

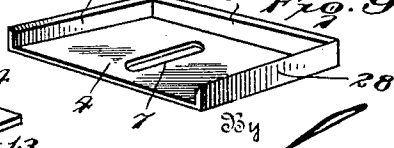
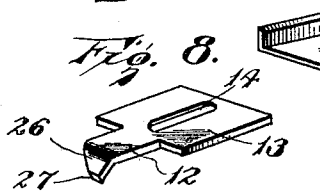
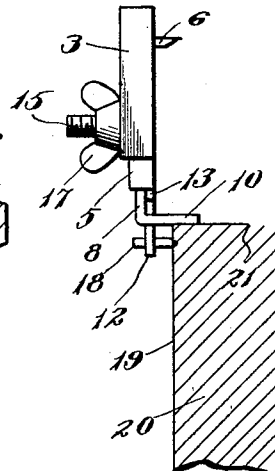
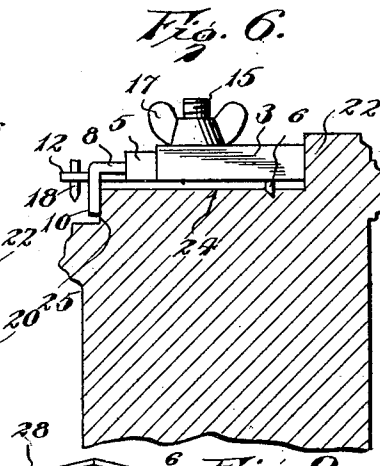
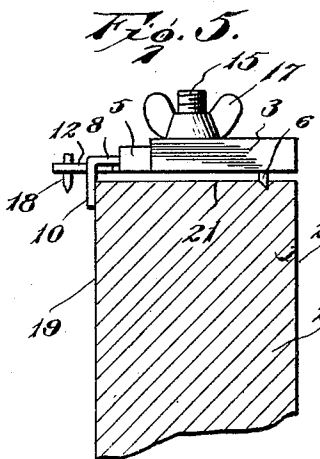
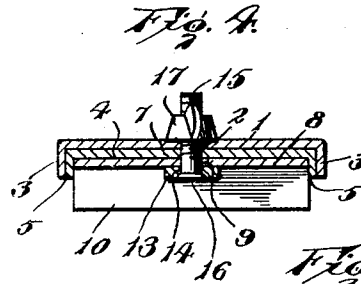
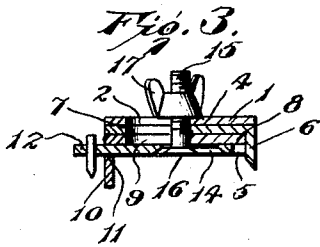
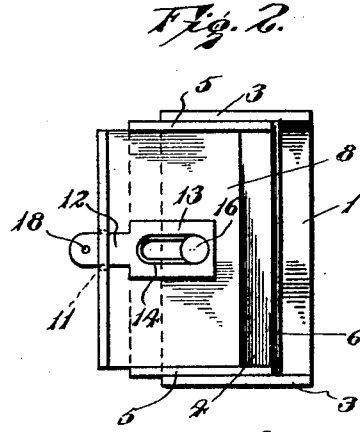
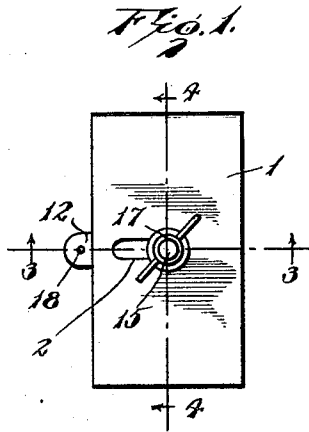
Dec. 30, 1930.

J. R. HOUTS

1,787,313

HINGE SEAT GAUGE

Filed Nov. 4, 1929



Inventor
J. R. Houts

Lacey, Lacey,

Attorneys

UNITED STATES PATENT OFFICE

JOHN R. HOUTS, OF McLEAN, VIRGINIA

HINGE-SEAT GAUGE

Application filed November 4, 1929. Serial No. 404,715.

This invention relates to gauges and more particularly to a gauge for use by carpenters when applying hinges to a door. When a swinging door is being hung, it is important that the hinges be properly applied to the door jamb and side edge face of the door as otherwise the door will not swing properly upon its hinges and will not fit tightly into place when shut.

Therefore, one object of the invention is to provide a gauge by means of which the door jamb and edge face of a door may be accurately marked so that seats to receive the leaves of the hinges may be cut in the door and door jamb and not only so located that the hinges will be properly applied but of such a depth that when the hinges are set in place and secured they will be flush with the faces of the door jamb and door.

