residing at Banning, in the county of Riverside and State of California, have invented a new and useful Hinge; and we 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 appertains to make and use the same.

This invention relates to a new and useful hinge, adapted for use upon gates, doors and the like.

As one of the objects of the invention it is the aim, to provide a hinge, one to be applied to the top and bottom of a gate, door or the like, upon each side thereof, whereby the gate or door may swing from either side, or in either direction. In other words, the employment of a multiple of hinges, whereby a gate or door may be swung four different ways.

As further stated, another object of the invention is to provide a hinge, so that when four hinges are employed, corresponding parts of two of the hinges on one side of the gate may be simultaneously disconnected from the other parts, whereby the gate may be swung from the opposite side thereof.

Another object of the invention is the provision of a multiple of devices, which not only are constructed so that the gate may be swung four different ways, but also constitutes means for holding the gate locked when closed.

Another object of the invention is that by the provision of such multiple of devices, the gate or door may be entirely dismounted.

The invention comprises further features and combination of parts, as hereinafter set forth, shown in the drawings and claimed.

In the drawings:—Figure 1 is a view in elevation, showing the application of a multiple of hinges. Fig. 2 is a plan view, showing the gate swung open in one direction in full lines, and swung open in another direction in dotted lines. Fig. 3 is a plan view, showing the gate swung from the opposite post, which view also shows the gate closed in full lines. Fig. 4 is a vertical sectional view through one of the posts, two of the hinges and the gate, showing the detail structure on an enlarged scale. Fig. 5 is a view similar to Fig. 4 showing the slide bar raised, whereby the hinged parts of the

hinges may be disconnected. Fig. 6 is a detail perspective view, showing the slide bar raised, and the hinged parts of the hinges in the act of being disconnected. Fig. 7 is a sectional plan view of one of the hinges, showing one of the hinged parts partially in the act of being disconnected. Fig. 8 is a view similar to Fig. 7, showing the parts in their normal or hinged positions. Figs. 9 and 10 are detail views.

Each of the hinges is constructed alike, therefore the structure of one hinge is described, and the reference character thereof designates the corresponding parts in each of the other hinges.

Referring to the drawings 1 and 2 designate fence posts, to which the usual fence wire 3 is connected, while 4 denotes the gate. Connecting between the gate, upon each side, and at the top and bottom thereof are hinges 5. Each hinge comprises a base 6, which is secured in the post, by means of the shank 6^a and the nut 7, there being spurs 8 forming integral parts of the base, to pierce the posts. This base is bifurcated at 9, and the fork on each side of the bifurcation is slotted at 10. A U-shaped bracket 11 is secured to the base 6, by means of the screws 12, which pass through the slots of the forks of the base. By means of the slots the U-shaped bracket may be adjusted toward and from the posts, the purpose of such adjustment will hereinafter appear. Mounted to slide in the brackets of two of the hinges at each end of the gate is a slide bar 14 having a shoulder 15 and a collar 16. The collar 16 is held adjustable on the slide bar by the thumb screw 17. Interposed between each shoulder and the lower portion of the bracket of the upper hinge is a coil spring 18, which acts to force the slide bar downwardly. The collars 16 upon the lower ends of the bars 14 are adapted to contact with the bottom of the bracket of each lower hinge, so as to limit the upward movement of the slide bars. Disposed between the upper and lower portions of each bracket is a latch plate 21 having an integral sleeve 22, through which and the plate the cylindrical portion of the slide bar extends. The sleeve 22 constitutes means to hold the latch plate adjacent the upper portion of the U-shaped bracket. The latch plate is designed to rock on the slide bar, the same being limited in its rocking movement, in either direction by the shoulders 23 coming in contact with the vertical portion

24 of the U-shaped bracket. The upper end of each slide bar is provided with a bracket arm 26, which consists of two clamping plates 27 and 28, secured together by a screw 29. A latch bolt 30 is clamped between the clamping plates 27 and 28. The latch bolt 30 extends through an aperture 31 in the upper portion of the bracket, and through an aperture 32 in the latch plate, as well as through an aperture 33 in the lower portion of the bracket. Carried by the gate adjacent the top and bottom, and on each end is a hinge member 34, the shank of which is secured in the gate by means of the nut 35. The hinge member 34 is provided with spurs, which pierce the frame of the gate, to hold the member 34 against displacement. The outer end of the member 34 terminates in a sleeve 36, through which the latch bolt 30 extends, thereby constituting a fulcrum or pivot for the gate.

