No. 889,591. PATENTED JUNE 2, 1908.

F. T. FAY.

AUTOMATIC GATE.

APPLICATION FILED SEPT. 12, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

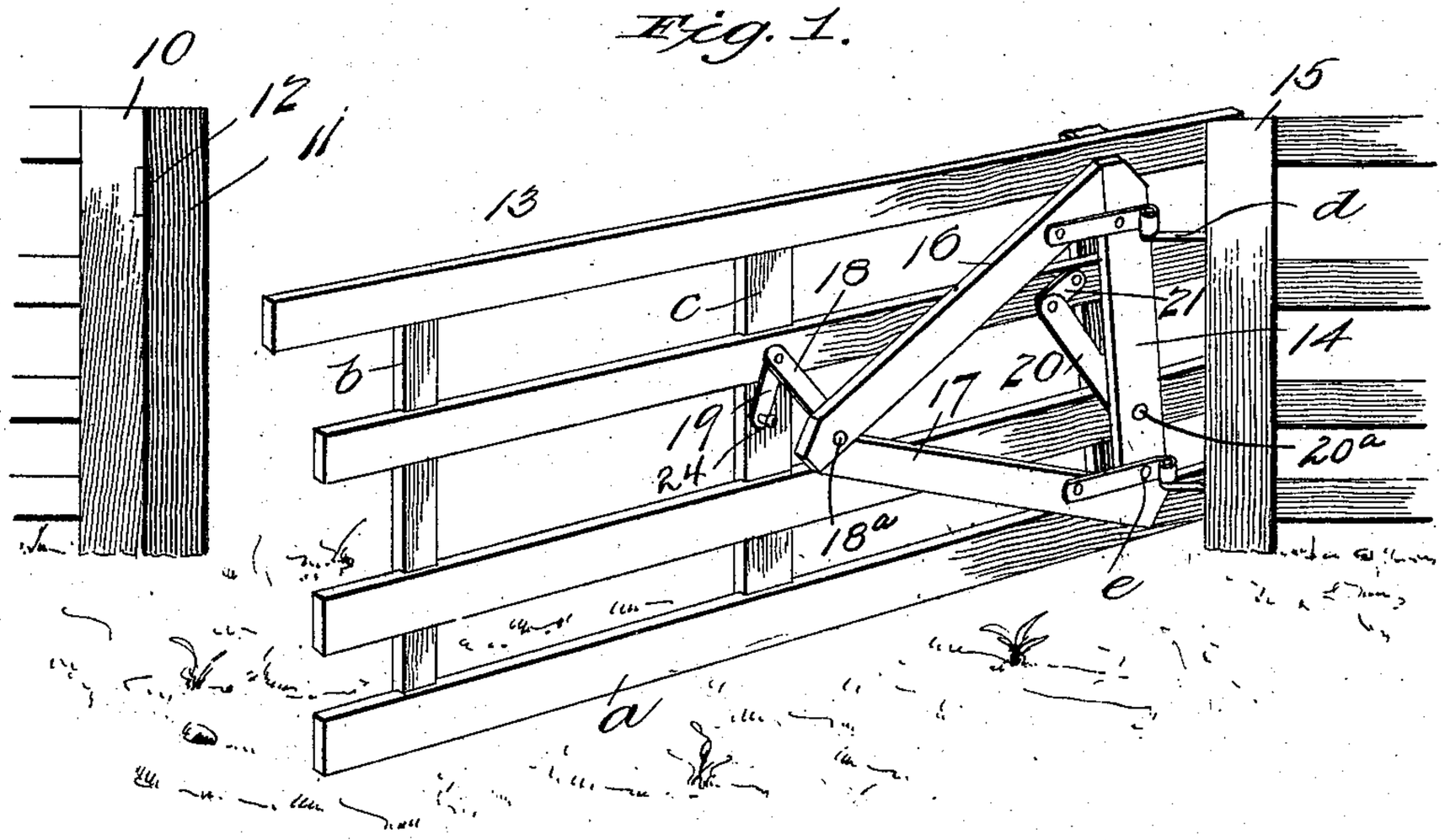
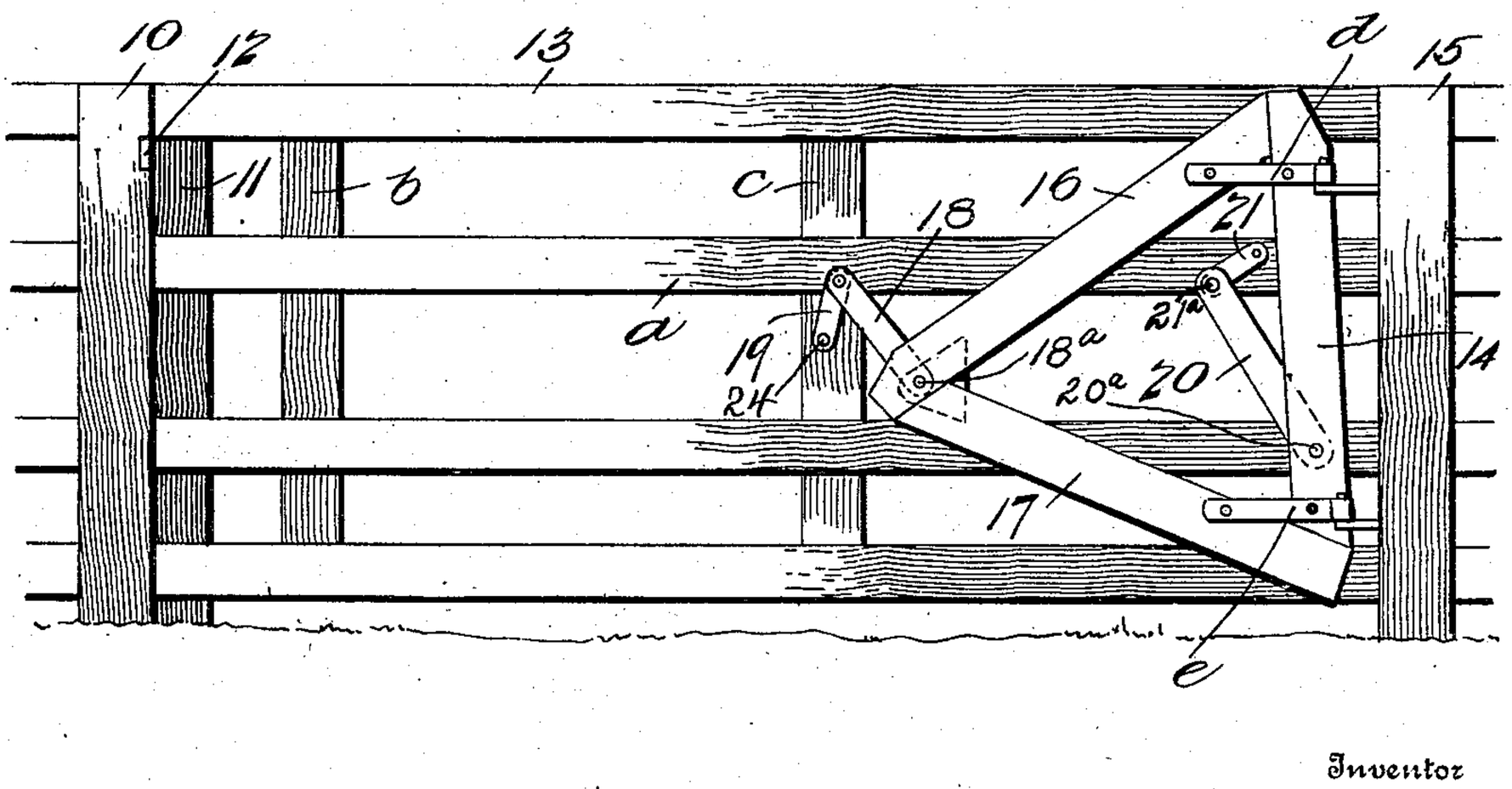


