

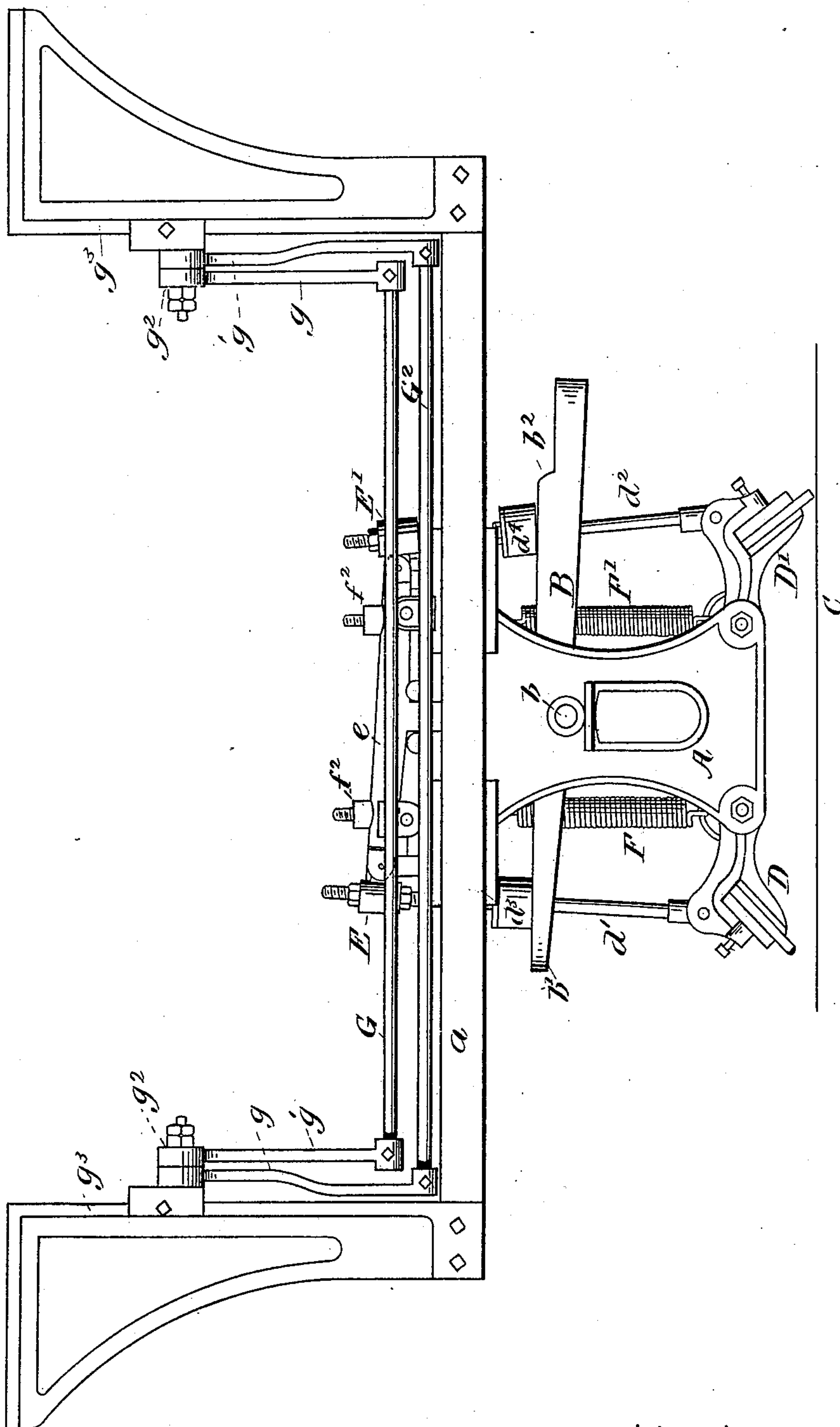
(No Model.)

3 Sheets—Sheet 1.

C. HOLMES.

Machinery for Scouring and Setting Out Leather.
No. 238,589. Patented March 8, 1881.

Patented March 8, 1881.



11

WITNESSES

George F. Walker
A. J. Ottinger

INVENTOR

Charles Holmes
by his attys
Charles & Raymond

(No Model.)

