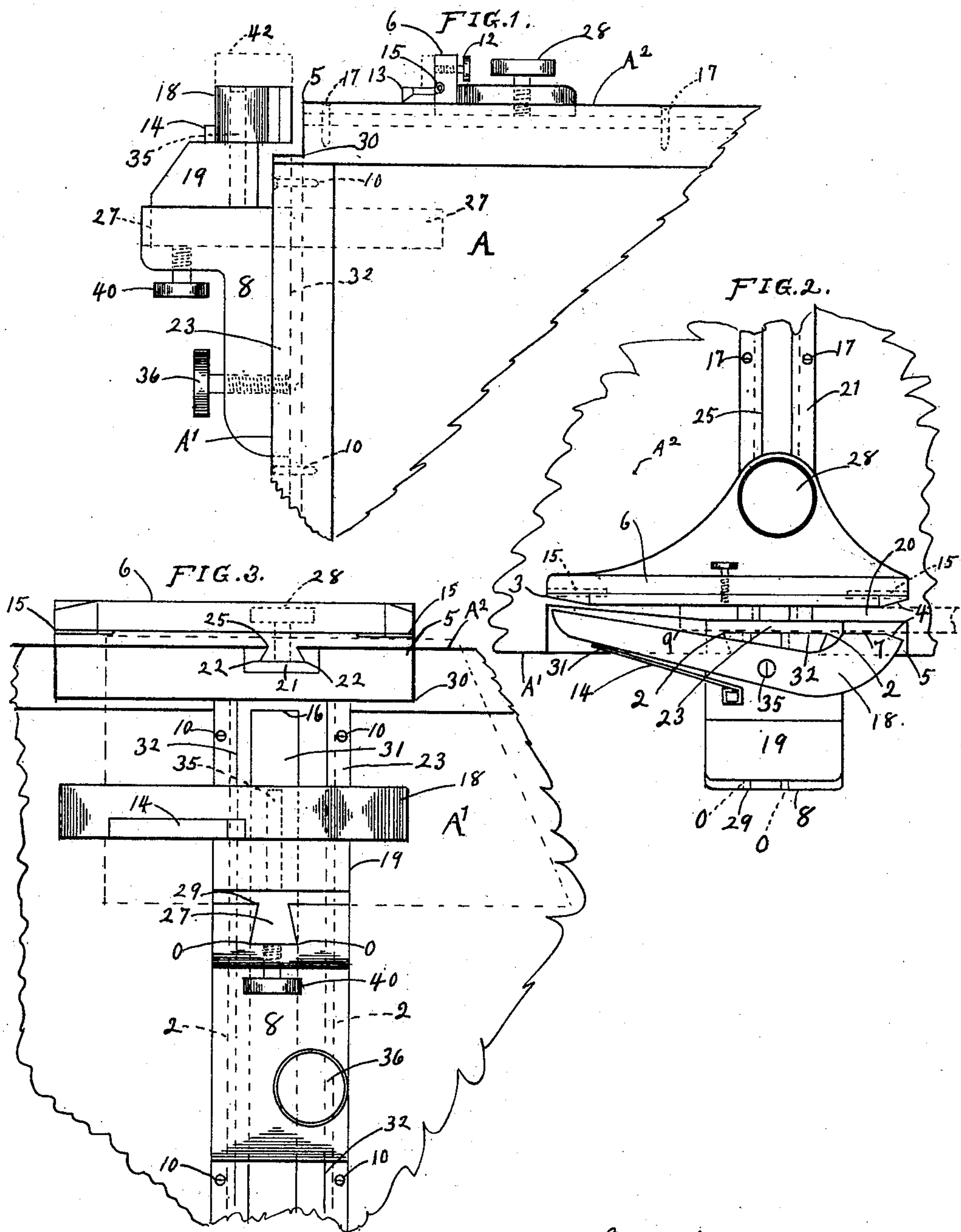


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BENCH STOP AND CLAMP.
APPLICATION FILED DEC. 30, 1909.

978,918.

Patented Dec. 20, 1910.



Witnesses:
Roscoe Forth.
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BENCH STOP AND CLAMP.

