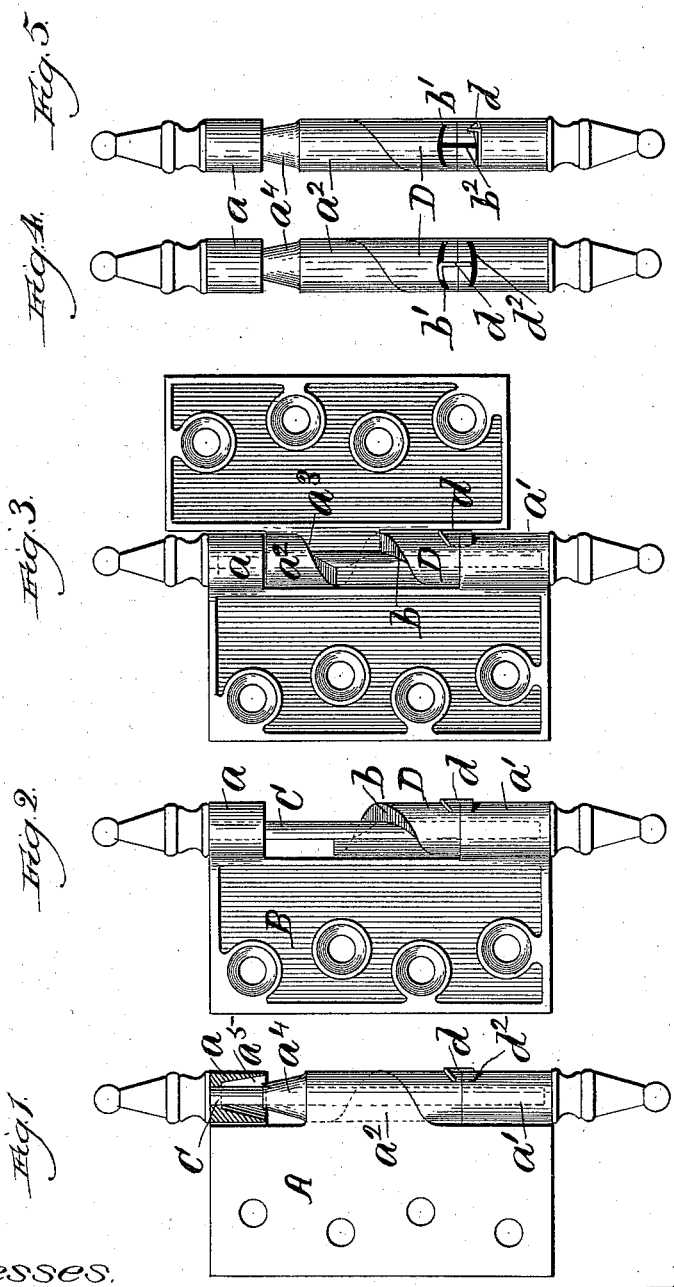
(Model.)

J. WIEN.

HINGE.

No. 385,156. Patented June 26, 1888.



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UNITED STATES PATENT OFFICE.

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HINGE.

SPECIFICATION forming part of Letters Patent No. 385,156, dated June 26, 1888.

Application filed December 17, 1887. Serial No. 258,169. (Model.)

To all whom it may concern:

Be it known that I, JULIUS WIEN, of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in a Door-Hinge, of which the following is a full, clear, and exact description that will enable others to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

The object of this invention is to provide a hinge which is adapted to be self-closing or adjusted to have the functions of an ordinary hinge, as may be required, the same consisting of certain peculiar and novel features in the construction and operation of the device, as will be hereinafter set forth.

Figure 1 is a side elevation of a hinge embodying my improved features, showing the side that is attached to the door or similar object; Fig. 2, an elevation with the door-half of the hinge removed. Fig. 3 shows the hinge open. Fig. 4 is a back view showing the device adjusted to operate as an ordinary hinge. Fig. 5 is a similar view showing the hinge adjusted to be self-closing.

Referring to the drawings, A represents the leaf that is usually attached to the door, B the companion leaf, and C the pintle.

The leaf B, or jamb part of the hinge, is provided at the ends with the knuckles *a a'*, the companion leaf A having the central knuckle a^2, which is cut away on the under side to provide the spiral surface a^3, as shown in the different figures of the drawings. The upper side of the knuckle a^2 is provided with the conical part a^4, which passes into the corresponding annular cavity, a^5, formed in the knuckle *a* of the leaf B, when the hinge is adjusted or set to be self-closing and opened out, as shown in Fig. 3. When the hinge is closed, the conical end of the knuckle a^2 is disengaged from the cavity or recess a^5, as shown in the sectioned part of Fig. 1. This conical end strengthens and increases the bearing-surface and covers the pintle at this point, which would not be the case were the conical part absent, but would leave a space at this point and present an unfinished appearance.

The knuckle D is an independent part mounted loosely on the pintle, and is cut away spirally, as at *b*, on the upper side to correspond to the cut-away spiral surface on the under side of the knuckle a^2. These spiral surfaces have a uniform bearing relative to each other when the hinge is in a closed position, as shown in Figs. 1, 4, and 5.

The loose knuckle D is provided in the back with the horizontal transverse slot *b'* (see Figs 4 and 5) and the vertical slot b^2, running into the slot *b'* and extending down into the knuckle *a'*, attached to the leaf B, thus forming a T-shaped slot.

d is an angular key adapted to removably engage with the T-shaped slot (see Fig. 4) and lock the loose knuckle D and the knuckle *a'* rigidly together. In this position the hinge and object to which it is attached are self-closing, by reason of the spiral riding surfaces of the loose knuckle D and the knuckle a^2, forming a rigid part of the leaf A. By this arrangement the leaf A is gradually raised up to the position shown in Fig. 3 as the same is thrown open, and when the pressure is released the hinge is automatically closed by force of gravity.

By simply removing the key *d* the hinge is converted into a device of the usual or ordinary character, having none of the functions of self-closing, as the loose knuckle D will then rotate on the pintle instead of remaining in a stationary position.

d^2 is a slot in the back of the knuckle *a'*, in which to lodge the key *d* when the same is not required for use.

By this construction and arrangement a hinge of a dual character and function is provided in one, and which may be quickly and conveniently changed from one to the other, as circumstances may require.

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

In a hinge of the character described, the combination, with the leaf A, provided with the central knuckle, a^2, having a spiral surface on the under side, of the independent or loose knuckle D, having the upper side cut

away in a corresponding plane and provided with the transverse slot b', the leaf B, the knuckle a' thereof, provided with the vertical slot b^2, which extends into the knuckle D, and the angular key adapted to be inserted in said slots, whereby these parts are rigidly locked together or disengaged, as may be required, substantially as and for the purpose set forth.

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