Each slide bar is provided with a lateral headed pin 38, on which a roller 39 is mounted. Pivoted to each end of the gate is a lever 40, one end of which is adapted to engage under the roller 39, whereby the slide bar may be raised vertically. When either of the slide bars is raised, the latch bolt 30 is also moved, sufficiently to withdraw the same entirely from the latch plate and the sleeve of the hinge member 34, whereby one end or the other of the gate may be swung in one direction or the other. When the slide bar on the right is raised both of the latch bolts are simultaneously moved, so as to free both hinge members 34 at the same time. When either set of hinge members 34 at either end of the gate is released by the bolts 30, and the end of the gate swung open, the latch plates assume positions as shown in Figs. 6 and 7, so that the sleeves 36 may swing from engagement with the recesses 41 of the latch plates. When the latch plates assume the positions as shown in 6 and 7, the apertures of said latch plates are out of registration with the bolts 30, so that the lower ends of the bolts will engage the upper surfaces of the latch plates. In this manner the slide bars are held raised against the action of the springs 18 and 19. When the gate is closed the recesses 41 readily receive the sleeves 36, because the latch plates remain in the positions shown in Figs. 6 and 7, while the gate is being opened. Lower portions of the bracket members are provided with inclined surfaces 42, with which the lower portions of the sleeves 36 contact, when reëntering the recesses 41 of the latch plates, especially if the gate tends to sag. The object for making the brackets adjustable toward and from the posts, by virtue of the slots 10 and screws 12, is to properly position the latch plates, whereby the sleeves 36 may be easily disengaged from the recesses 41, or allowed to reënter the same.

In the drawings there is disclosed certain features of construction, but in practical fields these features may necessitate alterations, to which the patentee is entitled, provided the alterations are comprehended within the scope of what is claimed.

The invention having been set forth, what is claimed as new and useful is:—

1. In a device as set forth, a pair of posts constructing a gate opening, a gate therefor, and combination latch and hinge devices connecting the ends of the gate to the posts, whereby the gate may be swung upon either post in either direction, each device comprising two hinged members, one acting as a base fixed stationary to one of the posts, while the other carried by the gate, means pivotally connecting the hinged members, and a vertical movable element for actuating said means for simultaneously disconnecting the hinged members of either two hinged devices at either end of the gate, and members pivoted on the vertical movable element to be partially rocked by the hinged members carried by the gate as the gate opens to a position in the path of said means, to hold said means actuated.

2. In a hinge, a pair of hinged members, a bolt latching the two members together, and a bar adapted to be raised to operate the bolt, whereby the members may be disconnected, and a latch plate fulcrumed on the bar to be actuated by one of the hinged members as said hinged members are disconnected, to hold the bolt actuated.

3. A combination hinge and latch, comprising a pair of hinged members, one acting as a base and adapted to be fixed stationary to a post, while the other is carried by one end of a gate, the base member having a U-shaped bracket adjustable thereon, between which one end of the hinged member carried by the gate is arranged, a bolt passing through the U-shaped bracket and the hinged member of the gate for hinging the members together, a vertical movable bar passing through the U-shaped bracket and having connections with the bolt and adapted to be actuated to withdraw the bolt from the hinged member of the gate, and a latch plate fulcrumed on the bar to be actuated by the hinged member of the gate to a position in the path of the bolt to hold the bolt withdrawn, said latch plate having a recess to receive the hinged member of the gate, the U-shaped bracket having inclined surfaces with which the hinged member of the gate contacts so that it may easily enter the recess of the latch plate, when the hinged members are about to be again connected, said latch plate having shoulders to contact with the U-shaped bracket to limit said plate in its movement.

4. In a hinge, a pair of hinged members, one of which consists of two parts adjust-

ably secured together, one of said parts adapted to be secured to a gate constituting a bracket for the other part, a bolt latching the two members together, a bar adapted to be raised to operate the bolt, whereby the members may be disconnected, and means to be actuated by one of the hinged members as said hinged members are disconnected, to hold the bolt actuated.

10 5. In a hinge, a pair of hinged members, one of which consists of two parts adjustably secured together, one of said parts adapted to be secured to a gate constituting a bracket for the other part, a bolt latching
15 the two members together, a bar adapted to be raised to operate the bolt, whereby the members may be disconnected, and a latch plate fulcrumed on the bar and having a tubular extension to be engaged by one of
20 the hinged members for actuating it as said

hinged members are disconnected, to hold the bolt actuated.

6. In a hinge, a pair of hinged members, a bolt latching the two members together, a bar adapted to be raised to operate the bolt, whereby the members may be disconnected, and a latch plate fulcrumed on the bar provided with a tubular extension to be engaged by one of the hinged members for actuating said plate as said hinged members are disconnected, to hold the bolt actuated.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JOHN K. WATERS.

WINFRED C. WINCHESTER.

Witnesses:

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EMMA CAHILL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."