Sept. 17, 1940. A. LAW 2,215,293

GATE LOCK

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Fig. 1

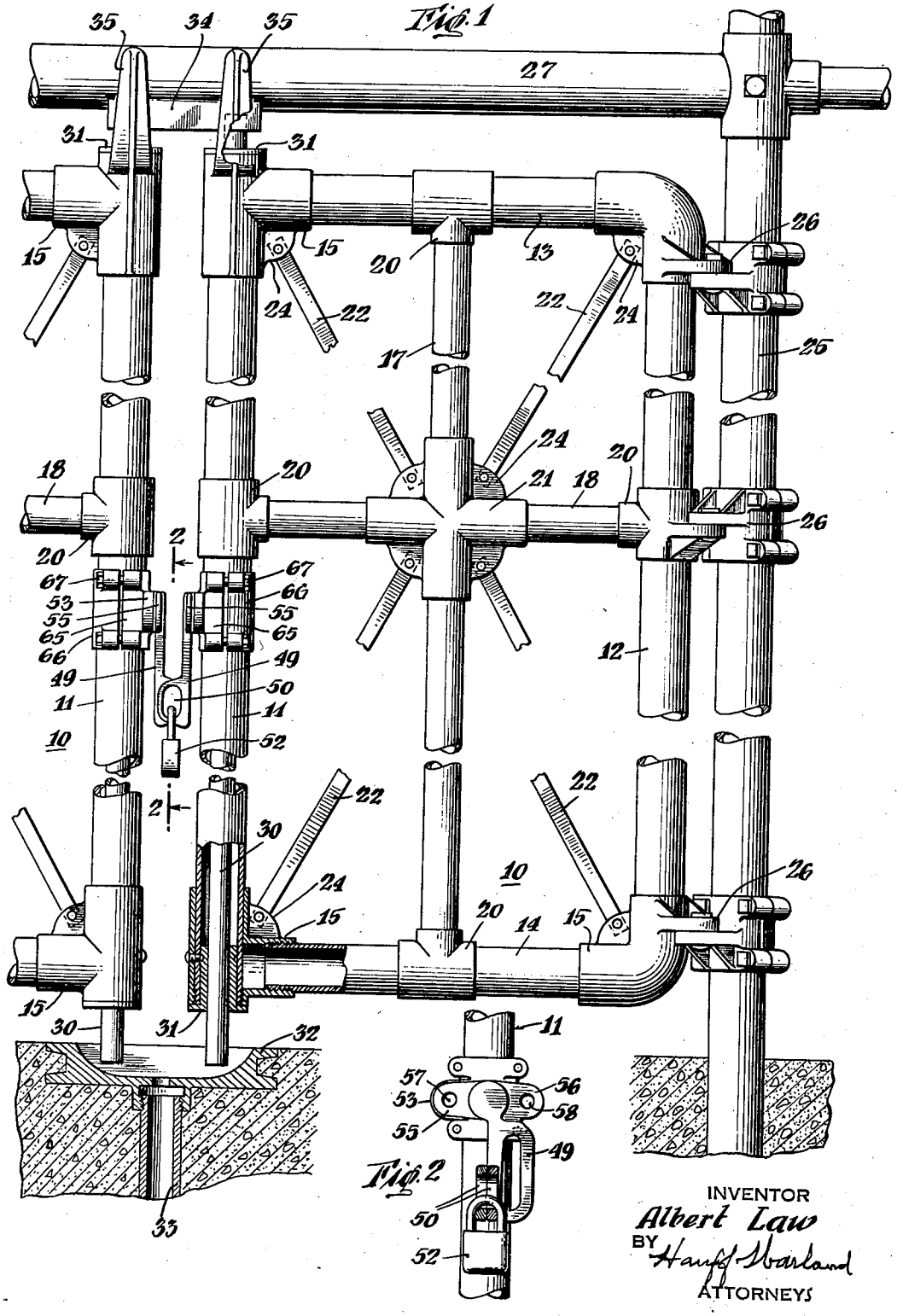

Fig. 2

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Fig. 3

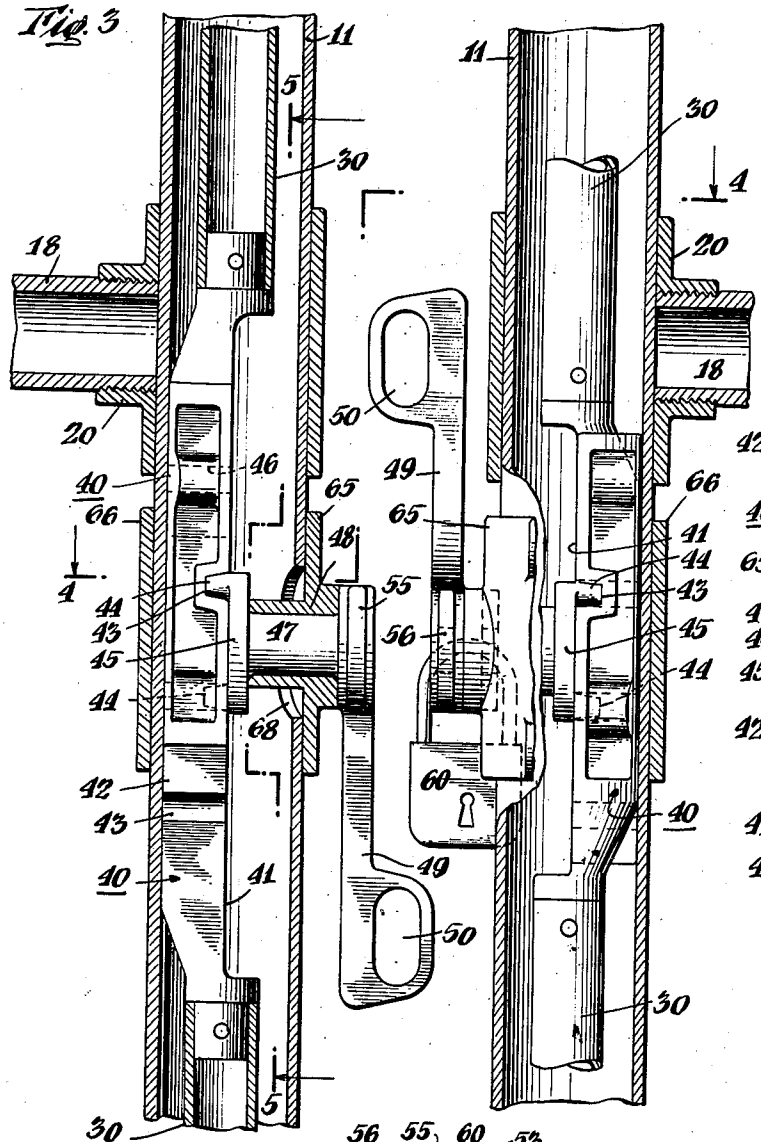


Fig. 5

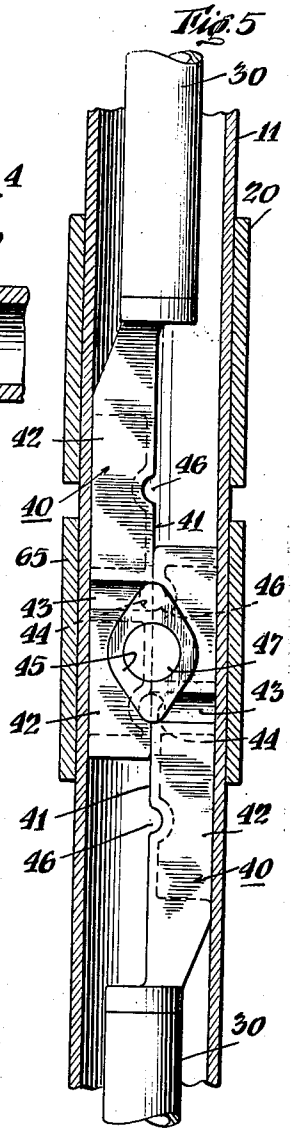
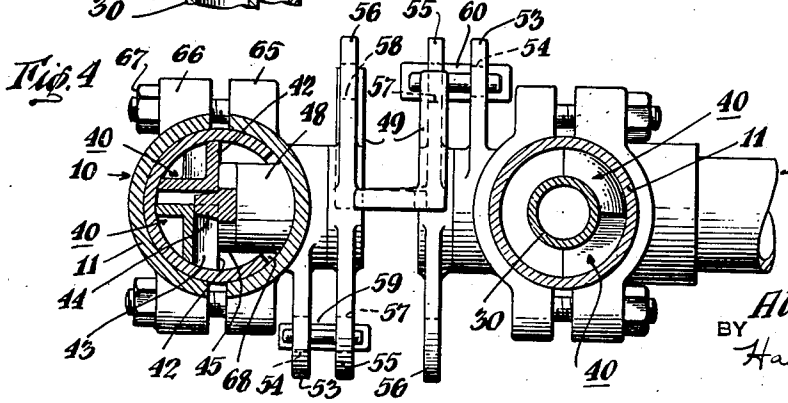


Fig. 4



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UNITED STATES PATENT OFFICE

2,215,293

GATE LOCK

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Application June 16, 1939, Serial No. 279,409

1 Claim. (Cl. 292—37)

This invention relates to gate locks and more particularly to locks for pipe gates or the like.

An object of the invention is to provide a lock of the above type which may be easily assembled, which is rigid and dependable in construction, and which may be locked in either latched or unlatched position.

Another object is to provide a gate lock of the above type which is constructed and arranged so that a pair of swinging gates may be locked by the use of a single padlock.

Various other objects and advantages will be apparent as the nature of the invention is more fully disclosed.

