F. H. BENNETT & E. A. ROBERTSON.

HINGE.

APPLICATION FILED DEC. 21, 1914.

1,141,303. Patented June 1, 1915.

Fig. 1

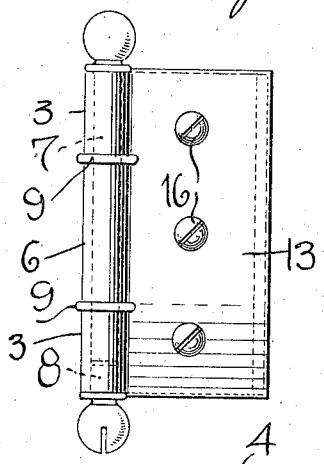


Fig. 2

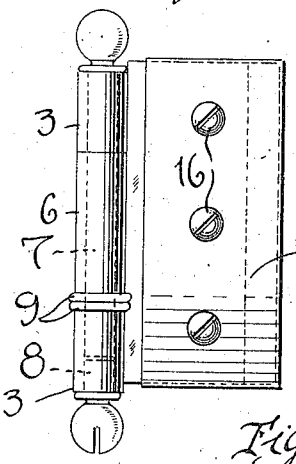


Fig. 3

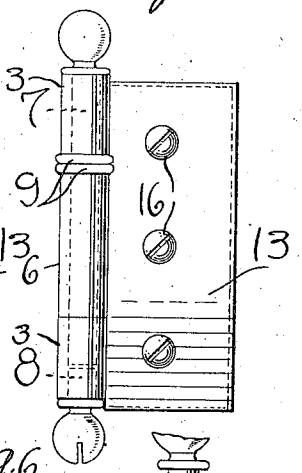


Fig. 4

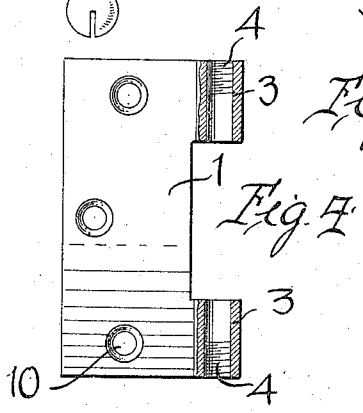


Fig. 5

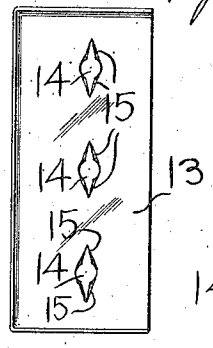


Fig. 6

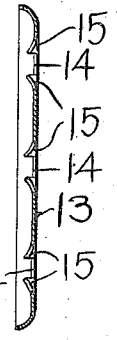


Fig. 8

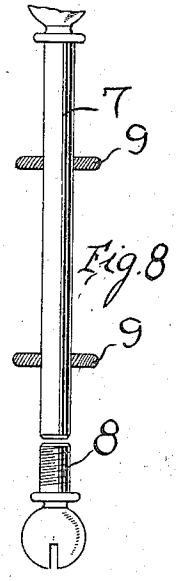


Fig. 7

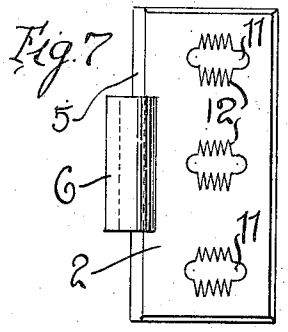


Fig. 10

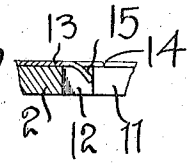
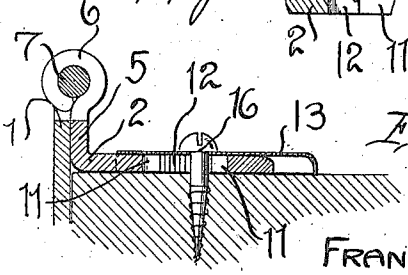


Fig. 9



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UNITED STATES PATENT OFFICE.

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HINGE.

1,141,303. Specification of Letters Patent. Patented June 1, 1915.

Application filed December 21, 1914. Serial No. 878,407.

To all whom it may concern:

Be it known that we, FRANK H. BENNETT and EDWARD A. ROBERTSON, citizens of the United States, residing at Sheffield, in the county of Colbert and State of Alabama, have invented certain new and useful Improvements in Hinges, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to new and useful improvements in hinges and more particularly to an adjustable loose pin half surface door hinge, the main object of the present invention being the provision of an adjustable hinge of this character wherein the door can be quickly and readily adjusted either by raising or lowering the same or in moving the door toward and away from the jamb.

Another object of the present invention is the provision of an adjustable hinge of the above character which will possess advantages in points of efficiency and durability, is inexpensive to manufacture and, at the same time, is simple in construction and operation.

With the above and other objects in view, the invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter referred to and more particularly pointed out in the specification and claim.