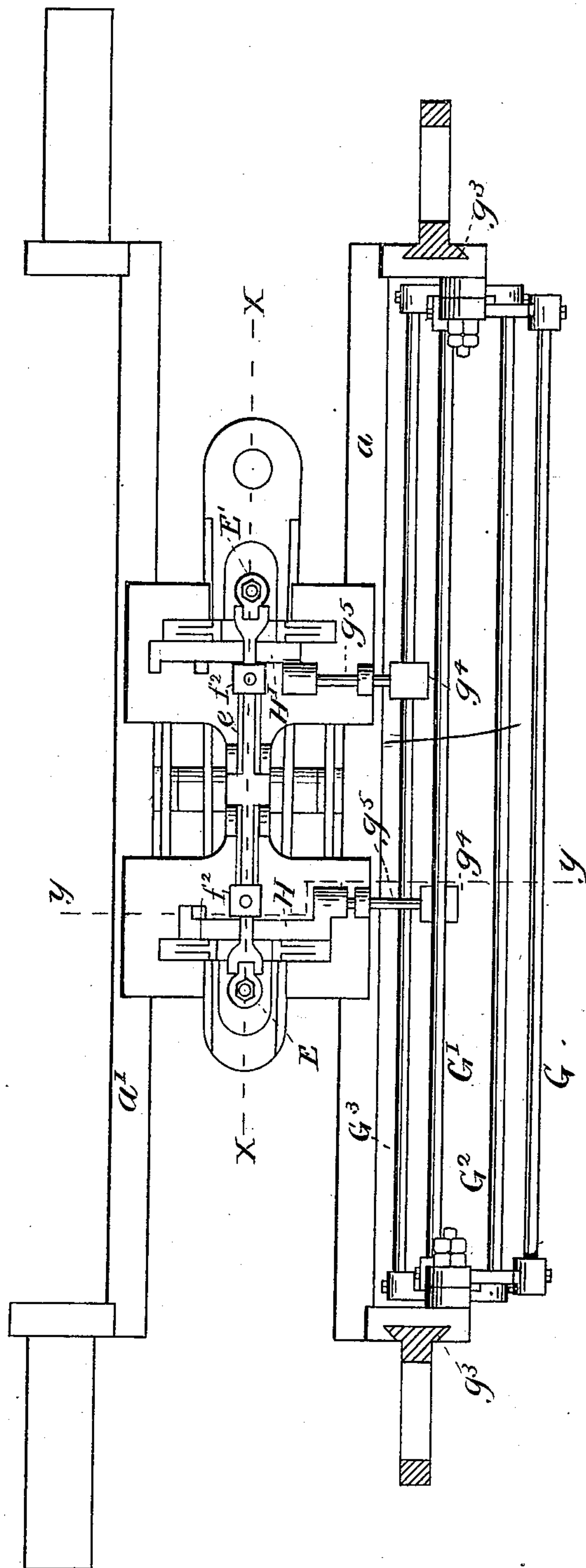
3 Sheets—Sheet 2.

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Machinery for Scouring and Setting Out Leather.

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2

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3 Sheets—Sheet 3.

Patented March 8, 1881.

