

(No Model.)

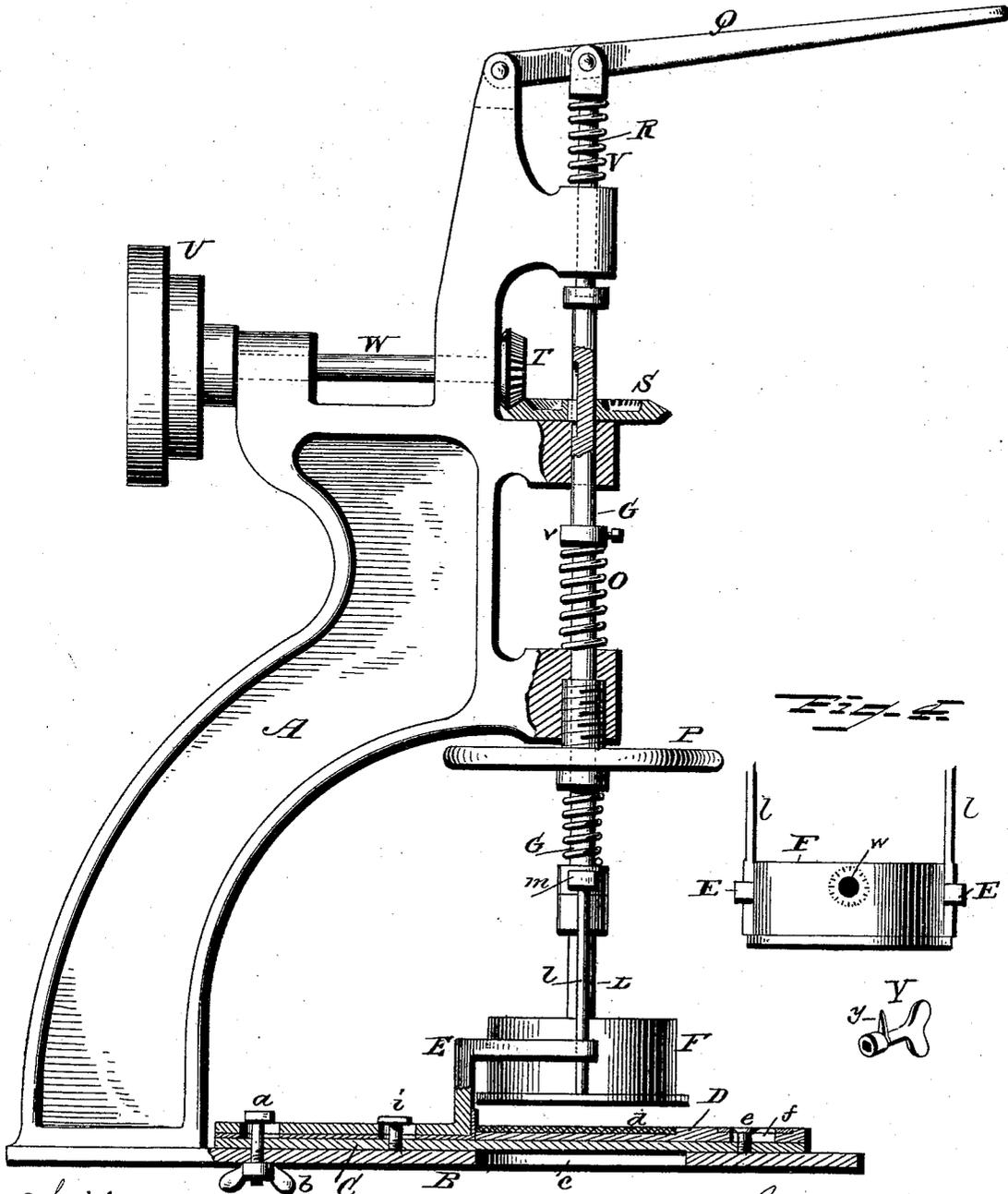
2 Sheets—Sheet 1.

A. BUCHHOLZ.
MACHINE FOR CUTTING WASHERS.

No. 507,210.