In the accompanying drawing forming a part of this application, Figure 1 is a side elevation, illustrating the parts of the hinge in a normal position. Fig. 2 is a similar view illustrating the position occupied by parts, after the door has been adjusted vertically and laterally. Fig. 3 is a similar view illustrating another position of the hinge upon vertical adjustment of the door. Fig. 4 is a plan view of the leaf which is secured to the jamb, parts thereof being illustrated in cross section. Fig. 5 is a bottom plan view of the locking plate. Fig. 6 is a longitudinal sectional view of the same. Fig. 7 is a top plan view of the leaf which is secured to the door. Fig. 8 is a side elevation of the connecting pin. Fig. 9 is a transverse sectional view through the hinge; and Fig. 10 is a detail transverse sectional view of the parts illustrated in Fig. 9, showing the respective position of the engaging point 15 with the notches 12.

In carrying out our invention, we provide two leaves generally indicated by the numerals 1 and 2, the leaf 1 being rigidly secured to the inner edge of the door jamb and provided at one edge thereof with spaced sleeves 3 which are internally threaded, as shown at 4. The leaf 2 is designed to be secured to the door and is provided at its inner edge with an upstanding flange 5 and formed on this flange is a sleeve 6, which is adapted to be arranged between the sleeves 3 on the leaf 1 and, in order to hingedly connect the two leaves, a pin 7 is inserted through the sleeves from either end thereof, and a bolt 8 is threaded into the other sleeve 3, whereby it would appear that the pin extends entirely through the sleeves 3 and 6 and having a head upon each end thereof.

Mounted upon the pin 7, are the washers 9, and it will be noted in Fig. 1 that these washers are disposed between the central sleeve 6 and the sleeves 3, and in Fig. 2, it will be noted that both of the washers are arranged between the lowermost of the sleeves 3 and the sleeve 6. This arrangement will adjust the door upwardly with respect to the jamb, while in Fig. 3 the washers are arranged between the uppermost of the sleeves 3 and the sleeve 6 which arrangement will lower the door with respect to the jamb. From this it will be apparent that the washers 9 can be readily placed upon opposite sides of the sleeve 6, singly or can be disposed at either end thereof so that the door can be adjusted vertically to three different positions.

The leaf 1 is provided with a plurality of openings 10 adapted to receive a suitable sized wood screw whereby the leaf may be quickly and readily applied to the jamb. The leaf 2 is provided with transverse slots 11 arranged in spaced relation and disposed in alinement longitudinally of the leaf. The side walls of these slots 11 are provided with V-shaped notches 12 and arranged over the leaf 2 is a locking plate 13 having a plurality of spaced openings 14 formed therein and disposed in alinement longitudinally of the plate 13. This plate is obviously rectangular in form and is preferably of the same size or sufficiently large enough to permit of the leaf 2 to be arranged between the down-turned edges of the plate 13. The material of the body of the plate is struck inwardly on opposite sides of each one of the openings 14 whereby to form triangular or V-shaped lugs 15 adapted to be arranged within the V-shaped notches 12 whereby to

retain the leaf 2 in an adjusted position beneath the plate 13. It will be noted that the locking plate 13 is provided at each end and upon one side thereof with down-turned flanges whereby to inclose the leaf 2 and form a suitable casing for the same. This plate 13 is rigidly secured to the face of the door jamb by means of the screws 16 which extend through the casing and through the slots 11 within the leaf 2.

From the above it will be apparent that in placing my improved hinge in position, the leaf 2 is first positioned upon the door. The screws 16 are then inserted through the opening 14 and through the slots 11 and driven into the door. Should it be desired to adjust the door toward or away from the jamb, the screws 16 are loosened so that the engaging points 15 can be disengaged from the notches 12 to permit the leaf 2 to be adjusted beneath the locking plate. It will be noted that the clamping action of the plate 13 upon the leaf 2 will assist the engaging points 15 in retaining the door in an adjusted position.

It will be noted from the above taken in connection with the accompanying drawing, that we have provided a simple and durable adjustable hinge which consists of comparatively few parts and is arranged so that the door can be readily adjusted vertically or laterally with respect to the door jamb. The hinge, as herein shown and described, is extremely simple in its construction and can be manufactured and placed upon the market at a comparatively low cost.

While the notches 12 are shown and described in the present embodiment of the invention as being V-shaped and the lugs 15 triangular or also V-shaped, yet it is to be understood that the invention is not limited in this regard, but that the notches and lugs may be of any desired shape at all, just so long as they are capable of interlocking engagement with each other. It is also to be understood that the invention is not limited in any wise to the specific construction and arrangement of the pin or pintle connection between the leaves, as various other pintle connections may be employed within the purview of our invention.

While we have shown and described the preferred form of our invention, it will be obvious that various changes in the details of construction and in the proportions may be resorted to for successfully carrying our invention into practice, without sacrificing any of the novel features, or departing from the scope of the invention, as defined by the appended claim.

Having thus described this invention, what we desire to claim and secure by Letters Patent, is:—

The combination in a device of the character described, of a hinged leaf having a plurality of parallel bolt receiving slots, a series of spaced teeth formed at each edge of each slot, a securing plate adapted to engage over the leaf, said plate being provided with a plurality of alined openings, said openings being spaced from each other distances corresponding to the spaces between the slots of the leaf, and a plurality of teeth formed at the edge of each opening, said last mentioned teeth being directed at right angles to the plate and being adapted to be engaged between the teeth of the leaf for holding the leaf and plate against longitudinal and transverse movement with respect to each other, the openings of the plate being adapted to register with the slots of the leaf.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

FRANK H. BENNETT.
EDWARD A. ROBERTSON.

Witnesses:
U. G. JONES,
H. A. GARTERFIELD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."