No. 659,059. Patented Oct. 2, 1900.

F. C. ENGELHARDT.

COMBINATION TOOL.

(Application filed Jan. 31, 1900.)

(No Model.)

FIG. 1.

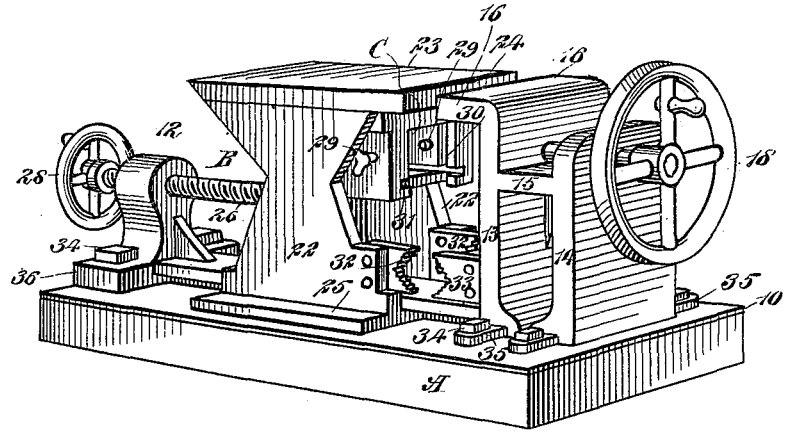


FIG. 2.

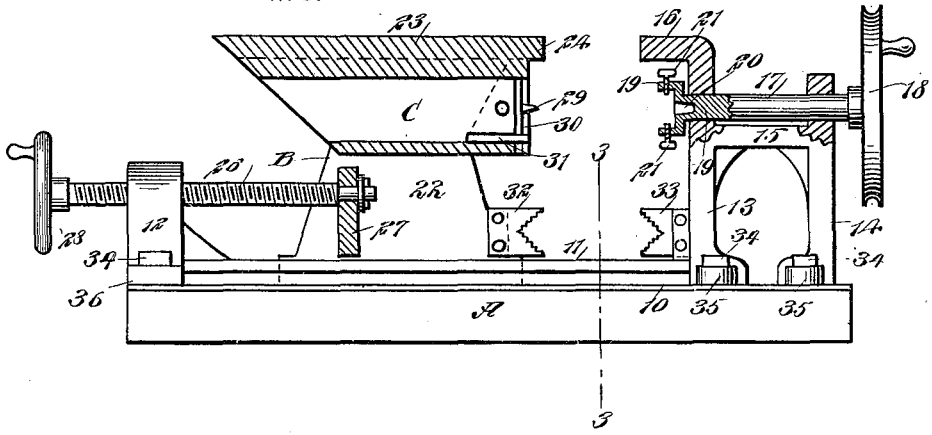
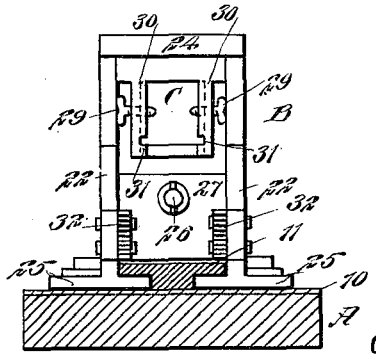


FIG. 3.



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COMBINATION-TOOL.

SPECIFICATION forming part of Letters Patent No. 659,059, dated October 2, 1900.

Application filed January 31, 1900. Serial No. 3,630 (No model.)

To all whom it may concern:

Be it known that I, FREDERICK CHARLES ENGELHARDT, a citizen of the United States, residing at the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Combination-Tool, of which the following is a full, clear, and exact description.

My invention relates to combination-tools of that class adapted for the use of machinists or others in making or in repairing articles of metal or of wood.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the improved device. Fig. 2 is a longitudinal vertical section taken about centrally through the device, and Fig. 3 is a transverse section taken substantially on the line 3 3 of Fig. 2.

Usually a base-block A is provided, made of wood and covered at the top by a metal plate 10. A guide-rail 11 is located longitudinally and centrally of the upper surface of the plate 10, extending nearly from end to end of the said plate. This guide-rail is T-shaped in cross-section, as shown at Fig. 3, and at one end of the guide-rail an upright or standard 12 is formed, while at the opposite end of the guide-rail two standards 13 and 14 are provided, preferably connected near the top by a cross-bar 15. The standards extend above the cross-bar 15, and the upper end of the inner standard 13 is provided with a horizontal jaw 16, which extends in direction of the central portion of the device. A lathe-spindle 17 is journaled in suitable bearings in the upper portion of the two uprights 13 and 14, above the cross-bar 15, and a hand-wheel 18 is located at the outer end of the spindle 17, while a lathe-chuck 19 is located at the inner end of the spindle, and this lathe-chuck is provided with a central recess 20, adapted to receive shanks of dies or thread-cutting taps or other shanked tools. The lathe-chuck is also provided with set-screws 21, which serve to firmly hold in the chuck revolving material or tools.

