

(No Model.)

J. P. IRWIN.
GATE HINGE.

No. 511,050.

Patented Dec. 19, 1893.

Fig. 1.

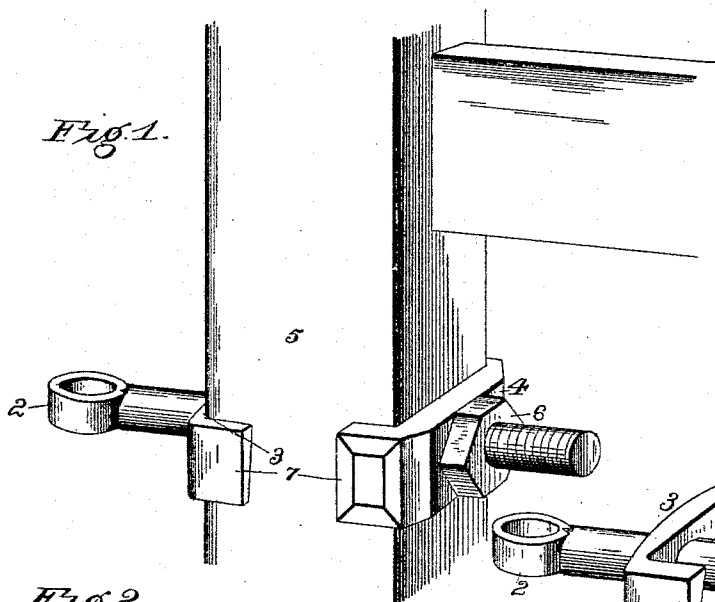


Fig. 3.

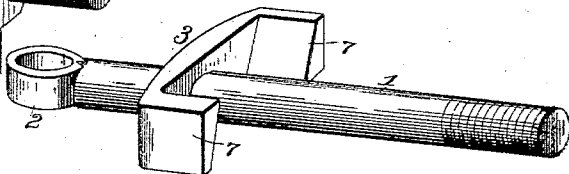


Fig. 2.

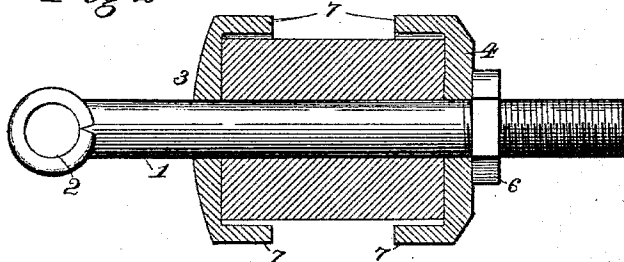


Fig. 4.

Fig. 5.

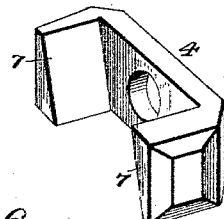
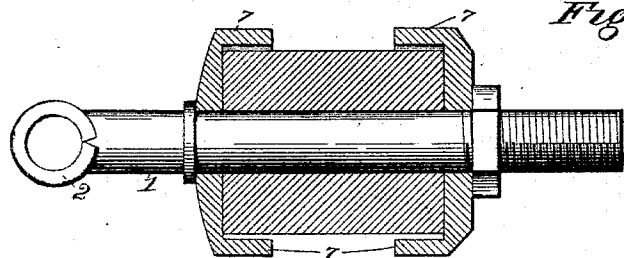
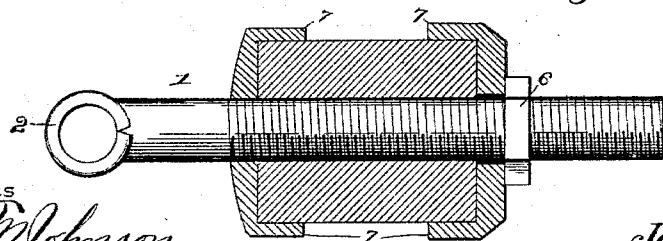


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN P. IRWIN, OF NEWARK, OHIO.

GATE-HINGE.

SPECIFICATION forming part of Letters Patent No. 511,050, dated December 19, 1893.

Application filed April 7, 1892. Serial No. 423,168. (No model.)

To all whom it may concern:

Be it known that I, JOHN P. IRWIN, a citizen of the United States, residing at Newark, in the county of Licking and State of Ohio, have invented a new and useful Gate-Hinge, of which the following is a specification.

The invention relates to improvements in gate hinges.

