No. 650,635. Patented May 29, 1900

S. R. CROUNER.

CONVERTIBLE MACHINE.

(Application filed Jan. 27, 1900.)

(No Model.)

Fig. 1.

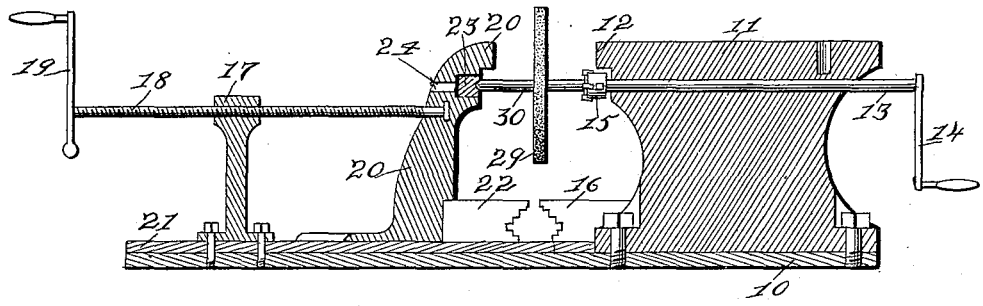


Fig. 3.

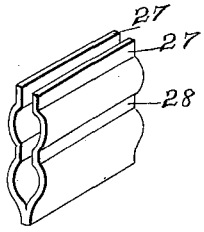
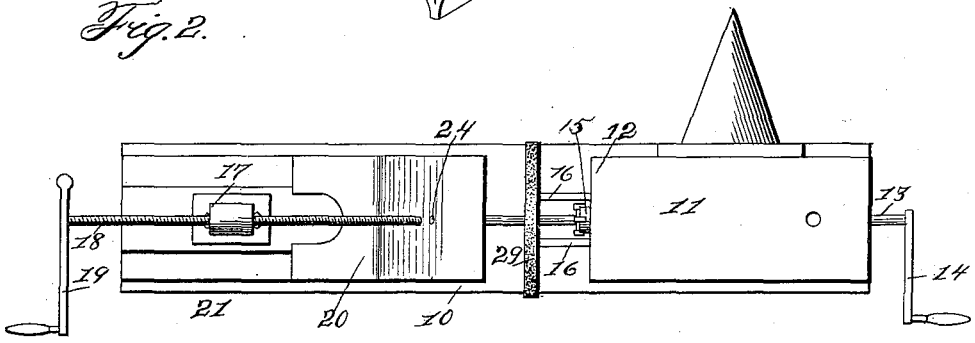


Fig. 4.

Fig. 5.

Fig. 2.



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UNITED STATES PATENT OFFICE.

STATES R. CROUNER, OF MARION, IOWA.

CONVERTIBLE MACHINE.

SPECIFICATION forming part of Letters Patent No. 650,635, dated May 29, 1900.

Application filed January 27, 1900. Serial No. 2,975. (No model.)

To all whom it may concern:

Be it known that I, STATES R. CROUNER, a citizen of the United States, residing at Marion, in the county of Linn and State of Iowa, have invented a new and useful Convertible Machine, of which the following is a specification.

One object of this invention is to provide an improved portable convertible machine especially designed for use by farmers to aid in carrying on all of the ordinary processes of construction and repair usually needed in farmwork; and my object is further to provide means whereby this machine is made of simple, strong, and durable construction, and the various parts thereof are so arranged as to not interfere when the apparatus is used for different purposes, and whereby the various parts coact in such a manner that the number of parts necessary is considerably less than if the various devices were disassociated.

My invention consists in certain details in the construction, arrangement, and combination of the various parts of the machine, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claim, and illustrated in the accompanying drawings, in which—

Figure 1 shows a central longitudinal section of the complete apparatus. Fig. 2 shows a top or plan view of the same. Fig. 3 shows in perspective the clamping-jaws for holding leather, harness, and the like, detached from the apparatus. Figs. 4 and 5 show, respectively, a bearing-block and a die to enter the movable jaw.

