(No Model.)

C. A. SALZMAN.

COMBINATION TOOL.

No. 529,962. Patented Nov. 27, 1894.

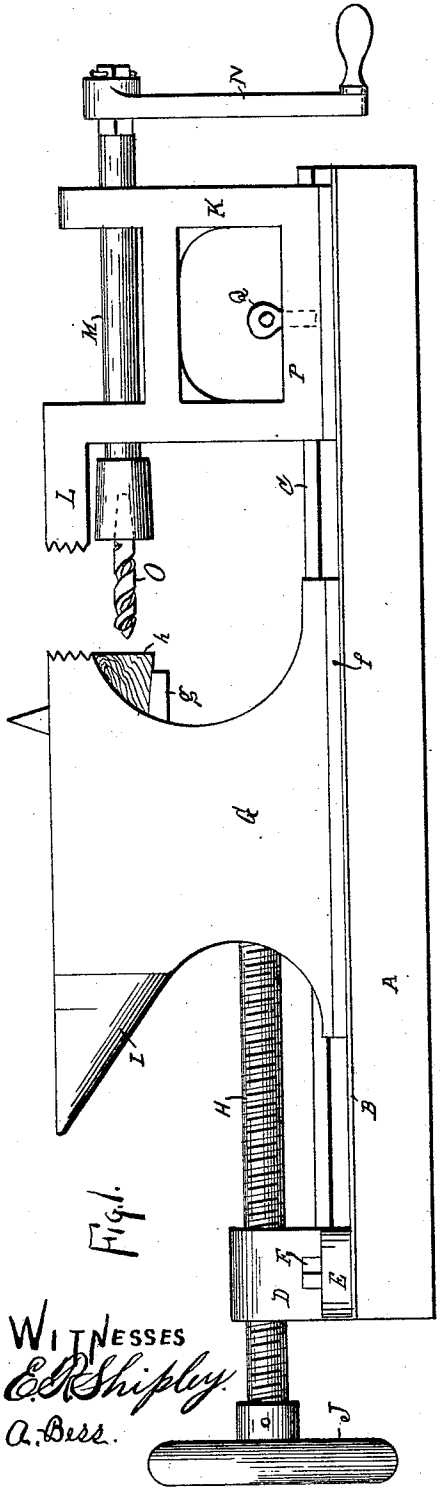

Fig. 1.

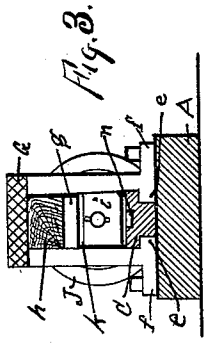

Fig. 3.

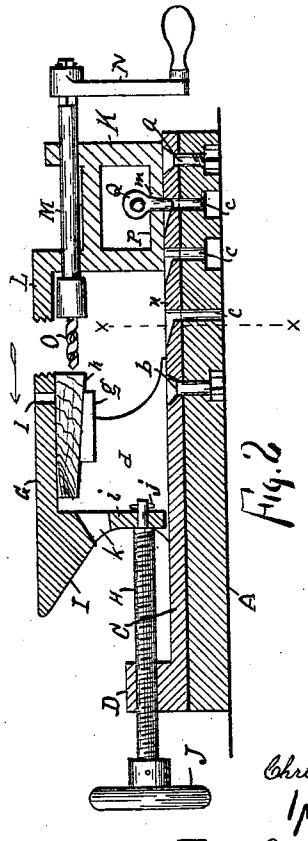

Fig. 2.

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UNITED STATES PATENT OFFICE.

CHRISTIAN A. SALZMAN, OF HAMILTON, OHIO, ASSIGNOR OF TWO-THIRDS TO EMIL P. KENNEL, OF SAME PLACE, AND JOHN A. ROBBINS, OF INDIANAPOLIS, INDIANA.

COMBINATION-TOOL.

SPECIFICATION forming part of Letters Patent No. 529,962, dated November 27, 1894.

Application filed October 20, 1894. Serial No. 526,439. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN A. SALZMAN, of Hamilton, Ohio, have invented certain new and useful Improvements in Combination-Tools, of which the following is a specification.

My invention relates to combination tools of that class adapted to the use of farmers or others in making or repairing articles of wood, leather or metal, and my improvement consists in the details of construction hereinafter described and claimed as illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my device; Fig. 2, a vertical longitudinal section thereof and Fig. 3 a transverse vertical section on the line *x*—*x* of Fig. 2, looking in the direction of the arrow.

