G. B. MANLOVE.

GATE HINGE.

APPLICATION FILED NOV. 7, 1907.

904,791.

Patented Nov. 24, 1908.

FIG. 1.

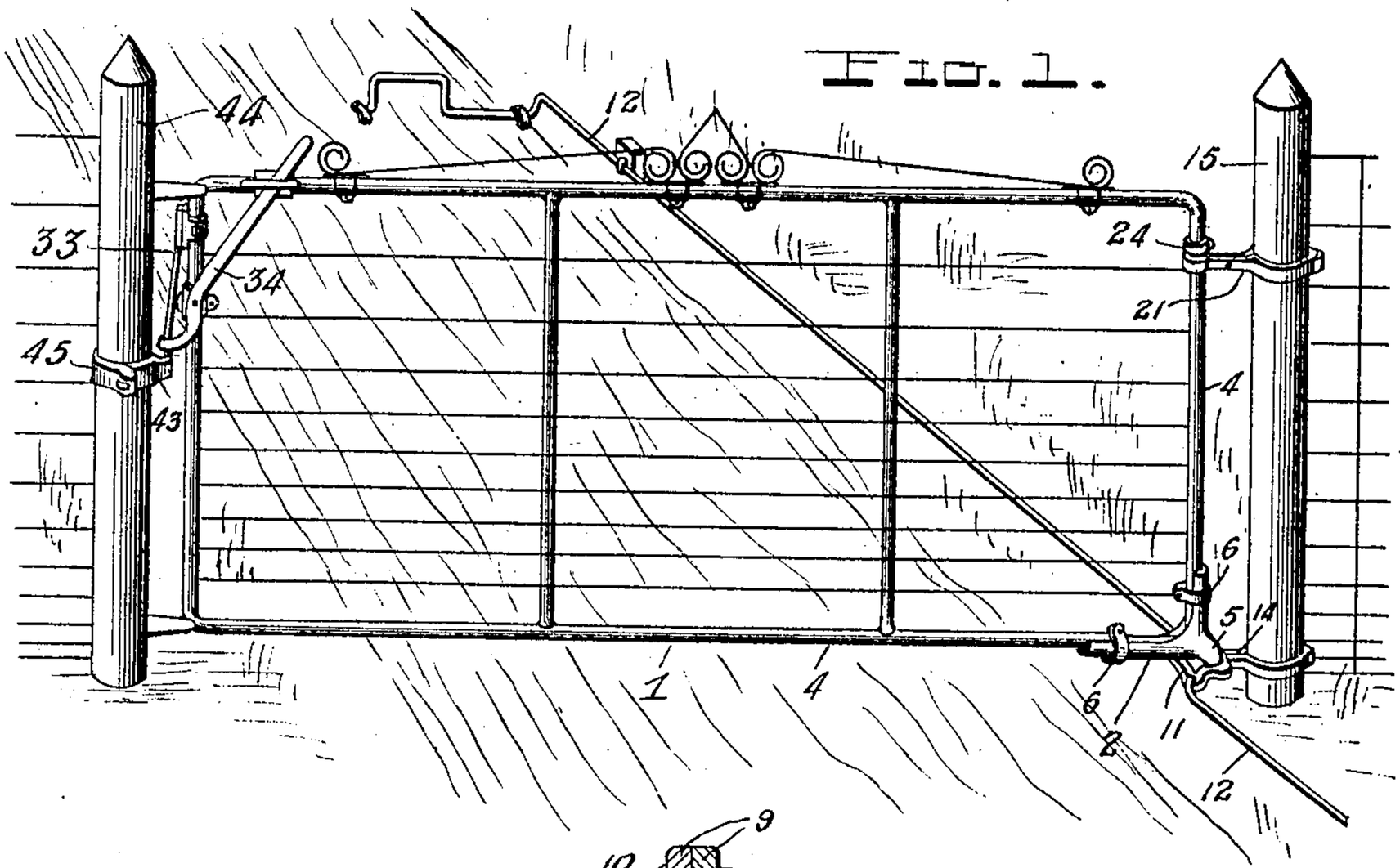

FIG. 2.

