July 10, 1934. W. EGGIMANN 1,966,338

VISE

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Fig. 1.

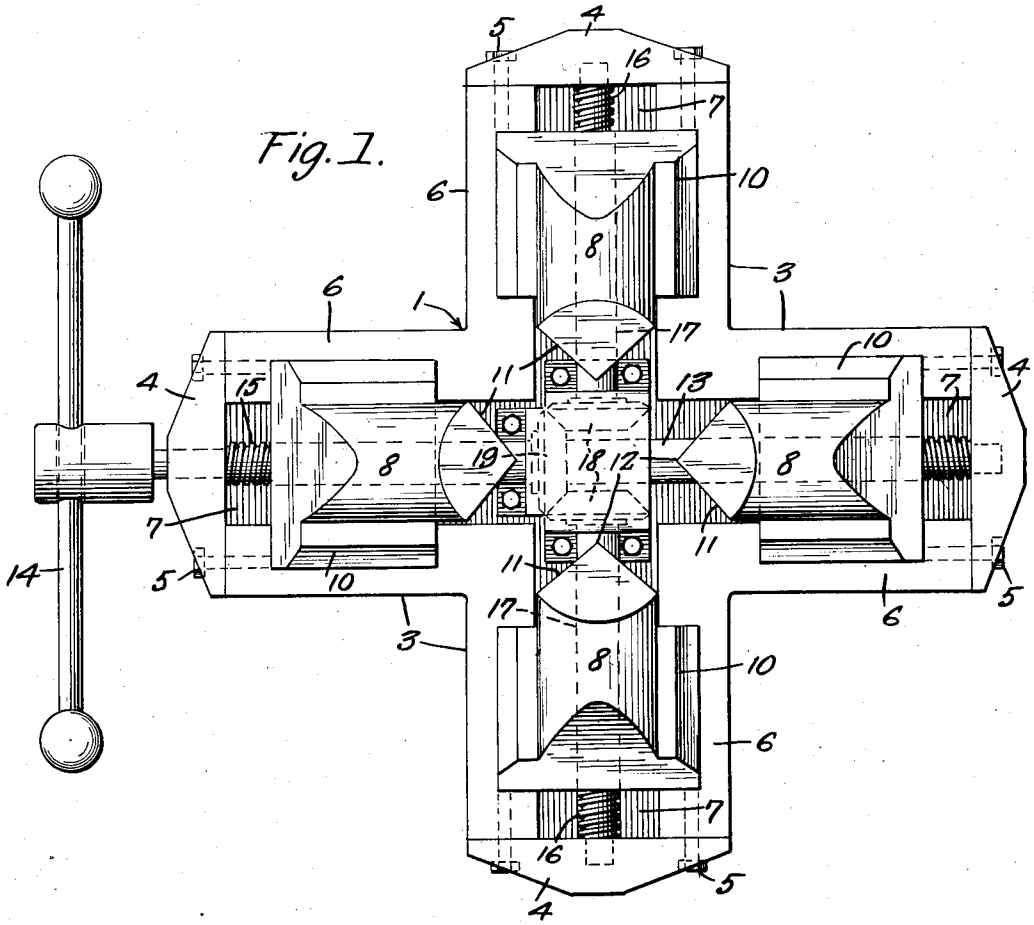



Fig. 4.

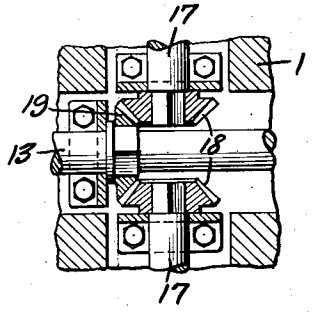
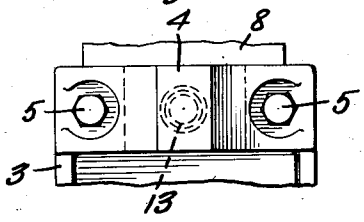



Fig. 5.




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Fig. 2.

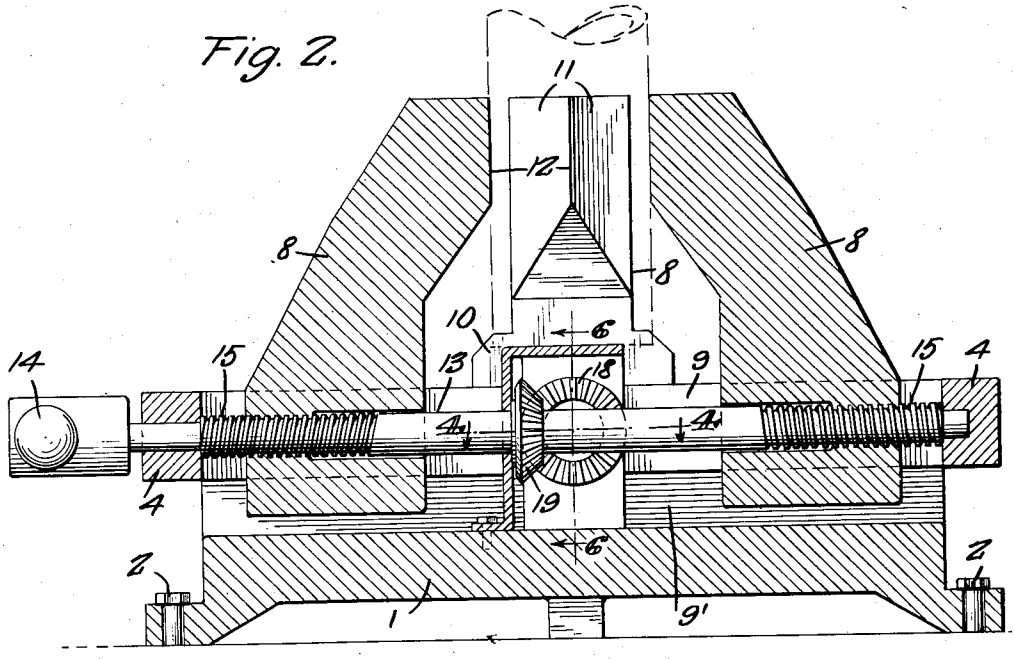



Fig. 3.

