

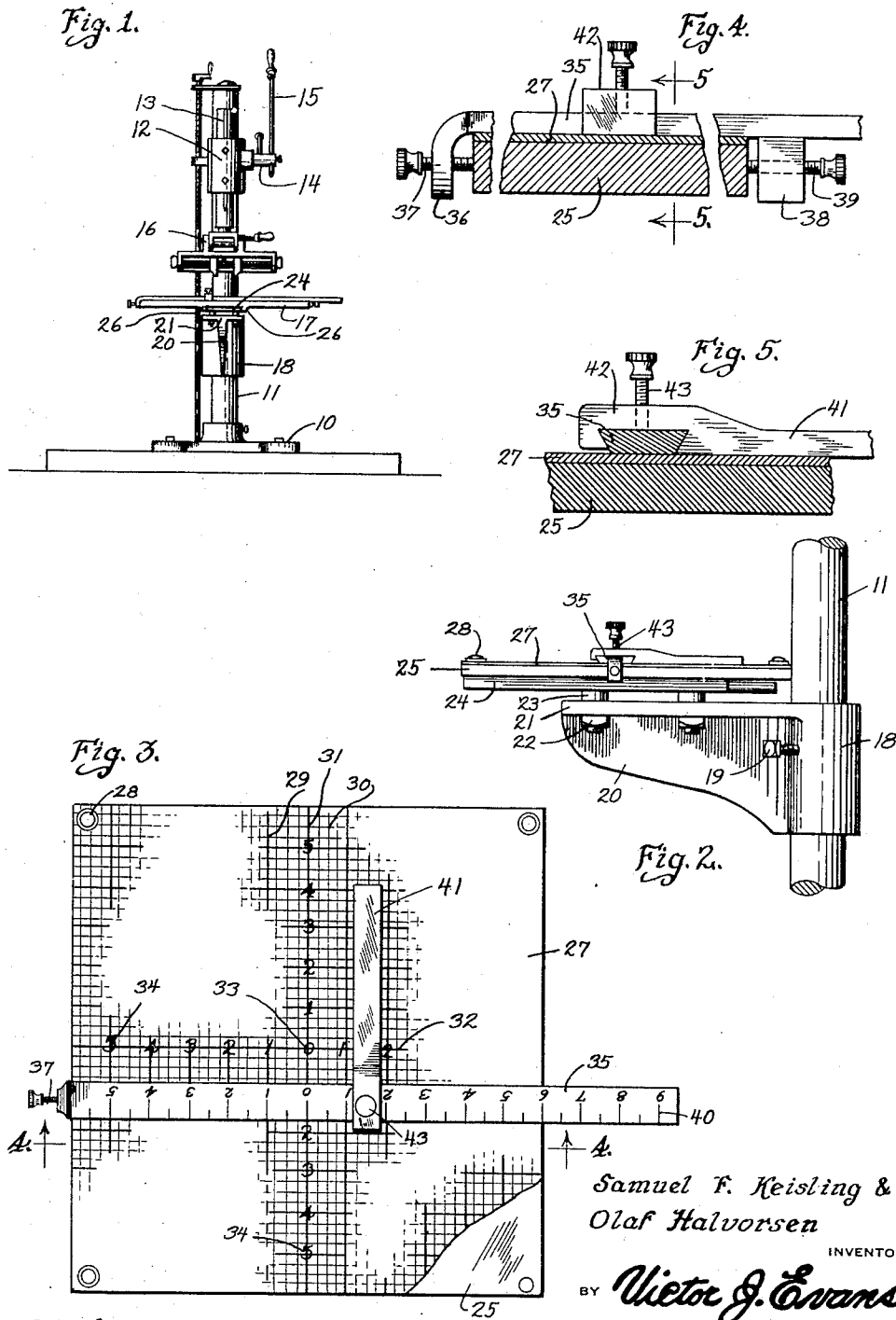
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WORK HOLDING TABLE AND THE LIKE

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WORK-HOLDING TABLE AND THE LIKE

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This invention relates to certain novel improvements in work holding tables and the like and has for its principal object the provision of an improved construction of this character which will be highly efficient in use and economical in manufacture.

The salient object of our invention is to provide a work receiving table which will embody an arrangement that will facilitate orienting of work thereon in predetermined positions with respect to a member adapted to act on the work.

Another object of the invention is to provide a work receiving table which will have guide lines associated therewith and which will have a work locating construction associated with said guide lines.

Another object of the invention is to so arrange the guiding construction that it may be adjusted in order that guide lines thereon may be arranged to coincide with guide lines on the work receiving table.

A further object of the invention is to so arrange the guiding construction that it may be adjusted relative to the work receiving table.

