Feb. 23, 1926. 1,574,528

O. J. YOUNGMAN ET AL

WORKBENCH

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Fig. 1

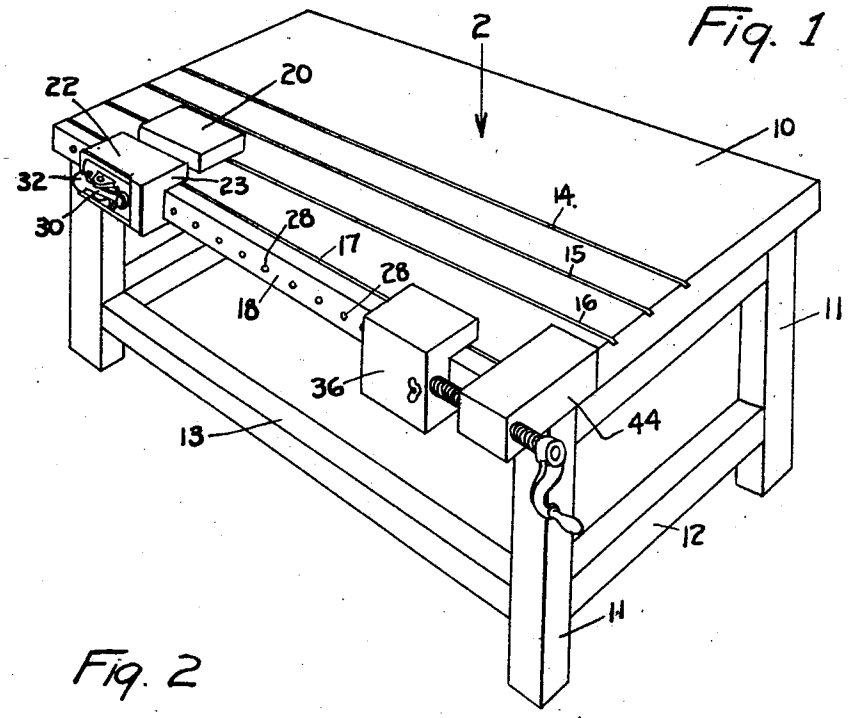
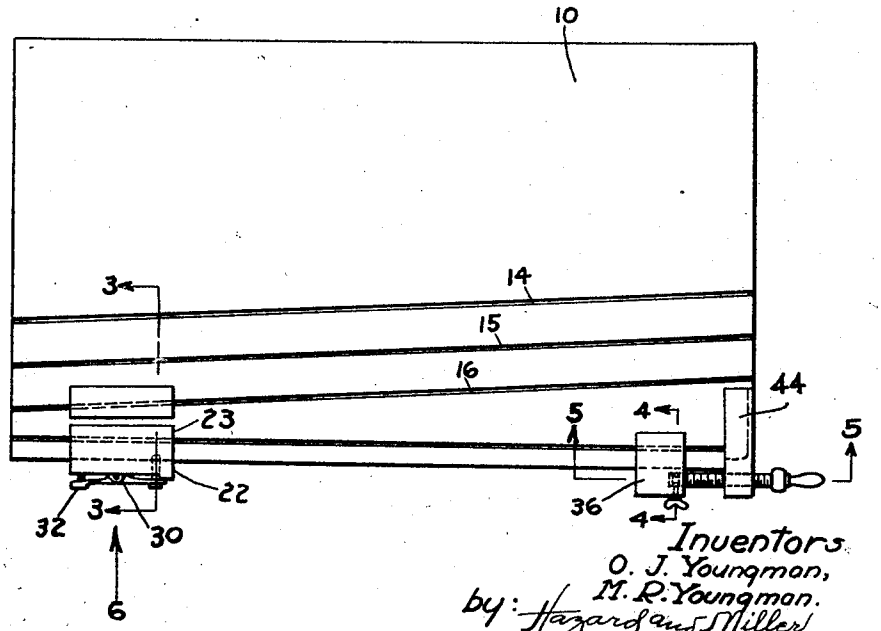