Patented Oct. 24, 1893.

FIG. 1.



Witnesses
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Fig. 2.

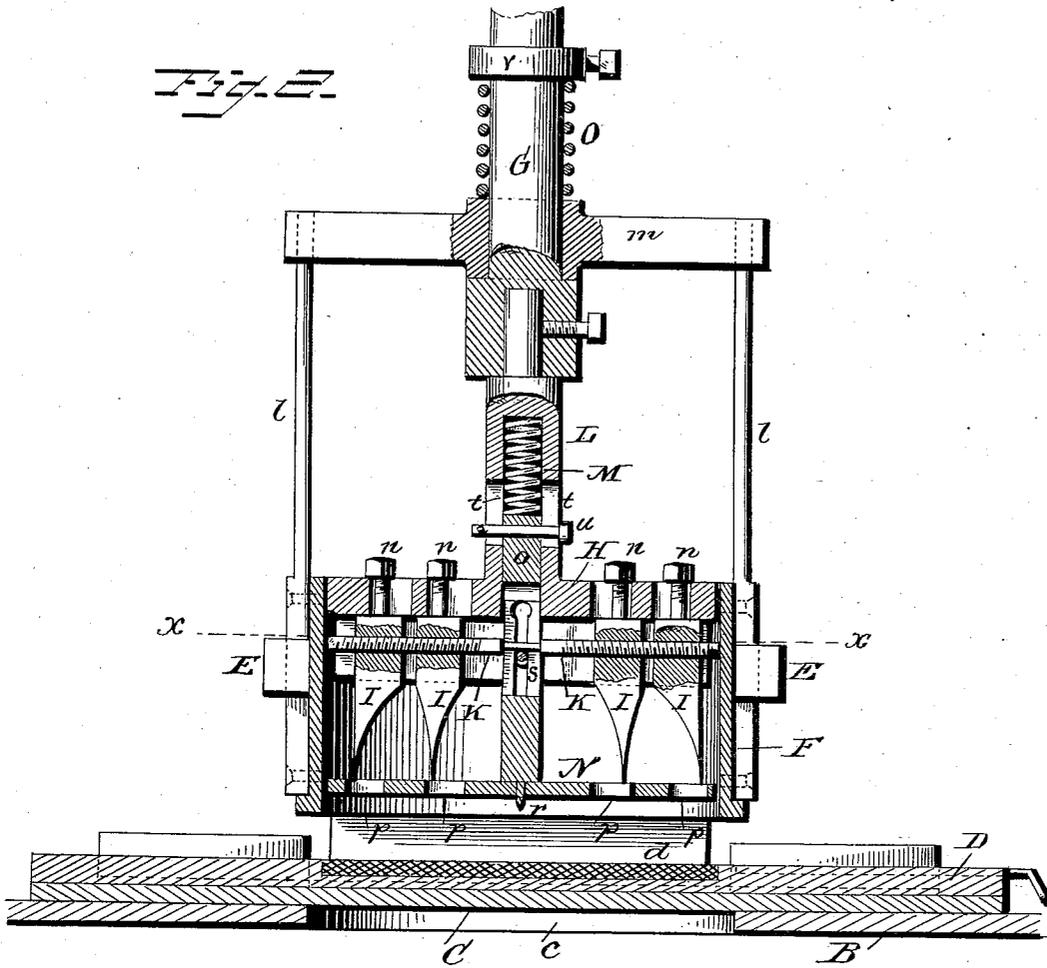
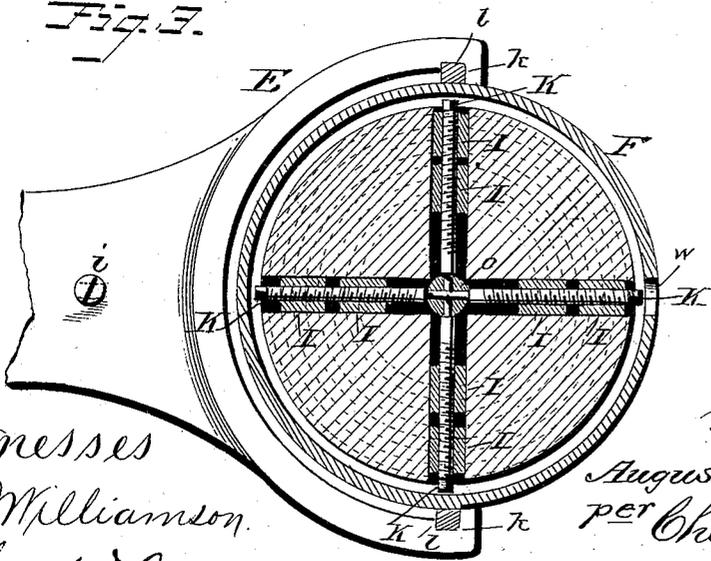