A still further object of the invention is to provide an adjustable member on the work locating construction which will be movable thereover into a number of predetermined positions and which will be so arranged that it may be properly retained in said positions.

Other objects will appear hereinafter.

The invention consists in the novel combination and arrangement of parts to be hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawing, showing the preferred form of construction and in which:

Fig. 1 is a front elevational view of a preferred form of construction for our invention;

Fig. 2 is a fragmentary side elevational view of the device as illustrated in Fig. 1, depicting the work receiving table;

Fig. 3 is a top plan view of the work receiving table;

Fig. 4 is a fragmental sectional view taken substantially on the line 4—4 on Fig. 3; and

Fig. 5 is a sectional view taken substantially on the line 5—5 on Fig. 4.

In the accompanying drawing wherein the preferred form of construction of our invention is depicted, 10 indicates the base of our improved machine. Extending upwardly from the base 10 is a supporting column which has at the upper end thereof an outwardly extending arm 12 having a sleeve at the outer end thereof in which a spindle 13 is arranged. A shaft 14 is provided which is operable by manipulation of the handle 15 and suitable mechanisms are arranged between the shaft 14 and the spindle 13 which function to transmit movement imparted to the shaft 14 from the handle 15 in order that the spindle 13 may be moved through the bearing sleeve at the end of the arm 12. At the lower end of the spindle 13 a type holder 16 or other analogous tool supporting member is mounted. In the type holder 16 means are mounted which are adapted to act on the work supporting table generically indicated by 17 which will be described more fully hereinafter. The above described mechanisms, with the exception of the work supporting table 17, can be constructed in any desired manner without departing from the purview of our invention.

The support for the work receiving table 17 includes the sleeve 18 which is mounted on the column 11 for movement thereacross and which is secured in position by the set screw 19 or other analogous securing device. Extending outwardly from the sleeve 18 is an arm 20 which includes a relatively wide upper surface 21. Bolt structures 22 extend through the surface 21 and collars 23 are mounted above the surface 21 in association with the bolt structures 22. The bolt structures 22 retain the guide way 24 in position above the flat portion 21 and the washers 23 serve to space this guide way 24 from said portion 21. The work receiving table proper is indicated by 25 and has depending therefrom lugs 26 which embrace the sides of the guide way 24 in order to retain and guide the table 25 in its movement along the guide way 24. A suitable securing arrangement

may be provided for retaining the table 25 in predetermined position.

The table 25 is preferably substantially square in outline and provides a flat upper surface. Over this flat upper surface a card or the like indicated by 27 is retained as by having the screws 28 extend therethrough at the corners thereof, said screws being fitted into screw threaded openings at the corners of the table 25. On this card 27 co-orthogonal lines 29 and 30 are provided. The lines 29 extending longitudinally of the card 27 are equally spaced apart while the lines 30 similarly extended transversely across the card 27. The base lines of the co-orthogonal lines 29 and 30 are indicated by 31 and 32 and these base lines 31 and 32 intersect the midpoint of the card and table 25 which is indicated by the point of origin. Suitable indicia such as numbers are provided on the base lines 31 and 32 and such indicia are indicated by 34.

It is manifest that the arrangement of the coorthogonal lines will greatly facilitate the locating of work on the table 25 and it is manifest that these lines will facilitate the location of different articles in the same position in order that they may be operated on by the means carried in the type holder 16 or the like.

In order to facilitate the locating of articles in the above described manner I provide the scale bar 35. This scale bar 35 has at one end thereof a downwardly depending portion indicated by 36 through which the thumb screw 37 is extended. Depending from and secured to the scale bar 35 is a block 38 which is spaced from the downwardly depending portion 36 in an amount greater than the transverse width of the table 25. A thumb screw 39 is extended through this block 38. The scale bar 35 is arranged over the lines on the card 27 and the thumb screws 37 and 39 are run inwardly into engagement with the edges of the table 25 and it is, therefore, manifest that the scale bar 35 may be secured above the card 27.

The lines 29 and 30 are preferably spaced in groups by so arranging one of the lines, as for example the fifth line, that it will be heavier than the others. On the scale bar 35 I provide graduations or markings 40 which may be, for example, spaced apart in an amount equal to the spacing apart of the heavier or fifth lines of the lines 29. It is manifest that by varying the positions of the thumb screws 37 and 39 in the depending portions 36 and 38 that the locating of the graduations 40 with respect to these heavier lines may be varied and if desired the graduations 40 and these heavier lines may be arranged to coincide. If desired additional graduations may be associated with the described graduations 40, as for example, by providing

additional markings at substantially the midpoint between the described markings.

