No. 824,394. PATENTED JUNE 26, 1906.

C. F. P. WARNER.

MECHANICAL IMPLEMENT.

APPLICATION FILED JAN. 29, 1906.

Fig 1.

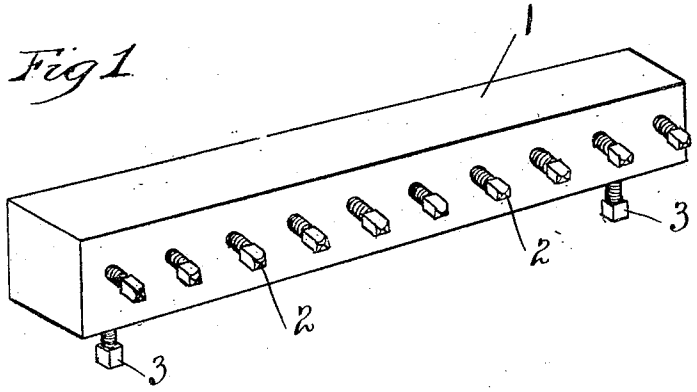


Fig. 2.

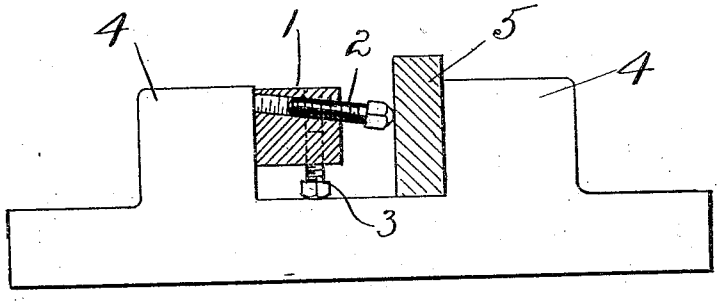
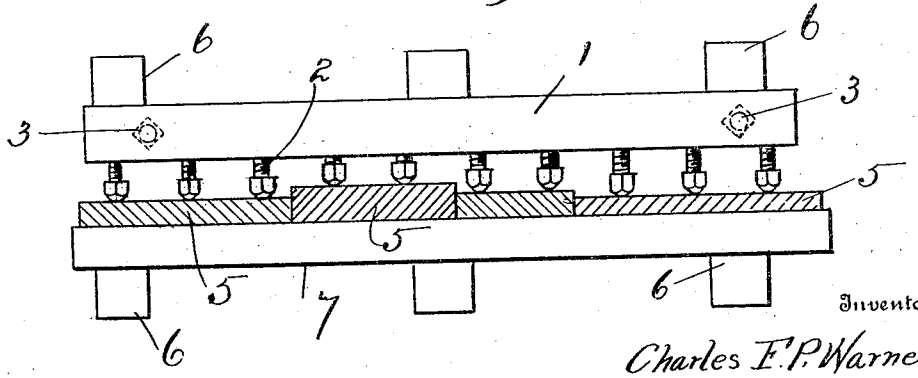


Fig. 3.



Witnesses

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MECHANICAL IMPLEMENT.

No. 824,394. Specification of Letters Patent. Patented June 26, 1906.

Application filed January 29, 1906. Serial No. 298,325.

To all whom it may concern:

Be it known that I, CHARLES F. P. WARNER, a citizen of the United States, residing at the city of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Mechanical Implements, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to retaining implements or tools designed more particularly to be used by mechanics for retaining or firmly holding work to be operated upon; and the object of the invention is to provide a simple, practical, and comparatively inexpensive device that may be readily applied to a chuck, vise, or other receiving device by the use of which the setting and holding of work to be machined will be greatly facilitated.

It is well-known to those skilled in the art to which this invention appertains that in setting work on a planer-bed in a chuck, shoe, or vise of any kind to be operated upon by a planer-tool, milling-cutter, lathe-tool, or the like that the work while being set has a tendency to rise—that is, not to set firmly down upon its bed or support. To set this work down firmly and properly all around before operating upon the same, is of utmost importance in order to produce accurate results, for should the said work be slightly raised from its support at one end it is obvious that when the top surface of the same is planed off this raised end will be cut away more than the other portion, causing the work to be narrower or thinner at that place than it is at said other portion, and which in many cases destroys the work. In my improved device I employ a plurality of retaining-screws set close together and preferably on an angle pitching downward, and by their use I am enabled to set and hold work of irregular form or of a plurality of pieces of the same or different sizes at one time in any chuck or retaining device, and by setting up on the several retaining-screws that are downwardly inclined the work is naturally carried downward until it rests firmly upon its base or support and is rigidly held in the desired position.