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Specification of Letters Patent.

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Application filed December 30, 1909. Serial No. 535,689.

To all whom it may concern:

Be it known that I, WILLIAM RAYMOND McCOY, a citizen of the United States, residing at Wayne City, in the county of Wayne and State of Illinois, have invented a new and useful Improvement in Bench Stops and Clamps, of which the following is a specification.

My invention relates particularly to combined stops and clamps adapted to be applied for use on carpenters' benches.

My primary object is to provide a device of the character indicated that is of simple and lasting construction, and capable of various uses.

With this and other objects in view the invention consists of the several details of construction and combination of parts, as will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings, Figure 1 represents a broken end elevational view of a carpenter's bench equipped with my improved combination automatic bench stop and clamp. Fig. 2, a broken plan view of the same, both clamping-members being shown in a different position from that shown in Fig. 1. Fig. 3, a broken side view, the device "8" and the self-adjusting clamping member being shown in different positions from that in "1" and "2."

In the construction illustrated, "A" represents a carpenter's bench of which part is broken away, the side of said bench being represented by "A'."

"8" represents the side device of my improved automatic bench stop and clamp attached to the side A'.

6 represents the top device with straight-side clamping-member, which is attached to the top of the bench A².

8 is attached to the side A' by means of a vertical bench plate "23" which is sunk flush with the surface of the side of the bench and extending downward from "30" some distance. It is also perforated for the passage of screws and secured to the side A' as shown at "10" and is furthermore provided with a dove-tailed groove 32, the beveled sides being shown at "2." A part of device 8 is beveled to fit into the dove-tailed groove 32 thus allowing it to be low-

ered or raised perpendicularly, and also allowing it to be easily removed when not in use, thereby leaving the side of the bench free from obstruction. "8" is also equipped at its upper end with a self-adjusting pivotally-mounted clamping-member 18 which will coact with either the side A' or the top clamping-member 6 and is mounted on a block 19.

"18" is also equipped with a spring 14 which is secured to the block 19 and is intended to press against the clamping-member 18, at 31, causing it to turn on the pivot 35 thus keeping it adjusted for the passage of materials between the clamping-members 18 and 6, or 18 and the side A' as the case may be. The clamping-members 18 and 6 are each beveled as shown at 4 for the free passage of materials, and have a space "20," between them. And by passing a piece of material through the space 20 along the straight side of 6 until it comes in contact with the clamping-member 18, at 9, it causes it to turn on the pivot 35 and clamp the material firm at 7.

Dotted lines represent a piece of material clamped between clamping-members 18 and 6. "6" is also beveled at its upper end as shown at 3, thus enabling it to be set close to the clamping-member 18, for clamping thin pieces of material in an upright position. 6 is attached to the top of the bench A² in like manner as the device 8 is attached to the side, A', and has a horizontal bench plate 21 sunk flush with the top surface of the bench A² and perforated for the passage of screws as shown at 17, thereby securing it to the top A². The plate 21 may reach all the way across the top of the bench, and is also provided with a dove-tailed groove 25, which extends full length of the plate 21, the beveled sides being shown at 22. A part of the clamping-member 6 is beveled to fit into the dove-tailed groove 25, and by means of the set screw 28, the member 6 may be adjusted for different widths of boards across the top of the bench, or may be slid entirely out of the groove 25, thereby leaving the top of the bench free from obstruction. A part of the member 6 as indicated by 13 is hinged on small hinges 15 and is held in an upright position against the side of its adjacent mem-

