(No Model.) 2 Sheets—Sheet 1.

C. A. SOUTHWICK.

MACHINE FOR GLAZING AND PEBBLING LEATHER.

No. 589,103. Patented Aug. 31, 1897.

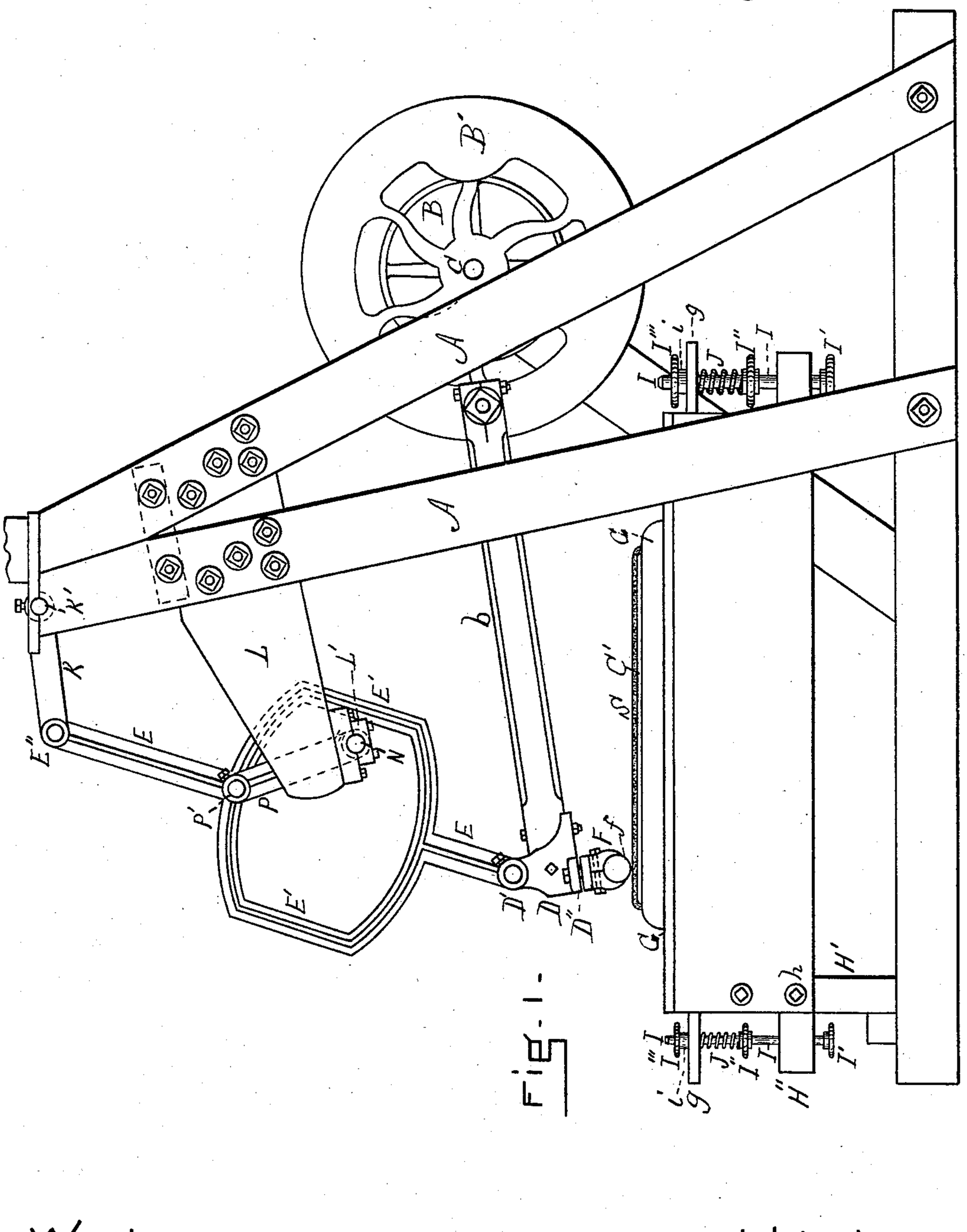

Fig. 1.

