H. HAUS.

SHEARING MACHINE.

APPLICATION FILED NOV. 6, 1909.

961,495.

Patented June 14, 1910.

Fig. 2.

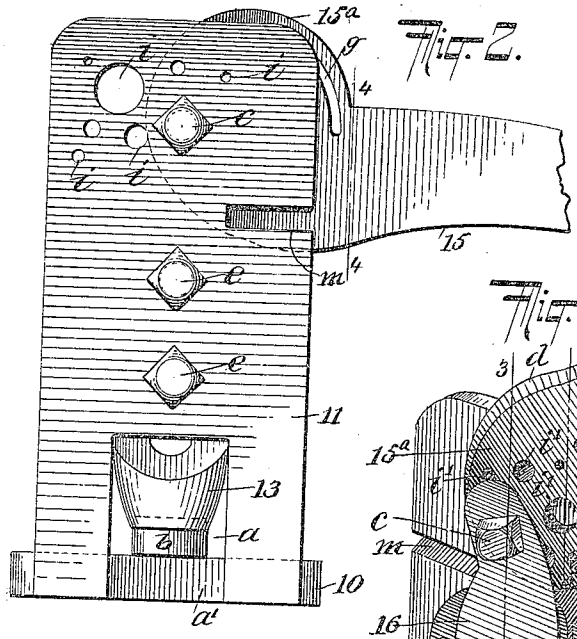

Fig. 1.

Fig. 4.

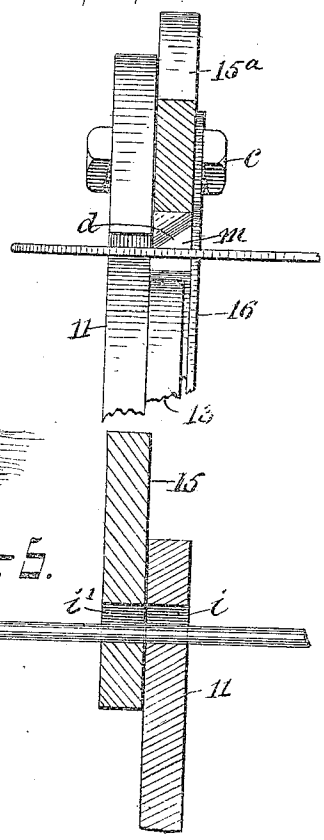

Fig. 3.

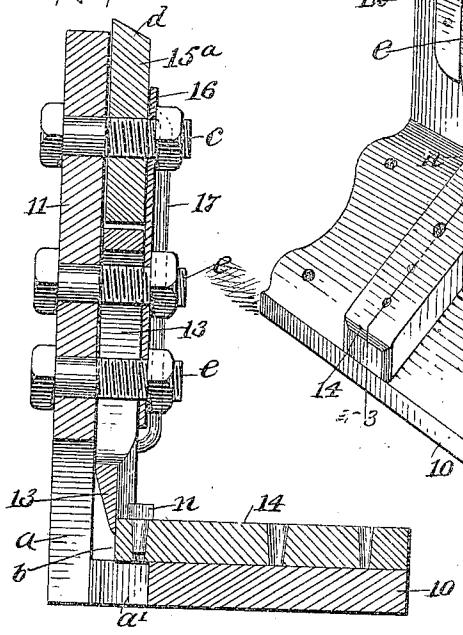

Fig. 5.

WITNESSES

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SHEARING-MACHINE.

961,495. Specification of Letters Patent. Patented June 14, 1910.

Application filed November 6, 1909. Serial No. 526,541.

To all whom it may concern:

Be it known that I, HENRY HAUS, a citizen of the United States, and a resident of Pope Valley, in the county of Napa and State of California, have invented a new and Improved Shearing-Machine, of which the following is a full, clear, and exact description.

The purpose of my invention is to provide novel, simple details of construction for a shearing machine, that is also adapted for use as a punching device, a vise, and an anvil, which may be employed for general repair of various farming implements, horse shoes, or leather harness.

The invention consists in the novel construction and combination of parts, as is hereinafter described and defined in the appended 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 views.

Figure 1 is a perspective view of the improved shearing machine; Fig. 2 is a rear view of the same; Fig. 3 is a vertical transverse sectional view, substantially on the line 3—3 in Fig. 1; Fig. 4 is a similar view of details, substantially on the line 4—4 in Fig. 2; and Fig. 5 is a vertical transverse sectional view, substantially on the line 5—5 in Fig. 1.

In the drawings, 10 indicates a base plate for the machine, having suitable marginal form and preferably a level upper surface. From a rear edge of the base plate 10 a vertical flat standard 11 is erected, having an opening *a* therein at the transverse center, said opening intersecting a recess *a'* that is formed in the rear edge of the base plate. Upon each side of the opening two vertical guides 12 are secured, between which a die block 13 is slidably secured.

An anvil block 14 is mounted upon and secured to the base plate 10 at its transverse center, having a die *b* formed or secured on its rear end, the end surface of which is preferably given convex shape.

