March 10, 1959 H. A. SMITH 2,876,667

INTERCHANGEABLE, AUXILIARY VISE JAWS

Filed Jan. 16, 1958

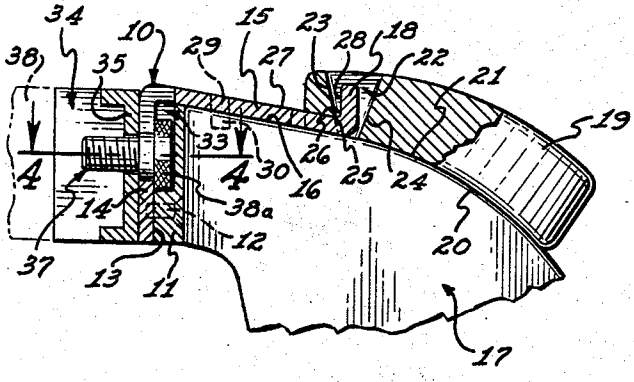


Fig. 2

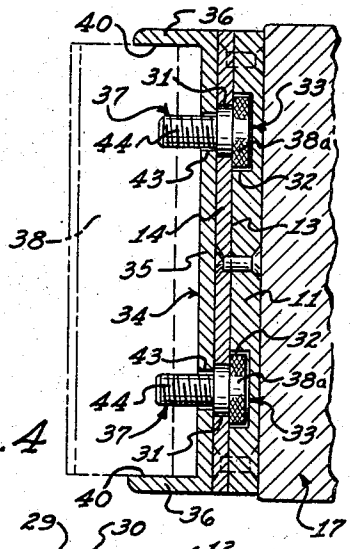


Fig. 4

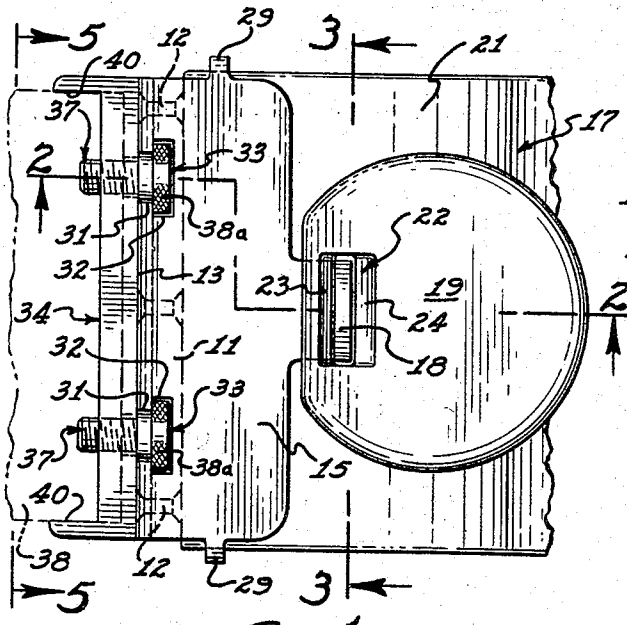


Fig. 1

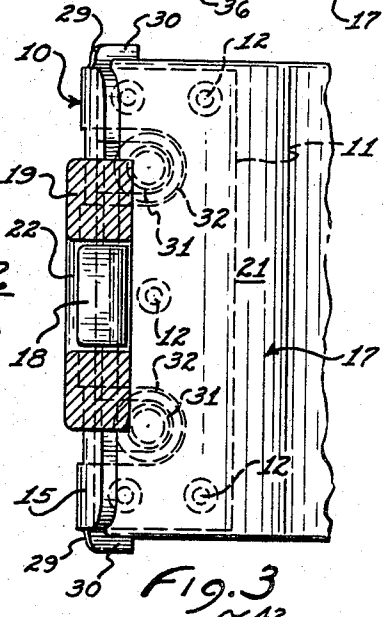


Fig. 3

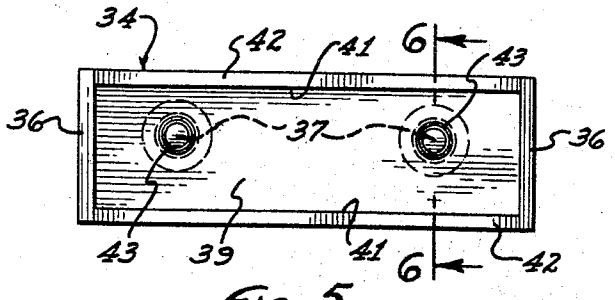


Fig. 5

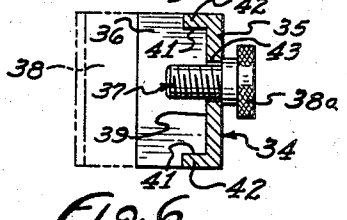


Fig. 6

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INTERCHANGEABLE, AUXILIARY VISE JAWS

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2 Claims. (Cl. 81—38)

This invention pertains to improvements in interchangeable, auxiliary vise jaws which can be easily attached and detached from the regular jaws of a vise.