In the drawings A represents the base preferably of wood to form a slightly yielding support for the other parts; B, a metal plate covering the top surface of the base; C, a guide or track extending the length of the base and along the middle portion of its top surface. The top of the track projects over the sides like a T rail which it resembles in cross-section. One end of the track is formed integral with boss D that projects above its top surface, and with ears E that are extended from each of its sides and by which it is rigidly secured to the base by means of bolts F inserted therethrough. The opposite end and the middle portion of the track are secured to the base by bolts *a* and *b* that have their heads countersunk in its top surface. A series of holes *c* are formed vertically through the track toward its front end. The rear portion of the top of said holes is slanted outwardly along the central line of the surface of the track to resemble a series of ratchet teeth formed therein. Anvil G contains a longitudinal interior recess *d* and is formed with interior integral base flanges *e* that are arranged to slide on each side of the track and under the top projections thereof. External flanges *f* form a wide base on the anvil to cause it to seat itself more perfectly on the top surface of the base A, and obviate any lateral movement of its top portions. The sides of the anvil are parallel with each other and are flush with the edges of its face. A partition *g* is formed across the recess *d* between the sides of the anvil and under the heel portion of its face. It forms an angle to the direction of the face for the insertion between them of a wedge shaped block *h* preferably of wood. The opposite end of the recess contains a vertical partition *i* formed integral with the sides of the anvil and which serves as a bearing for the end of screw H journaled therein and retained by pin *j*. An opening *k* admits access to the interior of recess *d* over partition *i* and directly under the horn I for the purpose of facilitating the removal of block or wedge *h* when desired. An opening *l* in the heel of the anvil's face is convenient for the insertion of a hardy or other tool.

Screw H is extended from the anvil above and parallel with the track and through a threaded opening in boss D thereon. Hand wheel J is secured on the outer extremity of the screw by which it is turned more or less through the boss to move the anvil along the track.

Bracket or stand K is formed with internal and external flanges on its bottom portion similar to flanges *e* and *f* on the bottom of the anvil and for the same purposes—*i. e.* to guide its movement along the track and to prevent any lateral movement of its top portion. Vise jaw L is formed integral with the bracket and projects from its end adjacent to the anvil and is capable of resisting the pressure of the projecting heel thereof in the manner of a vise jaw. The contiguous faces of said jaws that make contact with each other are serrated to better retain an article that may be clamped between them. The top portion of the bracket is bored horizontally to form a bearing for a drill spindle M that is journaled to rotate on a line with and perpendicular to the end surface of block or wedge *h* in the anvil. The forward end of said spindle is recessed axially to form a socket for a drill shank, or it may be formed for the attachment of a drill chuck. The opposite end of the spindle terminates without the bracket and is provided with a removable crank N which serves to rotate the spindle and actuate the drill O therein. Horizontal plate P integral with the bracket cov-

ers the top of the track and contains a vertical opening *m* directly over the central line of the track. Pin Q is movable in said opening and depends therethrough into engagement with the ratchet teeth *n* formed in the middle of the top surface of the track. Said pin automatically engages with said ratchet teeth by its own weight as the bracket is moved lengthwise along the track. A spring may be applied to the pin to make its action more positive if desired. The bracket may be secured immovable on the track by displacing the pin with a clamping bolt that extends through the track and the base block A.

In operation the anvil rests on the yielding base block to lessen its resonance, and the metal surface interposed between the bottom of the anvil and said block forms a smooth surface for the movement of the anvil along the track by means of the hand wheel and screw. The track is relieved of the weight of the anvil on its top surface and is less liable to injury by the jarring of the anvil in use than if it rested thereon.

To be used as a drill the article to be drilled is placed against the end of the wooden block that is inserted in the heel end of the anvil and is fed toward the drill by the movement of the anvil by means of the hand wheel and screw. By removing the drill bit from the spindle the same movement of the anvil will serve to clamp and retain an article between the jaw formed by the heel of the anvil and the jaw projecting from the drill bracket and in a manner similar to a vise. When the distance between the jaws that form the vise is much wider than the article to be clamped the bracket may be quickly moved toward the anvil on the track and locked immovable in a different position on the track by the automatic engagement of the vertical pin in the bracket with the ratchet teeth in the track. By disengaging the pin the bracket may be as quickly returned to its former position and the article released.

By constructing the anvil and the bracket to engage with the outside edges of the track instead of sliding between two tracks, obviates the accumulation of drill chips and dirt that would interfere with the movement of the parts between double tracks. In the use of the single track all parts are exposed and are easily accessible to be kept clean.

The device may be easily dismembered for packing in a small area by the disengagement of the hand screw from the anvil and its removal from the threaded boss, and the removal of the bracket and the anvil from the opposite end of the track. By reversing the operation the parts may be as quickly assembled into operative position. The drill spindle is also removable from the bracket by first detaching the crank therefrom.

The bracket may be placed on the track in a reversed position with the crank end of the drill spindle toward the anvil and with the drill bit projecting beyond the end of the track for drilling within wider areas than could swing above the track. The spindle crank may be made sufficiently short to turn clear of the track when the bracket is reversed thereon. The base block may be secured to a post with the drill spindle in a vertical position with the crank end uppermost for certain desired purposes.

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

1. The combination with a base, a T shaped track secured thereon, an anvil mounted on the base and movably engaging with the track and a hand screw engaging with a boss formed on one end of the track and with the anvil of a bracket movably engaging with the track and being reversible thereon a vise jaw formed on the bracket in a line with the heel of the anvil and means to automatically secure the bracket immovable and in different positions along the track.

2. The combination with a base, a T shaped track thereon, an anvil movable on the base and engaging with the track, and a hand screw engaging with the track and with the anvil of a reversible bracket movable on the base and along the track, a drill spindle reversibly journaled therein and means to secure the bracket immovably to the track.

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Witnesses:
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