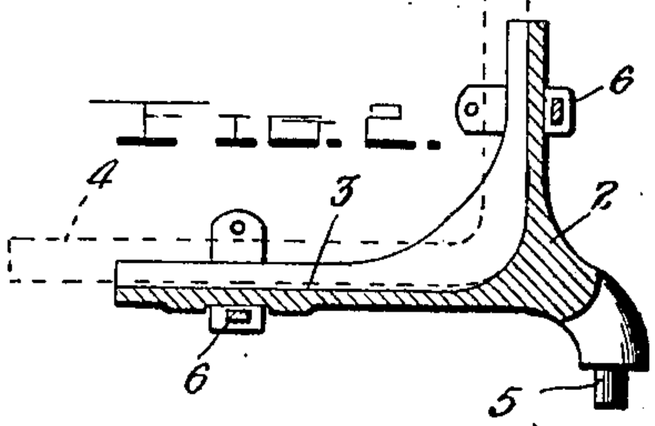

FIG. 3.

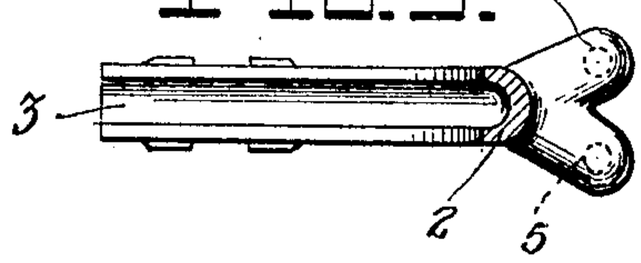

FIG. 4.

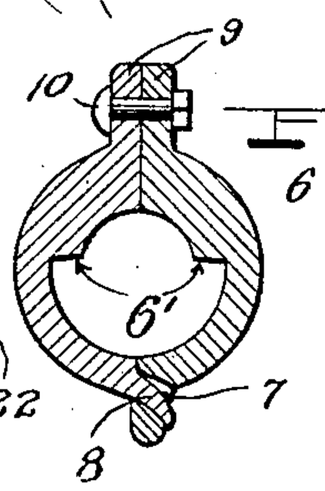

FIG. 7.

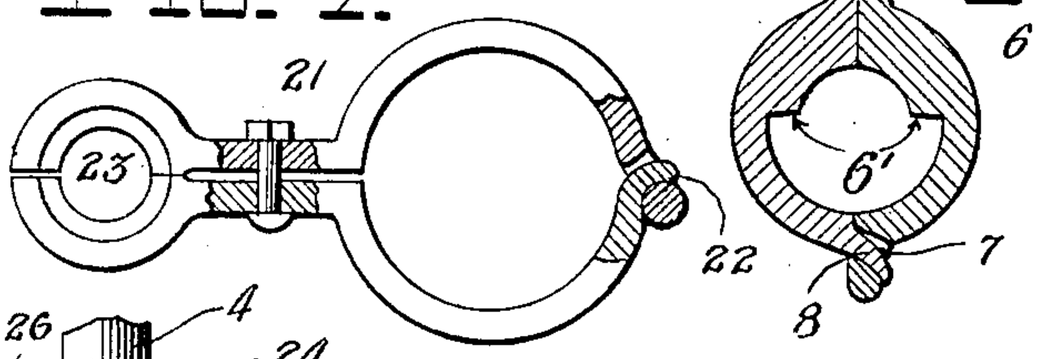

FIG. 8.

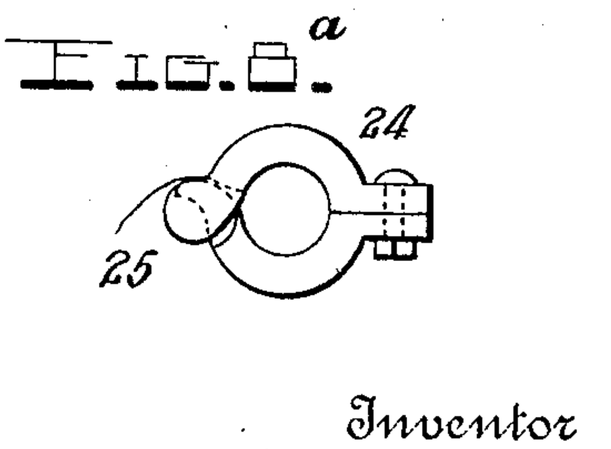

FIG. 5.