Fig. 3.



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UNITED STATES PATENT OFFICE.

AUGUST BUCHHOLZ, OF BOEUF-CREEK, MISSOURI.

MACHINE FOR CUTTING WASHERS.

SPECIFICATION forming part of Letters Patent No. 507,210, dated October 24, 1893.

Application filed June 20, 1893. Serial No. 478,238. (No model.)

To all whom it may concern:

Be it known that I, AUGUST BUCHHOLZ, a citizen of the United States, residing at Boeuf Creek, in the county of Franklin and State of Missouri, have invented certain new and useful Improvements in Machines for Cutting Leather Washers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

The present invention has for its object to provide a simple and practically operating machine for cutting washers from leather, one that will perfectly cut the washer without leaving any ragged edges and cut washers of different sizes and the machine controlled by the operator while in an upright position or sitting down, also constructing the operating parts in such manner as will insure strength and durability and not become inoperative for reason of the parts getting out of order. These several objects above enumerated I attain by a machine constructed substantially as shown in the drawings and hereinafter described and claimed.

Figure 1 of the drawings represents a side elevation of my improved machine partly in section; Fig. 2 a part sectional elevation on an enlarged scale of the base of the machine and that portion carrying the cutters; Fig. 3 a horizontal sectional view thereof taken on line $x x$ of Fig. 2; Fig. 4 a detail view of the cylinder showing the scale and key.

In the accompanying drawings A represents a standard or frame which supports the operating parts of the machine, said standard being of any suitable form and construction and of any desirable size and cast or otherwise formed of metal.

The standard A is provided with a base B for supporting a bed C, which bed is pivotally connected to the base by means of a screw a and thumb-nut b so that the bed may be swung around laterally to obtain access to the opening c in the base, to clean it or for any other purpose found necessary. A block is provided which may be of any suitable thickness and shape, said block resting upon the bed C and having a pad d of leather

or other similar material, and upon this pad rests the leather from which the washers are to be cut. This block D is rendered adjustable by means of the set-screw e and slot f so as to bring the pad d directly under the cutters. An adjustable gage E is provided which is bifurcated or semicircular in shape and is rendered adjustable by means of the screw a and the set-screw i which extend through slots in the gage. This gage E acts also as a guide to steady the cylinder F in its vertical movement, as well as acting as a stop for the leather when placed upon the cushion or pad d , said gage having grooves k which engage the guide-rods l , said rods being rigidly connected to the cylinder F and to a cross-bar m . The cross-bar m is loosely supported upon the lower end of the shaft G in any suitable manner so that the shaft can turn without interfering with the cross-bar which latter remains stationary after the cylinder is forced down into position upon the leather. The cutter-head H has connected to it a plurality of cutters or knives I, which knives are of any suitable form and construction and adjustably connected to the cutter-head in any preferred manner. The knives are both vertically and horizontally adjustable, or rather have a compound adjustment so as to adjust the width of the washer to be cut and also to adapt the height of the knives to the vertical movement of the cutter-head.

The knives I are adjustable vertically by means of the screws n or other well known means may be employed, and the horizontal adjustment of the knives is effected by the screw-rods K.