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

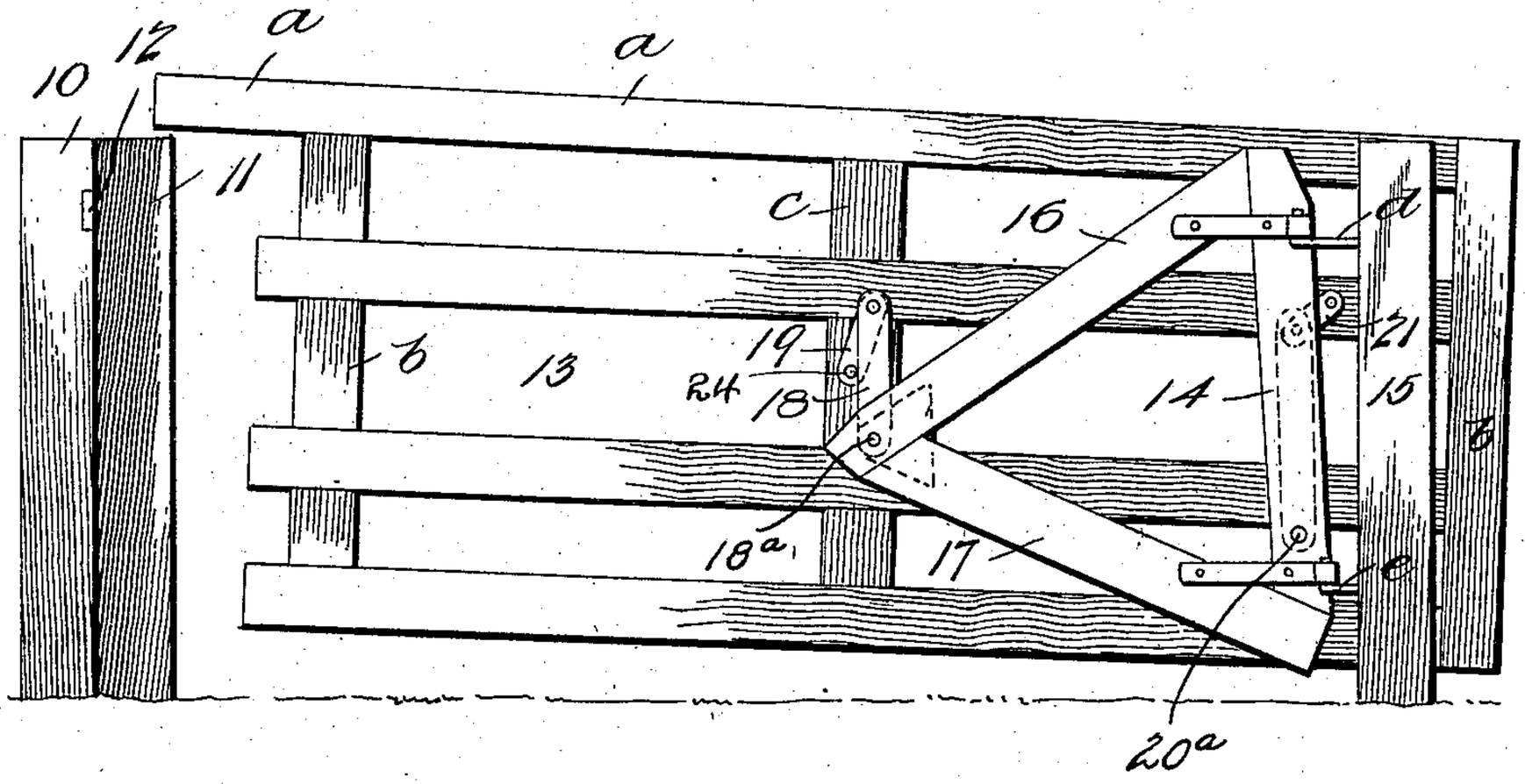


Fig. 4.

