

United States Patent Office.

D. H. GOULD, OF TROY, NEW YORK.

Letters Patent No. 68,434, dated September 3, 1867.

IMPROVEMENT IN GATE-HINGES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, D. H. GOULD, of Troy, in the county of Rensselaer, and State of New York, have invented a certain new and useful Improvement in Gate-Hinges; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is a perspective view of the hinge, with the leaf supporting the gate swung to the right hand.

Figure 2, a similar view, with the leaf swung to the left.

Figure 3, a vertical section through the joints of the hinge, with the leaves closed together.

Like letters of reference indicate corresponding parts in all the figures.

This hinge is of that class having forked bearings employed at the bottom of gates for closing the gate by its gravity when its bottom is thrown from the vertical axis of the upper hinge.

My invention is an improvement on that patented to Field and Carruthers, October 30, 1866, No. 59,202, and consists in the employment of a horizontal bar connecting the lower sides of the jaws, the object being to furnish a guide to carry and retain the jointed braces in place as the hinge closes, and thus obviate any difficulty in shutting from wear or from looseness of the pivots.

The drawings represent an arrangement of hinge similar to that of Field and Carruthers. The hinge consists of two principal parts, A B, attaching respectively to the bottom of the gate and to the post. The part A has simply a rigid bearing or flange, *b*, for the support of the hinge. The part B has two forked or branching jaws *d d'*, and these jaws are formed with slots *e e* in the ends, which leave upper and lower sides *f g* thereto, as clearly shown. Above the bearing *b* is situated a swing-brace, *h*, and beneath said bearing is situated a similar swing-brace, *h'*. Brace *h* is pivoted at *i* to the upper side *f* of jaw *d*, and brace *h'* is pivoted at *i'* to the lower side *g* of jaw *d'*. At the opposite ends the braces are pivoted respectively at *k k'* to the bearing *b*. Thus it will be seen that when the jaws close up in shutting the hinge, they enclose or embrace the parts *h h' b*, as clearly shown in fig. 3.

Thus arranged, the gate is allowed the ordinary swinging action in either direction, and the bottom, being thrown from the centre, will be self-closing by the weight of the gate. The braces being pivoted to the jaws, and being pivoted to the bearing, will prevent the hinge from getting displaced. Thus far the arrangement is the same as that patented to the parties before mentioned. In Field and Carruthers' hinge, the jaws *d d'* are separate and disconnected. The whole weight of the bottom of the gate comes upon the pivoted bearings of these jaws. In swinging the gate closed from its open position, as in fig. 1, the bar *h'* will be folded into the jaws, as indicated, and will serve as a support and guide to the bearing *b*, which rests on top. But in swinging the gate closed from its opposite open position, as in fig. 2, this brace *h'* will be extended, and the opposite one, *h*, above the bearing *b*, will be folded in. Therefore, in this arrangement, there is no support or guide to the brace *h'* and the bearing *b*, except the open and disconnected jaw to which they are connected. If the bearing surface at the jaws wears down, or if any wear of the pivots occurs, or if the pivots are fitted loosely or work at an angle, the parts, in closing, will strike below the level of the opposite jaw, and will not enter, thus causing difficulty. I obviate this difficulty by casting or forming a bar, *p*, between the lower sides *g g* of the opposite jaws, on a level with the bearings of the jaws, which bar performs the same service in guiding and supporting the parts as does the brace *h'*, as at first mentioned. This bar is of the utmost importance, for it always retains the parts in position to close properly, and there can be no difficulty occurring from wear or imperfection of the pivots in closing the gate. This connection also serves to strengthen the lower sides of the jaws, where the greatest strain comes, and prevent the great danger of breakage in cold weather if violence is applied to the gate. If desired, a similar connection may be made between the upper sides of the jaws; and indeed the whole space between the jaws may be boxed in, but this is not considered essential under ordinary circumstances. This arrangement might be applied to hinges in which a single brace, in place of a combination of braces, is used. I do not limit myself to the precise arrangement shown.

What I claim as my invention, and desire to secure by Letters Patent, is—

The employment of the bar *p* in combination with the jaws *d d'*, serving as a guide and support to the parts folding within the jaws, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

D. H. GOULD.

Witnesses:

R. F. OSGOOD,

J. A. DAVIS.