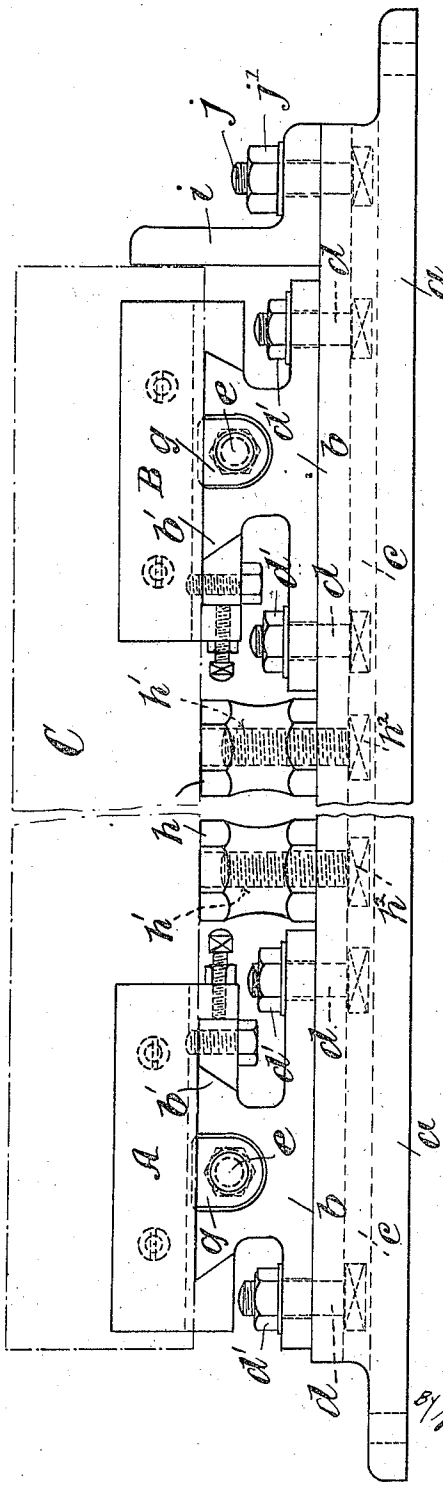
Oct. 16, 1923. 1,471,118

E. GETHING

ATTACHMENT FOR SECURING THE WORK TO THE TABLES OF PLANING, MILLING, AND LIKE MACHINES

Filed Dec. 8, 1921 4 Sheets-Sheet 1

Fig. 1.



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Filed Dec. 8, 1921 4 Sheets-Sheet 2

