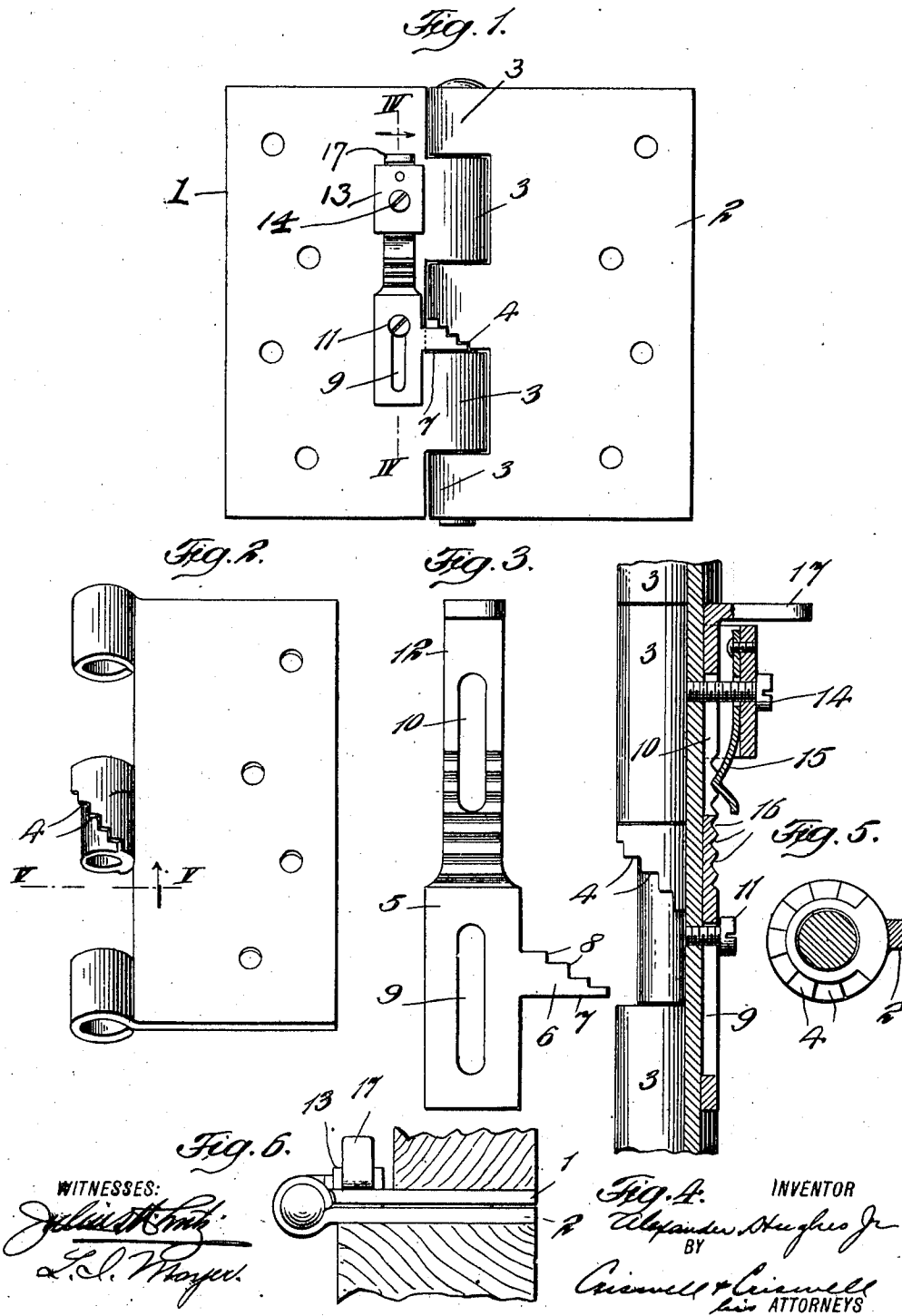


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HINGE.
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974,492.

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ALEXANDER HUGHES, JR., OF FORT LEE, NEW JERSEY.

HINGE.

974,492.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALEXANDER HUGHES, Jr., a citizen of the United States, and a resident of Fort Lee, county of Bergen, and State of New Jersey, have invented certain new and useful Improvements in Hinges, of which the following is a full, clear, and exact description.

The main object of this invention is to provide a hinge of simple construction by means of which the movement of a door or other swinging device may be limited, the hinge itself serving as a door stop.

Another object of the invention is to so construct the hinge that it may be locked against all swinging movement.

With these and other objects in view, the invention will be hereinafter more particularly described with reference to the accompanying drawings, which form a part of this specification, and will then be pointed out in the claims at the end of the description.