Another object of the invention is to provide a device of this character which is of a compact construction and may be very easily carried in a pocket and further to allow the elements constituting the gauge to be formed of sheet metal which is not only light in weight but also reduces the cost of manufacture.

Another object of the invention is to provide a gauge which may not only be used to mark hinge seats upon a door and door frame but may also be used in order to mark a lock receiving seat in an edge face of a door.

The invention is illustrated in the accompanying drawing, wherein

Figure 1 is a view in elevation looking at the outer face of the gauge,

Fig. 2 is a view looking at the inner face of the gauge with portions thereof moved to an adjusted position,

Fig. 3 is a transverse sectional view taken on the line 3—3 of Fig. 1,

Fig. 4 is a longitudinal sectional view taken on the line 4—4 of Fig. 1,

Fig. 5 is a view showing the gauge in end elevation and applied to an edge face of a door in order to mark a hinge seat,

Fig. 6 is a similar view showing the gauge operatively applied to a door jamb.

Fig. 7 is a view showing the manner of

using the gauge when marking a door or jamb to indicate the depth of a hinge seat.

Fig. 8 is a perspective view illustrating a modified form of one of the marking elements, and

Fig. 9 is a perspective view showing a modified form of another element of the device.

This improved gauge has its elements preferably formed of sheet steel, although other materials may be used if found practical, and includes a body plate 1 formed with a transversely extending slot 2 intermediate its ends and having its end portions bent to provide flanges 3. A cutter plate 4 fits against the inner face of the body plate 1 and has its end portions bent to form flanges 5 which fit closely against the inner side faces of the flanges 3 and a side portion bent to form a blade 6 which is sharpened along its free edge, as shown in Fig. 3. Intermediate its ends the cutter plate is formed with a transversely extending slot 7 adapted to register with the slot 2 of the body plate. Since the cutter plate fits snugly between the flanges of the body plate, its movement transversely of the body plate will be guided and the cutting edge of the blade 6 will at all times be retained in a position parallel to the side edges of the plate 1. The gauge plate 8 which is also formed of sheet metal and provided intermediate its ends with a slot 9 adapted to register with the slot 7 fits against the plate or with its end edges snugly engaging the inner faces of the flanges 5 and this gauge plate has its outer side portion bent downwardly to form a lip or flange 10 which projects downwardly beyond the blade 6 and is adapted to bear against a door or door jamb when the gauge is in use, as shown in Figs. 5, 6 and 7. A slot 11 is formed through the flange 10 intermediate its length and through this slot extends the neck or reduced end portion 12 of a second marker plate 13. This marker plate 13 extends transversely of the gauge plate 8 and is formed with a slot 14 which tapers inwardly, as shown in Figs. 3 and 4, so that when a securing bolt 15 is passed through the registering slots its head 16 will be countersunk in the plate 13. A winged nut 17 is threaded upon the outer

portion of the bolt 15 and when this nut is tightened pressure is applied which binds the plates firmly against each other and prevents the plates from having movement relative to each other. Therefore, the plates may be securely held in an adjusted position but by loosening the bolt they may be easily slid to adjusted positions. A tooth 18 is passed through a small opening formed in the outer end portion of the marker plate 13 in order to allow a depth line to be marked upon a door or door jamb, as shown in Fig. 7, and while this tooth fits tightly into the opening through which it passes it can be driven out and a new one substituted when necessary. It will thus be seen that the gauge is formed entirely of sheet metal, such as steel, with the exception of the bolt 15 and spur or tooth 18 and, therefore, can be very cheaply produced. It will be further noted that since the plates all fit in close contacting engagement with each other, as shown in Figs. 3 and 4, a small and very compact device will be formed which will be light in weight and of such dimensions that it can be very conveniently carried in a pocket.

When this gauge is in use, the nut 17 is loosened and the plates slid transversely of each other until the lip or flange 10 fits against the side face 19 of a door 20 and the outer side edge of the body plate is even with the other side edge of the edge face 21 of the door against which a hinge is to be mounted. The cutter plate 4 is moved transversely until the blade 6 is disposed the proper distance from the side face 19 of the door to mark the inner edge of a seat and the plate 13 is slid outwardly until its tooth 18 is spaced from the lip 10 a distance corresponding to the depth of the hinge seat. The nut is then tightened and the plates will be firmly held in a set position. The gauge can then be easily held with one hand and slid longitudinally upon the edge face 21 of the door to mark a line representing the inner edge of a hinge seat or it may be shifted along the edge face of the door and tapped with a hammer in order to drive the cutting edge of the blade into the door and not only form a mark but also cut into the wood a sufficient depth to allow the wood to be very easily cut from the door with a chisel. After the edge face of the door has been marked to indicate the length and width of the seat, the gauge is turned to the position shown in Fig. 7 so that the lip 10 rests upon the edge face of the door and the tooth 18 contacts with the side face of the door. The gauge is then slid longitudinally upon the edge face of the door and a line will be marked upon the side face 19 to indicate the depth to which the seat is to be cut. It will thus be seen that by means of this gauge a seat of the proper length and width and also of the proper depth may be accurately marked and cut. After the hinges