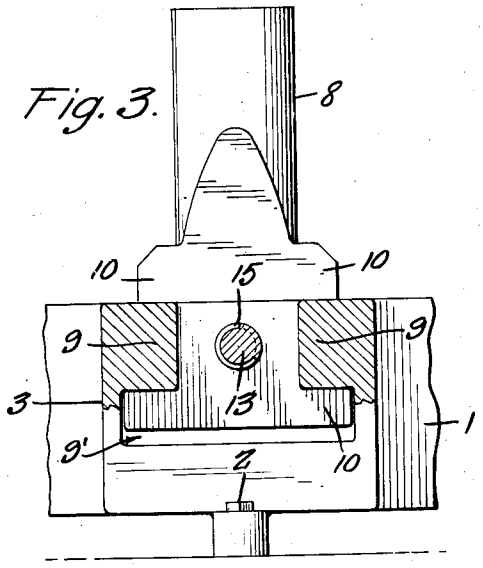
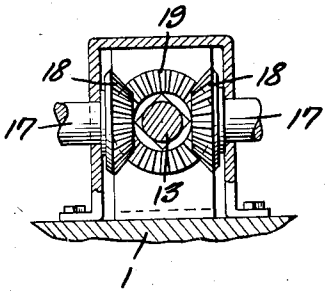



Fig. 6.




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# UNITED STATES PATENT OFFICE

1,966,338

## VISE

Walter Eggimann, Dutchtown, Mo.

Application August 14, 1933, Serial No. 685,125

1 Claim. (Cl. 81—34)

This invention relates to a vise and has for the primary object the provision of a device especially adapted to firmly grip objects of various sizes either of cylindrical shape or having angularly related faces by employing pairs of oppositely arranged jaws operated from a single handle.

With these and other objects in view this invention consists in certain novel features of construction, combination and arrangement of parts to be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which

In the drawings:

Figure 1 is a plan view illustrating a vise constructed in accordance with my invention.

Figure 2 is a vertical sectional view illustrating the same.

Figure 3 is a detail sectional view illustrating the means of slidably mounting one of the jaws to the base.

Figure 4 is a detail sectional view taken on the line 4—4 of Figure 2.

Figure 5 is a detail view illustrating the connection of one of the bearing heads with the jaw supporting members.

Figure 6 is a detail sectional view taken on the line 6—6 of Figure 2.

Referring in detail to the drawings, the numeral 1 indicates a base which may be anchored to a support by bolts or like fasteners 2. Formed integrally with the base 1 are oppositely arranged pairs of jaw supporting members 3 each having a removable bearing head 4 connected to the respective jaw supporting member by stud bolts 5. Each jaw supporting member includes side members 6 cooperating with the bearing member 4 in forming a chamber 7 to receive a jaw 8. The chamber 7 communicates with a main chamber 9' formed in the base. The side members 6 are formed to provide guide ribs 9 fitting between guide flanges 10 of the jaws. The opposing or working faces of the jaws are each beveled in opposite directions, as shown at 11, rendering the jaw with a sharp biting edge 12. The biting edges of the jaws cooperate with each other in gripping a cylindrical object or any object having angularly related faces.

One pair of jaw supporting members rotatably support a main shaft 13 confined in the respective chambers 7 and 9' with one end extended beyond one of the jaw supporting members of said pair and has connected thereto a handle 14. The main shaft 13 carries feed threads 15 meshing with feed threads on the jaws of said pair of jaw supporting members. The other jaws of the vise are provided with feed threads meshing with feed threads 16 of auxiliary shafts 17 confined in the chambers of the other jaw supporting members and their opposing ends have secured thereto beveled gears 18 meshing with a beveled gear 19 secured to the main shaft 13. Thus it will be seen that by rotating the handle 14 in one direction, the jaws will be advanced towards each other in gripping an object and the rotation of the handle in an opposite direction reverses the movement of the jaws or moves the same away from each other to release the object.

The bearing heads 4 besides forming journals for the shafts also permit the jaws to be applied and removed from their respective jaw supporting members.

While I have shown and described the preferred embodiment of my invention, it will be understood that minor changes in construction, combination and arrangement of parts may be made without departing from the spirit and scope of my invention, as claimed.

Having described the invention, I claim:

A vise comprising a base shaped to provide pairs of oppositely arranged jaw supporting members having chambers communicative with each other centrally of said base, guide elements formed on opposing walls of the chambers, removable heads closing the outer ends of the chambers, a main feed shaft journaled to a pair of said heads and lying in chambers of a pair of said supporting members, a handle for said feed shaft, auxiliary feed shafts secured to the main feed shaft and lying in the chambers of the other pair of said supporting members with ends thereof journaled to the other pair of heads, jaws slidable on said members and having threaded bores to receive the feed shafts and each provided with oppositely extending tapered active faces, and flanges on said jaws and located in the chambers and underlying the guide elements.

WALTER EGGIMANN.