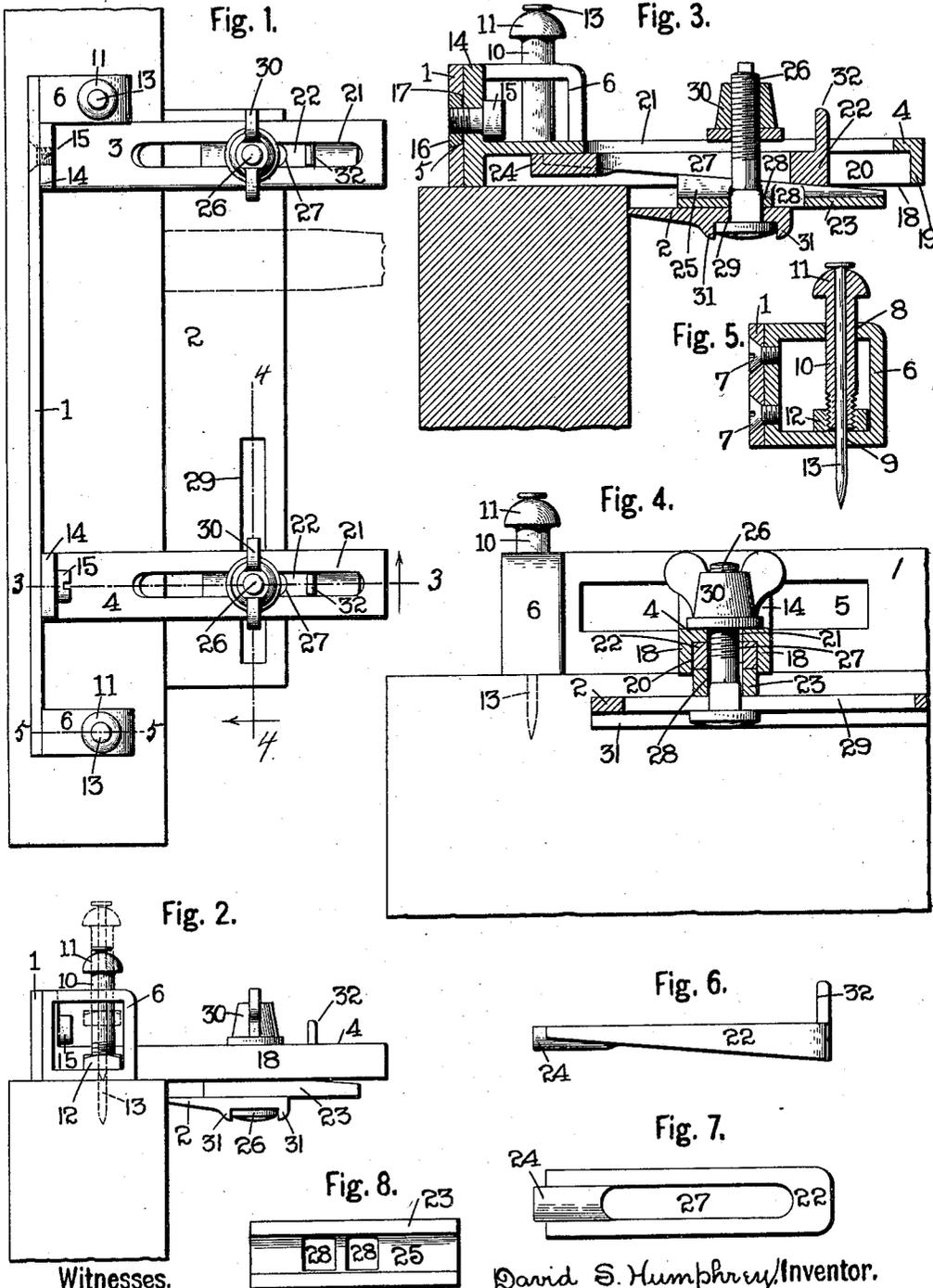


D. S. HUMPHREY.
 CONFORMING GAGE.
 APPLICATION FILED MAR. 16, 1911.

1,008,826.

Patented Nov. 14, 1911.