have been applied to the door, it is fitted into the doorway and the door jamb marked to indicate where the seats are to be cut to receive the leaves of the hinges which are secured to the door jamb. The door is then removed and the gauge applied to the door jamb, as shown in Fig. 6, with the outer side edge of the body plate fitting against the bead 22 of the door jamb. Therefore, the blade 6 will be spaced from the bead 22 a distance corresponding to the distance between the side face 23 of the door and the inner side edge of the seat formed therein. The gauge is shifted longitudinally of the face 24 of the door jamb and tapped with a hammer or slid along the same so that the blade will mark a line parallel to the bead and at the proper distance from the face of the door jamb against which the flange 10 fits. After this operation has been completed the gauge is turned to the position shown in Fig. 7 and a depth line marked upon the face 25 of the jamb. Therefore, the seat to be cut in the door jamb will be accurately marked and the hinge leaf to be received therein will fit properly when applied and secured by screws. Therefore, both the door and the door jamb may be accurately marked to receive the hinges and when the hinges are applied they will fit properly and allow the door to easily swing to an opened or closed position and also assure proper fit of the door when closed. When a lock is applied to a door, a pocket is formed in the door to receive the casing of the lock and about the outer end of the pocket is formed a seat so that the face plate of the lock will be countersunk and flush with the edge face of the door. By properly setting the plates of the gauge the flange 10 may bear against a side face of the door and either the blade 6 or the spur 18 may bear against the edge face of the door and by movement of the gauge longitudinally of the edge face of the door marks may be formed upon the edge face parallel to its side edges and thereby allow the seat for the face plate of the lock to be accurately marked and then cut. In Figs. 8 and 9, there have been illustrated modified forms of the marker plates. Referring to Fig. 8, it will be seen that the plate 13 instead of having its neck 12 formed with an opening to receive a spur it may be provided with a tapered end bent downwardly to form a tooth 26 which is sharpened at its free end, as shown at 27. In Fig. 9, the plate 7 is provided with end flanges 28 which are of the same depth as its side flange 6 and these flanges are sharpened so that they serve as cutting blades. When this form of marker is used, the end flanges or blades serve to mark the ends of the hinge seat as the device is tapped in order to mark the inner side edge thereof and it will not be necessary to use a square and mark its end edges by a separate operation.

Having thus described the invention, I claim:

1. A marker comprising a substantially rectangular body plate having flanges at its ends and a transversely extending slot intermediate its ends, a marker plate fitting against said body plate between the flanges thereof and having flanges at its ends bearing against the flanges of the body plate and along one side provided with a blade projecting beyond the flanges, a gauge plate fitting against said marker plate between the flanges thereof and having a lip along one side formed with an opening intermediate its length, a second marker plate fitting against said gauge plate and extending transversely thereof with one end projecting through the opening of said lip, a tooth carried by the projecting end of the last-mentioned marker plate, the gauge plate and marker plates being formed with slots disposed to register with the slot of said body plate, and a securing bolt passed through the registering slots whereby the plates may be adjusted relative to each other and secured in a set position.

2. A marker comprising a substantially rectangular body plate, flanges at the ends of said body, a marker plate fitting against said body between said flanges and having flanges at its ends and a blade along one side, a gauge plate fitting against said marker plate between the flanges thereof and having a flange along one side formed with a slot, a second marker plate fitting against said gauge plate and having a portion projecting through the slot in the flange of the gauge plate, a tooth carried by the projecting portion of the second marker plate, all of said plates being formed with slots registering and extending transversely of the body plate, and a bolt passed through the registering slots to slidably connect the plates and when tightened serving to secure the plates in adjusted positions.

3. A marker comprising a substantially rectangular body plate, flanges at the ends of said body, a marker plate fitting against said body between said flanges and having flanges at its ends and a blade along one side, a gauge plate fitting against said marker plate between the flanges thereof and having a flange along one side formed with a slot, a second marker plate fitting against said gauge plate and having a portion projecting through the slot in the flange of the gauge plate, a tooth carried by the projecting portion of the second marker plate, and means to slidably connect the plates and releasably secure the same in adjusted positions.

In testimony whereof I affix my signature.
JOHN R. HOUTS.