Referring to the accompanying drawings, I have used the reference-numeral 10 to indicate the base of the machine. Upon one end of this base I have bolted an anvil 11, which anvil is preferably greater in its transverse than in its longitudinal proportions, and on the inner side of the anvil the jaw 12 is formed. The shaft 13 is extended centrally through the anvil from side to side and is capable of rotation therein. On its end is the crank 14, whereby the shaft may be rotated, and on the inner end of the shaft 13 is a chuck 15 of ordinary construction. On the inner face of the anvil, near its base, openings are made for the reception of the pipe-clamping jaws 16, two of which are placed on opposite sides of the center of the base 10. On the opposite end of the base 10 I have mounted an upright 17, and in this upright the screw-threaded rod 18 is seated. On one end of the rod 18 is a crank 19, whereby it may be manually operated, and the other end of the said rod is connected with a sliding jaw 20, which is capable of movement to and from the anvil upon the track 21, which track is mounted upon the base 10. The said jaw 20 is shaped to coact with the jaw 12 on the side of the anvil, and the surface of the jaw which is designed to coact with the jaw on the anvil projects beyond the body portion of the jaw in a direction toward the anvil, so that articles—such, for instance, as bolts and the like—may be clamped between the jaws with the heads of the bolt in the space between the lower portions of the jaws, and near the base of this jaw a third pipe-clamping member 22 is detachably inserted at a point midway between the jaws 16.

On the inner face of the jaw 20, in alinement with the shaft 13, is a rectangular opening 23, and from the center of this opening 23 a round opening 24 extends to the outer surface of the jaw. This opening 23 is designed to receive either a die 25 or a plate 26, designed to serve as a bearing.

The device for clamping leather, harness, and the like comprises a single piece of spring metal, the ends of which form two parallel jaws 27, and in the sides of these parallel end pieces are the longitudinal grooves 28, designed to admit the jaws 12 and 20. In use this device is placed between the jaws 12 and 20, and obviously the jaws 27 thereof will be separated a slight distance by means of the resiliency of the metal of which they are made. Then by the manipulation of the crank 19 it is obvious that the jaw 20 may be moved toward the jaw 12 in such a manner as to bring the jaws 27 toward each other, and obviously when the jaw 20 is moved backwardly the said jaws 27 will separate sufficiently to admit the articles between them without dropping down between the jaws 12 and 20.

The reference-numeral 29 indicates a grindstone of disk shape mounted upon a shaft 30. This shaft is of such size and shape that one end thereof may be grasped in the chuck 15

and the other end supported in the bearing-block 26. Then upon a rotation of the crank 14 the grindstone is turned. In this connection it will be noted that the anvil and the sliding jaw are so arranged with relation to the grindstone as to serve as rests for tools when being ground upon the stone.

In practical use and assuming that the parts were connected as shown in Fig. 1 of the drawings it is obvious that the grindstone may be used in an ordinary way and that the parts of the anvil and sliding jaw may serve as rests for the tools being ground, and assuming that it is desired to use the apparatus as a pipe-vise the grindstone is removed by first separating the sliding jaw from the stationary one and then releasing the chuck 15, whereupon the grindstone and its shaft are detached from the device. Then the pipe-clamping jaws 16 and 22 are placed in the notches to receive them, whereupon by rotating the crank 19 a pipe may be firmly clamped between said jaws in the ordinary way.

Assuming that it is desired to use the apparatus as an ordinary vise, this may readily be done by simply operating the crank 14 to move the sliding jaw to and from the stationary one and to firmly clamp articles between the jaws. It is obvious, further, that when it is desired to use the apparatus as a lathe any of the ordinary tools—such, for instance, as drills, taps, &c.—may be placed in the chuck 15, while the other end of the article being turned or worked upon is supported by the bearing-block 26. When the die 25 is used, it is placed in the rectangular opening 23 in the sliding jaw 20, and the article to be cut by the die is placed in the chuck 15. The opening 24 in the jaw provides for the passage of the said article through the jaw while it is being threaded.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States therefor, is—

An improved convertible machine, comprising a base, an anvil fixed to one end of the base, an integral vise-jaw projecting from the side of the anvil, a pipe-clamping jaw detachably secured to the lower portion of the vise below said jaw, a crank-shaft passed through the anvil below the vise-jaw, a clutch on the inner end of the crank-shaft, a track on the base, a vise member slidingly mounted on the track, and having the vise-jaw thereon to project inwardly beyond the body of the vise member to coact with the jaw on the anvil, said vise member having an angular opening in its inner face below the jaw and in alinement with the said crank-shaft, to receive a die or the like, two pipe-jaws detachably connected with the anvil or stationary vise member to coact with the aforesaid pipe-jaw and means for longitudinally moving the vise member on the track, for the purposes stated.

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