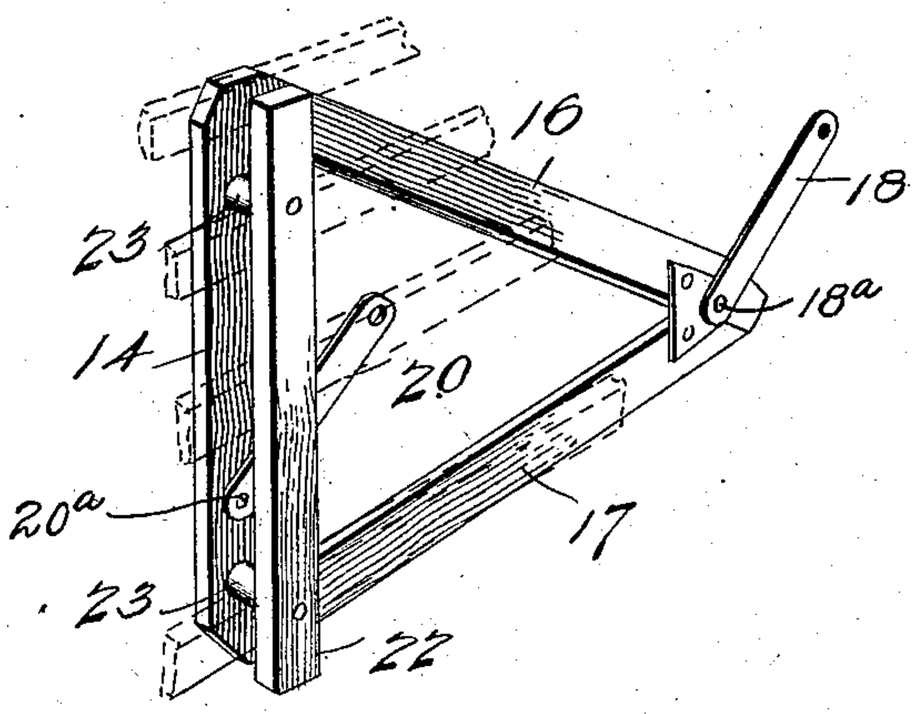
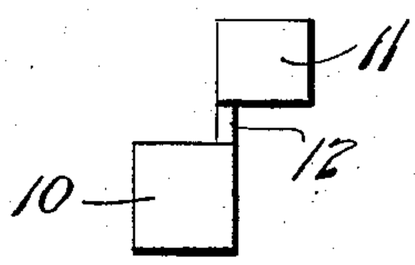


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

FRANK T. FAY, OF WOODHULL, ILLINOIS.

AUTOMATIC GATE.

No. 889,591. Specification of Letters Patent. Patented June 2, 1908.

Application filed September 12, 1907. Serial No. 392,472.

To all whom it may concern:

Be it known that I, FRANK T. FAY, a citizen of the United States, residing at Woodhull, in the county of Henry and State of Illinois, have invented certain new and useful Improvements in Automatic Gates, of which the following is a specification.

The present invention consists in certain new and useful improvements in gates of the swinging tilting type in which the gate proper is supported and carried by a crane which has a hinge connection with the hinge post.

The principal object of the invention is to provide a new and improved form of pivotal connection between the gate proper and its supporting and carrying frame which will permit of a limited sliding and lifting of the gate to move it from the latching point, and cause the gate to automatically swing to its open position.

Other and further objects and advantages of the invention will be apparent from the following detailed description, when taken in connection with the accompanying drawings.

In the said drawings, wherein like characters of reference designate corresponding parts—Figure 1 is a perspective view, the gate being shown partly open and dropped to the ground. Fig. 2 is a side elevation, the gate being shown in its closed position. Fig. 3 is a similar view, the gate being shown slid back and lifted to the position it assumes prior to swinging to its open position. Fig. 4 is a detail perspective view of the supporting and carrying frame and its connections. Fig. 5 is a top plan view of the latching posts, showing their relative arrangement.