In addition to the scale bar 35 we provide an arm 41 which, in the present instance, is arranged to extend substantially at rightangles to the bar 35. As best illustrated in Fig. 5, the bar 35 is preferably arranged to be substantially dove-tailed shape in cross section and a similarly shaped opening is provided in the base portion 42 of the arm 41. The narrowest portions of the opening in the arm 41 and the bar 35 are preferably disposed toward the card 27 and it is, therefore, manifest that the arm 41 cannot be displaced from the bar 35 except by being slid from the end thereof. A thumb or set screw 43 extends through the foot portion 42 and engages the upper surface of the bar 45. This thumb screw is employed to lock the arm 41 in various adjusted positions along the bar 35 with respect to the lines 29.

In order that articles of a size larger than the table 25 may be mounted on said table the bar 35 is of a greater length than the width of the table with which it is associated as is clearly illustrated in Fig. 3.

It is manifest from the foregoing description that we have provided a simple and expeditious arrangement that will serve to facilitate the locating of work on a work supporting table. It is manifest that this device is arranged to be adjustable in order that it may be set in predetermined positions.

It is to be understood that while we have described the lines 29 and 30 as being provided on a member separate from the table 25 these lines might be provided directly on the upper surface of the table and still be within the spirit and scope of our invention but we have found the above described arrangement to be advantageous since it permits replacement when the upper surface of the table becomes soiled after usage.

While we have illustrated and described the preferred form of construction for carrying our invention into effect, this is capable of variation and modification, without departing from the spirit of the invention. We, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail ourselves of such variations and modifications as come within the scope of the appended claims.

Having thus described our invention what we claim as new and desire to protect by Letters Patent is:

1. In combination with a work receiving table having graduations on the upper surface thereof, a work locating bar, means connected to said work locating bar depending therefrom having thumb screws mounted therein, said thumb screws engaging the edges of said table to secure said bar thereto and being adjustable whereby graduations

on said bar may be aligned with the graduations on said table.

2. In combination with a work receiving table having graduations on the upper surface thereof, a work locating bar, means connected to said work locating bar depending therefrom having thumb screws mounted therein, said thumb screws engaging the edges of said table to secure said bar thereto and being adjustable whereby graduations on said bar may be aligned with the graduations on said table, said bar being substantially dove-tailed shape in cross section, an arm including a foot having a substantially dove-tailed shape opening therein through which said bar may be extended to interconnect said arm to said bar whereby said arm may be slid along said bar, and a set screw carried by said arm and engaging said bar to secure said arm in predetermined positions along said bar.

3. In combination with a work receiving table, a card having coorthogonal lines thereon, a bar having graduations thereon related to the graduations of said coorthogonal lines, means for securing said card to said work receiving table, adjustable means for securing said bar to said work receiving table whereby said bar may be adjusted to bring about coincidence of the graduations thereon with said coorthogonal lines, and an arm slidable along said bar extending at right angles thereto, said adjustable means including means depending from said bar and having set screws therein adapted to engage the edges of said table.

4. In combination with a work receiving table having spaced coorthogonal lines on the upper surface thereof, a work locating bar slidably movable over the upper surface of said table, said bar including a depending portion at one end thereof spaced from one edge of said table and having a threaded opening therein, a set screw in said opening adapted to engage said edge, a member depending from said bar in spaced relation with the opposite edge of said table, and having a threaded opening therein, and a set screw in said opening engageable against said last named edge.

5. In combination with a work receiving table having spaced coorthogonal lines on the upper surface thereof, a work locating bar slidably movable over the upper surface of said table, said bar including a depending portion at one end thereof spaced from one edge of said table and having a threaded opening therein, a set screw in said opening adapted to engage said edge, a member depending from said bar in spaced relation with the opposite edge of said table, and having a threaded opening therein, a set screw in said opening engageable against said last named edge, an arm slidably mounted on said bar and extending right-angularly there-

from, and means for slidably mounting said arm on said bar.

6. In combination with a work receiving table having spaced coorthogonal lines on the upper surface thereof, a work locating bar slidably movable over the upper surface of said table, said bar including a depending portion at one end thereof spaced from one edge of said table and having a threaded opening therein, a set screw in said opening adapted to engage said edge, a member depending from said bar in spaced relation with the opposite edge of said table, and having a threaded opening therein, a set screw in said opening engageable against said last named edge, an arm slidably mounted on said bar and extending right-angularly therefrom, means for slidably mounting said arm on said bar, said last named means including a dovetail and slot connection, and a thumb screw mounted in said arm for engaging the upper surface of said bar.

In testimony whereof we affix our signatures.

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