

C. B. TRIMMER.
ADJUSTABLE HINGE.
APPLICATION FILED APR. 29, 1909.

947,168.

Patented Jan. 18, 1910.

Fig. 1

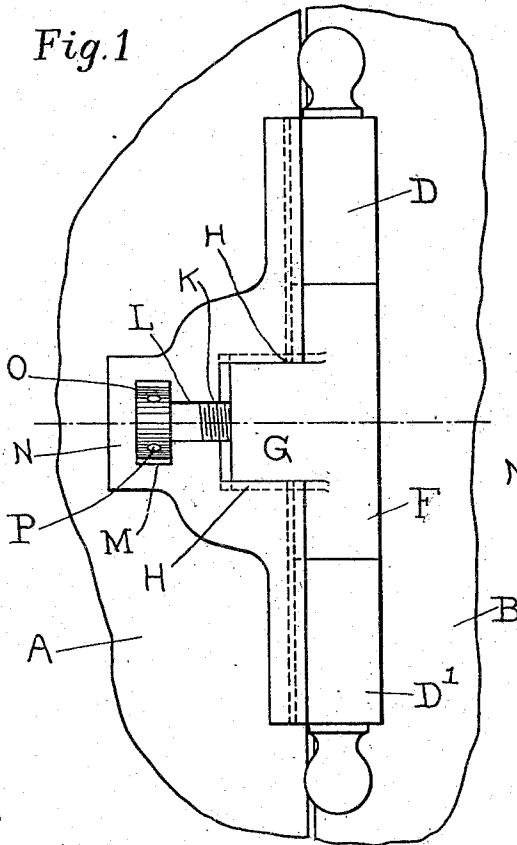


Fig. 2

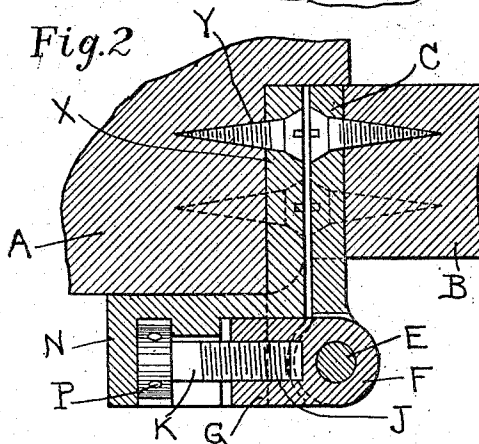


Fig. 3

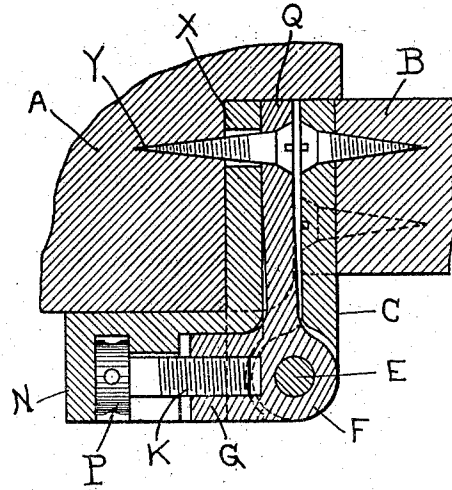
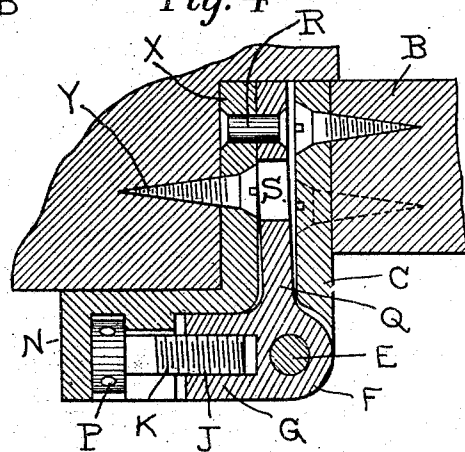


Fig. 4



WITNESSES:

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CHARLES BANGHART TRIMMER, OF ROSELLE, NEW JERSEY, ASSIGNOR OF ONE-HALF
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ADJUSTABLE HINGE.

