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 VISE ATTACHMENT FOR MILLING MACHINES OR THE LIKE.
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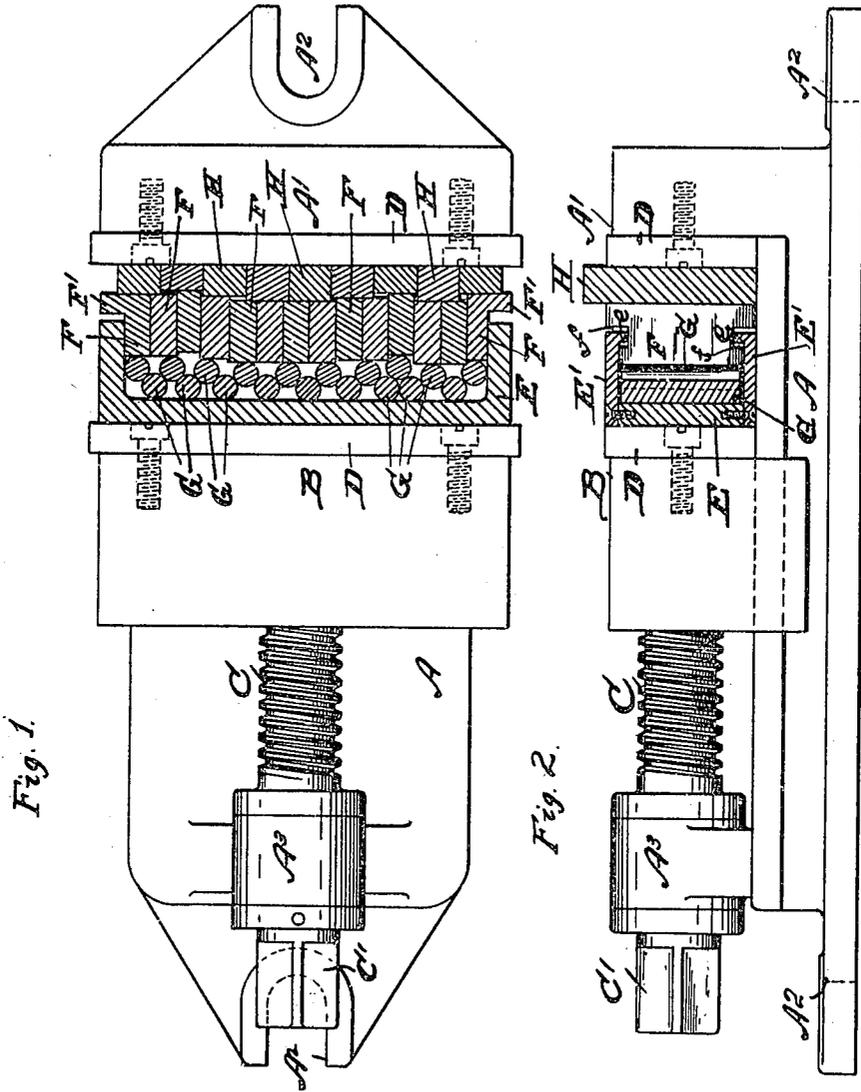


Fig. 1.

Fig. 2.

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VICE ATTACHMENT FOR MILLING-MACHINES OR THE LIKE.

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To all whom it may concern:

Be it known that I, FREDRICK W. FIELDHOUSE, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Vise Attachments for Milling-Machines or the like, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to a vise for milling machines or the like, shown in the accompanying drawings and more particularly set forth in the following specification and claims.

One of the objects of this invention is to provide a simple device of inexpensive construction adapted to automatically adjust itself that it may clamp a plurality of pieces of work, of the same, or of varying lengths.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention as herein disclosed may be made without departing from the spirit of the same;—and so also while the drawings show a device especially constructed for use on milling machines, its use is not restricted thereto as it may be employed in any connection for which it is adapted or appropriate.

In the drawings accompanying this specification:—

Figure 1 is a plan view of the vise showing a plurality of elements clamped between its fixed and movable jaws.

Fig. 2 is a vertical longitudinal sectional view through the same.

Referring now to the letters of reference placed upon the drawings in which similar characters represent like parts in all the views:—

A, denotes a bed plate having a fixed jaw A', and recessed portions A², to receive bolts (not shown) for securing the bed plate to a supporting member.

B, indicates a movable jaw, slidable upon the bed plate A.

C, denotes a screw shaft, journaled in a

bearing A³, carried by the bed plate A, adapted to actuate the movable jaw B, that the latter may be adjusted with reference to the fixed jaw.

C' is a squared end on the shaft C, to receive a wrench or other suitable tool for rotating the shaft.

D, D indicate liner strips of hardened metal secured to the fixed and movable jaws of the vise.

E, indicates a chuck in which are lodged a plurality of plates F, having recesses *f*, to receive the inwardly directed flanges of the retaining plates E' which serve to retain the plates against accidental dislodgment.

Located directly back of the plates F, are a plurality of rolls G, arranged in staggered relation;—respectively impinging upon each other, and contacting alternately with the walls of the chuck and the edge of the plates F. It will be noted that the recesses *f*, formed in the plates F, are sufficiently large to admit of a restricted movement of the plates F, with reference to the elements H;—which indicate the parts to be machined, and shown to be of varying size.

The end plates F, F, are provided with projecting flanges F', to increase the bearing surface in contact with the elements clamped between the jaws of the vise.

Having designated the several parts by reference letters, the construction and operation of the device will be readily understood. The parts to be machined, as indicated in the drawing are located between the stationary jaw of the vise and the edges of the bank of plates F. The movable jaw B, is then actuated by the adjustment of the screw shaft, forcing the several plates F, into contact with the elements H;—the rolls G, automatically adjusting themselves through contact with each other so as to force the respective plates into gripping engagement with the parts to be machined;—the rolls being forced outwardly, or laterally with reference to each other that the plates F, may severally adjust themselves to the different sizes of the parts H, held between them and the fixed jaw of the vise.

Having thus described my invention what I claim is:—

1. In a device of the character described, a vise and means coöperating with the relatively adjustable jaws of the vise comprising a frame, a plurality of adjustable elements supported by the frame adapted to grip one

or more work pieces, and a plurality of rolls arranged in staggered relation between the wall of the frame and said adjustable elements, impinging therewith and with each other, whereby upon the adjustment of the vise jaws, the rolls may be shifted to force the adjustable elements into gripping relation with the work pieces.

2. In a device of the character described, the combination of a vise, and means cooperating with the relatively adjustable jaws of the vise comprising a frame, a plurality

of adjustable plates assembled within the frame in adjacent relation to each other, means for restricting the movement of said plates, and a plurality of rolls arranged in staggered relation between the walls of the frame and the adjustable plates.

In testimony whereof, I sign this specification in the presence of two witnesses.

FREDRICK W. FIELDHOUSE.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."