A. J. GUSTAFSON.

HINGE BUTT.

APPLICATION FILED MAR. 18, 1921.

1,379,814. **Patented May 31, 1921.**

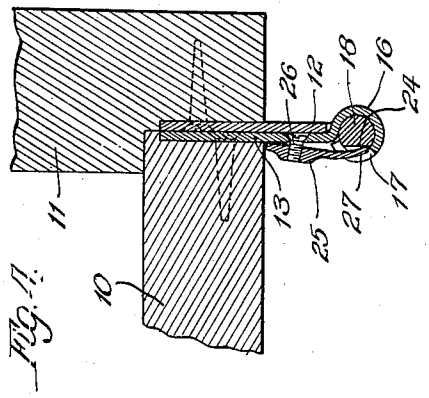


Fig. 4.

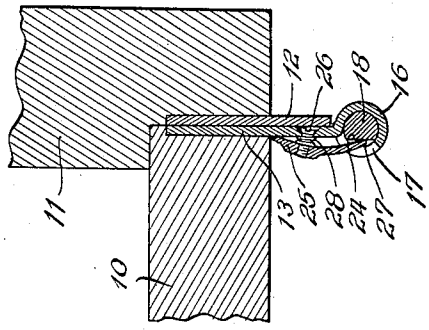


Fig. 5.

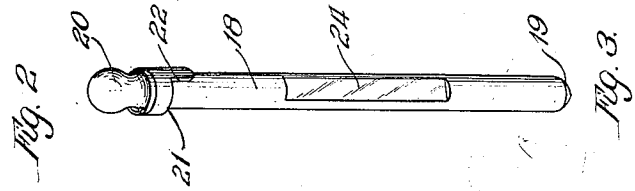


Fig. 2.

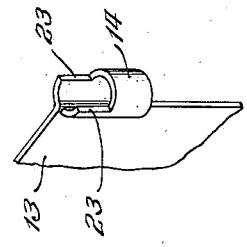


Fig. 3.

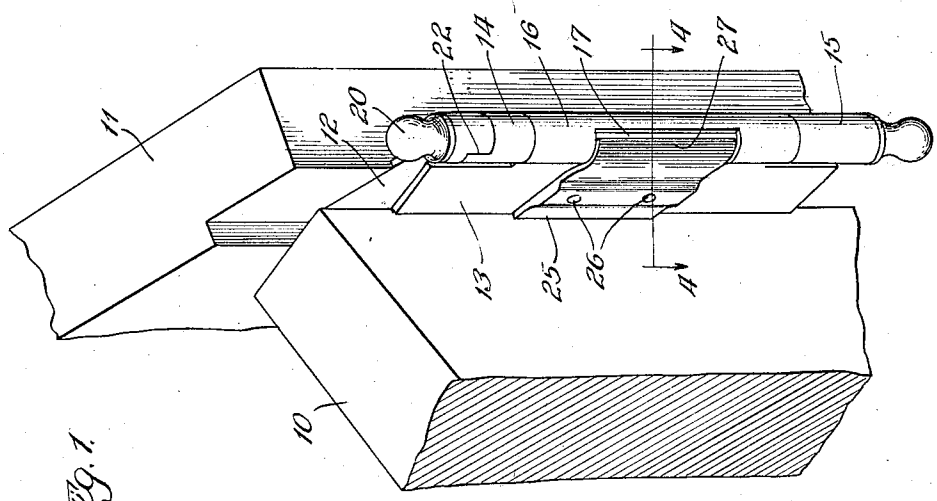


Fig. 1.

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UNITED STATES PATENT OFFICE.

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HINGE-BUTT.

1,379,814. Specification of Letters Patent. Patented May 31, 1921.

Application filed March 18, 1921. Serial No. 453,306.

To all whom it may concern:

Be it known that I, AUGUST J. GUSTAFSON, a citizen of the United States, residing at Maywood, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Hinge-Butts, of which the following is a specification.

This invention relates to improvements in butts particularly adapted for use with swinging closures, such as doors, windows and the like, and one of the objects of the invention is to provide an improved butt of this character whereby the closure will be frictionally maintained in any of its adjusted positions and prevented from rattling, and which will at the same time cause the closure, when it reaches a predetermined point in its movement, to move under the influence of the friction creating means.

To the attainment of these ends and the accomplishment of other new and useful objects as will appear, the invention consists in the features of novelty in substantially the construction, combination and arrangement of the several parts hereinafter more fully described and claimed and shown in the accompanying drawing illustrating this invention and in which—

Figure 1 is a perspective view of a portion of a swinging closure and the casing therefor, with this improved butt applied thereto.

Fig. 2 is a perspective view of the pintle pin.

Fig. 3 is a detail perspective view of one of the knuckles.

Fig. 4 is a sectional view taken on line 4—4, Fig. 1, showing the closure in a closed position.

Fig. 5 is a view similar to Fig. 4 of a modified form of the invention.

Referring more particularly to the drawing the numeral 10 designates a swinging closure and 11 the casing. The butt embodies two members 12—13, one of which is secured to the closure 10, and the other to the casing 11. The member 12 is provided with spaced knuckles 14—15, while the member 13 is provided with a knuckle 16, that is adapted to be inserted between the knuckles 14 and 15.