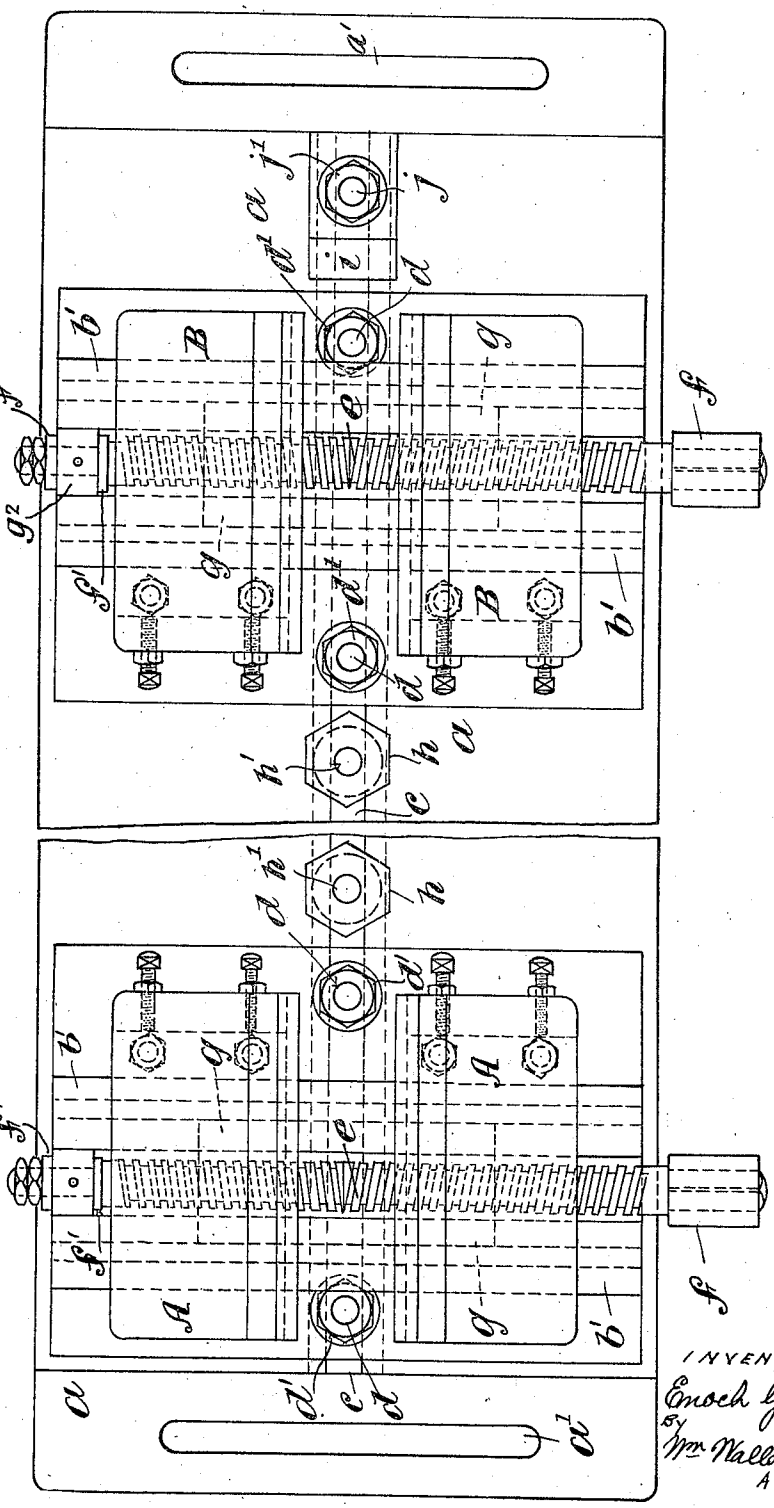

Fig. 2.

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Filed Dec. 8, 1921 4 Sheets-Sheet 3

Fig. 3.

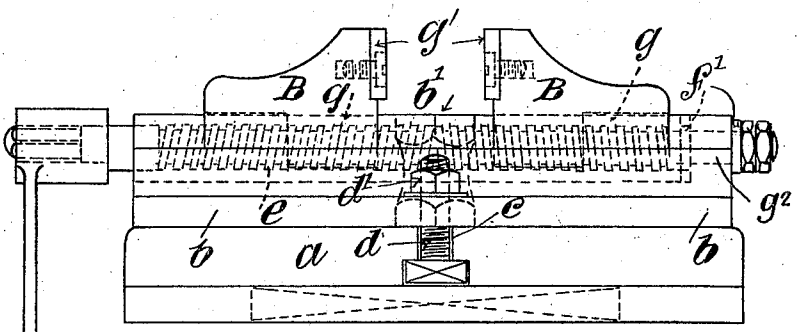


Fig. 5.

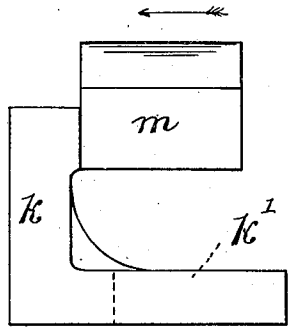


Fig. 4.

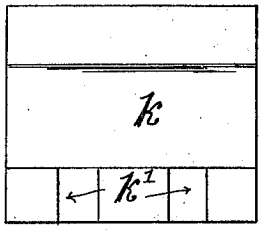


Fig. 6.