The invention will be better understood by referring to the following description, taken in connection with the accompanying drawings, in which a specific embodiment thereof has been set forth for purposes of illustration.

In the drawings:

Fig. 1 is a broken side elevation of a gate embodying the present invention;

Fig. 2 is a section taken along the line 2—2 of Fig. 1 showing the two gates locked by a single padlock;

Fig. 3 is a vertical section of a portion of the gates shown in Fig. 1 showing one of the gates latched and the other unlatched;

Fig. 4 is a transverse section taken on the line 4—4 of Fig. 3; and

Fig. 5 is a longitudinal section taken on the line 5—5 of Fig. 3.

Referring to the drawings more in detail, the invention is shown as applied to a pair of gates 10 (Fig. 1), each of which comprises vertical members 11 and 12, and horizontal members 13 and 14, joined together by suitable angle or coupling members 15 to form a frame. Internal vertical members 17 and horizontal members 18 are connected to the frame by suitable coupling members 20 and, in the embodiment shown, are joined at the center of the gate by a coupling member 21. Diagonal braces 22 are secured to the various coupling members by means of gussets 24. The entire assembly comprises a pipe gate which is constructed entirely of standard pipes and coupling members. This gate may be secured to a post 25 forming a portion of a fence, not shown, by suitable hinges 26 of standard construction. A top rail 27 is shown as extending between the two posts 25, forming the opposite sides of the gate opening.

Suitable means is provided for latching the two swinging gates 10 in closed position when desired. In the embodiment shown, this means comprises a pair of rods 30 which are held in the upright member 11 of each gate and are slidably secured by bushings 31. One rod 30 is adapted to be extended into a recessed member 32 which may, for example, comprise an iron casting secured in the ground by pipe 33 or by other suitable means. The upper rod 30 is adapted to bear against a stop flange 34 which is secured to the top rail 27 so as to latch the gate in closed position. A suitable ear 35 may be secured to the top of the gate in a position to engage the side of the top rail 27 so as to provide a stop to prevent the gate from swinging past its center position.

When the rods 30 are both fully extended, the gate is secured in closed position both at the top and bottom. When the rods 30 are retracted, however, the gate is free to swing about the hinges 26.