The object of the present invention is to provide a simple and inexpensive gate-hinge which may be readily adjusted to an end-bar of a gate, and which will securely clamp and brace the same, and thereby greatly strengthen mortised end-bars.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

In the drawings—Figure 1 is a perspective view of a portion of a gate provided with a hinge constructed in accordance with this invention. Fig. 2 is a horizontal sectional view. Fig. 3 is a detail perspective view of the eye-bolt and rigid jaw. Fig. 4 is a similar view of the movable jaw. Figs. 5 and 6 are horizontal sectional views, illustrating modifications of the invention.

Like numerals of reference indicate like parts in the several figures of the drawings.

1 designates an eye-bolt of a hinge, having an eye 2 at one end and threaded at the other end and carrying a clamp composed of a stationary jaw 3 secured rigidly to the eye-bolt, and a movable jaw 4. The eye-bolt is arranged in a perforation of an end-bar 5; the stationary jaw is arranged on the outside of the end-bar, and the movable jaw is arranged on the inside of the end-bar and is caused to clamp the bar by a nut 6, arranged on the threaded portion of the bolt and adapted to be screwed up against the jaw 4. The jaws 3 and 4 are provided with inwardly-extending lugs 7, which are arranged on the sides of the end-bar and the said jaws are adapted to securely clamp and brace the latter. The lugs are beveled and are slightly wedge-shaped in vertical section, and are adapted to be shifted or turned on the bolt to enable them to fit against the sides of end-bars varying in width.

The jaw 3 is held rigid with the eye-bolt, and this may be accomplished as illustrated

in Figs. 5 and 6, or as illustrated in the other figures. In Fig. 5 the eye-bolt is shown provided with a shoulder against which the jaw 3 bears; and in Fig. 6 the eye-bolt is threaded and the jaw 3 is provided with a threaded opening to screw onto the eye-bolt, and is thereby held rigid therewith.

The lugs 7 are beveled in opposite directions, namely: the lug at one end of the jaw being tapered toward its upper end, and that at the other end being tapered toward its lower end. The inner inclined faces of these jaws are approximately parallel or lie in parallel planes, and hence the interval between the inner faces of the lugs is greatest when measured perpendicular to the faces. Hence, in applying the jaw to a post it may be slipped on with facility if the inner faces of the lugs are parallel with the opposite sides of the post, but in order to accomplish this disposition the jaw must be turned at an angle to the post, or must be inclined to a horizontal plane. After having applied the jaw, whether it be that jaw which is fixed to the bolt or that which is detachable therefrom, and after the inner surface of the jaw proper, or the body-portion thereof, has been brought in contact with the surface of the post, the jaw may be turned to or toward a horizontal position to cause the acute angles of the lugs, which are formed by the beveling thereof, to bite into and engage the sides of the post. In this way both jaws are caused to fit the post accurately, or are adjustable to the width thereof, and if the post shrinks by the action of the weather the jaws may be readjusted to take up the shrinkage. It is obvious that without this adjustability and peculiar construction of jaw a device of this kind may be accurately fitted to a post provided the sizes of the post and jaw are proportionate; but by the arrangement above described the jaw is adapted to be applied to any post which approximates the size of the jaw, and it may fit loosely on the post when applied in the inclined position above mentioned without affecting its operativeness, for the reason that after being applied in the inclined position it may be turned by means of a hammer or similar tool to an approximately horizontal position to tightly grip the post, and therefore all that is necessary in fitting a jaw to a post is

to ascertain that the distance between the extreme inner surfaces or acute angles of the lugs measured parallel with the length of the jaw is equal to, or less than, the width of the post.

It will be seen that the hinge is simple and comparatively inexpensive in construction, that it is adapted to clamp and strengthen an end-bar, that it may be readily applied to a gate, and that it allows the latter to swing freely in either direction.

The eye-bolt engages a suitable pintle, and a gate is thereby hinged to a post. The bolt may be provided with a thumb-nut to be turned by the hand, or a polygonal nut to be screwed up with a wrench.

What I claim is—

In a hinge, the combination with a threaded eye-bolt of a fixed jaw, and a movable jaw to

engage opposite sides of a post, and means to adjust the movable jaw, said jaws being provided with terminal perpendicularly-disposed lugs having beveled inner sides whereby the greatest interval between the lugs is measured perpendicular with the inner faces thereof, and whereby the interval between the innermost points of the lugs measured parallel with the length of the jaw is less than the interval measured perpendicular to the faces, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN P. IRWIN.

Witnesses:

C. D. BARROWS,
JOHN H. JAMES.