An object of this invention is to provide interchangeable, auxiliary vise jaws having holding devices which may be detached from the auxiliary jaw members to provide greater room for the clamping of workpieces in the vise, and with demountable, convenient and secure means for holding workpieces of different types of material and of various sizes.

Further features and advantages of this invention will appear from a detailed description of the drawings in which:

Fig. 1 is a plan view of the interchangeable, auxiliary vise-jaw attachment incorporating the features of this invention.

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

Fig. 3 is a view on the line 3—3 of Fig. 1.

Fig. 4 is a section on the line 4—4 of Fig. 2.

Fig. 5 is a view of the auxiliary jaw structure shown by the line 5—5 of Fig. 1.

Fig. 6 is a section on the line 6—6 of Fig. 5.

As an example of one embodiment of this invention there is shown an interchangeable, auxiliary vise-jaw attachment comprising a prime jaw 10 comprising the back-up plate 11 suitably fixed as by the rivets 12 to the rear surface 13 of the downwardly extending portion 14 of the prime jaw 10. The top integral portion 15 of the prime jaw 10 extends rearwardly and downwardly over the top surface 16 of the vise jaw 17 and terminates in an upturned end portion 18. A demountable weight 19 has a suitable under surface 20 which engages the curved portion 21 of the vise jaw while an elongated slot 22 having downwardly converging sloping sides 23 and 24 fits over and receives the upturned end of the prime jaw 10, the edge 25 of the slot 22 engaging in the crotch 26 formed between the top surface 27 of the top integral portion 15 and the front surface 28 of the upturned end 18 to hold the weight 19 from sliding off the vise surface 21. Suitable side guides 29 having downwardly projecting lugs 30 engaging the sides of the vise jaw 17 prevents lateral shifting of the prime jaw on the regular vise jaw.

The downwardly extending portion of the prime jaw 10 has downwardly extending slots 31 formed therein behind which, in the backup plate 11, are formed further downwardly extending slots 32 so as to form T slots 33.

Each auxiliary jaw 34 comprises a base piece 35 having projecting side members 36 and rails 42 rigidly connected thereto while shoulder screws 37 having enlarged heads 38*a* are arranged to be received in the T slots 33 in the prime jaw 10. Various forms of work-engaging jaws 38 are mounted against the surface 39 of the base piece 35 and confined by the surfaces 40 of the side member 36 and the surfaces 41 of the side rails 42 of the base piece 35. The shoulder screws 37 pass through clearance holes 43 in the base plate 35 and are threaded at 44 into the work-engaging jaw 38. It is to be understood that various forms and types of work-engaging jaws to meet every need of the particular workpiece to be gripped may be used in place of the work-engaging jaw 38 while utilizing the basic base piece 35 and enlarged heads 38*a* fixed thereto, the latter engaging in the T slots 33. It is to be also noted that the demountable slot connection 18—22 between the weight 19 and prime jaw 10 makes possible the quick removal of the weight to facilitate getting at the workpiece once it is gripped between the work-engaging jaws.

While the apparatus herein disclosed and described constitutes a preferred form of the invention, it is also to be understood that the apparatus is capable of mechanical alteration without departing from the function of the invention and that such mechanical arrangement and commercial adaptation as fall within the scope of the appendent claims are intended to be included herein.

Having thus fully set forth and described this invention what is claimed and desired to be obtained by United States Letters Patent is:

1. An interchangeable, auxiliary vise-jaw device including a prime jaw comprising a backup plate and a member having a downwardly extending portion fixed to said backup plate and a top integral portion extending rearwardly and downwardly over the top surface of a regular vise jaw, an upturned end portion on the rear end of said top portion, a demountable weight having an under surface engaging the downwardly sloping curved portion of a regular vise jaw and including an elongated slot adapted to be received over said upturned end portion of said prime jaw, and means for demountably fastening a workpiece-engaging jaw on said backup plate and downwardly extending portion of said prime jaw.

2. In a device as set forth in claim 1 wherein said elongated slot in said weight includes downwardly converging sloping sides and wherein the lower front edge of said slot engages in the crotch formed between the top surface of the top integral portion of said prime jaw and the front surface of the upturned end thereof.

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(1st Addition to Pat. 973,919)