

A. C. VOGT.
 BUTT INLET CUTTING DEVICE.
 APPLICATION FILED JAN. 18, 1921.

1,417,431.

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Fig. 1.

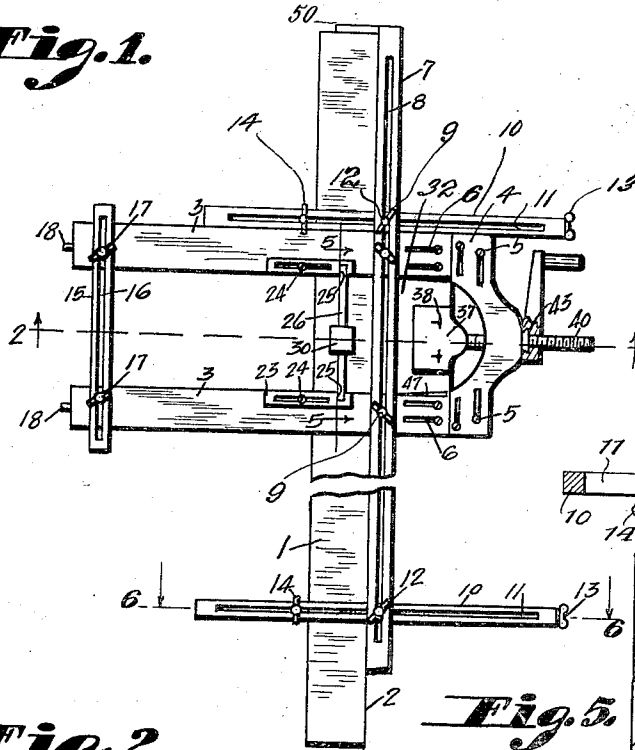


Fig. 6.

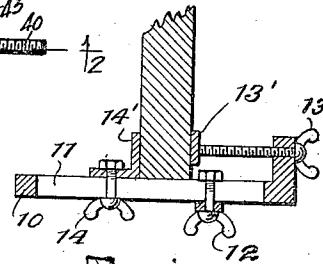


Fig. 2.

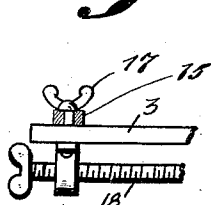


Fig. 5.

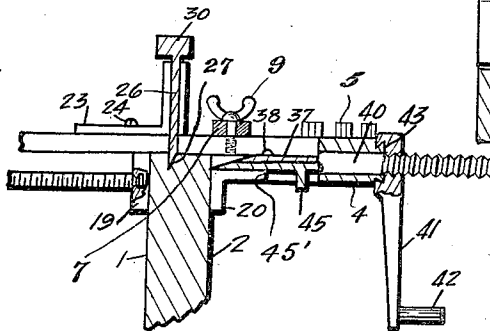


Fig. 3.

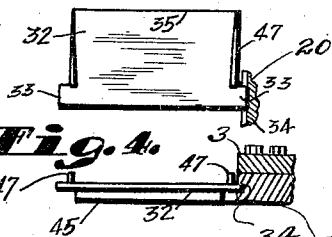


Fig. 4.

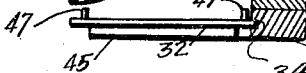
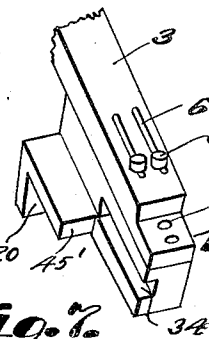


Fig. 7.



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BUTT-INLET-CUTTING DEVICE.

1,417,431.

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To all whom it may concern:

Be it known that I, AUGUST C. VOGT, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Butt-Inlet-Cutting Devices, of which the following is a specification.

It is the object of this invention to provide an apparatus which may be readily clamped upon a door or the like and which is provided with cutting blades so positioned as to readily cut inlets in the edge of the door adapted to receive the usual hinges employed for mounting the door in a frame.

The apparatus consists of a frame which is adjustable to fit any desired door and which may be readily clamped in position upon a door. A blade is adjustably mounted in this frame in such position that when tapped by a hammer it will cut the end of a hinge recess in the edge of a door and will then be automatically turned so as to disengage the door. A second blade is adjustably mounted upon the frame in such position that when moved by means of suitable actuating mechanism, preferably including a screw, the blade will cut into the face of the door so as to slice away the material thereof for forming the hinge inlet.