947,168.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES BANGHART TRIMMER, a citizen of the United States of America, residing at Roselle, in the county of Union, State of New Jersey, United States of America, have invented a new and useful Adjustable Hinge; and I do hereby declare the following to be a full, clear, and exact description of the same.

The present improvements relate to adjustable hinges, and especially to a form of hinge which permits a door to be raised and lowered without removing the door from the frame, allowing this work to be done by unskilled persons, and rendering repairs to the door, door-frame or the sill unnecessary.

The objects aimed at are to produce a hinge of the class referred to which shall be simple, strong, economical, easily assembled, taken apart and operated.

It has been the constant experience that, when a door has been hung upon the door-frame for some little time, the door is found to bind against the top or the bottom or side of the frame, or against the sill. Prior to my invention, it has been the custom to have a carpenter, or other workman, plane the door, or the frame or the sill, increasing the cost of the work, and it has been found afterward that the door again and again requires to be repaired. It has also been found that the planing of the door has defeated the very object sought—to have a door fit its frame quite snugly without any binding—as the building sometimes further settles, and then it has been found that there is a space, undesirable for many reasons, underneath the door or at one of its sides.

The hinge which I have designed is formed to permit any person to immediately make changes in the hanging of the door, without the use of any tools, and without removing the door from the hinge or from the frame.

Each door may have as many of the new hinges as desired, and each may be adjustable. Where there are two or more of the hinges, the adjustment may be effected by operating any or all of them, and when two are operated they may be moved either in the same or opposite directions. Thus one hinge may be operated to lower the door, while a hinge, above or below that first named, may be operated to raise the door.

It will be obvious that only a small amount of movement is necessary at a hinge, as that amount of movement will be multiplied by the width of the door. As a result, the outer edge of the door, at which the binding usually occurs, can be swung a great distance (comparatively speaking) with the form of hinge which I have invented.

In the form of my invention embodied in the illustrated structures, I have provided a slidable part, for effecting the adjustment, and an offset wherein said part is movable. Said offset may be secured either to a door or to a door frame. The latter use is shown in the drawings.

In the accompanying drawings I have shown two forms of hinges embodying my improvements.

Figure 1 is a view of a part of a door-frame and door hung thereon, showing, in edge view, a hinge according to this invention; Fig. 2 is a cross section, on the dotted line of Fig. 1; Fig. 3 is a similar section of a modified form of hinge, and Fig. 4 is a cross section of a slightly changed form of the modified hinge.

Referring to Fig. 1, A represents a portion of a door-frame and B represents a portion of a door. C represents a hinge-leaf of any unusual construction, secured to the door, and having hinge knuckles D D', Fig. 1, whereby the hinge pivotally engages with a pintle E as usual. The door-frame or jamb does not carry, in this form of the invention, the usual second hinge-leaf, but carries a supplementary leaf X (held in place by screws) and this supplementary leaf is formed to sustain a slide which is the element for advancing and retracting the hinge and the door. Said slide G carries a knuckle F and the latter also engages the pintle E in the same manner as said pin is usually engaged by a hinge leaf intended to be fastened to a door-frame. The slide G is movably supported in an offset H projecting at a right angle from the supplementary leaf, and adapted to rest against the face of the door jamb, the connection between the slide and the recess in the offset being a dovetailed connection so that the slide will be strongly supported, while freely slidable, in any of its positions. The slide is provided with an internal screw thread J and said thread is useful to cause the slide to

engage with a screw K having a head P provided with openings O to be engaged by a building nail or an awl. The screw lies within a slot L in the offset, and the head of such screw lies in an enlargement M of that slot and against the end N of the offset.