Fig. 2



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Fig. 3

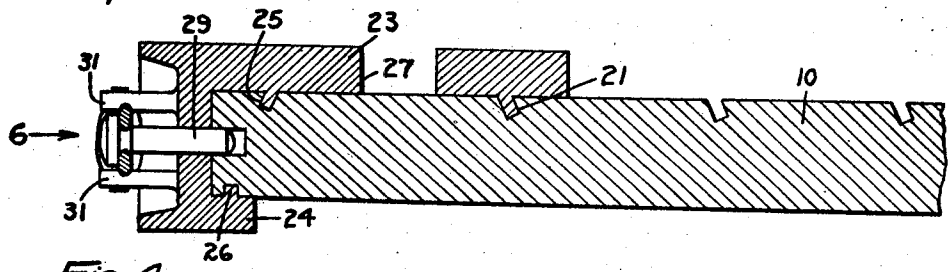


Fig. 4

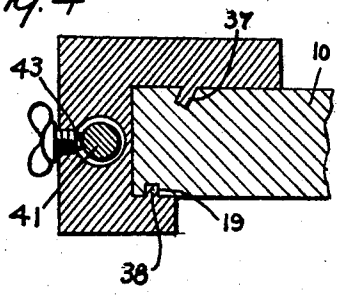


Fig. 5

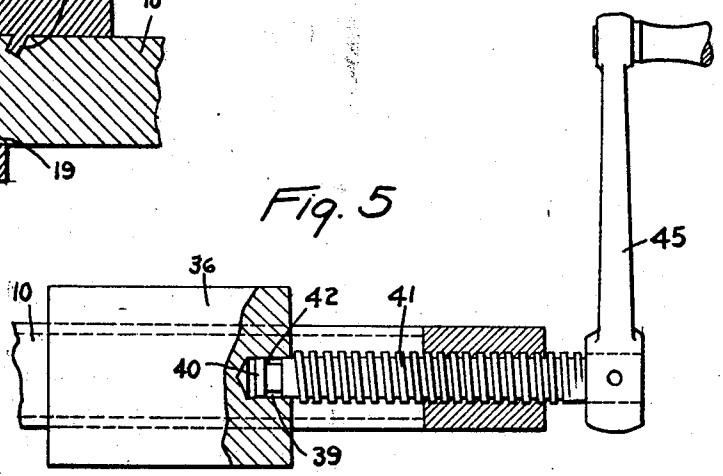


Fig. 6

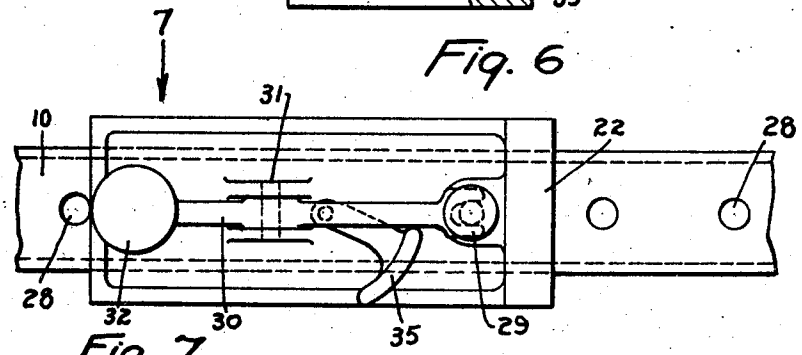
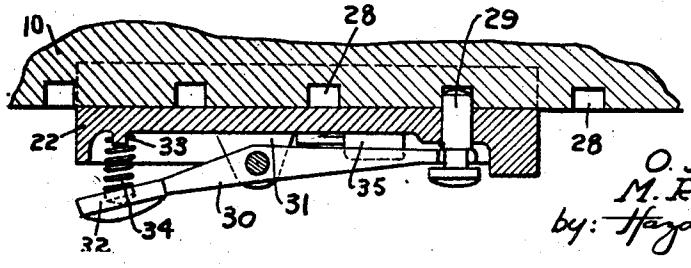


Fig. 7



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UNITED STATES PATENT OFFICE.

OTTO JOHN YOUNGMAN AND MAXIMILIAN R. YOUNGMAN, OF LOS ANGELES, CALIFORNIA.

WORKBENCH.

Application filed March 18, 1925. Serial No. 16,383.

To all whom it may concern:

Be it known that we, OTTO JOHN YOUNGMAN and MAXIMILIAN R. YOUNGMAN, citizens 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 Workbenches, of which the following is a specification.

This invention relates to work benches. An object of the invention is to provide readily adjustable means incorporated in the work bench for holding strips of material such as wood, for planing, sandpapering and the like, and to facilitate accommodation of the holding means to objects of greatly varying width.

A further object is the inclusion in a device of the type described of a vise arrangement which is quickly adjustable to any extension limited approximately only by the length of the work bench and to enable a board or other object being held in the vise to at the same time rest upon the top of the work bench.