The invention will be readily understood from the following description of the accompanying drawings, in which

Figure 1 is an edge view of a door showing the improved cutting mechanism mounted thereon in position for use.

Fig. 2 is a transverse section on the line 2—2 of Fig. 1.

Fig. 3 is a plan view of the slicing blade of a cutting mechanism.

Fig. 4 is a rear end view of the same.

Fig. 5 is a detail section on the line 5—5 of Fig. 1.

Fig. 6 is a detail sectional view showing the mechanism for clamping the door to the bars 10.

Fig. 7 is a detail perspective view of a portion of a spaced bar 3.

The improved hinge recess cutting mechanism is mounted upon a door, one of the vertical edges of which is shown at 1. The hinge recesses are formed in this edge at one of the faces 2 of the door.

The cutting mechanism includes an adjustable frame detachably clamped to the door.

This frame, preferably, includes spaced bars 3 extending across edge 1 and connected by a cross bar 4. An adjustable connection including slots and clamping screws therein is formed between bars 3 and cross bar 4, as shown at 5, so as to permit of adjusting the space between bars 3, and by means of similar connections shown at 6 the bars 3 are longitudinally adjustable with relation to cross bar 4. The opposite ends of bars 3 may be adjustably connected by a bar 15 having a longitudinal slot 16 adapted to receive set screws 17 extending from the bars 3.

A bar 7 extends across bars 3 and is of a length sufficient to extend from one to the other of the points where the hinge recesses are to be cut. Projecting laterally from the upper end of bar 7 is a thin plate 50 which, when the apparatus is in use is positioned on the upper edge of the door, and said plate in addition to serving to assist in supporting the apparatus defines the necessary clearance between the upper edge of the door and the lintel of the door frame. Bar 7 is longitudinally slotted as shown at 8 and the bars 3 are adjustably connected to bar 7 by means of set screws 9. Bar 7 is clamped to the door by means of upper and lower cross bars 10 extending across edge 1 of the door and provided with longitudinal slots 11. The bars 10 are adjustably clamped to bar 7 by means of set screws 12 received through the intersections of slots 8 and 11. The bars 10 are clamped to the door by means of the usual heads 13' and clamping screws 13 opposed by blocks 14' and having thumb screws 14 adapted to clamp the same in position by turning the screws in usual manner. The bars 3 are also clamped to the door by means of usual clamping screws 18 extending longitudinally beneath bars 3 and having clamping heads 19 adapted to engage the face of the door so as to clamp the latter between the clamping heads and fixed clamps 20 carried by bars 3.

A cutting blade is mounted on bars 3 in such position as to be driven into the edge 1 of the door for cutting the rear end of a recess adapted to receive the butt plate of a hinge.

As an instance of this arrangement slotted brackets 23 are mounted upon bars 3 and are longitudinally adjustable thereon as by set screws 24. These brackets form upright guideways 25, and a cutting blade 26 is ver-

5 tically movable in said guideways so that the cutting edge 27 of the blade may be driven into the edge 1 of the door. The edges of the cutting blade are, preferably, provided with shoulders 28 and springs 29 are received between these shoulders and the bars 3 so as to normally urge the blade upwardly out of engagement with the door. A contact plate 30 is formed upon the upper edge of the cutting blade so that by striking against the same with a hammer or the like the blade may be forced into the door against the tension of springs 21 for cutting the rear end of a hinge butt inlet.

15 A second blade is arranged to then cut into the face 2 of the door adjacent edge 1 and opposite the cut formed by the first blade so as to slice away the door for forming the hinge butt inlet. As an instance of this arrangement a blade 32 is mounted upon bars 3 beyond the face 2 of the door, said blade being formed with ears 33 received in guideways 34 of the clamps 20 which are longitudinally adjustably fastened to the bars 3 as by screws 6' passed through slots 6 and having threaded engagement with clamp 20 so that the cutting edge 35 of the blade may be moved toward or away from the face of the door. The blade 32 is, preferably, adjustably secured to a plate 37 as by set screws 38, and the rear portion of plate 37 is secured to the screw rod 40 which is threaded through an actuating crank 41 and slidably supported in cross bar 4 so that by rotation of the crank, said screw will reciprocate the plate and thereby move the blade 32 into and out of cutting engagement with the door. The crank 41 may be held against axial movement relative to the bar 4 by means of a tapered thrust collar 43 fixed thereon and the crank may have a split bearing so that the same may be positioned around said collar. A suitable actuating handle 42 may be fastened to the crank.