An examination of Fig. 2 will show that, no matter what the position of the slide, the door will always swing upon the pintle E in the usual manner. If the outer edge of the door binds when the door is closed, it will be obvious that it will be necessary only to turn the screw L (by having the end of a building-nail thrust into one of the openings O) so as to draw the slide G a slight distance farther into the offset; or, on the contrary, if the outer edge of the door does not fit closely enough the door-frame, then the desired change of position may be attained by slightly turning the screw, in a direction opposite to that previously noted, so as to cause the slide to move outwardly in the offset.

The form of the invention shown in Figs. 3 and 4, differs from that already described in having the slide carry an intermediate leaf which, in use, is connected with the leaf screwed to the door-frame, so as to assure an exceedingly strong construction.

In each of said figures, Q indicates the intermediate leaf mentioned, formed in one with the slide, and secured along its front edge only with the front edge of the leaf attached to the door frame. Referring to Fig. 3, it will be seen that the screw Y, of which there may be any desired number, is used not only to hold the leaves Q and X together but to secure the hinge to the door-frame. The construction of Fig. 4, however differs from that of Fig. 3 in having the leaves Q and X secured together at all times, whether secured to the door or not, by rivets R, and by providing holes S in the intermediate leaf to allow the screws Y to pass into the door-frame.

What I claim is:

1. A hinge provided with a leaf adapted to be secured to the edge of the door jamb and having an offset from its central portion extending at a right angle and adapted to rest against the face of a door jamb, said offset being provided with a recess extending also through the edge of the leaf, a second leaf adapted to be secured to the edge of a door and provided with a vertical knuckle near each end, a long vertical knuckle fitting between the two knuckles of the door leaf, and having an extension projecting at a right angle into the recess of the extension of the jamb leaf, a pintle fitting in the three knuckles, and means for adjusting the extension of the long vertical knuckle within the recess of the jamb leaf,

and carrying with it in such adjustment the pintle and the door leaf.

2. A hinge provided with a leaf adapted to be secured to the edge of the door jamb and having an offset from its central portion extending at a right angle and adapted to rest against the face of a door jamb, said offset being provided with a recess extending also through the edge of the leaf, a second leaf adapted to be secured to the edge of a door and provided with a vertical knuckle near each end, a long vertical knuckle fitting between the two knuckles of the door leaf and having an extension projecting at a right angle into the recess of the extension of the jamb leaf, a screw swiveled in said recess and threading into the knuckle extension and a pintle fitting in the three knuckles.

3. A hinge provided with a leaf adapted to be secured to the edge of the door jamb and having an offset from its central portion extending at a right angle and adapted to rest against the face of a door jamb, said offset being provided with a recess extending also through the edge of the leaf, a second leaf adapted to be secured to the edge of a door and provided with a vertical knuckle near each end, a long vertical knuckle fitting between the two knuckles of the door leaf having an extension projecting at a right angle into the recess of the extension of the jamb leaf and a leaf at right angles to the extension adapted to be secured to the door jamb, a screw swiveled in said recess and threading into the knuckle extension, and a pintle fitting in the three knuckles.

4. A hinge provided with a leaf adapted to be secured to the edge of the door jamb and having an offset from its central portion extending at a right angle and adapted to rest against the face of a door jamb, said offset being provided with a recess extending also through the edge of the leaf, a second leaf adapted to be secured to the edge of a door and provided with a vertical knuckle near each end, a long vertical knuckle fitting between the two knuckles of the door leaf having an extension projecting at a right angle into the recess of the extension of the jamb leaf and a leaf at right angles to the extension secured to the door jamb leaf, a screw swiveled in said recess and threading into the knuckle extension, and a pintle fitting in the three knuckles.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

Roselle, New Jersey, April 21st, 1909.

CHARLES BANGHART TRIMMER.

Witnesses:

GEORGE V. KLEINHAUS,
MICHAEL J. BRADLEY.