No. 609,302. Patented Aug. 16, 1898.

H. E. SHAWVER.

BENCH STOP.

Application filed Aug. 3, 1897.)

(No Model.)

Fig. 1.

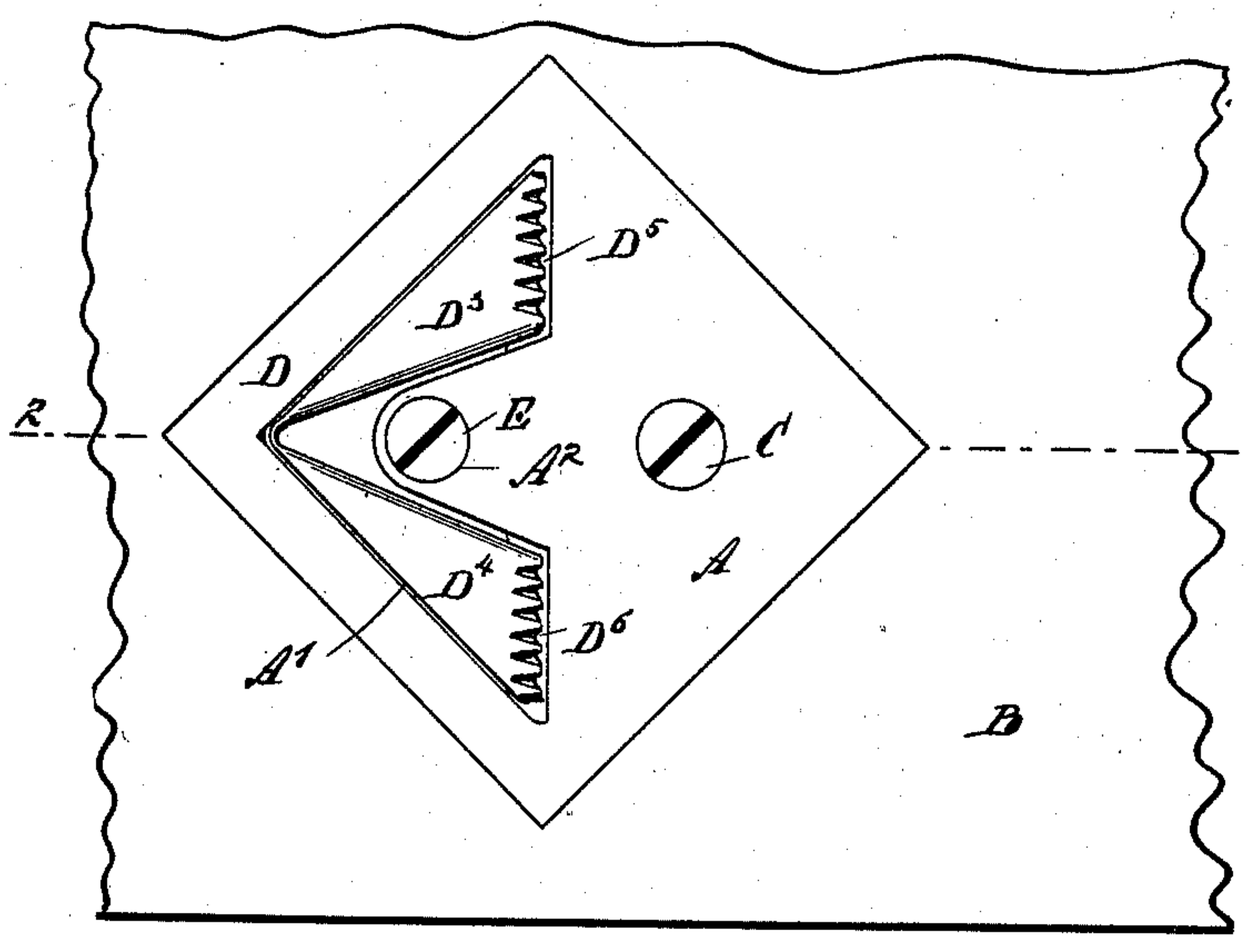

Fig. 4.

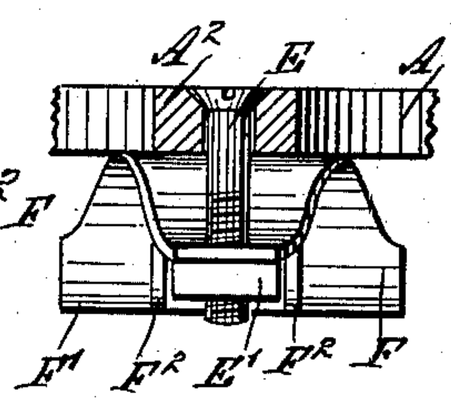

Fig. 5.