In the drawings, Figure 1 is an elevation of the inner side of the hinge, showing it in its full open position. Fig. 2 is a perspective view of one member of the hinge. Fig. 3 is a detail side elevation of the locking bar. Fig. 4 is a vertical sectional view on the line IV—IV of Fig. 1. Fig. 5 is a detail horizontal sectional view on the line V—V of Fig. 1; and Fig. 6 is a horizontal sectional view of a portion of a door and its support, showing the hinge in plan view.

Referring to the various parts by numerals, 1 and 2 designate the members of the hinge each of which is formed with the knuckles 3. The middle knuckle of the hinge member 2 is formed with a spiral stepped surface 4, said steps forming a series of vertical shoulders against which the stop device is adapted to contact. It is to be noted that this stepped surface extends spirally around the knuckle for approximately 90 degrees. On the opposite hinge member is secured a vertically sliding locking plate 5 carrying the forwardly extending shouldered extension 6. When this plate is in its lowermost position the lower edge 7 of the shouldered extension engages the upper surface of the lower knuckle of hinge section 1, shown clearly in Fig. 1. The shoulders 8 of the extension 6 are adapted to engage the vertical shoulders of the stepped surface 5 of the hinge section 2. When the stop plate 5 is in its lowermost position, the hinge sections may be opened

to their full extent, as indicated in Fig. 1 and the shoulders 8 of the extension 6 will then engage the lowermost shoulders of the said stepped surface 4. By raising the stop plate 5 the extent of swinging movement of the hinge members will be limited. This is manifest as the shoulders 8 of the extension 6 will be engaged by shoulders higher up on the spiral stepped surface 4, thereby limiting the movement of the hinge section 2. To permit the vertical adjustment of the stop plate, said plate is slotted, as shown at 9 and 10 in Fig. 3. A securing screw 11 passes through the slot 9 and into the hinge section 1 to serve as a guide for the lower end of said plate. The upper end of this plate is reduced in width, as at 12, and passes through a keeper 13. Through this keeper and through slot 10 passes a securing screw 14. Within the housing is secured a spring detent 15, which is adapted to engage corrugations 16 in the face of the stop plate. The upper end of the stop plate is bent outwardly to form a finger piece 17. The detent 15 serves to permit the stop plate to be adjusted vertically and holds it in its adjusted position.

From the foregoing it is manifest that by simply adjusting the stop plate to the proper position the swinging of the hinge members may be limited as may be desired; and that by raising the stop plate to its uppermost position, the hinge will be locked closed. By moving the lock plate to its lowermost position the hinge will be free to swing to its full open position. The hinge may be used as a stop device, or, it may be used in the ordinary manner, the stop device becoming practically inoperative when it is moved to its lowermost position.

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

1. A hinge consisting of two members suitably connected together, a vertically movable stop device on one member and a spiral stop-engaging surface carried by the other member and adapted to engage the stop device to limit the opening movement of the hinge members.

2. A hinge consisting of two members suitably connected together each member provided with knuckles, a vertically movable stop device on one member, one of the knuckles of the other member formed with a spiral stop engaging surface adapted to

engage said stop device to limit the opening movement of the hinge members.

3. A hinge consisting of two members suitably connected together, a vertically movable stop device on one member, means for holding said stop device in its adjusted positions and a spiral stop-engaging surface carried by the other hinge member and adapted to engage the stop device to limit the opening movement of the hinge members.

4. A hinge consisting of two members suitably connected together, a vertically movable stop device on one member and provided with a shouldered extension, a detent to hold said stop device in its adjusted position and a spirally arranged stepped stop engaging surface carried by the other member, the shoulders of said stepped surface being adapted to engage the shoulders on the stop device to limit the opening movement of the hinge members.

5. A hinge consisting of two members suitably connected together each member provided with knuckles, an adjustable stop

device on one member and one of the knuckles of the other member formed with a spiral stop engaging surface adapted to engage said stop device to limit the opening movement of the hinge members.

6. A hinge consisting of two members, each of said members being formed with knuckles, a vertically movable stop plate carried by one of said members and formed with a shouldered extension at one side thereof, a spring detent to hold said stop plate in its adjusted position, a spirally arranged stepped stop engaging surface formed on one of the knuckles of the other hinge member, the vertical shoulders of said stepped surface being adapted to engage with the shoulders of the stop plate to limit the opening movement of the hinge members.

This specification signed and witnessed this 6th day of April A. D. 1910.

ALEXANDER HUGHES, JR.

Witnesses:

W. A. TOWNER, Jr.,
L. I. MAYER.