G. W. GOSS.

GATE HINGE.

APPLICATION FILED FEB. 6, 1919.

1,362,415. Patented Dec. 14, 1920.

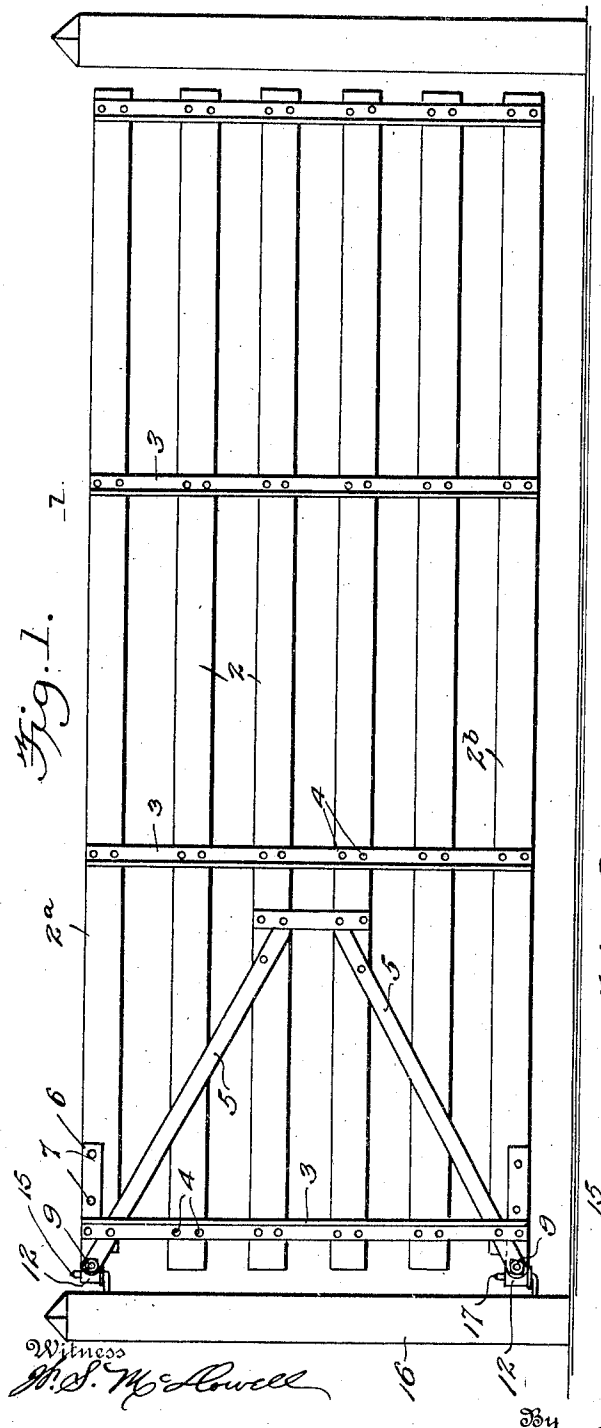


Fig. 1.

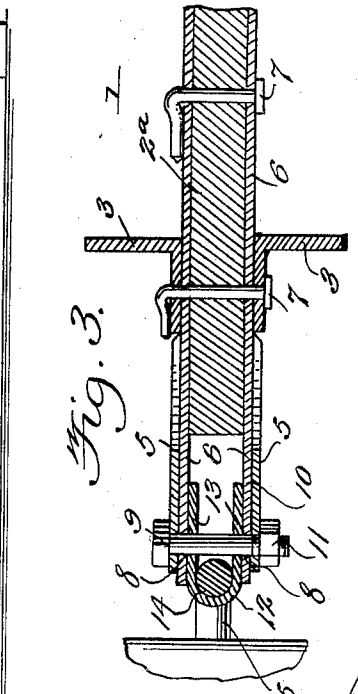


Fig. 3.

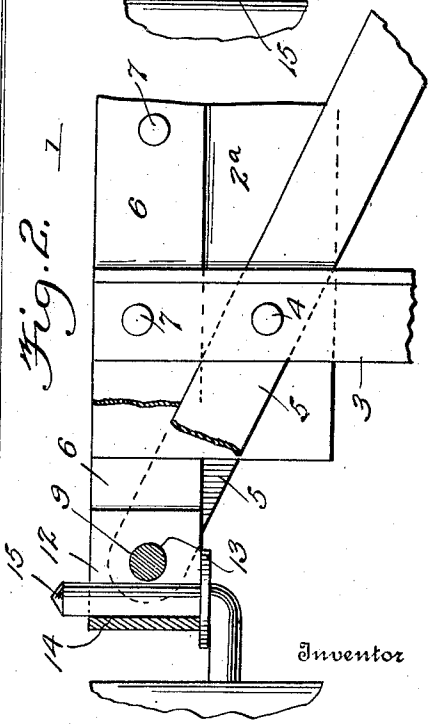


Fig. 2.

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GATE-HINGE.

1,362,415. Specification of Letters Patent. Patented Dec. 14, 1920.

