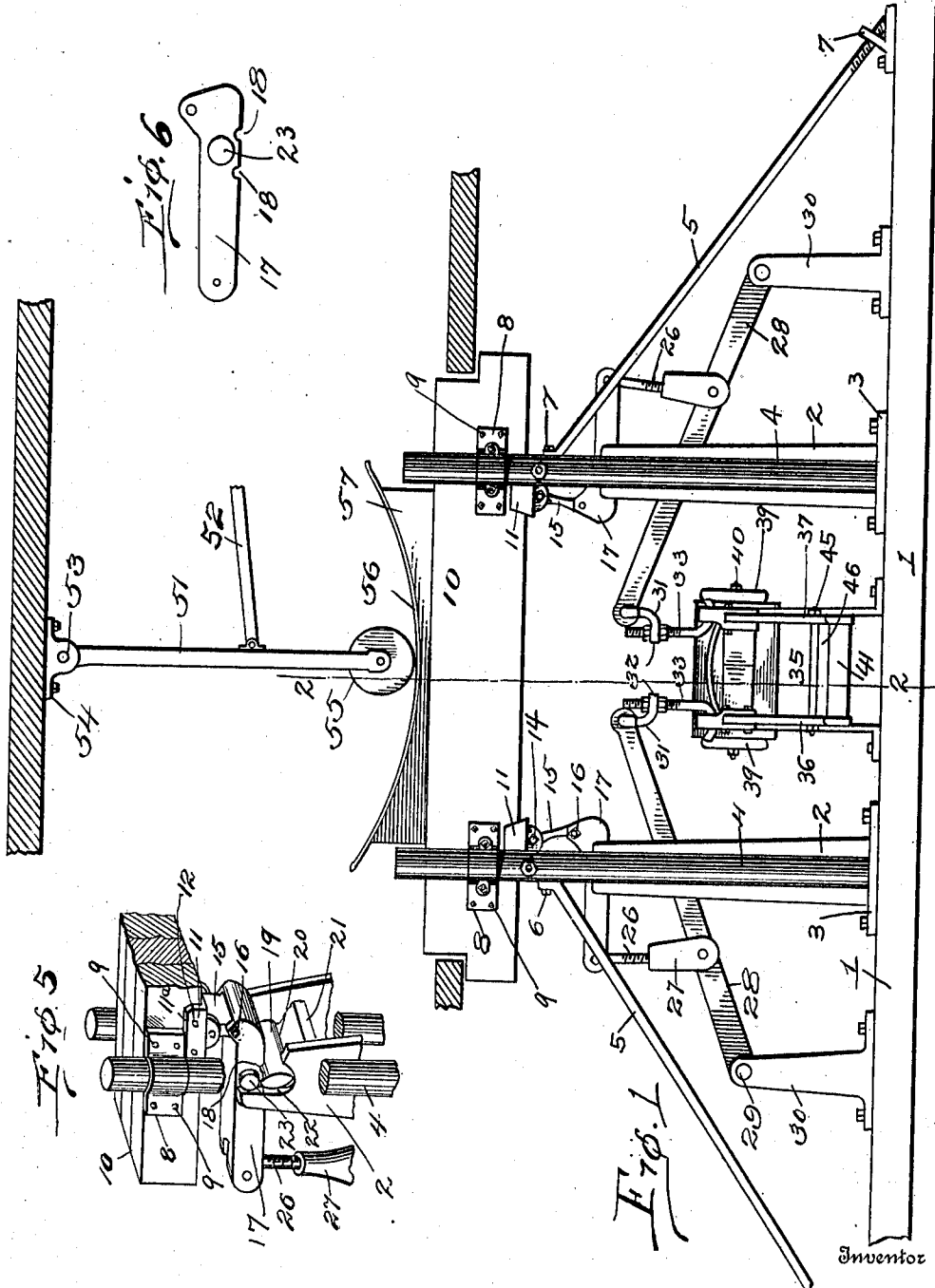


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TABLE FOR LEATHER WORKING MACHINES.
APPLICATION FILED JAN. 4, 1909.

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Patented Dec. 6, 1910.