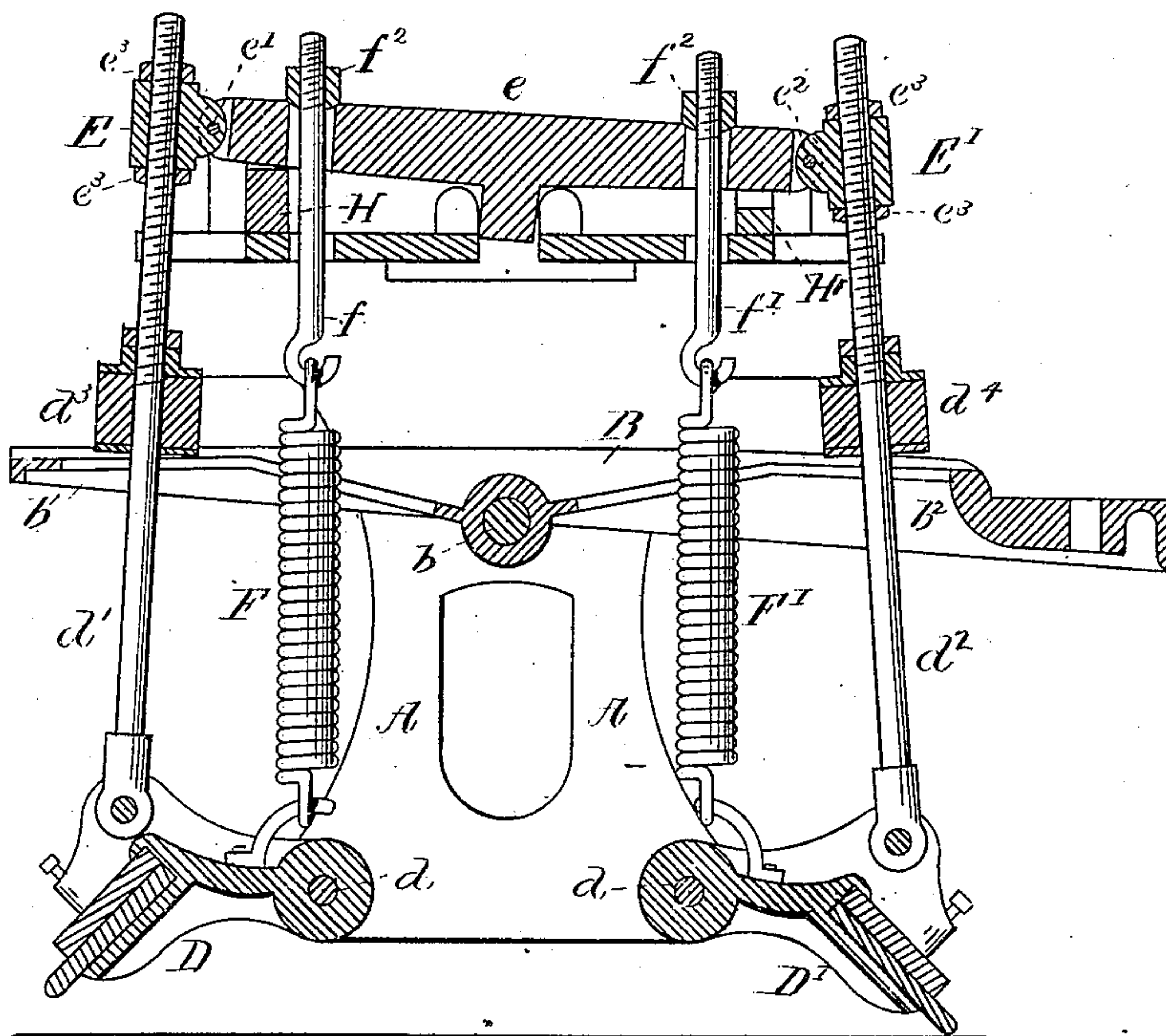


Fig. 3.

