April 22, 1924. 1,490,956

O. K. BINDER

GATE HINGE

Filed April 17, 1923

Fig. 1.

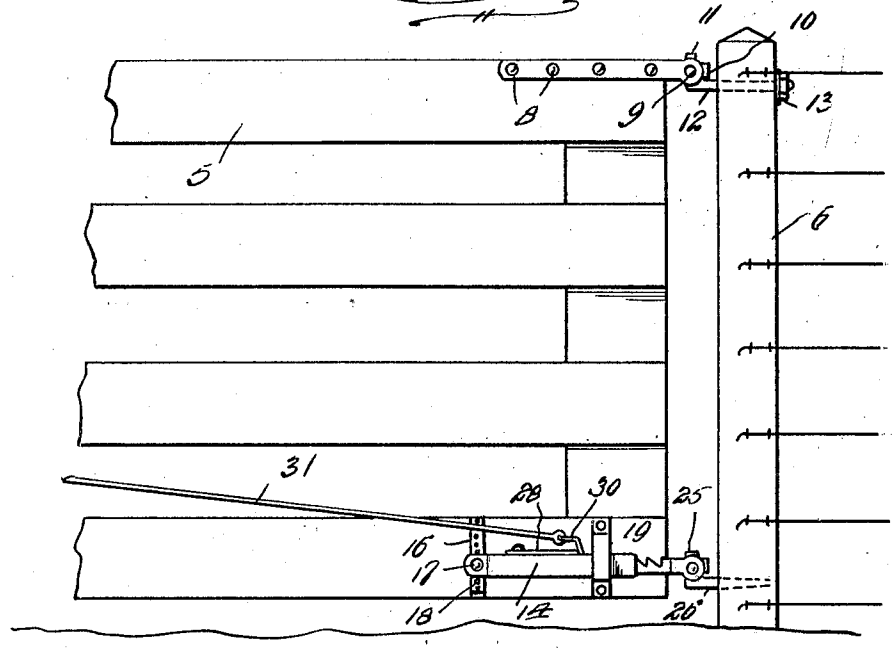


Fig. 2.

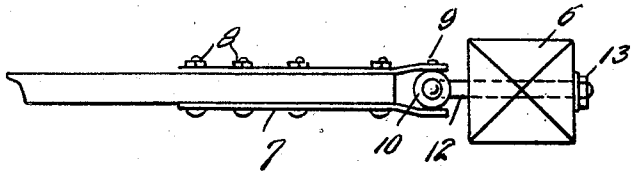


Fig. 3.

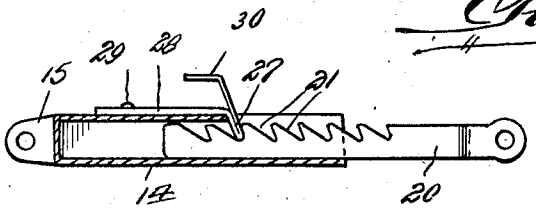
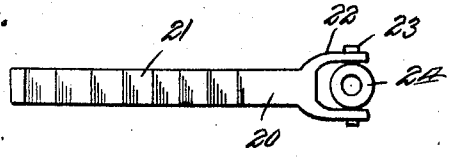


Fig. 4.



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UNITED STATES PATENT OFFICE.

OTTO K. BINDER, OF GENESEO, NEW YORK.

GATE HINGE.

Application filed April 17, 1923. Serial No. 632,624.

To all whom it may concern:

Be it known that OTTO K. BINDER, a citizen of the United States, residing at Geneseo, in the county of Livingston and State of New York, has invented certain new and useful Improvements in Gate Hinges, of which the following is a specification.

In carrying out the present invention, it is my purpose to provide a gate hinge whereby the gate may be raised upwardly for permitting the same to be expeditiously opened and closed when the ground is covered with snow or other obstructions are in the way.

A further purpose of this invention is the provision of such a hinge which is comparatively simple of construction and of such a nature as to be expeditiously applied to all types of gates, the invention being further characterized by its efficiency and durability, the same comprising relatively few parts and these so correlated as to reduce the liability of derangement to a minimum.

The nature and advantages of the invention will be better understood when the following detailed description is read in connection with the accompanying drawings, the invention residing in the construction, combination, and arrangement of parts as claimed.