I do not wish to be understood as limiting myself to the means shown of rendering the compound adjustment of the knives as any desirable and well known means may be employed that will enable the knives to be properly adjusted in a vertical and horizontal direction and also to enable the knives to be removed when found necessary.

The cutter-head H has a chambered shank L in which is located a spiral spring M, and within the chambered shank is also located the stem o of a presser-plate N having suitable openings p through which the ends of

the knives I extend when in the act of cutting the leather. The presser-plate N has a centering spur *r* which enters the pad *d* when the plate is pressed down thereon, and to enable the plate to be operated independently of the cutter-head H, the stem *o* is formed with slots *s* so that the movement of the stem will not interfere with the adjusting screws K, and the shank L has slots *t* through which the pin *u* extends to hold the stem of the presser-plate within the chamber of the shank and enabling it to move vertically independently of the cutter-head and shank.

The shank L of the cutter-head H is detachably connected to the shaft G in any suitable manner or as shown in the drawings, and above the cross-bar *m* and adjustable collar *v*, is located a spiral spring O. Above the collar *v* and to the shaft G is connected a hand-wheel P for operating the machine when sitting down and when standing up a lever Q is provided for this purpose which hand-lever is pivoted to the standard A at its upper end and to a supplemental shaft R, the lower end of the supplemental shaft serving as a plunger to force the main shaft G downward but does not turn in its bearings.

The shaft G and also the plunger-shaft R have their bearings in the standard A, and connected to the shaft G is a bevel gear-wheel S with which meshes a pinion T upon the end of a horizontal shaft W, which shaft also has its bearings in the standard and is provided at its outer end with a belt-pulley U of any of the usual forms.

Through the medium of the belt and pulley, motion is imparted to the horizontal shaft W, and through the gear connection with the shaft G, the latter mentioned shaft is rotated and carries with it the cutter-head H and knives I. By means of the feather on the bevel gear-wheel S and the longitudinal groove in the shaft G, the shaft is enabled to have a vertical motion without interfering with the gear wheel. Through the medium of either the hand-wheel or lever, the cutter head with its knives is forced down and brought into position for the knives to operate. The presser-plate and cylinder are now moved down into position and the cutting of the washers takes place, the springs O V upon the shafts G R respectively, forcing them up to their normal position as the pressure is removed from the hand wheel or lever. The cylinder F has an opening *w* on line with the screw-rods K when

the latter are brought around to register therewith, and around the opening is a suitable scale as shown in Fig. 4. A suitable key Y having a pointer *y* is used to adjust the screw rods so that the knives will be set to cut washers of any given circumference, the pointer upon the scale or dial indicating the circumference or size of the washer to be cut.

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

1. In a machine for cutting leather washers, a suitable standard, a rotatable shaft, carrying a hand wheel knives for cutting the washers connecting with the shaft, and a supplemental shaft or plunger and means connected thereto for forcing down the main shaft, substantially as and for the purpose set forth.

2. In a machine for cutting leather washers, the horizontally adjustable screw-rods and a slotted shaft by which they may be vertically adjustable, and adjustable knives engaging the screw threads upon the rods, substantially as and for the purpose specified.

3. In a machine for cutting leather washers, a suitable standard, a rotatable and vertically movable shaft and knives connected therewith, a pivoted bed, an adjustable block having a pad connected thereto, and adjustable gages connecting with the bed, substantially as and for the purpose described.

4. In a machine for cutting leather washers, a rotatable shaft having a vertical movement in its bearings, a cutter-head connected to the shaft, knives adjustably connected to the cutter-head, an independently operating pressure-plate, and an independently operating cylinder inclosing the cutter-head, knives, and presser plate, substantially as and for the purpose specified.

5. In a machine for cutting leather washers, screw-rods carrying cutters adjustable thereon, a cylinder inclosing the cutters and having a key-opening and scale around it, and a key with pointer for turning the screw-rods and indicating the position of the cutters, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

AUGUST BUCHHOLZ.

Witnesses:

CHAS. ROEDDER,
HENRY W. SCHWENKER.