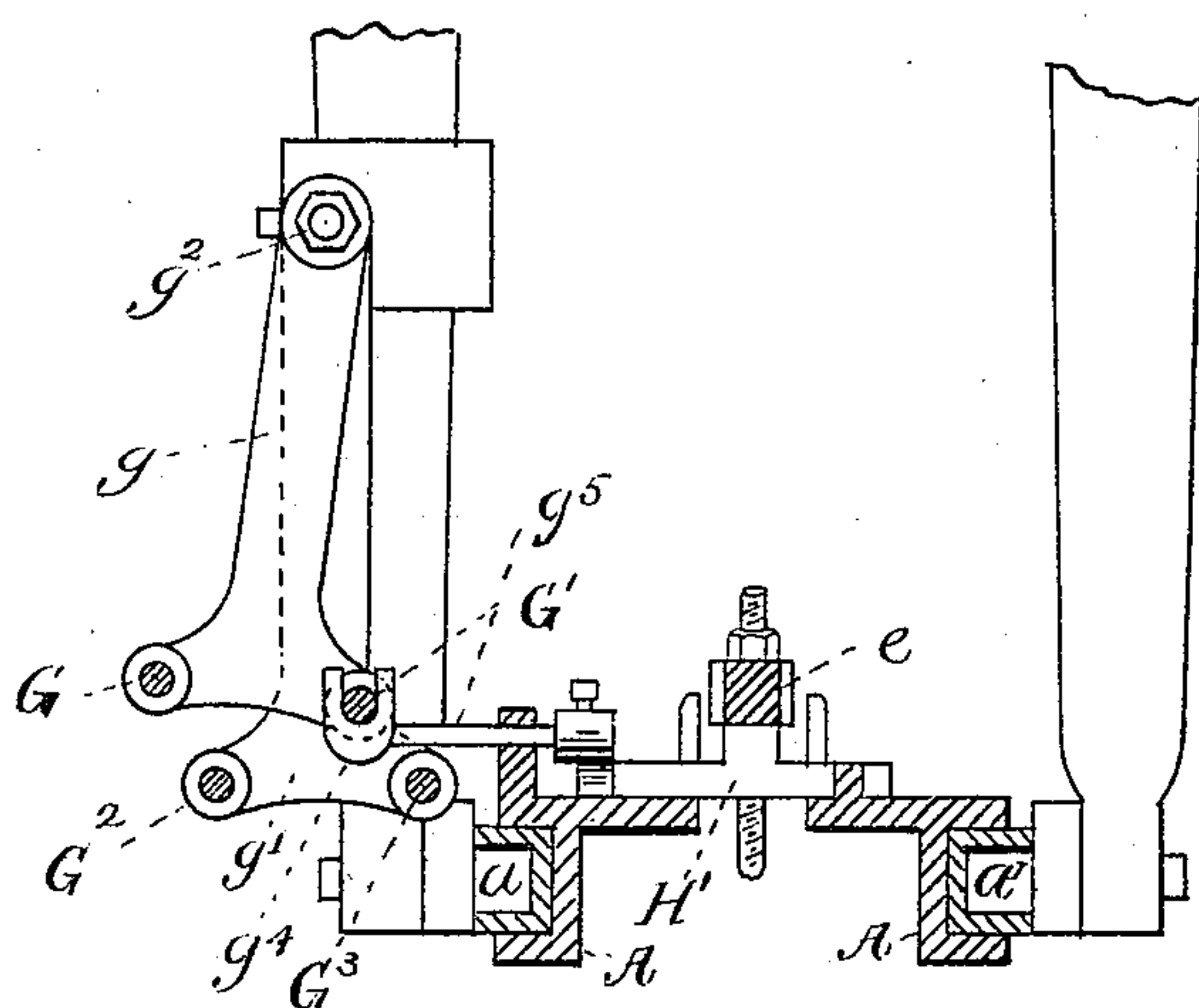


Fig. 4.

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UNITED STATES PATENT OFFICE.

CHARLES HOLMES, OF BOSTON, MASSACHUSETTS.

MACHINERY FOR SCOURING AND SETTING OUT LEATHER.

SPECIFICATION forming part of Letters Patent No. 238,589, dated March 8, 1881.

Application filed January 8, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HOLMES, of Boston, in the county of Suffolk and Commonwealth of Massachusetts, have invented a new and useful Improvement in Machinery for Scouring and Setting Out Leather, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification in explaining its nature, and in which—

Figure 1 is a front elevation of the portion of the machine embodying my invention. Fig. 2 is a plan thereof. Fig. 3 is a vertical section on the line $x x$ of Fig. 2. Fig. 4 is a vertical section, to which reference will be made hereinafter.

This invention relates to the class of machines described in Patents No. 61,182, granted Fitzhenry and Ball, and No. 61,250, granted Pray and Fitzhenry; and it is an improvement upon my invention described in Letters Patent No. 90,664, dated June 1, 1869.

The machine described in my said Letters Patent is provided with mechanism for raising the tool-carriers alternately, but the upper ends of the tool-carrier lifting-rods are not directly connected with each other, while the tool-carriers are connected and operated by a half-elliptic spring in such a manner that the bearing action of the tool upon the work varies considerably in each stroke; and, as a uniform pressure of the tool upon the work is desirable, I have modified this construction by connecting the tool-lifting rods at their upper ends and by using independent coiled springs for holding the tool in contact with the work at suitable pressure.

My invention further relates to means whereby the tool-carrier may be lifted from the table; and this portion of the invention varies from that described in my said Letters Patent in that the handles for operating the slide-bars do not reciprocate with the head carrying the tools.

The head or frame-work A is arranged to be reciprocated upon the horizontal and parallel ways $a a'$ by a crank and connecting rod or pitman, B, as described in my said Letters Patent. This connecting-rod or pitman or an extension thereof is pivoted at b to the head A, and a portion extends beyond the pivot, and consequently as said head is reciprocated,

the end b' and the point b^2 are alternately lifted and lowered in relation to the line C of the table upon which the hide is scoured, finished, or otherwise treated, and this oscillating movement of this portion of the connecting-rod or pitman in relation to the center b is utilized for the purpose of alternately lifting the tools from the work and allowing them to bear upon the work, as set forth in the last-named patent.