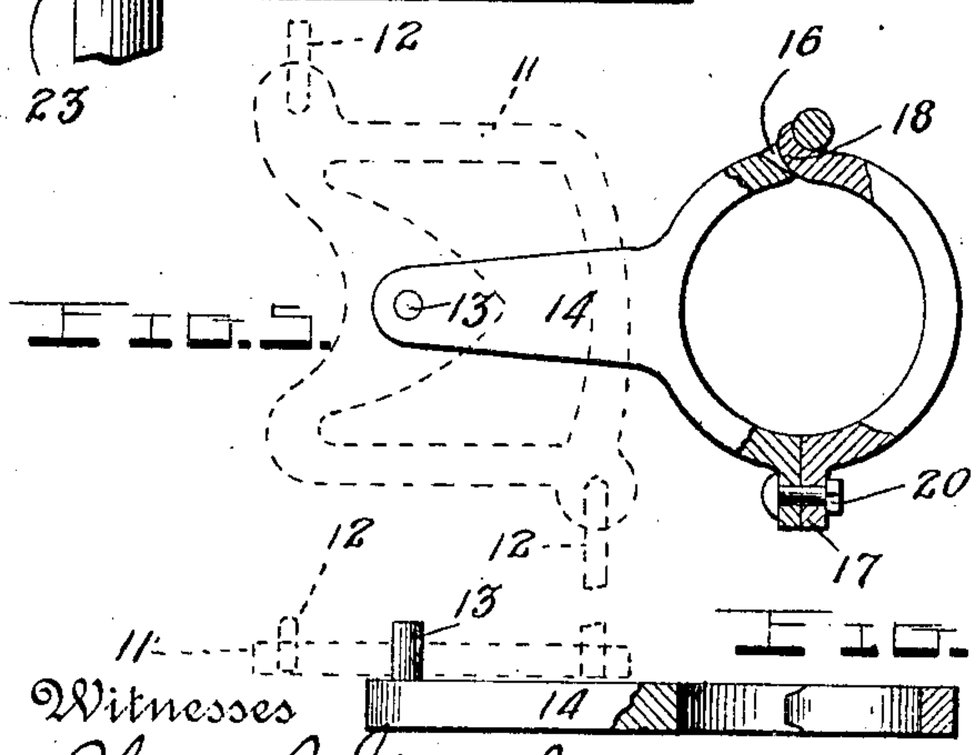

FIG. 6.

Witnesses

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UNITED STATES PATENT OFFICE.

GILBERT BEEBE MANLOVE, OF CHICAGO, ILLINOIS.

GATE-HINGE.

No. 904,791. Specification of Letters Patent. Patented Nov. 24, 1908.

Application filed November 7, 1907. Serial No. 401,128.

To all whom it may concern:

Be it known that I, GILBERT BEEBE MANLOVE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Gate-Hinges; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to gates and attachments therefor, and it has for its object to provide a gate with attachments for supporting and closing the same which can be removably applied thereto without perforating the gate, as will be hereinafter more fully set forth.

In the accompanying drawings, which illustrate the invention, Figure 1 is a perspective view of a gate provided with appliances embodying certain forms of my improved attachments; Figs. 2 and 3 are sectional views of one of the hinge members adapted to be secured to the inner bottom end of the gate; Fig. 4 is a cross sectional view of one of the means for securing said member in position; Figs. 5 and 6 are broken top plan and edge views, respectively of one of the hinge members adapted for use in connection with the attachment shown in Figs. 2 and 3; Figs. 7 and 8 are broken plan and side elevations, respectively, of one form of the upper hinge.

Referring more particularly to the drawings, 1 indicates a gate which may be of any desired construction, but is preferably what is known as an "automatic" gate, which is adapted to be opened and closed in the ordinary manner and especially as shown in Patent No. 680,054, dated August 6, 1901, to which reference is made for a more detailed disclosure of the same. In said patent the lower hinge is shown as forming a part of the gate which required said parts to be secured in position when the gate was being assembled, or put together. In adapting this hinge for use with gates having frames of welded iron or steel, I construct said hinge member 2 in the form of a right-angled or L-shaped casting, having its inner face concaved or trough-shaped, as shown at 3, which is adapted to partially encircle the rails, 4, of the gate at the lower inner corner. Said member is provided with rearwardly and downwardly extending pintles, 5, the same as shown in my said former patent, and it is adapted to be secured to the rails 4 by means of clamps, 6.

