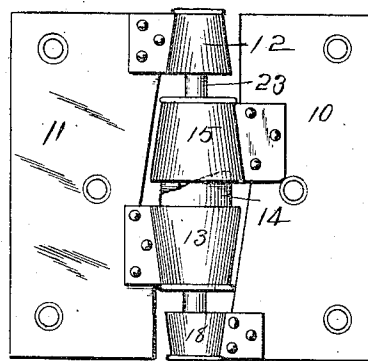
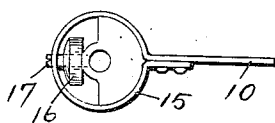
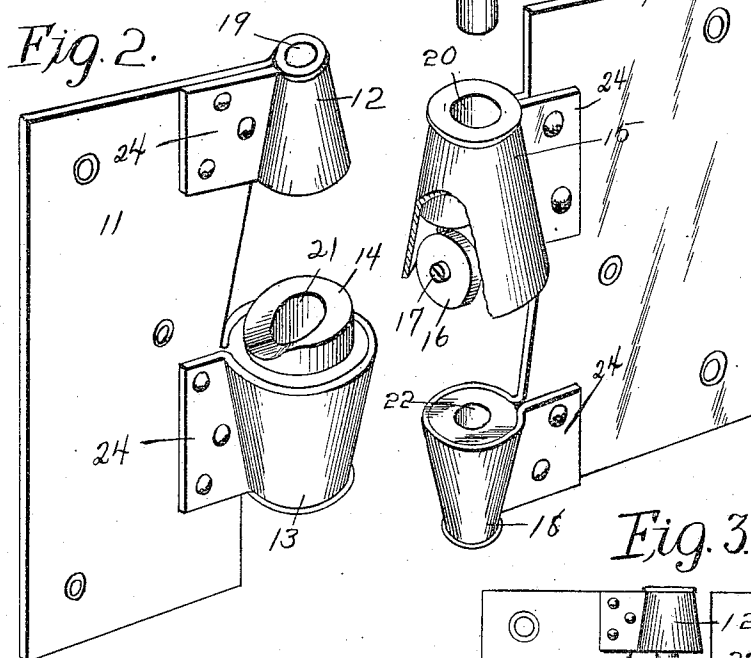
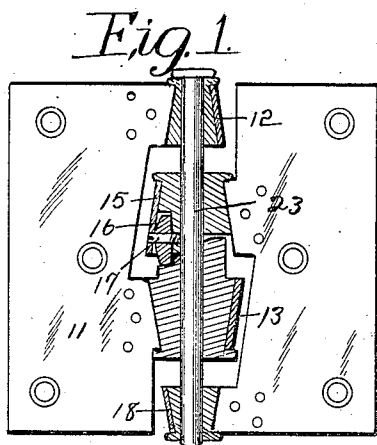


No. 868,173.

PATENTED OCT. 15, 1907.

A. ERLER.
HINGE.

APPLICATION FILED JUNE 18, 1906.



Witnesses
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UNITED STATES PATENT OFFICE.

AUGUST ERLER, OF CARROLL, IOWA.

HINGE.

No. 868,173.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, AUGUST ERLER, a citizen of the United States, residing at Carroll, in the county of Carroll and State of Iowa, have invented a certain new and useful Improvement in Hinges, of which the following is a specification.

The objects of my invention are to provide an automatic door closer of simple, durable and inexpensive construction in which the device acts not only as a hinge allowing the door to be swung in either direction, but normally holds the door in its closed position.

A further object of the device is to allow the door to stand in a closed position and yet to allow it to be open from either side with ease, and thus obviate the necessity of double springs and devices of a similar nature.

My invention consists in certain details in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the hinge, showing in section the operative parts of it. Fig. 2 is a detail, perspective view of the hinge, showing the parts of it disengaged from each other, with the pin for maintaining the parts together drawn out. Fig. 3 is a side elevation of the hinge showing it assembled, and in the position in which it stands when the door is in a closed position, and Fig. 4 is an inverted plan view of the upper portion of one of the hinge members, showing the position of the roller therein.

Referring to the accompanying drawings, I have used the reference numerals 10 and 11 to indicate the leaves of the hinge. Secured to the leaf 11 of the hinge and near the upper inner portion of it is the upper pin receiving socket 12. Secured to the inner side of the leaf 11 and slightly below the central portion of it is a knuckle 13 having a cam face 14 mounted in its upper portion, the upper surface of said cam being so arranged that one portion is substantially higher than the other; that is, the rear inner portion of the cam face 14 is much lower than the outer upper surface thereof. Secured to the leaf 10 of the hinge is a knuckle 15, having the roller 16 rotatably mounted upon the screw 17 and located in a suitable chamber in said knuckle, as shown clearly in Fig. 1 of the drawings.

Mounted at the lower inner edge of the leaf 10 is a lower socket 18 which is the exact duplicate of the upper socket 12, except that the same is inverted.

Extending through the upper socket 12 is an opening

19, through the knuckle 15 is an opening 20, through the knuckle 13 is an opening 21, and through the lower socket is an opening 22. I have provided a pintle 23 which is designed to pass through the openings 19, 20, 21 and 22 when these openings are placed in line with each other, as hereinafter described for holding the leaves 10 and 11 of the hinge in position relative to each other when the hinge is in readiness for use, as hereinafter set out. The knuckle 15 is designed to be placed between the upper socket 12 and the knuckle 13 in such a way that the roller 16 will rest upon the cam face 14, and normally in the lower portion of said cam face 14 when the leaves 10 and 11 are substantially in line with each other; that is, in the position shown in Figs. 1 and 3, so that when the leaf 11 is secured to a door frame, the leaf 10 will stand in line with it because of the roller resting in this depressed portion of the cam face 14.

As the leaf 10 is turned, the roller moves over the cam surface 14 and slightly elevates said leaf 10 and the door which may be secured to it so that it will normally swing back to a position in line with the leaf 11 on account of the inclined surfaces of the cam portion 14. The lower socket 18 is designed to be placed immediately beneath the knuckle 13 when the device is assembled. In use, two or more of these devices are to be used on a hinge door as is customary with the use of the ordinary hinges. The details and construction of the arrangement above referred to may be varied somewhat at the pleasure of the constructor, as I contemplate not only the exact form shown, but such modifications thereof as will accomplish the result contemplated herein.

By reference to the drawing it will be observed that the sockets and knuckles are formed by bending projecting portions 24 of leaves 10 and 11 back upon the bodies of such leaves in such manner as to form tubular sockets, the ends of said projecting portions being secured to said bodies by any suitable means, such as rivets. Pieces of cast metal 25 of suitable contour are placed within said tubular sockets and firmly held in position by the latter.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States, therefor is—

1. A device of the character described comprising two leaves each provided with separated projecting portions bent over to form sockets and knuckles, an independent filling secured within each of said sockets and knuckles to form pintle receiving sockets and knuckles, respectively, one of said knuckles being provided with a cam face, the

other knuckle having a chamber formed in the periphery thereof, a roller located in said chamber and resting on said cam face, and a pintle passed through coincident bores formed in said knuckles and sockets.

- 5 2. A device of the character described comprising two leaves each having projections bent over to form sockets and knuckles, an independent filling secured within each of said sockets and knuckles and forming pintle receiving sockets and knuckles, respectively, one of said knuckles

being provided with a cam face, a roller carried by the 10 other knuckle and bearing on said cam face, and a pintle passed through coincident bores formed in said knuckles and said pintle receiving sockets.

AUGUST ERLER.

Witnesses:

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