The die block 13, which is in vertical alinement with the die *b*, is adapted for shear cutting action therewith, when the die block is moved downward in contact with the convex surface of the die, the contacting surface of said die block being correspondingly concaved to permit such an engagement thereof with the die.

Upon the upper portion and forward face of the flat standard 11, a lever 15 is pivoted upon a pivot bolt *c*, said lever having a flat head portion 15^a thereon, which is beveled on its circular peripheral edge *d*, thus adapting said edge for cutting action, said edge being disposed eccentrically with relation to the pivot bolt.

Upon the front face of the die block 13, the lower portion of a link plate 16, is secured by two bolts *e*, *e*, the upper portion thereof being lapped upon and pivoted to the head 15^a by means of the pivot bolt *c*. As the bolt *c* is the center whereon the lever is rocked, it will be obvious that the die block 13 will remain stationary if the lever is vertically reciprocated. To enable a reciprocal movement of the die block 13 to be effected, an arcuate slot *g* is formed in the head portion 15^a, concentric with the pivot bolt *c*, and at a suitable distance therefrom. A connecting rod 17 of suitable length is pivoted at its lower end in the die block 13, and at its upper end in the arcuate slot *g*, and it will be seen that upon reciprocating the lever 15, the die block will be reciprocated a limited degree, the vertical movement thereof being defined by the length of the slot, that is to say the die block 13 is reciprocated only when the connecting rod 17 engages the ends of the said slot.

In the upper portion of the standard 11 a number of perforations *i* are formed, that are sharpened on their defining edges so as to adapt them to cut freely, and in the head portion 15^a of the lever 15 corresponding perforations *i'* are formed. It will be seen that if the connecting rod 17 is removed from engagement at its upper end with the slot *g*, any one of the perforations *i'* in the lever 15 may, by a rocking adjustment of the lever 15 be disposed opposite a mating perforation *i* in the standard 11, and when so alined, a wire rod of the same gage may be passed therethrough and severed by a rocking movement of the lever 15. A piece of material may also be inserted and held as in a vise in two alined perforations *i*, *i'*.

In the standard 11 near the pivot bolt *c*, a horizontal slot *m* extends from the vertical edge of the same inward, said slot having sharp side edges. The relative position of the slot *m* adapts it to receive strips or bars

of plate metal, which may be cleanly cut by means of the head portion 15ª of the lever 15, and for such service the connecting rod 17 is detached from the slot *g*, and the lever is rocked so as to bring its bevel cutting edge *d* into proper position for shear cutting any material placed in the slot, when the lever is rocked downward.

The die *b* and block 13 are particularly well adapted for cutting and shaping the heels on a horseshoe, so that they will be smoothly curved and require no further dressing. The anvil block 14, which is level on the upper surface is well adapted for service as an anvil, in shaping hot or cold metal thereon, and adjacent to the die *b* may have a removable plug inserted in a perforation therein, said plug *n* having any preferred indicating character formed on its upper end, which will be impressed into the material that is held upon the die *b* while being acted upon by the die block 13, the pressure exerted upon the material by the said die block, being sufficient to cause an impression to be made.

On the lever 15 a punch 18 may be removably secured, which, if said lever is rocked after its disconnection from the rod 17, toward the slot *m*, may be pressed through leather that is supported upon a table or other suitable support, and thus form perforations in harness straps or the like that are undergoing repair.

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

1. In a shearing machine, a base, a vertical standard on the base, guides on the standard, a die block reciprocal in the guides, an anvil on the base, a die on an end of said anvil disposed below the die block for co-action therewith, a lever pivoted on the standard above the die block, said lever having an arcuate slot concentric with the pivot thereof, and a rod loosely connected at its ends with the die block and with the lever in its slot.

2. In a shearing machine, a base, a flat standard erected on one transverse edge of the base and having an opening in its lower end, an anvil on the base, a die on one end of the anvil having a convex contour and extended into the opening, a sliding die block on the standard above the die on the anvil, said die block having a concave face that slidably engages the convex surface of the die below it, a lever pivoted on the standard, and a rod loosely connecting the lever and die block.

3. In a shearing machine, a base, an anvil on the base, a flat standard vertically erected on a transverse edge of the base, said standard having a horizontal slot extended through one vertical edge thereof, a sliding die on the standard, a lever having a head thereon the edge of which is beveled to sharpen it, a rod connecting the die with the lever, said rod being loosely connected with the lever and a pivot bolt rockably securing the lever on the standard near the slot, said pivot bolt being disposed eccentric to the cutting edge on the head, thus adapting said edge to shear cut material inserted in the slot when the lever is rocked toward said slot.

4. In a shearing machine, a base, a flat standard vertically erected on a transverse edge of the base, a sliding die block on the standard, a lever having an enlarged flat head, said head being pivoted upon the standard, and a rod pivoted to the die block and having a sliding and pivotal connection with the lever, said standard and lever having paired perforations that will shear cut wire rods placed therein, upon rocking the lever.

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

HENRY HAUS.

Witnesses:
EDWARD KRAFT,
FRED B. ROSSI.