Another important feature of this device is that by employing a plurality of small retaining-screws and having the same set at close intervals it is obvious that a tremendous gripping force is applied to the work, positively holding the same against any possibility of becoming dislodged when a heavy chip or deep cut is taken across its face, and also by the arrangement of these screws the work is gripped at so many different points that any possibility of its springing is also obviated.

By the use of the supporting-screws beneath the block the height of the instrument may be nicely adjusted to accommodate itself to different varieties of work to which it may be applied.

The instrument greatly facilitates the labor of the attendant when used on the class of work described and at the same time enables him to produce much more accurate results.

The invention is fully set forth in this specification and more particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view showing a detail of the implement. Fig. 2 shows a transverse sectional view of the implement in position and retaining a piece of work in a chuck or vise. Fig. 3 is a plan view of the retaining implement as applied to a planer-bed and supported in position between the pins in said bed, said implement engaging and retaining several strips or pieces of irregular thickness, all of which are to be operated upon or machined at one time.

Referring to the drawings, 1 designates the body of the device, which may be constructed of any suitable material and of any convenient shape or size; but I have shown the same as an elongated rectangular block being more particularly adapted to set between the jaws of a vise, chuck, or the like, as illustrated in Figs. 2 and 3, with the rear face of said block resting against the jaw of the chuck. Threaded into the front face of this block at 2 2 are the retaining-screws, set quite close together and preferably on an angle inclined downward, this downward inclination of the screws having a tendency to seat the work engaged by the same. At 3 3 are two vertically-adjustable supporting-screws extending downward and on which this block rests, and by these screws the height of said block may be adjusted to suit the work retained by the same.

Fig. 2 illustrates the device as being operated in a chuck or grooved block 4, in which the work 5 is set and held in position by the retaining-screws 2 2, while Fig. 3 shows the instrument as being applied to hold a plural-

ity of small pieces of work in position between the pins 6 6 on a planer-bed, the rear face of body of the device backing directly up against said pins, the work resting primarily against the parallel block 7.

The usual chuck in which small work is held to be machined is capable ordinarily of holding but one piece at a time, while by the application of my device even between the jaws of this same chuck four or five times as many small pieces may be held and operated upon all at one time and finished practically in the same length of time it would take to operate upon the one, as these four or five pieces would all come within the minimum length of the stroke of the planer or shaper. Thus it will be seen that by the use of my device a great deal of time is saved for both the machine and its attendant.

The device is extremely simple, inexpensive to construct, and very practical and efficient in its operation, and produces a result not heretofore obtainable by any mechanical tool on the market, and by its use the labor on many varieties of work is greatly facilitated and the quality brought to a higher standard.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A device of the character described, comprising a body portion, a plurality of adjustable retaining-screws threaded therein at close intervals, said screws being adapted to be turned outward and extended from said body to engage and hold by pressure the work to be operated upon.

2. A device of the character described, comprising a body portion, a plurality of adjustable retaining-screws threaded therein at close intervals, said screws being downwardly inclined and adapted to be turned outward and extended from said body to engage and carry the work to its seat and hold the same by pressure to be operated upon.

3. A device of the character described comprising a body portion, a plurality of adjustable retaining-screws threaded therein at close intervals, said screws being downwardly inclined and adapted to be turned outward and extended from said body to engage and hold by pressure the work to be operated upon, and vertically-adjustable means in said body on which the same is supported.

4. A device of the character described, comprising a body portion, a plurality of adjustable retaining-screws threaded therein at close intervals, said screws being set at an angle to the rear face of the body and inclining slightly downward therefrom, and said screws being adapted to be turned and extended outward from said body so that the heads of the same will engage and hold by pressure the work to be operated upon, and a plurality of supporting-screws threaded into the under side of said body by the rotation of which said body may be adjusted vertically.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES F. P. WARNER.

Witnesses:
HOWARD E. BARLOW,
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