2 SHEETS—SHEET 1.



Witnesses
J. M. Fowler
W. L. Kitchen

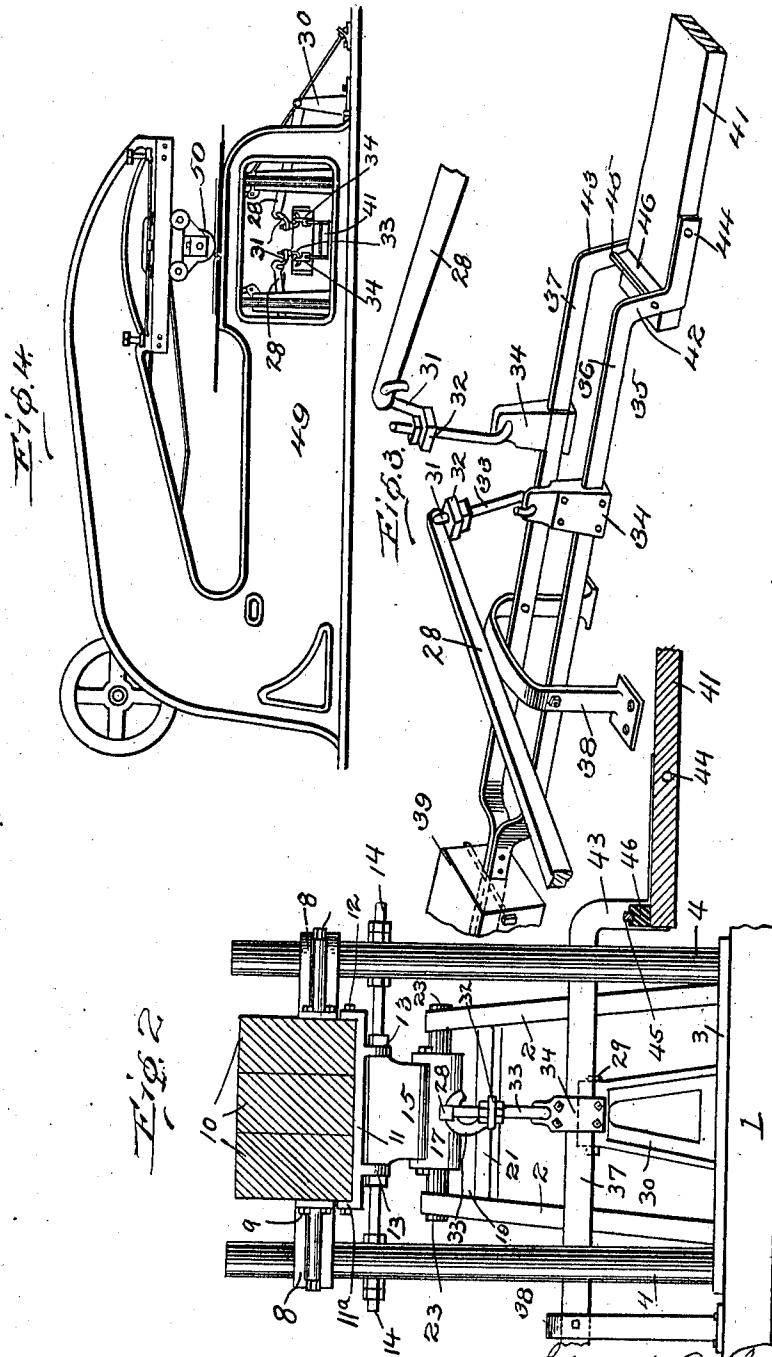
Edward Y. B. Engelman
By Messrs. Finck & Lawrence
his Attorneys

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A. L. Kitchen

Inventor
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UNITED STATES PATENT OFFICE.

EDWARD Y. B. ENGELMAN, OF NOXEN, PENNSYLVANIA.

TABLE FOR LEATHER-WORKING MACHINES.

978,120.

Specification of Letters Patent.

Patented Dec. 6, 1910.

Application filed January 4, 1909. Serial No. 470,733.

To all whom it may concern:

Be it known that I, EDWARD Y. B. ENGELMAN, a citizen of the United States, residing at Noxen, in the county of Wyoming and State of Pennsylvania, have invented certain new and useful Improvements in Tables for Leather-Working Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a table for leather working machines, and has for an object the provision of improved means for causing an even pressure to be applied to leather throughout the entire rolling process.

