E. D. NORTON.

Improvement in Hinges.

No. 115,509. Patented May 30, 1871.

fig. 3.

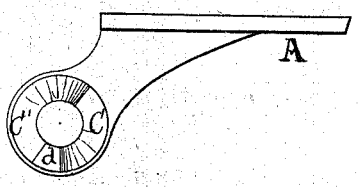


fig. 2.

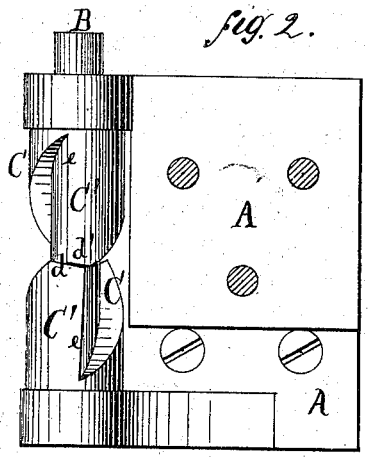
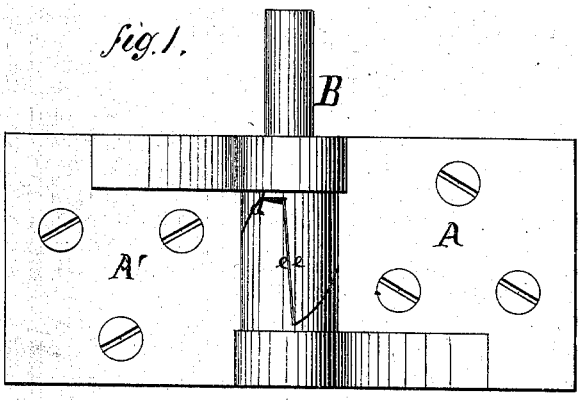


fig. 1.



Witnesses:

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UNITED STATES PATENT OFFICE.

EDWIN D. NORTON, OF CUBA, NEW YORK.

IMPROVEMENT IN HINGES.

Specification forming part of Letters Patent No. 115,509, dated May 30, 1871.

To all whom it may concern:

Be it known that I, EDWIN D. NORTON, of Cuba, in the county of Allegany and State of New York, have invented an Improved Door and Gate Hinge; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is an elevation of my improved hinge, showing its position when closed; Fig. 2 is a similar view, showing its position when open; and Fig. 3 is a plan view of the lower leaf.

Similar letters of reference in the accompanying drawing denote corresponding parts.

My invention relates to that class of hinges for doors and gates in which inclines are employed upon each leaf, so arranged that the gate shall close by its own gravity; and the invention consists in constructing the hinge with double inclines of unequal base upon each leaf, the apex of the widest inclines being cut off at an angle, so that when the gate is opened it shall be held in such position without being locked.

The employment of single inclines upon hinges of this class is objectionable, for the reason that they throw the entire weight of the gate upon the hinge-pintles, which are consequently liable to become broken and thus destroy the whole hinge. By my invention the pintles are relieved of all lateral strain, and serve simply as guides to hold the inclines against each other, while by the employment of inclines of unequal base the whole weight of the gate is supported by the single bearing-surface of the wide inclines, and is held open without being locked; consequently the necessity of lifting it preparatory to closing is avoided.

In the drawing, the fixed and swinging leaves of the hinge are indicated, respectively, by the letters A and A′, the former being cast with the pintle B, upon which the latter turns. Each leaf is provided with two inclines, C C′, which register with each other when the gate is closed, as shown in Fig. 1. The inclines C form an acute angle at their apex, while the inclines C′ are made broader at their base, and with the apex of each cut off at an angle, as seen at *d d′*.

When the hinge is operated the inclines of one leaf work in contact with their corresponding inclines on the opposite leaf. By this arrangement the pintle is relieved of all strain, serving as a guide simply for the inclines. The gate being swung open the inclines bear against each other, and the leaf A′ moves upward until the ends of the inclines C C′ are reached, when the upper one rests upon and is supported by the lower one, as shown at *d d′*, Fig. 2. The surfaces *d* and *d′* do not form an exact right angle with the axis of the pintle, but are inclined slightly to prevent the parts from slipping, and thus hold the gate open. The slides *e* of the inclines may be either parallel to the axis of the pintle or slightly inclined therefrom, as preferred. It is not designed, however, that the surfaces *e* shall come in contact while the hinge is being operated.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

The combination of the pintle B, the perpendicular or nearly perpendicular offsets *e e*, the inclines of different angles upon bases of different widths, and the bearing-surfaces *d d′*, sustaining the entire weight of the gate when open, substantially as herein described.

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