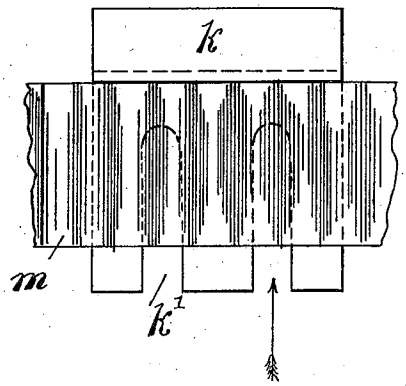


Fig. 7.

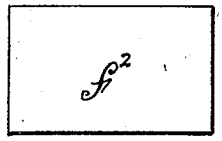
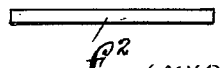


Fig. 8.



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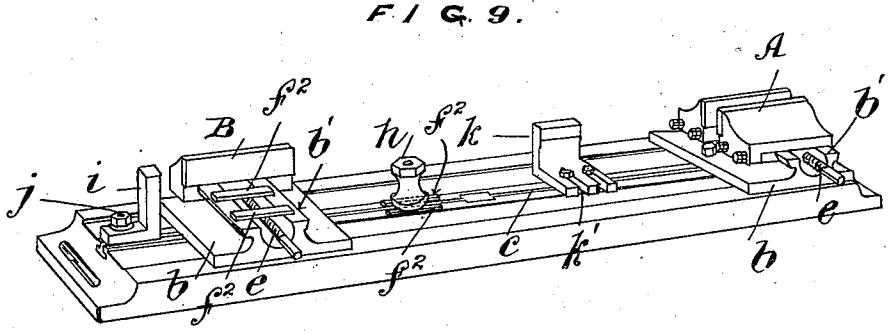
Filed Dec. 8, 1921 4 Sheets-Sheet 4

FIG. 9.



INVENTOR:
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BY Wm Wallace White
ATT'Y.

Patented Oct. 16, 1923. 1,471,118

UNITED STATES PATENT OFFICE.

ENOCH GETHING, OF MANCHESTER, ENGLAND, ASSIGNOR OF ONE-HALF TO GEORGE FREDERICK TETLOW, OF MANCHESTER, ENGLAND.

ATTACHMENT FOR SECURING THE WORK TO THE TABLES OF PLANING, MILLING, AND LIKE MACHINES.

Application filed December 8, 1921. Serial No. 520,889.

To all whom it may concern:

Be it known that I, ENOCH GETHING, a subject of the King of Great Britain and Ireland, residing at 12 Albion Street, Miles Platting, Manchester, in the county of Lancaster, England, have invented new and useful Improvements in an Attachment for Securing the Work to the Tables of Planing, Milling, and like Machines, of which the following is a specification.

The invention has reference to an attachment or device by means of which the work to be operated on can be readily secured in position on the tables of planing, milling and other like machine tools.

Such an attachment consists of a base plate having a pair of vices adjustable towards and from each other. The jaws of each vice are operated by a right and left hand screwed spindle. The work is clamped in the jaws which can be readily set in the required position and intermediate support for the work is also provided.

The invention is fully illustrated in the accompanying drawings which will now be described in detail.

Fig. 1 of the drawings illustrates a side elevation of the attachment, broken in length for want of space.

Fig. 2 is a plan thereof.

Fig. 3 is an end view.

Figs. 4, 5 and 6 illustrate a detail part in front, side and plan view respectively, and,

Figs. 7 and 8 show in plan and edge view respectively a sample of a packing strip which can be used with the appliance.

Fig. 9 is a perspective view showing the application of the packing strips and side brackets to the attachment.

The attachment made in accordance with my invention consists of a base plate *a*, the ends of which are slotted as at *a'* or otherwise prepared to enable it to be bolted in any desired position upon the table of the planing or like machine. It will be understood that this base plate may be made to any convenient size or in varying sizes.