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To all whom it may concern:

Be it known that I, GEORGE W. GOSS, a citizen of the United States, residing at Baltimore, in the county of Fairfield and State of Ohio, have invented certain new and useful Improvements in Gate-Hinges, of which the following is a specification.

This invention relates to gates, and has particular reference to the hinge construction thereof; the object of the invention being to produce a novel and efficient hinge construction so formed as to be capable of governing the working height or positions of operation of a gate, whereby in the event of the latter sagging, or falling from a true and freely swinging position, such defect may be readily compensated for and eliminated by adjusting the hinge construction, the adjustment being of a very simple nature, easy to effect and will not slip or otherwise become ineffectual.

With these and other objects in view as will appear as the description proceeds, the invention accordingly consists in the novel features of construction, combinations of elements and arrangement of parts hereinafter fully described and having the scope thereof set forth in the appended claims. In the accompanying drawing:

Figure 1 is a side elevation of a gate, showing the application of the improved hinge construction comprising the present invention hereto,

Fig. 2 is a fragmentary elevation and vertical section of the hinge construction, and

Fig. 3 is a horizontal sectional view.

Similar characters of reference denote like and corresponding parts throughout the several views of the drawing.

For purposes of illustration, I have shown my improved hinge construction as applied to a farm gate, which has been indicated in its entirety by the numeral 1. The construction of this gate by itself does not form an essential part of the present invention, as the latter may be applied to gates and other swinging closures of a variety of forms, uses and sizes. However, the gate 1 may be said to consist of a plurality of vertically spaced longitudinally extending rails 2, preferably formed from wood and which are rigidly connected in their related positions by means of vertically disposed angle bars 3. The latter being located, as shown in Fig. 3, on both sides of the gate and are in this instance connected with the rails 2 by means of nails 4, the latter having their ends bent over to prevent slippage. While bolts and nuts may be used with equal facility, yet it has been found that for a practical and economical construction the nails 4 answer every requirement, and, furthermore, they are not likely to rust, as is the case of threaded bolts, so that difficulty will not be afforded in effecting the removal. The gate is further braced and strengthened by means of angularly disposed pairs of parallel rods 5, which are located near the hinged end of the gate and which extend between the sides of the bars 2 and the adjacent inwardly situated angle bars 3.

The gate 1 is in this instance provided at its hinged end and adjacent to its upper and lower edges with a plurality of parallel bars 6. These bars lie on opposite sides of the rails 2^a and 2^b and are connected therewith by means of suitable securing elements 7. The ends of the bars 6 adjacent to one side thereof are formed to terminate beyond the adjacent ends of the rails 2^a and 2^b, and these protruding ends are apertured as at 8 to receive bolts, studs or their equivalents 9, and which bolts also pass through registering openings 10 formed in the ends of the rods 5, so that the latter will be securely clamped to the rigidly carried gate bars 6. Nuts 11 being threaded upon the ends of the bolts 9 to permit of this feature.

Situated between the protruding ends of the bars 6 are a plurality of yoke shaped hinge members 12, which are maintained in supported relation with respect to the bars 6 by providing said members with alined openings 13, which are located to receive the bolts or studs 9. By reference to Fig. 3, it will be noted that this construction provides a socket 14 between the bolt and the closed looped or medial portion of each hinge member and that this socket may be changed from one side of the bolt 9 to the other by simply swinging the hinge member about the bolt 9, using the latter as an axis.

Thus, in operation, in the event that the lower right-hand end of the gate 1 should sag, the gate may again be restored to its normal operative position by simply swinging the hinged upper member 12 so that its socket

14 will lie between the bolt 9 and the end of the rail 2^a, as shown in Fig. 3. This feature permits the upper post carried pintle 15 of the gate supporting structure 16 to be connected with the gate at a point nearer the latter than is accomplished when said pintle occupies its normal position, as it is disclosed in full lines in Fig. 3. This adjustment causes the gate to oscillate about its lower point of connection with the pintle 17 situated at the lower extremity of the structure 16. From the foregoing, it will be gathered that by simply rotating one or the other of the members 12, the gate 1 may be readily adjusted to assume various vertical positions, thus preventing the same from sagging or becoming inoperative. This adjustment is capable of being effected in a very convenient and simple manner and is positive and reliable in use. The adjustment is of such character as to eliminate the necessity of pivotally connecting the horizontal and vertical members 2 and 3 of a gate and also eliminates the use of threaded reach rods and other such contrivances heretofore largely used in securing this gate adjustment.

What I claim is:

1. In a gate, a hinge therefor comprising a plurality of horizontally spaced bars rigidly connected to said gate and situated to have adjacent terminals thereof disposed to project beyond one end of said gate, a member situated to lie between the terminals of said bars and formed with a socket portion, a bolt carried by said bars and upon which said member is pivotally mounted, and a gate supporting pintle operable to occupy said pivoted socket member.

2. In a gate, a hinge construction therefor, comprising a bracket secured to said gate and formed to terminate in horizontally spaced arms, a pintle carried by a gate supporting structure for pivotally supporting said gate, and means swingingly supported by said arms for coöperation with said pintle to vary the relation between the latter and said gate.

In testimony whereof I affix my signature.

GEORGE W. GOSS.