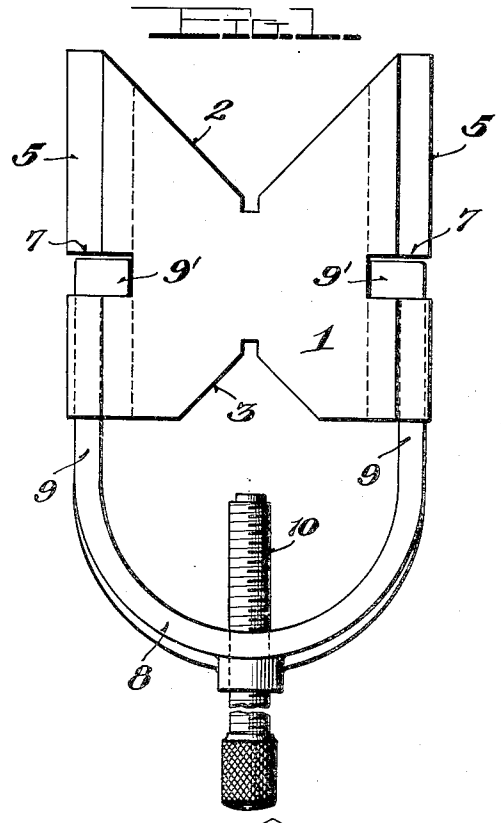
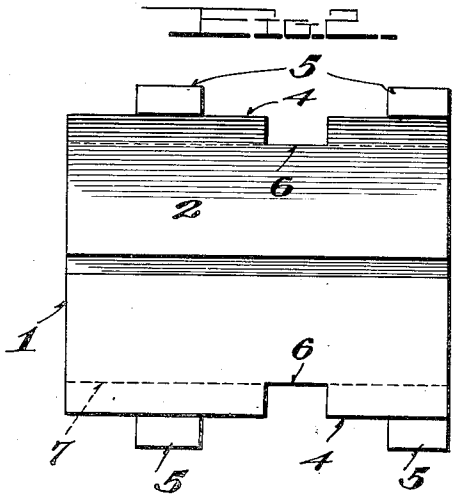
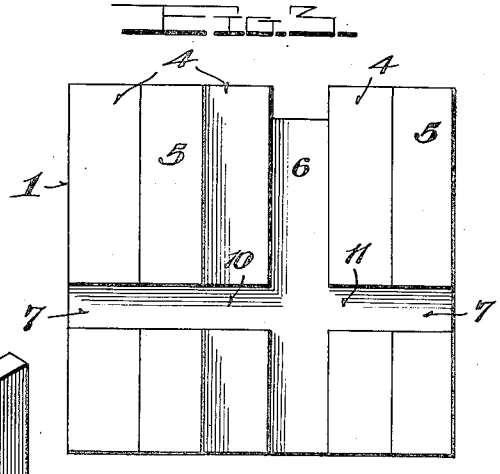
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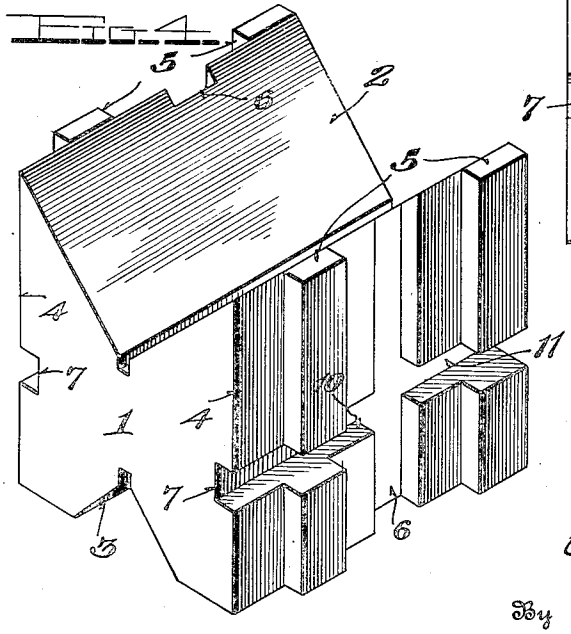
V-BLOCK

Filed Dec. 13, 1929 2 Sheets-Sheet 1









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V-BLOCK

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Fig. 5.

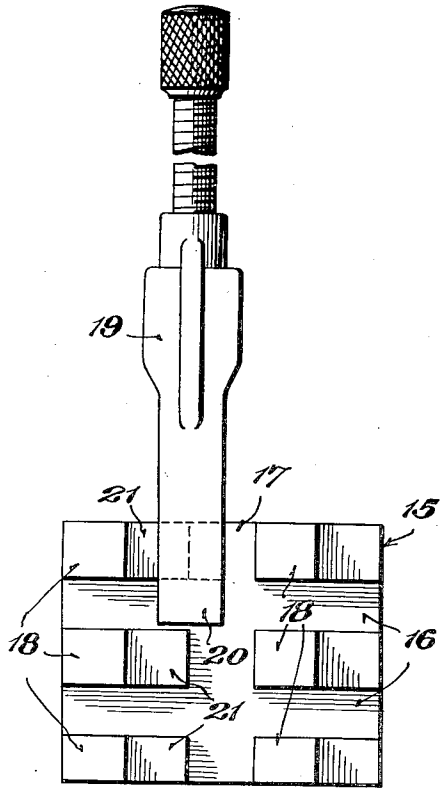


Fig. 6.