Witnesses.
 Edwin F. Fry
 George A. Neubauer.

David S. Humphrey/Inventor.
 By *Cy S. ...* Attorney.

UNITED STATES PATENT OFFICE.

DAVID S. HUMPHREY, OF BUFFALO, NEW YORK.

CONFORMING-GAGE.

1,008,826.

Specification of Letters Patent. Patented Nov. 14, 1911.

Application filed March 16, 1911. Serial No. 614,808.

To all whom it may concern:

Be it known that I, DAVID S. HUMPHREY, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented a certain new and useful Improved Conforming-Gage, of which the following is a specification.

This invention relates to improvements in conforming gages, and primarily to that class of gages employed in cutting mortises for door hinges and the like.

The principal object of the invention is to provide means for quickly and accurately determining the width, depth and length of the mortise required.

The invention also relates to certain details of construction which will be hereinafter described and perhaps claimed, reference being had to the accompanying drawings in which a preferred adaptation of the invention is shown.

Figure 1 is a face view of the improved gage, also showing a fragment of a door to which it is attached, and a chisel in position in dotted lines for cutting the mortise. Fig. 2 is an end view of the improved gage. Fig. 3 is an enlarged transverse section through the improved gage on line 3—3 Fig. 1. Fig. 4 is an enlarged fragmentary horizontal section through the improved gage on line 4—4 Fig. 1. Fig. 5 is an enlarged fragmentary transverse section through the improved gage on line 5—5 Fig. 1. Figs. 6, 7 and 8 are enlarged detached details of the tapering wedge members for regulating the depth of the mortise.

In referring to the adaptation of the invention shown in the accompanying drawings in detail, like numerals designate like parts.

This improved gage consists of a plurality of members adjustably connected to each other and capable of independent adjustment to regulate the width, depth and length of the mortise to be cut.

The adaptation of the gage illustrated consists of a rear longitudinal member 1, a forward longitudinal member 2, and two transverse connecting members 3 and 4. The

rear longitudinal member 1 is preferably the longest member of the gage, and is provided with a longitudinal slot 5.

Two loop members 6 are fastened to the front face or side surface of the rear longitudinal member 1, near the ends thereof, by screws 7 or the like, and are each provided with a comparatively large upper opening 8, and a comparatively small lower opening 9, which registers with the upper opening. The loop members are of a substantially square outline, and a tubular element or socket 10 is slidably mounted in the large opening 8 in each loop member, and is restrained against removal therefrom by upper and lower enlargements 11 and 12, located at the respective upper and lower ends of the socket.

An ordinary wire nail, or other suitable element, 13, is fitted loosely in each socket and is adapted to be driven into the door, or door casing, to temporarily fasten the gage to the door or casing.

The transverse connecting members, 3 and 4, are provided with vertical flanges, 14, at their rear ends through which screws, 15, are fitted to secure said transverse connecting members to the rear longitudinal member 1. One of the screws, 15, in the adaptation illustrated in the accompanying drawings, screws into a slide block, 16, slidably mounted in the slot, 5, to provide for the adjustment of the transverse members toward or from each other for the purpose of determining the length of the mortise. The complementary walls of the slot, 5, and edges of the block, 16, are correspondingly tapered, as shown at 17, in Fig. 3, to lock the block in the slot against transverse forward movement.

The forward longitudinal member, 2, is disposed with its faces or side surfaces at substantially right angle to the faces or side surfaces of the rear longitudinal member, and is arranged to extend beneath and to be attached to the transverse members 3 and 4, in front of the rear longitudinal member 1. The forward longitudinal member is so supported that it is capable of adjustment back-

ward or forward, or in other words, toward or from the rear longitudinal member to regulate the width of the mortise to be cut, and also of independent adjustment up or
 5 down relatively to the transverse members to regulate the depth of the mortise. Each of the transverse members is provided with depending side flanges, 18, and an end flange, 19, and the space between said side flanges,
 10 18, constitutes a slideway, 20, in which a wedge device is adjustably and slidably arranged. Each of the transverse members is also provided with a longitudinal slot, 21.