Other objects and advantages will be made manifest in the following specification of an embodiment of the invention illustrated in the accompanying drawing, in which—

Fig. 1 is a perspective of the work bench,

Fig. 2 is a top view of the work bench,

Fig. 3 is a fragmentary vertical section of a portion of the work bench taken on the line 3—3 of Fig. 2.

Fig. 4 is a fragmentary vertical section of a portion of the work bench taken on the line 4—4 of Fig. 2,

Fig. 5 is a fragmentary vertical section of the work bench and vise arrangement taken on the line 5—5 of Fig. 2,

Fig. 6 is a fragmentary view of the side of the work bench top taken in the direction of the arrow 6 of Fig. 2,

Fig. 7 is a horizontal sectional fragmentary view of the portion of the work bench shown in Fig. 6 and is taken in the direction of the arrow 7 of Fig. 6.

The details of construction and operation of the invention are as follows:

A work bench top 10 is supported by suitable legs or standards 11 which are properly placed with end pieces 12 and side pieces 13; the supporting frame work may constitute any desired structure.

The top 10 is approximately rectangular in design and has a plurality of parallel grooves 14, 15 and 16 in the upper face of the top and extending diagonally with reference to the longitudinal extension of said top.

The grooves 14, 15 and 16 are preferably cut at a bias or diagonal to the vertical when considered in cross section. A groove 17 is cut near the side 18 of the top parallel thereto and in an opposite diagonal to the grooves 14, 15, and 16 when considered in cross section. The lower face of the top 10 has a longitudinally extending groove 19 which is disposed vertically and is parallel to the side 18.

A wedge block 20 which is herein shown as rectangular in design and of sufficient thickness to provide a substantial obstruction is provided with a diagonally disposed tongue 21 which is adapted to slidably engage one of the grooves 14, 15 and 16 and the wedge block to slide over the surface of the upper face of the top. It will be noted that the sides of the wedge block are parallel to the sides of the top 10 and that the guide-way formed by the groove 16 will cause the wedge block to be moved to or from the side of the top when the block is slid lengthwise in the groove.

A slide block 22, having a substantially U shaped cross section is adapted to slidably engage the side 18 of the top 10 and an upper extension 23 to slide on the upper face of the top and a lower extension 24 to slide on the lower face of the top. This slide block is formed with a tongue 25 adapted to slide in the groove 17 and the lower extension is provided with a tongue 26 which is adapted to slide in the groove 19. It will thus be observed with reference to Figure 3 that the cooperating tongues 25 and 26 act to prevent the slide block 22 from being moved in any direction except longitudinally of the side of the top. Thus the inner face 27 of the slide block presents a substantially rigid abutment between which and the wedge block 20, a piece of material may be wedged and held securely for being worked.

The side 18 has a plurality of recesses 28 into which a pin 29 operating through the slide block 22 is adapted to project for the purpose of securing the slide block against lengthwise movement. The pin 29 is disposed at the end of an arm 30 which is pivoted between a pair of ears 31 and has a

handle 32 at its opposite end. A short lug 33 projecting outwardly from the slide block 22 is adapted to retain an expansion coil spring 34 which bears at one end on the slide block 22 and at its other end on the arm 30. Thus the pin 29 is normally pressed inwardly to effect an engagement with one of the apertures 28. The pin 29 however, may be locked in an optward or disengaged position by means of a swinging lock member 35 which is adapted to be interposed between the arm 30 and the block 22 and to offer an obstruction to the said arm, preventing the pin from entering any of the apertures.

A vise block 36 is formed with a cross section substantially identical to the cross section of the slide block 22 and is adapted to slide upon the side of the top and its tongues 37 and 38 to engage the grooves 17 and 19 respectively. One end of the vise block 36 has a recess 39 into which the bearing end 40 of a jack screw 41 is adapted to work. The bearing end 40 is formed with an annular groove 42 in which a set screw 43 is adapted to be extended for preventing retraction of the jack screw 41 from the vise block 36. The jack screw 41 is threaded through an extension 44 at the end of the top 10 and a crank 45 is provided at the outer end of the jack screw.