The tool-carriers D D' are pivoted or hinged at the points d to the head A, and the tool-carrier lifting-rods $d' d^2$ lay hold of the tool-carriers and are provided with buffers $d^3 d^4$, as and for the purposes described in my said patent. In lieu, however, of the independent pivoted arms F of said patent, to which the ends of said rods are secured, I connect the nuts or blocks E E' by the long arm or lever e , which is pivoted at $e' e^2$ to the blocks. I prefer that the lifting-rods $d' d^2$ be provided with a screw-thread, and that their position in relation to the blocks E E' be adjusted by the nuts e^3 .

The tools are held down to their work by means of the contractile power of the coiled springs F F', which, at their lower end, are connected with the tool-carriers, as represented, and at their upper ends hook upon the rods $f f'$, which are adjustably secured to the arm or lever e by the nuts f^2 .

This construction and combination of springs, tool-carriers, lifting-rods, oscillating lifting rod or plate, and connecting lever or arm, give and permit a uniform and equable pressure upon the tool-carriers, and consequently upon the tools, at all points of their reciprocation or stroke, and this was not the case with the mechanism described in the Letters Patent above referred to.

For lifting one or both tool-carriers during the reciprocation of the head from their work I employ the two pairs of rods, G G' and G² G³, arranged so that each pair is supported at both ends by independent swinging arms $g g'$, which are pivoted at g^2 to any suitable stationary portion of the device for holding the frame a' . One of the two pairs of arms $g g'$ is longer than the other pair, in order that each pair of rods may be on a different level. Upon each of the inner rods, G' G³, there is arranged a slide, g^4 , and one of these slides, by means of a connecting-rod, g^5 , connects with the latch

or slide-bar H, and the other slide, g^4 , by means of a like connecting-rod, g^5 , connects with the latch or slide-bar H'. Both these slide-bars are like the slide-bars described in my said Letters Patent, and they are adapted to be pushed under the lever e , for the purpose of holding the tool-carrier from the work when desired. For operating these latches or slide-bars by the mechanism herein described, it is simply necessary at the proper moment, which is at or near the end of a forward stroke for one tool, and at or near the end of the return stroke for the other tool, to move the pair of rods connected with the slide-bar to be operated inwardly to hold up the tool-carrier; and to let the tools upon the work it is simply necessary to move the rods outwardly from the head. Each pair of rods and their connecting mechanism and slide-bars are, of course, independent of each other; but they are exactly alike in construction, with the exception, as above stated, that one set is lower than the other, and this arrangement is for the convenience of the operator in order that he may know which pair of rods to move for operating a given slide, and it also somewhat simplifies the connection of the slide-bars and the rods. Each of the slides g^4 reciprocate on their respective rods $G' G^3$ until the machine is stopped; but while it is often necessary to lift one or both the tools from the work, it is not necessary, and in fact it is not desirable, to stop the machine.

In operation the hide is laid upon the table, which is mounted upon rolls and provided with universal movement on a horizontal plane beneath the head A, and the crank set in motion. This causes the tools to be applied alternately, according to the direction of movement of the head, to the skin with a slicking motion.

I do not confine myself to the specific construction of mechanism herein shown and described, but may use any equivalent for accom-

plishing the objects which are the purposes of this invention, and by changing the tools as required the leather may be stoned, glassed, and finished.

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

1. The combination of the reciprocating tool-carriers D D', the lifting-rods $d' d^2$, their connecting arm or lever e , the contractile springs F F', the buffers or stops $d^3 d^4$, and the pivoted oscillating plate or rod B, all substantially as described.

2. The combination of the tool-carriers D D' and means for lifting them alternately, as described, with the independent contractile springs F F', all substantially as and for the purposes set forth.

3. The combination of the reciprocating tool-carriers, the lifting-rods d' and d^2 , the stops d^3 and d^4 , the oscillating plate or rod B, and the arm or lever e , connecting the ends of the lifting-rods, all arranged to operate substantially as and for the purposes described.

4. The combination of the latches or slide-bars for holding the tool-carriers from the work, and mechanism for operating the same, but not reciprocating therewith, substantially as described.

5. In a hide-scouring and striking-out machine, the combination of the alternately-operating reciprocating tools, the tool-carriers, means for lifting them alternately from the work, as described, the springs operating to hold each tool to its work, and acting independently of each other, and means of holding from the work one tool while the other is operating, all substantially as and for the purposes set forth.

CHARLES HOLMES.

Witnesses:

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A. J. OETTINGER.