ber, by means of a set-screw 12 which passes through the upright portion of the member 6, and by adjusting the set-screw 12 the part 13 can be laid down for clamping thin pieces of materials lying flat on top of the bench as shown in Fig. 1. The device 8 can be lowered or raised perpendicularly as before mentioned and by means of the set-screw 36 can be easily adjusted to varying widths of boards, when clamping boards on the side of the bench. The horizontal portion of 8 is provided with a dove-tailed groove 29, the beveled sides being shown by 0. The block 19 is equipped with a horizontal guide 27, the two, 19 and 27, being made integral, and the guide 27 is beveled to fit into the groove 29. The plate 23 is provided with a slot perforation 31, which extends downward from 16 through which the guide 27 extends. The latter will support the clamping-member 18 at some distance from the bench A', and by means of the set-screw 40 can be quickly adjusted to varying thicknesses of material when clamping same on the side of the bench A'. The device 8 can be raised to sufficient height to bring the clamping-member 18 on a horizontal plane with the clamping-member 6, as shown by dotted lines at 42. The top of the bench A² is recessed as shown at 5, the recess extending downward to 30, and along the side of the bench at a length to receive the clamping-member 18 when in the positions it occupies in Fig. 1, and Fig. 2. And while in these positions it will coact with the clamping-member 6, and by means of the set-screw 36 can be adjusted for varying thicknesses of material, or set to catch a part of the lower edge of a board and clamp it firm, leaving the upper outside edge free to be gaged from, rabbeted, or the corner planed off as the case may be.

My invention provides an exceptionally handy and durable device which is capable of use as a combination stop and clamp for varying thicknesses and varying widths of material at the top of the bench, or as a clamp at the side of the bench, which can be adjusted for varying thicknesses and widths of material. The great practical advantages will at once be noticed and appreciated by those familiar with the art.

I am aware that fixed bench plates are known in the art, and also that pivoted lever clamps adapted to clamp material on the side and the top of benches, have long been known. I do not therefore claim them broadly, but,

What I do claim and desire to protect by Letters Patent, is—

1. In bench stops and clamps, the combination of a vertical bench plate applied to the outer side of the bench and sunk flush therewith, a vertically slidable bracket adjustably

connected with said plate, said bracket comprising a horizontal guide and a block, the latter supporting a laterally adjustable clamping member; a horizontal bench plate applied to the top of the bench and sunk flush therewith, and a laterally sliding clamping member adjustably connected with said plate.

2. In bench clamps and stops, the combination of a vertical bench plate applied to the outer side of the bench, sunk flush therewith, provided with a slot and a dovetailed groove, the latter extending full length of said plate; a bracket with a dovetailed rib to fit into said dovetailed groove, allowing the bracket to slide in a perpendicular plane and also to be stationed at any distance down from the top of the bench, along said vertical bench plate and held against vertical movement with a set screw; a horizontal guide adjustably connected with said bracket and projecting through said slot, said guide comprising a block, the latter supporting a pivoted self-adjusting clamping member, a horizontal bench plate applied to the top of the bench and sunk flush therewith, a laterally sliding clamping member having a straight clamping face, adjustably connected with said plate, said pivoted clamping member adapted to co-act with either the side of the bench or the laterally movable clamping member at the top of the bench.

3. In bench clamps and stops the combination of a vertical bench plate applied to the outer side of the bench, and provided with a vertical slot, a vertically movable bracket provided at its horizontal side with a dovetailed groove, a horizontal guide dovetailed to fit into said groove and adapted to slide therein, said guide extending through the vertical slot in said vertical bench plate, a block made integral with the horizontal guide and supporting a pivoted self-adjusting clamping member, which by means of said guide, may be adjusted laterally to any varying distance from the side of the bench along the horizontal guide, and held against lateral movement with a set screw; a horizontal bench plate applied to the top of the bench and sunk flush therewith, a laterally sliding clamping member having a straight clamping face, adjustably connected therewith and regulated by a set screw.

4. In bench clamps and stops the combination of a side bench plate, a vertically movable bracket, a horizontal guide comprising a block supporting a pivoted self-adjusting clamping member, a horizontal bench plate applied to the top of the bench, sunk flush therewith, and provided with a dovetailed groove, a clamping member having a straight clamping face, a dovetailed rib on said clamping member to fit into said dovetailed

groove, allowing the clamping member to
slide therein and also to be stationed at any
varying distance from the side of the bench
along said horizontal bench plate and held
5 against lateral movement by a set screw as
described; the straight clamping face or per-
pendicular portion of said clamping mem-

ber comprising a hinged side, which is
adapted to be lowered to a horizontal posi-
tion for engaging thin material.

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Witnesses:

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