Referring to the accompanying drawings, 10 and 11 designate the latching posts which are arranged in spaced parallel planes and provided with an upper horizontal connecting member 12, which forms a rest for the free end of the gate proper 13. The type of gate shown in the drawings is the preferred one, comprising spaced horizontal rail members *a* and end and center vertical stays *b* and *c*, and by referring to Figs. 1 and 3, it will be observed that the upper rail of the gate has a projecting end *a'* that is adapted to be seated upon the said horizontal rest 12 between the latching posts 10 and 11.

A triangular shaped supporting and carrying crane has its upright base bar 14 hinged to a post 15, and the apex of its inclined side bars 16—17 has pivoted thereto at 18^a a short link 18 which has its upper end in pivotal engagement with the upper end of a strap 19 carried by the central stay *c* of the gate proper 13. The upright base bar 14 has a long link bar 20 pivoted adjacent to its lower end as at 20^a, the upper end of said long link bar having a pivotal engagement at 21^a with the lower end of a strap 21 carried by one of the horizontal rail members *a* of the gate proper 13, at a point above the plane of the pivotal engagement of the short link 18 with the said gate.

By referring to Figs. 2 and 3 of the drawings it will be observed that the upright base bar 14 of the supporting and carrying crane, is connected to the hinge post 15 by means of the upper and lower hinges *d*, *e*, the upper one of which (*d*) projects to one side of the vertical plane of the lower hinge *e*, so that when the said crane is in its supporting and carrying position, it will hang with its upright base at a slight inclination beyond a vertical plane.

By referring to Fig. 4 of the drawings it will be observed that the upright base bar 14 of the triangular supporting and carrying crane has bolted thereto at one side a standard 22 which is arranged in the same plane and is spaced therefrom a sufficient distance to permit of the gate being movable therebetween. To overcome the frictional resistance caused by the contact of portions of the gate with said bolts, rollers or collars 23 are carried by the same.

From the foregoing description it will be seen that by means of the short link bar 18 and the long link bar 20 having their pivots arranged in different planes, when the gate proper is slid back, the said links will swing on their pivots and impart a lifting movement to the free end of said gate, which movement continues until said links have nearly reached their centers, at which point the short link 18 contacts with a stop 24 preferably carried by the lower end of strap 19, which serves to retain the said links in a position which causes the gate to hold the position shown in Fig. 3 of the drawings on account of the relation of elements 24, 19 and 18. When in said position, owing to the fact that the gate is supported in a position beyond the centers of said links, and the further fact that the crane is hinged in an inclined position, the gate may readily swing to its open position. And it will be further understood that the face end of the gate may be dropped to the ground at any point

of its swinging movement by a forward pull upon the gate, one of such positions being shown in Fig. 1 of the drawings.

To close the gate it is swung on its hinged support until the free end contacts with the gate post 11, and a forward sliding movement is imparted thereto, which releases the short link from engagement with its stop, causing said links to swing on their pivots and lower said gate from its tilted position, and allowing the projecting end of rail bar *a'* to be seated upon its horizontal rest between the latching posts 10—11.

I claim as my invention:—

1. The combination with a hinge post, of a triangular-shaped supporting and carrying crane the upright base of which is hinged to said gate post, a gate proper provided with straps which are disposed in different positions thereon, a pivoted link connection between the apex of the triangular-shaped crane and one of said straps, a pivotal link connection between the base of said crane and the other of said straps, means for limiting the swinging movement of said links in one direction to retain the gate in an elevated position, and a guide for said gate.

2. The combination with a hinge post, of a triangular shaped supporting and carrying crane the upright base of which is hinged to said hinge post, a gate proper having a pivotal connection with said crane comprising means for lifting the gate vertically and a stop for holding the gate in its lifted position, and a guide for the said gate comprising a standard arranged in a parallel plane with the upright base of the crane and having a bolt connection therewith carrying anti-friction rollers.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

FRANK T. FAY.

Witnesses:
ERNEST G. JANSON,
ED SEARCY.