The knuckle 16 is provided with a cutaway portion 17, and the two members are held pivotally together by means of a pintle or pin 18, which is provided preferably with a tapering point 19, and a head 20. The portion of the pintle adjacent the head 20 is cut away as at 21, to form a shoulder 22, which is adapted, when the pintle 18 is passed through the alined knuckles 14—16—15, to coöperate with a shoulder 23, on the knuckle 14, so as to hold the pin 18 against rotation. The pin 18 is provided with a flattened portion 24, extending longitudinally of one face thereof and this flattened portion 24, when the pintle is placed in position in the knuckle, stands opposite the opening 17 in the knuckle 16, and the shoulders 22 adjacent the head of the pin cooperate with the shoulders 23 on the knuckle 14.

Carried by the member 13, is a spring element or member 25, which may be of any desired configuration. This member 25 is secured to the member 13 in any suitable manner such as by means of fastening devices 26, in the form of screws preferably passing through the member 13 and engaging the member 25. The extremity 27 of the member 25, is shaped to form a spring portion which passes through the opening 17 in the knuckle 16, so as to engage and rest against the pintle 18. The degree of tension of the extremity 27 upon the pintle 18 is controlled by the adjustment of the screws 26, and when the proper friction is obtained it will be manifest that when the closure 10, is moved about its pivot with respect to the casing 11, the knuckle 16, will be rotated about the pintle 18, and the extremity 27 of the spring member 25, will move over the surface of the pintle. When, however, the extremity 27 of the spring member 25 reaches the flattened portion 24 of the pintle 18, it will operate automatically to swing the closure 10 about its pivot.

With this construction it will be manifest that when the closure is opened the friction between the parts will maintain the same in its adjusted position but when the closure is swung to a closing position, it will, at a predetermined point in its movement, be automatically closed by the passage of the spring on to the flattened portion 24, to insure a tight closing of the closure.

If desired, a supplemental spring 28, may be provided around one of the screws 26, between the member 13 and the member 25, which increases the spring tendency of the member 25.

With this improved construction it will be manifest that when it is desired to re-

move the closure 10, all that is necessary is to remove the pintle 18 and this may be readily accomplished by slightly loosening the fastening devices 26, if desired. In assembling the parts the pintle may be easily dropped into position in the alined knuckles and the tapered or beveled extremity 17 of the pin will shift the extremity 27 of the spring element 25 sufficiently to permit the pin to be easily inserted.

After the parts have been assembled, the tension of the member 25 may be varied by adjusting the screws 26.

It will be manifest that by reason of the shoulders 22 and 23 the pintle 18 will be held against rotation and the flattened portion 24, will be maintained in a proper position.

While in the present form of the invention the flattened portion is so arranged as to cause the closure to swing to a closing position after it reaches a predetermined point in its movement, it is of course to be understood that the portion 24 may be so arranged as to cause the closure to swing into an open position after it reaches a predetermined point in its movement. It will also be manifest that the spring 27 will, by reason of its frictional engagement with the periphery of the pintle 18, hold the closure in its adjusted position and thereby prevent the same from rattling or from being accidentally blown shut.

Obviously many changes may be made in the details of construction, within the scope of the claims, without departing from the spirit of this invention.

What is claimed as new is:—

1. A butt embodying two members having alined knuckles, a freely removable pin passing through the knuckles for pivotally connecting the members, said pin having a flattened portion, an elastic element, and means securing the elastic element to one of the said members, a portion of the said element engaging and moving over the surface of the said pin for creating a friction to maintain the members in their relative adjusted positions and adapted to pass to the said flattened portion of the pin to automatically swing one of the members about the pivot with respect to the other member.

2. A butt embodying two members having alined knuckles, a freely removable pin passing through the knuckles for pivotally connecting the members, the said pin having a flattened portion, means for maintaining the pin against rotation, an elastic element, and means securing the elastic element to one of the said members, said elastic element projecting between adjacent knuckles to engage and move over the surface of said pin for creating a friction to maintain the members in their relative adjusted positions and adapted to pass to the said flattened portion of the pin to automatically swing one of the members about the pivot with respect to the other member.

3. A butt embodying two members having alined knuckles, a freely removable pin passing through the knuckles for pivotally connecting the members, the said pin having a flattened portion, interengaging shoulders on the pin and one of the knuckles for maintaining the pin against rotation, an elastic element, and means securing the elastic element to one of the said members, said elastic element projecting between adjacent knuckles to engage and move over the surface of said pin for creating a friction to maintain the members in their relative adjusted positions and adapted to pass to the said flattened portion of the pin to automatically swing one of the members about the pivot with respect to the other member.

4. A butt embodying two members having alined knuckles, a freely removable pin passing through the knuckles for pivotally connecting the members, the said pin having a flattened portion, means for maintaining the pin against rotation, an elastic element, and an adjusting screw securing the said element to one of the members, whereby the stress of the elastic element may be varied, said element extending between adjacent knuckles and engaging the surface of the pin for creating a friction to maintain the members in their relative adjusted positions and adapted to pass to the said flattened portion of the pin to automatically swing one of the members about the pivot with respect to the other of the members.

In testimony whereof I have signed my name to this specification, on this 16th day of March, A. D. 1921.

AUGUST J. GUSTAFSON.