The preferable form of wedge device employed consists of an upper tapering wedge member, 22, and a lower tapering wedge member, 23, said wedge members being slidably arranged in the slideway, 20, of one of the transverse members and having diagonally extending contacting faces. The upper wedge member, 22, is provided with a depending enlargement, 24, which projects into a longitudinal groove, 25, in the top surface of the lower wedge member, 23,
 20 and serves to prevent lateral movement of one wedge member relatively to the other. Each of the wedge devices is adapted to be locked in its adjusted position in the slideway of the transverse member in which it is arranged by a bolt or screw, 26, which passes through the longitudinal slot, 21, in the transverse member, a longitudinal slot, 27, in the upper wedge member and an opening, 28, in the lower wedge member.
 35 The bolt or screw, 26, also passes through the forward longitudinal member and thus additionally serves to fasten the forward longitudinal member to the transverse members. The forward longitudinal member is
 40 provided with a longitudinal slot, 29, through which one of the bolts, 26, passes, thereby providing for longitudinal adjustment of the bolt in the forward longitudinal member to permit the adjustment of the transverse members relatively to each other.

In the adaptation shown, the bolt or screw, 26, is passed up through the slot or opening in the forward longitudinal member, then through the opening in the lower
 50 wedge member, the slot in the upper wedge member and the slot in the transverse connecting member, and a butterfly nut, 30, is screwed upon the upper projecting end of the bolt or screw, 26, to fasten all of the
 55 parts in their adjusted position. If desired, the head of the bolt, or screw, 26, may be made comparatively thin, and slight depending horizontal flanges, 31, may be provided on the under surface of the forward longitudinal member in parallel separated arrangement, as shown in Figs. 2
 60 and 3, between which the head of the bolt or screw is located as shown. The purpose of these flanges is to provide means for preventing contact between the head of the

bolt or screw, and the surface of the door or casing. Each of the upper wedge members is provided with a vertical projection, 32, which extends through the slot in the transverse connecting member, as shown in Fig. 2, and forms a convenient means for adjusting the wedge member. 70

In cutting a mortise with the aid of this improved gage, the hinge is first placed in the gage and the members of the gage are adjusted relatively to the said hinge to obtain the proper width, depth and length for the mortise, and are then fastened in their adjusted positions: the hinge is then removed and the gage is temporarily attached
 80 to the desired portion of the door or casing, by placing it in position and driving the nails, 13, into the surface of the wood. The mortise can then be quickly and accurately cut by a carpenter with a chisel or other suitable cutting tool; the members of the gage exactly defining the width, depth and length of the cut to be made, and guiding the tool, to guard against any cut or mar of the wood exterior, to the proper outlines
 90 of the mortise.

The great advantage of this improved gage is that it enables a carpenter to very quickly and accurately cut a mortise of any desired size. 95

While this improved gage is chiefly adapted for setting door hinges, it should be understood that it is also equally adapted for and may be utilized for many other purposes in which it is necessary to secure
 100 an accurate mortise.

I claim—

1. A gage of the class described consisting of a plurality of members adjustable relatively to each other to regulate the
 105 width, depth and length of the mortise to be cut, and means for temporarily fastening the members to the article in which the mortise is to be cut; said means consisting of loop members attached to one of the main
 110 members of the gage, sockets adjustably mounted in the loop members and nails loosely supported in the sockets.

2. A gage of the class described consisting of a rear longitudinal member, transverse connecting members having their rear ends fastened to the rear longitudinal member, a forward longitudinal member supported beneath the transverse connecting members and wedge devices interposed between the transverse connecting members and the forward longitudinal member, and adapted to adjust the forward longitudinal member relatively to the transverse connecting members. 120 125

3. A gage of the class described consisting of a rear longitudinal member, transverse connecting members having their rear ends fastened to the rear longitudinal member, a forward longitudinal member supported be- 130

neath the transverse connecting members and wedge devices interposed between the transverse connecting members and the forward longitudinal member, and adapted to
5 adjust the forward longitudinal member relatively to the transverse connecting members; said wedge devices comprising upper and lower tapering members slidably mounted relatively to each other.

DAVID S. HUMPHREY.

Witnesses:

C. J. SANGSTER,
GEORGE A. NEUBAUER.

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

*