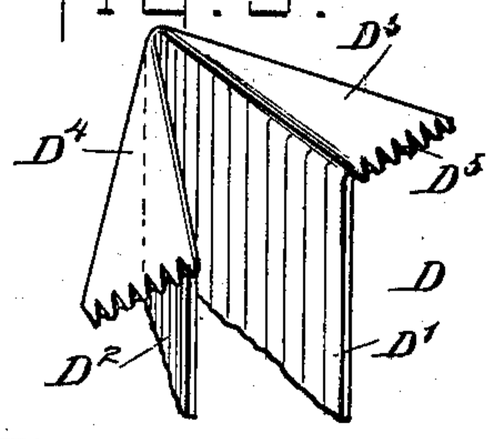

Fig. 2.

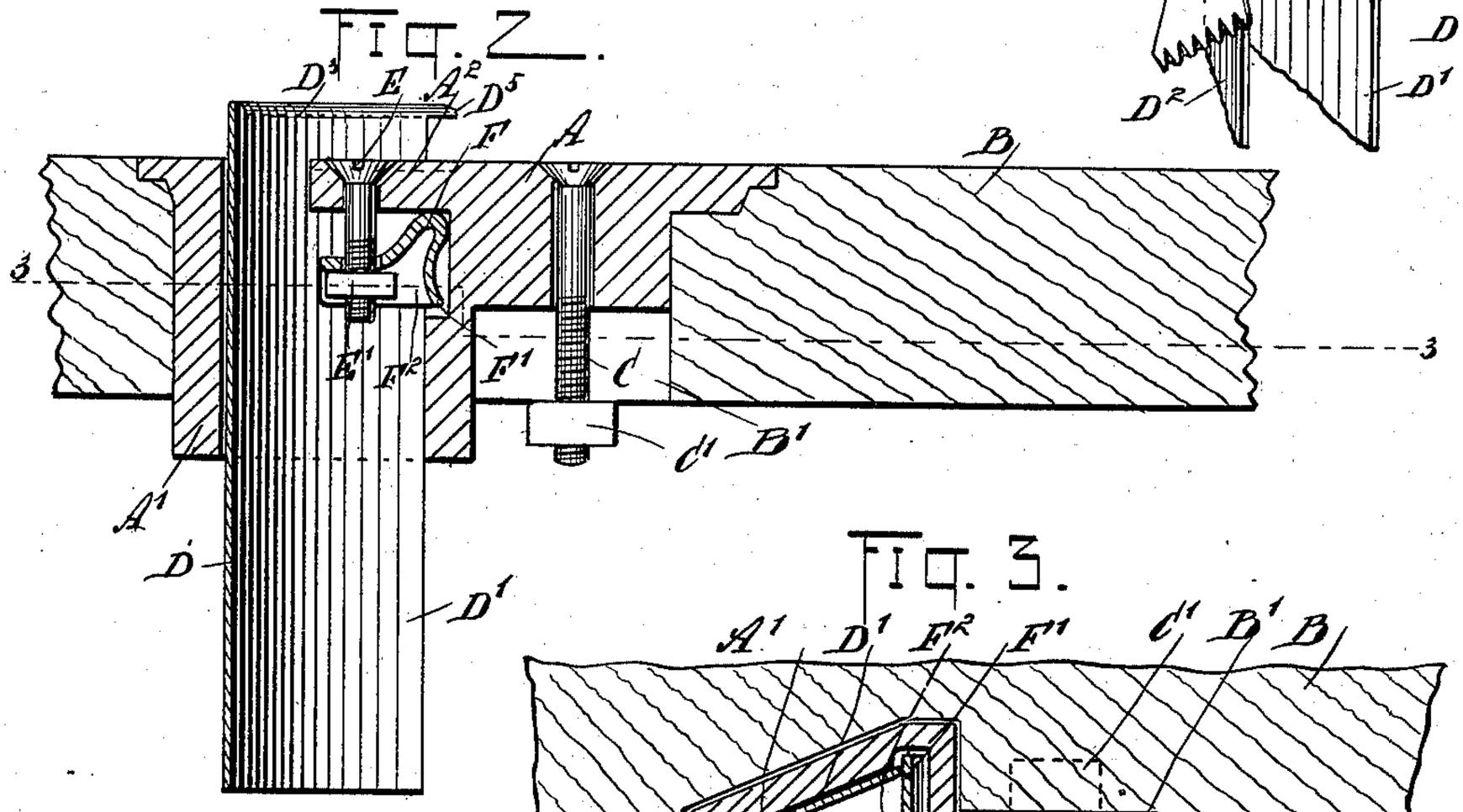

Fig. 3.

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BENCH-STOP.

SPECIFICATION forming part of Letters Patent No. 609,302, dated August 16, 1898.

Application filed August 3, 1897. Serial No. 646,881. (No model.)

To all whom it may concern:

Be it known that I, HARVEY E. SHAWVER, of Harvey, in the county of Cook and State of Illinois, have invented a new and Improved Bench-Stop, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved bench-stop which is simple and durable in construction and arranged to securely hold the work in place while it is being operated on with a plane or other tool.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improvement as applied. Fig. 2 is a sectional side elevation of the same on the line 2 2 of Fig. 1. Fig. 3 is a sectional plan view of the same on the line 3 3 of Fig. 2. Fig. 4 is an enlarged transverse section of the clamping-plate for the dog, and Fig. 5 is a perspective view of the upper end of the dog.