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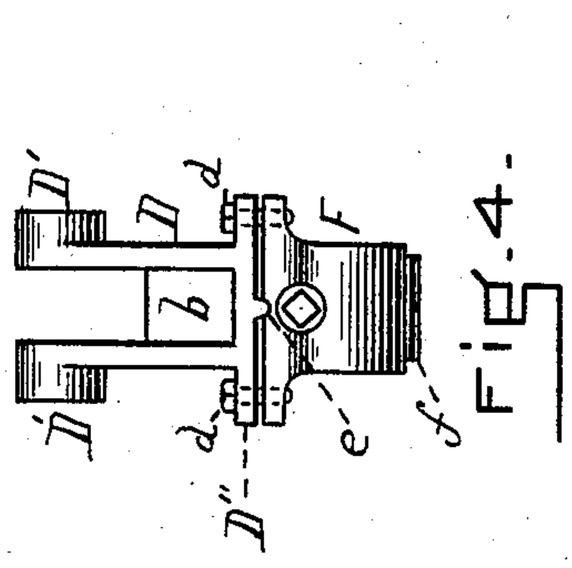

FIG. 4.

FIG. 3.

WITNESSES

A. W. Bonney.

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INVENTOR

Charles A. Southwick

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Henry N. Williams

UNITED STATES PATENT OFFICE.

CHARLES A. SOUTHWICK, OF PEABODY, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO HORACE A. SOUTHWICK, OF SAME PLACE.

MACHINE FOR GLAZING AND PEBBLING LEATHER.

SPECIFICATION forming part of Letters Patent No. 589,103, dated August 31, 1897.

Application filed January 23, 1897. Serial No. 620,335. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. SOUTHWICK, a citizen of the United States, residing in Peabody, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Machines for Glazing and Pebbling Leather, of which the following is a specification.

This invention relates to machines for glazing, polishing, dicing, and pebbling leather; and it has for its objects, first, to impart a greater rigidity to the portion of the frame above the bed and to adapt the pendulum to the construction by which said rigidity is accomplished; second, to even the stroke of the agate and agate-holder by an adjustment thereof instead of moving the table or bed, and, third, to regulate and fix the height and inclination of the table and the relative tension of the lifting-screws which support said table, all by means of the novel construction and combinations of parts hereinafter described, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a machine embodying my improvements. Fig. 2 is a front elevation of the same. Fig. 3 is a detail vertical section of the bed, its supporting-frame, and the agate-holder or polishing device. Fig. 4 is a detail elevation of the agate-holding device.

Similar letters of reference indicate corresponding parts.

A represents the frame of the machine.

B represents fast and loose pulleys on the driving-shaft C, supported by the frame, B′ being the balance-wheel.

b is a connecting-rod extending from the balance-wheel to the lever D, which is pivotally connected at D′ to the pendulum E, below described, and constitutes in connection therewith a toggle or jointed lever. Bolted at *d* to the under side of the plate D″, making a portion of the lever D, is the "hand" or agate-holder F, whose two jaws clamp and hold the agate F′ in the usual manner. The under surface of the plate D″ is formed with the downwardly-projecting and substantially V-shaped rib *e*, which constitutes a fulcrum for the holder F, which is grooved on its upper side in order to receive and center said rib. By this means the bolts *d*, which pass loosely through the plate D″, can adjust the angle of the holder and agate so that the latter will bear equally upon the leather to be treated and not produce streaks at either edge during the stroke, as would be the case if it were to bear harder on one side than on the other.

G represents the bed supporting the platform G′, upon which is secured the leather S to be treated. This bed is supported by the table *g*.

H H are side pieces to which the uprights or legs H′, supported by the frame, are bolted.

H″ is a base-piece bolted at *h* to and supported by the legs H′. Set in the under side of the base-piece H″ are three metallic nuts *h*′, one being located centrally near the rear edge thereof and the other two being located near the front edge, as indicated by broken lines in Fig. 3. Bolts or screws I are engaged by said nuts and extend up through plain openings in the base-piece H″ and the table *g*. The single screw or bolt in the rear portion of the frame is about twice the diameter of one of the two screws in the front portion. Each bolt is provided at its lower end with a round head I′, at its upper end with a round nut I″, between the table and the base-piece with a nut I‴, while between said nut I‴ and the table *g* a spring J is disposed around the screw, the spring upon the rear screw being about twice the strength of either of the springs upon the front screw.

The nut I‴ is provided with a shoulder *i*, which rests upon the table. Turning the screws I and adjusting the nuts I″ raise and depress the table *g*, which is held up by the springs J. When the table has been set at its proper height by the above means, the tension is made greater or less by turning the nuts I‴, and, if desired, the relative tension of the front and rear edges of the table may be regulated. Thus the vertical resistance of the bed as the agate travels over it may be made greater or less, and such resistance may be greater on one side than on the other, or at the front than at the rear, or vice versa, in case the leather is unequal in hardness or thickness or power of resistance.