As shown more particularly in Fig. 4, said clamping members are substantially semi-cylindrical for encircling the rails and the hinge member, and one of them is provided with an eye, 7, with which a prong or extension 8 upon the other member is adapted to interlock, and the other ends are provided with corresponding perforated ears, or projections, 9, through which a bolt, 10, is projected for holding them together, and thereby rigidly securing the hinge member 2 to said rails without the necessity and consequent weakening of the rail members as heretofore generally practiced in securing attachments to gate structures. Each of the semi-circular clamping members has its inner face cut out on a different arc to form a shoulder 6′ to abut against the edges of the member 2 when the parts are assembled, the curved cut out portions at opposite ends of one clamping member being arranged to aline with the similar portions of the other member to form a similar semi-circular portion for engagement with the gate rails, and a larger portion to fit around the arm of the member 2 when in position on the gate rail to securely lock said rail and member against turning. These members 6 encircle the gate rails 4 and the hinge member 2 preferably in two places about the center of the upper part and about two-thirds of the way from the inner end of the other.

The pintles 5 upon said hinge member are adapted to engage with the throw plate, 11, which may be of any desired form but preferably the same as shown in my said former patent, and is adapted to be actuated by throw rods, 12, in the usual manner. Said plate is adapted to be mounted upon the pintle 13 of an arm or bracket 14, which projects outwardly from the post, 15. Instead of securing said bracket to the post by bolts in the usual manner, I prefer to construct the bracket of two parts, one of which is provided with an eye 16 at one end and a perforated ear 17 at the other end, and providing the other member with a hinge-like projection 18 at one end, which is adapted to engage with the eye portion 16 and providing its other end with a perforated projection, which is adapted to register with the projection, 17, and to be drawn toward

the same by means of a bolt 20, and thereby cause the encircling portion of said bracket members to engage with the post with sufficient rigidity to prevent movement of the same and yet permit the same being attached or removed without the necessity of forming holes through the post. The advantage arising from this construction will be readily apparent when it is considered that the post is frequently formed from metallic tubes or concrete material.

The upper hinge member 21 is also preferably formed from two members having one end adapted to encircle the post and provided with the interlocking hinge portions, 22, similar to the portions 16 and 18 of the lower hinge and having the other end provided with a circular recess, or opening, 23, for the reception of the vertical rail, 4, which is adapted to rotate therein and form a hinge. A collar, 24, is adapted to be adjustably secured to the rail 4 above said hinge member, 22, and by engaging therewith support the gate at the desired height. The upper face of the bracket 21 is preferably provided with an annular groove 26, within which balls, 27, are adapted to be seated and thereby provide a ball bearing support for engaging with the collar, 24.

By constructing a gate as above described, it is evident that the different attachments may be secured thereto without drilling any holes either in the post or in the gate members, and that any attachment can be quickly replaced, thereby affording a very cheap and durable structure. In addition to this, it permits of the attachment being applied to any ordinary gate or post without special preparation or adaptation.

Although I have shown and described my attachments as peculiarly applicable for what are known as "automatic" gates, it is evident that many of them can be applied to the ordinary gate with but slight changes.

Having thus particularly described my invention, what I claim as new and desire to secure by Letters-Patent, is:

1. In combination with a gate, of a hinge member formed from a trough like substantially L-shaped casting having a rearwardly extending pintle at its angle, clamping means for encircling the gate rails and said member for holding the latter in position, and a hinge member pivotally connected with said pintle for connecting said casting with a gate post.

2. A gate hinge comprising an approximately L-shaped trough-like casting having a rearwardly extending pintle at its angle, clamps for connecting said casting with the gate rails comprising semi-circular members, the connecting ends of which are provided respectively with inter-locking and perforated elements, a bolt operable to connect said perforated elements, and a hinge member pivotally connected with said pintle for connecting said casting with a gate post.

3. A gate hinge comprising an approximately L-shaped trough-like casting having a rearwardly extending pintle at its angle, clamps for connecting said casting with the gate rails comprising semi-circular members, the connecting ends of which are provided respectively with inter-locking and perforated elements, each of said semi-circular members having its inner face at opposite ends cut out to form arcs of a circle of different sizes with a shoulder arranged between them, a bolt operable to connect said perforated elements, and a hinge member pivotally connected with said pintle for connecting said casting with a gate post.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GILBERT BEEBE MANLOVE.

Witnesses:

ORSON SMITH,

PAUL C. PETMON.