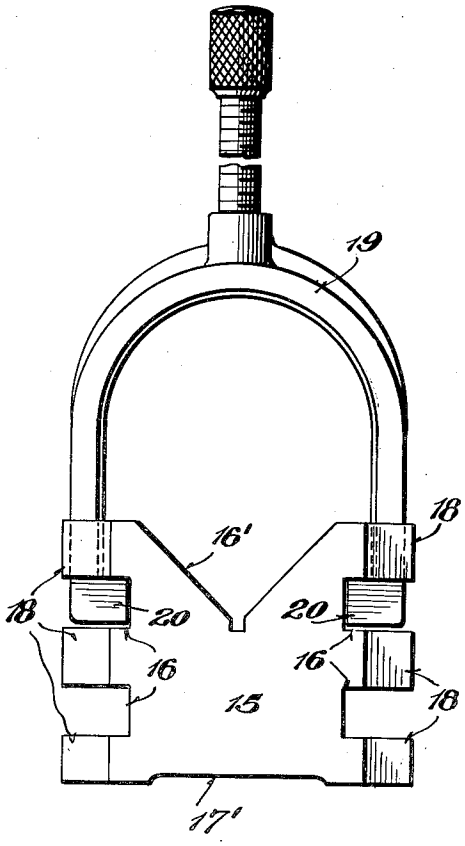
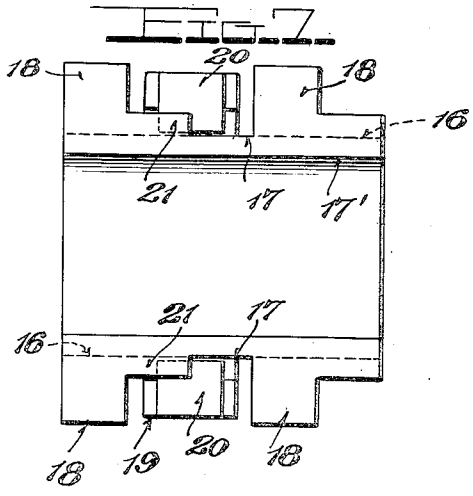


Fig. 7.



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UNITED STATES PATENT OFFICE

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V BLOCK

Application filed December 13, 1929. Serial No. 413,799.

This invention relates to V blocks or jigs and the primary object thereof is to provide a device of this type wherein the yoke of the work engaging clamp is embedded in or lies flush with the side faces of the block, whereby to enable the latter to be held flat on a supporting surface on either side thereof or to be used standing on either of its ends without interference from the clamp.

The invention further aims to provide a block which has novel means for enabling the clamp to be easily and quickly applied to and removed therefrom and to also enable the clamp to be reversed so as to cooperate with either the upper or lower face of the block, thereby to enable use of the clamp with work of different sizes or character.

The invention has further and other objects which will later be set forth and manifested in the course of the following description.

In the drawings:—

Figure 1 is an end elevation of the invention;

Figure 2 is a bottom plan view;

Figure 3 is a side elevation;

Figure 4 is a prespective view;

Figure 5 is a side elevation of a modified form of the invention;

Figure 6 is an end elevation of Figure 5, and

Figure 7 is a bottom plan view of Figures 5 and 6.

Referring to Figures 1 to 4, a block 1 is provided which has a V-shaped upper face 2 and a correspondingly shaped lower face 3, the two V-shaped faces being of different angularity so as to adapt same for work of different sizes or character. The side faces of the block are cut away as indicated at 4 whereby to provide vertical ribs 5 which latter are spaced and are formed to seat flat on or against a supporting surface. Vertical grooves 6 are formed in the side faces inwardly of the cut away portions 4 and are located between the ribs 5, while longitudinal grooves 7 are likewise formed in the side faces of the block and intersect the vertical grooves 6 and are also disposed inwardly of the cut-away parts 4 so that the bottoms of the grooves 6 and 7 lie flush with each other. As depicted in Figures 1, 3 and 4 the longitudinal or horizontal grooves 7 are located closer to the V-face 3 than to the V-face 2, thereby enabling larger work to be held by use of the face 3 as compared to the face 2, or work of different characters such as are peculiarly adapted for use with either of the V-faces 2 or 3.

The work-engaging clamp is composed of a yoke 8, the side arms 9 of which are receivable in the vertical grooves 6 and are formed with inturned ends 9′ which latter are also receivable in the grooves 6 and upon lateral movement are engageable in the grooves 7 to either side of the vertical grooves 6 whereby to hold the ends or fingers 9 against movement outwardly from the block. The clamp has the usual screw 10 for engagement with the work.