The lever E, which, with the lever D, con-

stitutes a toggle-joint or jointed lever, takes the place of what is usually termed in machines of this character the "pendulum." In this class of machines the pendulum is usually straight and swings between two brackets, each of which is connected with the pendulum by a link or lever. It is found in practice that the pendulum and arms or levers are apt to lack rigidity and that the latter often fail in exact uniformity and similarity of action, thus causing the pendulum to become a trifle one-sided or to spring or to bear unequally upon the leather. My pendulum E is spread centrally into the bow E′ and is connected pivotally at its upper end, at E″, with the arms K, pivotally connected at K′ to the frame A. This frame is provided with brackets L, which extend forward on opposite sides of the bow. Secured to the under sides of these brackets are boxes L′ for the accommodation of a shaft N, which extends from one box to the other through the bow E′. Arms or links P extend up from said shaft N on opposite sides of the bow E′ and have their upper ends pivotally connected to the opposite upper portions of said bow. Thus it will be seen that as the pendulum is reciprocated over the surface of the leather S by the pulley-wheel B and connecting-rod *b* it is supported and guided on opposite sides by the brackets L and arms or links P; but owing to the provision made by the bow E′ for the shaft N said brackets L and arms P are connected not only with the pendulum but with each other, so that the motion of the parts P is absolutely uniform and similar, supports the pendulum equally, and prevents any lack of rigidity, or spring or lateral or one-sided action.

The shape of the bow may be varied as desired, provided its opening is of sufficient size to accommodate the relative movement or swing of the shaft N.

The holder, termed in this specification an "agate-holder" or "hand," may be employed and adapted to hold an agate, glass, roll, or other article for glazing, polishing, dicing, or pebbling leather.

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

1. In a machine of the character described, the frame; the bed; the driving mechanism and connecting-rod *b* extending therefrom, the pendulum pivotally supported at its upper end by the frame and comprising a toggle consisting of a long upper arm or lever and the short lower arm or lever D provided on the under surface of its bottom plate D″ with the central, downwardly-extending, substantially V-shaped rib; and the hand or agate-holder held pivotally against said rib and adjustably secured to said plate D″ on opposite sides of the rib, whereby the angle of the agate-holder may be altered and set and thereby adapted to cause the agate to bear evenly upon the leather to be treated, substantially as described.

2. In a machine of the character described, the frame; the bed; the driving mechanism and connecting-rod *b* extending therefrom, the pendulum pivotally supported at its upper end to the frame and comprising a toggle consisting of a long upper arm or lever and the short lower arm or lever D provided on the under surface of its bottom plate D″ with the central, downwardly-extending, substantially V-shaped rib; and the hand or agate-holder F provided on its upper surface with a groove adapted to receive and center said rib; and mechanism connecting said agate-holder F and bottom plate D″ whereby the angle of the former with relation to the latter may be adjusted, substantially as set forth.

3. In a machine of the character described, the frame; the bed; the pendulum pivotally connected at its upper end to the frame and formed on its lower end with a rib extending downwardly therefrom in line with the stroke of the pendulum; mechanism for reciprocating said pendulum over the surface of the bed; and a hand or holder pivoted or fulcrumed upon the under edge of said rib and thereby adapted to be swung and adjusted at right angles with the line of direction of the stroke of the pendulum, substantially as described.

4. In a machine of the character described, the frame; the base-piece II″ supported by the frame and provided with three triangularly-located fixed nuts *h′*; the table *g* above the base-piece and supporting the bed; the screws or bolts I engaged by said nuts and extending up through the base-piece and table; the nuts I‴ on the upper ends of said bolts above the table; the nuts I″ upon said bolts between the table and the base-piece; and the springs J upon said bolts between the nuts I″ and the table, substantially as and for the purpose set forth.

5. In a machine of the character described, the frame; the pendulum consisting of the jointed arm or toggle E, D, the main portion E of said pendulum being formed into a bow E′; arms or brackets extending from the frame on opposite sides of said pendulum; a shaft or rod connecting said arms and extending through the bow of the pendulum; and the links P extending from said shaft or rod on opposite sides of the bow and pivotally connected at their upper ends with opposite sides of the pendulum, substantially as described.

CHARLES A. SOUTHWICK.

Witnesses:
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A. N. BONNEY.