In the drawings forming part of this application, like numerals of reference indicate similar parts in the several views, and wherein:

Figure 1 is a fragmentary elevation of the conventional form of gate secured to a fence post through the medium of my improved hinge;

Figure 2 is a top plan view of Figure 1;

Figure 3 is a longitudinal cross section of one of the hinge members; and

Figure 4 is a top plan view of one of the elements comprised in the hinge member shown in Figure 3.

Referring to the drawings in detail, 5 indicates a gate and 6 the usual gate post. These elements, however, are not of the essence of my invention as the same may be of any convenient construction and are merely shown for more adequately disclosing the relationship of my invention thereto.

Upon the top side of the gate 5 and at the end thereof adjacent the post 6 are longitudinally extending metallic straps 7, one upon each side of the gate and being secured to the gate and to each other through the medium of bolt and nut connections 8. The ends of these strap members 7 extend outwardly from the end of the gate and are provided with alined openings for receiving therebetween laterally extending pintles 9 of a collar 10, this collar adapted for positioning over the vertically projecting end 11 of a bolt 12 extended through an opening adjacent the upper end of the post 6 and is secured through this opening through the medium of a nut 13.

Upon one side of the gate 5 and at the lower corner thereof adjacent the post 6 is a plunger casing 14, one end of the same being closed and provided with an extension ear 15 whereby this casing is pivotally secured to a bracket plate 16 upon the gate through the medium of a bolt or the like 17 extending through an opening within said ear and within any one of a number of openings 18 in said plate 16. The front end of the casing 14 is slidable within a guide bracket 19 upon said gate 5 and freely movable within the casing 14 is an arm or rod 20, the major portion of the top edge thereof being toothed as at 21. The front end of this rod or arm 20 is yoked as at 22 and engaging through openings in the opposite legs of this yoked end are projecting pintles 23 upon opposite sides of a collar 24. This collar 24 engages over the vertically projecting end 25 of a spike 26 that is driven into the post 6 adjacent its lower end.

The front end of the top wall of the casing 14 is open and extending within this opening is the downwardly bent portion 27 of a spring plate 28 that is riveted or otherwise secured at 29 to said casing. This downwardly bent portion is adapted for engaging the teeth 21 of an arm or rod 20 for preventing the inward sliding movement of said arm or rod within the casing. This spring plate 28 is further provided with an upwardly or rearwardly extending portion 30 that is connected to one end of an operating rod 31 that extends laterally and upwardly to a point adjacent the usual gate latch whereby when the rod 31 is pulled the arm or rod 20 may slide backwards into the casing 14.

In view of the above description it will at once be apparent that whenever it is desirable to raise the lower edge of the gate 5 a sufficient distance above the ground surface for permitting the opening and closing of the same when obstructions are upon

the ground the gate may be conveniently raised by raising upwardly upon the free end thereof, the gate being maintained in this position by the said downwardly bent portion 27 of the spring plate 28 engaging one of the teeth of said rod or arm 20, the specific connection between the upper and lower hinge elements of the gate to the post 6 effecting a universal connection of the gate to the post.

It will be obvious to those skilled in the art that I have provided a highly improved form of hinge primarily adapted for association with farm gates, it being, of course, understood that the device may be readily associated with other gates or doors without departing from the spirit and scope of the invention as claimed.

Having thus described my invention, what is claimed is:

A gate hinge including a pair of post carried members, a pair of gate carried members for cooperation therewith for mounting the gate on the post for horizontal swinging movement, and pivoting the gate for vertical adjustment of the free ends, one of said gate carried members having a tubular housing formed with an ear extending from one end thereof, a bracket formed with a plurality of vertically aligned openings mounted on the gate, a pivot member extending through an opening in the ear on said housing adapted to be extended through any one of the openings in said bracket, for adjustably attaching the housing thereto for a pivotal movement thereon, a guide bracket mounted on the gate for guiding the housing in its pivotal movement on the first mentioned bracket, an arm slidable in the housing formed with a plurality of ratchet teeth having one end extending beyond the housing and pivotally connected with one of the post carried elements, and a latch carried by the housing for engagement with the ratchet teeth on said arm for holding said arm in an adjusted position relative to the housing whereby the gate is secured in adjusted position relative to the parts for pivotal movement thereon.

In testimony whereof I affix my signature.

OTTO K. BINDER.