A holder B is mounted to slide on the plate 10, and this holder consists of two side or cheek pieces 22, having a flat connecting top section 23, which serves as an anvil or pounding-surface, and the inner end 24 of this anvil or pounding-surface 23 constitutes an opposing jaw for the jaw 16, attached to the standard or upright 13, so that by adjusting the holder B material may be clamped between the jaws 16 and 24.

The side pieces or cheeks 22 of the holder are provided at their bottom edge with a flange 25. This flange extends beyond both faces of the side pieces, and one portion of the flanges enters the undercut grooves in the guide-rail 11, as shown in Fig. 3, while the other portions of the flanges 25 simply rest on the plate 10 and serve to maintain the holder in a level position as it is moved to and from the standard 13. This movement of the holder B is accomplished through the medium of a feed-screw 26, which screw is mounted to turn loosely in a cross-bar 27, extending from one side piece of the holder to the other at a point above the guide-rail 11, as illustrated in Fig. 2, and the feed-screw is also passed through a threaded opening in the standard or upright 12 and carries a hand-wheel 28 at its outer end.

At the upper portion of the inner end of the holder B a box-receptacle C is constructed, and this box-receptacle is adapted to constitute a socket to receive dies for cutting threads on bolts or for holding nuts while cutting threads on them or for other purposes. Each side surface of the box-receptacle at the front is provided with a set-screw 29, whereby material may be secured in the said receptacle, and the side pieces 22 of the holder are so cut away, as shown in Fig. 1, that these set-screws are very accessible. A vertical groove or channel 30 is made in the inner face of each side of the box-receptacle, and these grooves meet horizontal grooves 31, produced in the sides of the receptacle, at the bottom thereof. The side grooves 30 are adapted to receive plates provided with one or more points to engage with an article, and these plates are held from dropping from the

vertical grooves 30, which extend out through the bottom of the box-receptacle, by placing a second plate in the horizontal grooves 31.

Alligator-jaws 32 are removably attached to the lower portions of the sides of the holder at the inner end of the same, and these jaws 32 are adapted to mate with a similar jaw or jaws 33, removably attached in any suitable or approved manner to the standard or upright 13, carrying the fixed upper jaw 16. These alligator-jaws 32 and 33 may be utilized for holding pipe or for any other purpose to which an alligator-jaw can be adapted, and these removable jaws may be readily replaced by others should they become worn or damaged.

Bolts 34 may be employed to hold the device on a bench, table, or other support, and these bolts are usually passed through lugs 35, attached to the bottom portions of the standards or uprights 13 and 14 and through flanges 36, located at each side of the base portion of the upright or standard 12, carrying the feed-screw 26.

It is obvious that a device of the above description may be utilized for various purposes and that it will be of especial advantage to machinists and plumbers, although it may be employed effectually by woodworkers or by amateurs as well as by professional workmen.

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

1. A combination-tool, comprising a base provided at one end with spaced and connected standards, the inner standard being provided with a horizontal jaw, a lathe-spindle mounted in the standards and provided with a lathe-chuck at its inner end, said chuck being provided with a central recess and with set-screws, a holder mounted to slide on the base and having a flat top, the front portion of which constitutes an opposing jaw for the jaw of the standard, a box-receptacle depending from the top of the holder and provided with vertical grooves in its sides and a horizontal groove in its sides at the bottom, and set-screws in the sides of the receptacle, substantially as described.

2. In a combination-tool, the combination with a base, provided with standards, and a lathe-spindle mounted in the standards and carrying a lathe-chuck on its inner end, of a holder mounted to slide on the base and provided with a box-receptacle depending from the top thereof, said box-receptacle having vertical grooves in its side walls and extending out through the bottom and horizontal grooves in the said walls at the bottom and intersecting the vertical grooves, and set-screws in the side walls of the box-receptacle, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FREDERICK CHARLES ENGELHARDT.

Witnesses:

R. H. FOSTER,

J. P. MOULDEN.