The base plate *a* carries a pair of vices each vice consisting of a plate *b* capable of being slid longitudinally in a prepared way or groove *c* in the base plate, towards or from each other and secured in any desired position on the base plate *a* by bolts *d* and nuts *d'* the heads of the bolts being disposed in the prepared groove, which may be of T or other shape. Each of such slidable plates *b* carries a pair of jaws marked A A, B B, to form a vice, the jaws being slidable on V shaped or like guides *b'* formed on the plate *b* towards and from each other transversely on the slidable plate by means of a right and left hand screwed spindle *e* rotatable by a suitable handle *f*, and engaging with nuts *g* carried by the jaws.

Endwise movement of the screwed spindle is prevented by the collars *f'*, *f'* confining the reduced end of the spindle in the plain bearings g^2. The work placed in the jaws of the vices is accurately centred as the jaws of the vices when actuated by the right and left hand screwed spindles move equally from and towards the longitudinal centre line of the base plate *a*. The vices are provided with steel faces *g'* which may be of soft steel or otherwise as preferred. The V shaped guides *b'* on which the jaws of each vice slide form parallel surfaces to support the work C, indicated by dotted lines, placed in the vices. The base plate *a* between the vices, is also provided with parallel supporting pillars *h*, slidable in the T groove *c* of the base plate and which can be secured in any desired position to serve as intermediate supports for the work to resist bending strain and give the same stability as if the work were flat on the machine table. These parallel supports are shown in the drawings as taking the form of flat topped nuts *h* carried on screwed bolts *h'*, the heads h^2 of which are disposed in the T groove of the base plate *a*. By slackening such nuts they may be slid into any required position and secured by tightening them on the bolts. A stop *i* is also provided slidable in the slot in the base plate, to act as an adjustable abutment for one end of the work. This stop is secured in position by a bolt *j* the head of which is disposed in the T groove of the base plate *a*, and nut *j'*. The work may be raised in the vices A A, B B, by providing a series of parallel packing plates f^2 placed in the vices beneath the work, one of which is shown in plan in Fig. 7, and in edge view in Fig. 8, to adjust the work to the correct height and these parallel packing plates could be used in conjunction with the supporting pillars by inserting them between the nuts *h* and the base place. This is illus-

trated in Fig. 9, in which, for the sake of clearness, one of the jaws B of a vise has been removed.

Provision may also be made to resist lateral or cross strains such as when cutting rack teeth upon a bar. This could take the form of a bracket or stop illustrated in Figs. 4 to 6. The bracket *k* is provided with slots *k'* to enable it to be secured to the base plate *a* and it provides a side abutment for the bar *m* on which the rack teeth are being cut, to resist side strains in the direction of the arrow. Fig. 9 shows the bracket *k* carried by the appliance.

Such an attachment as described greatly facilitates the setting of work in planing and like machines and would be particularly useful for repetition work. With small work a single vice only might be used, the two vices being employed when the work is required to be held at both ends, in which case the intermediate supporting pillars and brackets for cross strains can be usefully employed.

I declare that what I claim is:

1. An attachment for securing work in proper position to the tables of planing, milling and other like machine tools, consisting of a base plate, two plates slidable in guides in such base plate towards and from each other longitudinally on the base plate, a vice carried by each of such slidable plates and consisting of two jaws slidable laterally across the base plate, the work being clamped and centred in such vices substantially as described.

2. An attachment for securing work in proper position to the tables of planing, milling and other like machine tools, consisting of a base plate, two plates slidable in guides in such base plate towards and from each other longitudinally on the base plate, a vice carried by each of such slidable plates and consisting of two jaws slidable laterally across the base plate, an end stop or abutment for the work, the side brackets or abutments, and intermediate supports and packing strips, to enable the work to be supported and adjusted at any required height substantially as described.

3. An attachment for securing work in proper position to the tables of planing, milling and other like machine tools consisting of a base plate, means for securing such base plate to the table of the machine tool, two plates slidable in guides in the base plate towards and from each other longitudinally on the base plate with means for securing such slidable plates to the base plate, a vice carried by each of such slidable plates and consisting of two jaws, means for guiding and sliding such jaws towards and from each other laterally across the base plate to clamp and centre work placed in the vices, an end stop or abutment for the work, side brackets and intermediate supports and packing strips, to enable the work to be supported and adjusted substantially as described.

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

ENOCH GETHING.