In operation, the legs or arms 9 of the clamp are brought into register with the grooves 6 and then slid inwardly toward the grooves 7, and upon entering the latter the yoke is then bodily moved to either side of the groove 6 so as to cause the fingers 9′ to engage in either of the portions 10 or 11 of the grooves 7, whereby the clamp will be held against movement outwardly of the block. It will be further seen that the clamp can be removed from the block and the parts then reversed to connect the clamp to the block in operative relation to the V-face 2.

It will be further noted that when the parts are in position of Figure 1 the clamp can be engaged flat against a supporting surface on either side thereof or the block can be supported from either end thereof, in all of these positions without interference from

the clamp, the block being firmly held in seated position on the supporting surfaces.

In the modified form of the invention shown in Figures 5–7, the block 15 has an upper V-shaped face 16′ and a lower face 17, which faces are of different characters for use with correspondingly shaped work. In this form of the invention there are however two horizontal grooves 16 on each side face of the block which grooves are intersected by a common vertical groove 17. The ribs 18 extend vertically of block and are intersected by the horizontal grooves 16.

The clamp 19 has fingers 20 on its arms as in the other form of the invention, which fingers are receivable in the vertical grooves 17 and in either of the horizontal grooves 16. In this form of the invention the ribs 18 are provided with extensions 21 to engage with the fingers 20 of the clamp, these extensions acting as abutments against which the fingers 20 engage. In operation, the clamp is moved to a position where its fingers 20 register with the grooves 17, whereupon the clamp is moved downwardly to enter the selected horizontal grooves 16 and is then slid in the latter to engage with the abutments 21. In this form of the invention it will be noted that the clamp can be disposed to engage the upper abutments 21 as shown in Figures 5 and 6 or can be moved to engage the center abutments 21 from the same side of the block, and upon reversal of the block the same condition holds true.

While the invention has been described as providing ribs or abutments by virtue of cutting of the metal, nevertheless it will be understood that the blocks can be cast in the form shown in the drawings, without departing from the spirit of the invention.

In all forms of the invention it will be seen that the ribs 5 or 18 protect the arms of the yoke and by virtue of the spacing of the ribs the block is held firmly seated on a supporting surface and against rocking.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:—

1. A jig comprising a block having upper and lower work-receiving faces and having opposed side faces each formed with a pair of spaced outwardly projecting vertical ribs, said side faces being formed with longitudinal grooves extending through the ribs and with vertical grooves located in the spaces between the ribs of the pairs of ribs and which vertical grooves intersect the longitudinal grooves, and a work engaging clamp including a yoke having the ends of its sides formed with inturned fingers, the yoke sides and fingers being formed to be received in the vertical grooves and moved to engage in the longitudinal grooves and to be moved in the latter to one side of the vertical grooves, the outer faces of the ribs extending substantially flush with the outer side faces of the yoke so as to enable the block to be placed flat on a supporting surface, the longitudinal grooves being located to one side of the horizontal center of the block.

2. A jig comprising a block having upper and lower work-receiving faces and having opposed side faces each formed with a pair of spaced outwardly projecting vertical ribs, said side faces being formed with longitudinal grooves extending through the ribs and with vertical grooves located in the spaces between the ribs of the pairs of ribs and which vertical grooves intersect the longitudinal grooves, and a work engaging clamp including a yoke having the ends of its sides formed with inturned fingers, the yoke sides and fingers being formed to be received in the vertical grooves and moved to engage in the longitudinal grooves, and to be moved in the latter to one side of the vertical grooves, the outer faces of the ribs extending substantially flush with the outer side faces of the yoke so as to enable the block to be placed flat on a supporting surface.

3. A jig composed of a block having work-engaging faces and having side faces formed with intersecting horizontal and vertical grooves, a work-engaging clamp having holding parts receivable in the vertical grooves and movable to engage in the horizontal grooves, and means on the side faces of the block at least flush with the holding parts of the clamp to hold the block flat on a supporting surface.

4. A jig composed of a block having a work-engaging face and side faces, a work-engaging clamp having holding parts slidably engagebale with the side faces of the block, means carried by the side faces and with which said holding parts have slidable engagement to connect the clamp to the block, and spaced ribs on the side faces extending at least substantially flush with the holding parts to hold the block flat on a supporting surface.

5. A jig composed of a block having a work-engaging face and side faces, a work-engaging clamp having holding parts slidably engageable with the side faces of the block, means carried by the side faces and with which said holding parts have slidable engagement to connect the clamp to the block, and means on the side faces of the block to hold the latter flat on a supporting surface.

6. A jig composed of a block having a work engaging face and having intersecting vertical and horizontal grooves on its side faces, and a clamp having arms provided with holding parts which are receivable in the vertical grooves and movable to engage in the horizontal grooves so as to lie in the latter to one side of the vertical grooves.

7. A jig including a block, a clamp having arms formed to embrace opposite sides of the

block and having holding means, and means on the block with which the holding means have slidable engagement to connect the clamp to the block and to cause the arms and the holding means to lie substantially flush with said sides of the block.

8. A jig including a block, a clamp having a block engaging means, and means carried by the sides of the block and formed to have said block engaging means slid into engagement therewith so as to anchor the clamp to the block and to cause the block engaging means to lie inwardly of the sides of the block.

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

CHARLES W. GRUBER.