45 By the construction as thus described it will be seen that forcing blade 32 into the surface of the door will slice out a portion thereof opposite the cut made by blade 26 so as to form a recess. The inward movement of blade 32 is, preferably, limited by a depending stop 45 upon the blade which is adapted to engage the laterally extending offset portion 45' of the clamp 20. The side edges of the cut formed by blade 32 are, preferably, trimmed by edge blades 47 extending upwardly from blade 32 and, preferably, comprising tapering cutting edges.

60 In the operation of the device the laterally extending lug 50 fixed on the upper end of the member 7 will be positioned on the top edge of the door and the transverse members 10 will be adjusted along the member 7 to serve as stops for the cutting mechanism so that the position of the recesses

will be determined by the position of the stops 10. The members 7 and 10 will then be fastened to the door as by the clamping screws 13 and 14 so that by loosening the screw 13 the whole frame can be removed from one door to a second door without loosening the position of the stops 10 and it is thus seen that by such an arrangement if several doors are to be recessed, by the use of the frame, said recesses will have identical positions relative to the door.

In the recessing operation, the cutting mechanism will be shifted along the member 7 until it abuts against the upper stop 10 and after the recess is cut, will be shifted to abut against the lower stop 10 where the second recess will be cut and to make the recesses of the door match the recesses in the door jamb of the casement, the screws 13 will be loosened and the lug 50 will be thrust up against the lintel of the casement and the frame then clamped to the casement as by the screw 13. It will be obvious that the lug 50 will cause a space to be made between the upper edge of the door and the lintel which space is always necessary for easily opening and closing the door.

If the length of the recess is to be varied so that a single operation will form the recess, the blade 32 is removed and a smaller one inserted as by the screws 38 and in order to properly guide the new blade as by the lugs 33 sliding in grooves 34, the members 3 must be brought closely together as by loosening the screws 5 and 17 which will allow the bars 3 to be brought to the proper position so as to support the new blade. The blade 26 will be positioned as by the adjustable supports 23 along the bars 3 so that any desired width of cut across the edge of the door may be had.

Various changes may be made without departing from the spirit of the invention as claimed.

What is claimed is:

1. In a recess cutting device, a vertically disposed slotted bar, a combined supporting and gage plate projecting laterally from the upper end of said bar, a horizontally disposed frame adjustably connected to said slotted bar, means for clamping said frame to the work, a pair of cutting members adjustably arranged in said frame, one of which cutting members is disposed at right angles to the other, a pair of horizontally disposed bars adjustably connected to said slotted bar, and means on said horizontally disposed bars for clamping the same to the work.

2. In a recess cutting device, a vertically disposed slotted bar, a combined supporting and gage plate projecting laterally from the upper end of said bar, a pair of horizontally disposed slotted bars adjustably connected to the first mentioned bar, means carried by

said horizontally disposed bars for clamping the work to which the device is applied, a horizontally disposed frame comprising a pair of adjustably connected horizontally disposed rails, means for clamping said rails to the work, and a cutter adjustably arranged between the rails at one end of said frame.

3. In a recess cutting device, a vertically disposed slotted bar, a combined supporting and gage plate projecting laterally from the upper end of said bar, a pair of horizontally disposed slotted bars adjustably connected to the first mentioned bar, means carried by said horizontally disposed bars for clamping the work to which the device is applied, a horizontally disposed frame comprising a pair of adjustably connected horizontally disposed rails, means for clamping said rails to the work, a cutter adjustably arranged between the rails at one end of said frame,

and means for moving said cutter toward and into the work.

4. In a recess cutting device, a vertically disposed slotted bar, a combined supporting and gage plate projecting laterally from the upper end of said bar, a pair of horizontally disposed slotted bars adjustably connected to the first mentioned bar, means carried by said horizontally disposed bars for clamping the work to which the device is applied, a horizontally disposed frame comprising a pair of adjustably connected horizontally disposed rails, means for clamping said rails to the work, a cutter adjustably arranged between the rails at one end of said frame, and a cutter adjustably arranged on the rails of the frame and disposed at right angles to the first mentioned cutter.

In testimony whereof I have signed my name to this specification.

AUGUST C. VOGT.