The improved bench-stop is provided with a plate A, formed on its under side with a triangularly-shaped bearing A′, fitted with the plate into a bench or other support B so that the top of the plate is flush with the top of the bench, the said plate being securely held in place by a bolt C, having its nut C′ engaging the under side of the bench, as is plainly shown in Fig. 2.

In the bearing A′ is fitted to slide vertically a dog D, formed of a single piece of material, having integral members D′ D^2 standing at angles to each other, as is plainly shown in Figs. 3 and 5, the upper ends of the said members being formed with integral outwardly-extending flanges D^3 D^4, respectively, preferably triangular in shape, with their front edges D^5 D^6 serrated and in alinement with each other and somewhat in advance of the front edges of the members D′ D^2. The rear ends of the flanges D^4 D^3 terminate in the apex of the members D′ D^2, as is plainly indicated in Fig. 5. The serrated edges D^5 D^6 are arranged in a plane parallel to a plane extending on the front edges of the members D′ D^2, and the said edges are adapted to engage the work under treatment and resting on the bench or other support B. The dog D thus described is adapted to be raised or lowered in its bearing A′ and adapted to be fastened in the position moved to, and for this purpose I provide a clamping-plate F, made L-shaped in cross-section, with one member engaged by a screw E, held in a tongue A^2, projecting from the plate A between the two members D′ and D^2 of the dog. A nut E′ engages the under side of the clamping-plate F, which latter rests with its corner against an angular shoulder formed by the tongue A^2 and the bearing A, so that the plate can swing with its lower edge F′ in contact with the forward edges of the members D′ D^2. Thus when the screw E is screwed up a swinging motion is given to the plate F to move the lower edge F′ in firm contact with the forward edges of the members D′ D^2, so that the latter are firmly pressed in contact with the angular inner faces of the bearing A′ to lock the dog D in place.

The clamping-plate is provided with sidewise-extending flanges F^2 for engaging opposite sides of the nut E′ to prevent the latter from turning when turning the screw E by a screw-driver applied on the head of the screw on the top of the plate A, as will be readily understood by reference to Figs. 1 and 2. By turning the screw E in an opposite direction the clamping-plate F is loosened to permit of readily moving the dog D up or down to bring the serrated edges to the proper height above the top of the plate A, according to the thickness of the work under treatment.

The nut C′ is elongated, as plainly shown in Fig. 3, and when in a transverse position, as shown in the said figure, it engages with its ends the under side of the support B, which latter is formed with a longitudinal slot B′ of a width somewhat in excess of the width of the nut, so that when the latter is turned into alinement with the slot then the entire device can be lifted off the support.

The device is very simple and durable in construction, is not liable to get out of order, and on account of the peculiar construction given to the dog the latter is rendered very

strong, so as to resist any ordinary pressure without danger of being bent out of shape, broken, or otherwise injured.

It will be seen that by the construction described the work is securely held in place, especially when the work lies flat and abuts against both toothed flanges or when the work is on edge and is pressed against the angular members $D' D^2$.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A bench-stop, provided with a dog having converging vertical members, said members having at their upper ends horizontal outwardly-projecting flanges whose inner edges are located in the planes of said vertical members, and whose outer edges converge toward the corner of the vertical members.

2. A bench-stop, provided with a dog having converging vertical members, said members having at their upper ends horizontal flanges, located exteriorly of the space inclosed between the planes of said members, the forward edges of said flanges being toothed, and alining transversely in advance of the upper ends of the front edges of the vertical members.

3. A bench-stop, comprising a plate having a V-shaped vertical guideway and a tongue projecting beyond the members of the guideway, said tongue being provided with a shoulder upon its under side, a dog movable vertically in said guideway, a clamping-plate held under the tongue and engaging the shoulder thereof, the free edge of the clamping-plate extending in advance of the forward edges of the dog, and means for forcing said edge of the clamping-plate rearward against the dog.

4. A bench-stop, comprising a guide-plate having a vertical guideway, a dog movable in said guideway, a clamping-plate whose central portion has a bend engaging a shoulder of said guide-plate, while the free edge of the clamping-plate is adjacent to the edge of the dog, and means for pressing the other edge of the clamping-plate toward the said shoulder to cause the free edge to clamp the dog.

5. A bench-stop, comprising a guide-plate having a vertical guideway, a dog movable in said guideway, a clamping-plate whose central portion has a bend engaging a shoulder of said guide-plate, while the free edge of the clamping-plate is adjacent to the edge of the dog, the central portion of the clamping-plate having spaced flanges approximately at right angles to the plane of the clamping-plate, a screw passing through the clamping-plate between the said flanges and through the guide-plate, and a nut held on the screw between said flanges.

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Witnesses:
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