The operation of the invention may be understood as follows:

A board strip of material or other object which is to be worked may be laid upon the top of the work bench and one edge brought adjacent the face 27 of the slide block 22. An approximate adjustment may be effected by inserting the tongue 21 on the wedge block 20 in the proper one of the grooves 14, 15 and 16. A more minute adjustment as to operation by the slide block 22 and the wedge block 20 may be effected on releasing the pin 29 from its position in one of the recesses 28 by means of the handle 32 on the arm 30 and the slide block 22 may be slid along the side 18 of the top 10 to the desired position. The object may then be tightly wedged between the two blocks by pushing the block 20 in the direction which will cause the said block to draw nearer to the side of the top. The object may be released by jarring the wedge block 20 in the opposite direction which will have the effect of pulling the said wedge block away from the object being held. The use of the vise arrangement contemplates cooperation between the slide block 22 and the vise block 36. The first approximate adjustment may be made by disposing the slide block 22 in the desired position along the side 18 and the pin 29 should be allowed to enter one of the recesses 28 to thereby secure the slide block against longitudinal movement. Whatever object is being worked on should be placed against the upper extension 23 of the slide block 22 and may be rested upon the top or otherwise and the vise block 36 tightened against the object by rotating the crank 45 on the jack screw 41.

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

What is claimed is:

1. A work bench having a top with a groove diagonal to its longitudinal extension, a wedge block of rectangular and rigid construction having its lower face resting on the top, said wedge block having a longitudinal tongue in its lower surface adapted to slide in the groove, and a slide block rigid with the said top whereby an object may be secured between the wedge block and the slide block.

2. In a work bench, a top having a groove diagonal to its longitudinal extension and oblique relative to a vertical cross section, a wedge block of rigid and rectangular construction having its lower face resting on the top, said wedge block having a tongue lengthwise thereof extending into the groove and adapted to slide therein, and a slide block on the edge of the top laterally rigid therewith whereby an object may be wedged between the wedge block and the slide block.

3. In a work bench, a top having a plurality of grooves diagonal to its longitudinal extension, a wedge block of rigid and rectangular formation having a flat lower surface resting on the top, the wedge block having a longitudinal tongue adapted to fit any of the grooves and slide therein, the top having a groove extending longitudinally parallel to the edge and adjacent thereto, a slide block having a tongue extending therein whereby the slide block may be positioned in different locations along the edge of the top, and means to secure the slide block in adjusted position.

4. In a work bench, a top having grooves extending diagonally with reference to its sides, a wedge block provided with a tongue, said tongue being adapted to slide in one of said grooves, a slide block adapted to slide upon the side of the top and having a portion extending over the top and a portion extending under the top, tongues provided on each portion and grooves in the top parallel to the side thereof adapted to receive said tongues and to retain said slide block in slidable relation with the side of said top.

5. In a work bench, a top having grooves extending diagonally with reference to its sides, a wedge block provided with a tongue, said tongue being adapted to slide in one of said grooves, a slide block adapted to slide upon the side of the top and having a portion extending over the top and a portion extending under the top, tongues provided

on each portion and grooves in the top parallel to the side thereof adapted to receive said tongues and to retain said slide block in slidable relation with the side of the top and means for firmly securing the slide block at various positions along the side of the top.

6. In a work bench, a top having a plurality of parallel grooves extending diagonally with reference to the side of the top, a wedge block provided with a tongue, said tongue being adapted to slide in one of said grooves, said block having sides parallel to the sides of the top, the said top having a series of recesses along one side and a groove in the lower face parallel to the side and a groove in the upper face parallel to the side, a slide block adapted to slidably engage the side of the top and provided with tongues adapted to slide in the last mentioned grooves, the opposing faces of said wedge block and said slide block constituting a pair of wedge jaws between which an object may be tightly wedged, and a pin slidably working in the slide block and adapted to engage any one of the recesses to hold the said block against longitudinal movement.

7. In a work bench, a top having a plurality of parallel grooves extending diagonally with reference to the side of the top, a wedge block provided with a tongue, said tongue being adapted to slide in one of said grooves, said block having sides parallel to the sides of the top, the said top having a series of recesses along one side and a groove in the lower face parallel to the side and a groove in the upper face parallel to the side, a slide block adapted to slidably engage the side of the top and provided with tongues adapted to slide in the last mentioned grooves, the opposing faces of said wedge block and the said slide block constituting a pair of wedge jaws between which an object may be tightly wedged, and a pin slidably working in the slide block and adapted to engage any one of the recesses to hold the said block against longitudinal movement, and means adapted to normally press the pin into engagement with one of said recesses.

8. In a work bench of the type described in claim 7, means for locking said pin in a disengaged position.

In testimony whereof we have signed our names to this specification.

OTTO JOHN YOUNGMAN.
MAX. R. YOUNGMAN.