Suitable mechanism is provided for actuating the rods 30 and for locking the same in either extended or retracted position, as will be described. Referring to Figs. 3 to 5, the rods 30 are shown as provided with heads 40 which are quadrant-shaped in cross section and are provided with surfaces 41 which are adapted to permit the two heads 40 to slide relative to each other as the rods 30 are retracted or extended. The heads 40 are also provided with flat top surfaces 42 having transverse grooves 43 which are adapted to be engaged by pins 44 secured to a rotatable collar 45. The grooves 43 extend transversely of the respective heads 40 and register with recesses 46 in said heads, which provide sufficient clearance to permit the collar 45 to be turned through 180° in shifting the rods 30 from extended to retracted positions.

The collar 45 is attached to a shaft 47 (Fig. 3), which is mounted in a bushing 48 and is secured to a handle 49. The arrangement is such that, with the handle 49 extending downwardly, for example, the collar 45 is in the position shown in Fig. 5 with the rods 30 fully extended. When the collar 45 is turned through 180° so that the handle 49 extends upwardly, for example, the pins 44, riding in the grooves 43, cause the heads 40 to slide past each other for retracting the respective rods 30.

For locking the handle 49 in either latching or unlatching position, the handle may be provided with an aperture 50 which is so positioned that the apertures 50 of the handles 49 of the two swinging gates are brought into registration when both gates are closed and latched and may be secured by a single padlock 52, as shown in Fig. 1.

In certain instances, however, it may be desirable to lock one of the gates in latched position and the other in unlatched position. For this purpose the bushing 48 may be provided with a laterally extending ear 53 having an aperture 54 therein and the handle 49 may be provided with oppositely extending ears 55 and 56 having apertures 57 and 58 therein. When the handle 49 is in its lower position, for example, the aperture 57 is brought into registration with the aperture 54 and the handle may be secured by a padlock 59 extending through said apertures, as shown in Fig. 4. When the handle 49 is in its opposite position, the aperture 58 may be brought into registration with the aperture 54 and the handle may be secured in this position by a padlock 60 extending through said aligned apertures. It is evident, therefore, that the two gates may be both locked in latched position by a single padlock, as shown in Fig. 1, or they may be independently locked in either latched or unlatched position by separate padlocks, as shown in Fig. 4.

For securing the latch mechanism in the vertical member 11, the bushing 48 may be provided with a split collar 65, which registers with a similar split collar 66 and may be secured by bolts 67. The entire device may be dismantled by removing the bolts 67 to permit the collars 65 and 66 to be separated. The bushing 48 may then be withdrawn through a suitable aperture 68 (Fig. 4) in the member 11. After the bushing 48 is withdrawn, the rods 30 are free to be removed longitudinally. For this purpose the bushings 31 may be withdrawn from the vertical members 11 to release the rods 30. In certain instances it may be desired to remove both rods 30 from the top end of the member 11 as, for example, when the gate is permanently held in position and sufficient clearance is not provided for removing the lower rod 30 from the bottom end of said member. This may be readily accomplished by removing the top bushing 31 and withdrawing both rods from the top.

It is to be noted that in the above construction. the gates may be securely and rigidly locked in either latched or unlatched positions. The construction is such that the parts will be readily assembled and, when once assembled, are substantially tamper-proof.

It is to be understood that various changes and modifications may be made in the details of construction, as will be readily apparent to a person skilled in the art. A specific embodiment has been shown for purposes of illustration only. The invention is only to be limited in accordance with the following claim.

I claim:

A latch for a swinging gate having a vertical tubular member, said latch comprising a pair of rods disposed in said tubular member and slidable longitudinally thereof, said rods being adapted, when extended, to secure both the top and bottom of said gate in closed position and, when retracted, to release said gate for swinging movement, a rotatable member engaging said rods to extend or retract the same, a handle associated with said rotatable member having oppositely extending ears, an ear secured to said tubular member registering with one of said oppositely extending ears when said handle is in latching position and with the other of said last ears when said handle is in releasing position, and means locking said registering ears together to prevent unauthorized movement of said handle.

ALBERT LAW.