Another object in view is the provision of a table for leather working machines for receiving leather to be rolled and a plurality of levers so arranged as to permit an even pressure on the table at all times regardless of the height to which the same is raised.

A further object of the invention is the provision of a framework carrying a reciprocatory support or table and a plurality of levers for moving the support to give the same pressure at all times to provide uniform compactness to leather or other material placed on the table for compression, the levers for reciprocating the table being connected with the tread or foot lever by which the same are operated.

With these and other objects in view the invention comprises certain novel constructions, combinations and arrangement of parts as will be hereinafter more fully set forth and claimed.

In the accompanying drawings:—Figure 1 is a side elevation of an embodiment of the invention. Fig. 2 is a section through Fig. 1 approximately on line 2—2. Fig. 3 is an enlarged detail fragmentary perspective view of the tread lever and connecting parts. Fig. 4 is a reduced side view of a pressing machine with the invention applied thereto. Fig. 5 is a detail fragmentary perspective view of one of the operating levers and connected parts. Fig. 6 is an enlarged detail side elevation of an operating lever.

In constructing leather working machines it is very desirable to provide means that will not only compress the leather to proper compactness, but to compress the leather to uniform compactness regardless of the thin-

ness or thickness of the leather. The present invention is designed to accomplish these and other desirable objects and is particularly arranged to be operated manually so as to more effectively accomplish the purposes designed.

Referring more particularly to the accompanying drawings, 1 indicates a base of any desired material to which is secured a pair of standards 2 cast integral with the base 3 which in turn have positioned therein uprights 4 constructed preferably of tubing. The uprights 4 are secured to the base 3 of the standards 2 by any approved means, and are also braced by rods 5 which are secured to the standards 4 by means of bolts 6 and to the base 1 by means of a threaded bracket 7 which receives the threaded end of the rod 5. The uprights 4 are positioned in sleeves 8, which are firmly bolted to a plurality of beams 10 by means of bolts 9, the bolts 9 preferably passing entirely through all of the beams 10 so that one bolt will pass through both of the sleeves 8 positioned on each side of the beams 10, the bolts being secured by means of suitable nuts. The beams 10 together with the sleeves 8 secured thereto form a reciprocating or pressing means for raising and holding anything placed thereon against pressing means that may be moved thereover. Positioned near each end of the beams 10 is a cross brace 11 that is preferably constructed of some strong metal, and is arranged with lips 11^a on each side for engaging the beams 10. The lips 11^a are provided with bolts 12 passing therethrough and through the beams 10 which act to secure the cross brace 11 to the beams 10. Projecting downwardly from the cross brace 11 are ears 13 through which pass bolts 14. Bolt 14 also passes through a connecting link 15 which is pivotally mounted on a pivoted bolt 16. The pivoted bolt 16 pivotally engages a lever 17 which is connected with the link 15. The lever 17 may be of any desired length, and is provided with a plurality of grooves or notches 18 for receiving a supporting knife-edged oscillatory fulcrum 19, which in turn is loosely supported in a groove 20 arranged in the cross member or brace 21. The cross brace 21 is integral with the standards 2 and connects the same near their upper ends, the standards 2 being connected at their lower ends by the base 3. The standards 2 are provided with slots 22 in the upper ends

thereof for accommodating journal members 23 of the lever 17. The journal members 23 are adapted to reciprocate in the slots 22 while the lever pivots upon fulcrum 19. The fulcrum 19 is loosely arranged in position, and when it is desired to secure a large amount of pressure the same is caused to engage one of the notches 18 that is nearer the pivoted bolt 16, and when it is desired to secure less power the fulcrum 19 is caused to engage one of the notches 18 located farther from the pivoted bolt 16. It will be evident of course that the upward movement of the beams 10 will be somewhat less when the fulcrum is moved nearer pivoted bolt 16 than when it is moved somewhat distant therefrom. Pivotally connected with the outer end of lever 17 is a rod 26 that is threaded into a pivotally mounted connecting member 27. The connecting member 27 is pivotally mounted upon a lever 28 which in turn is pivotally mounted at 29 to the standard 30. The standard 30 is bolted or otherwise secured to base 1 so that upon the movement of lever 28 power will be conveyed to lever 17 through the rod 26 and connecting member 27 and through the lever 17 and the pressing table formed by beams 10. It will be observed by reference to Fig. 1 that the parts 15, 17, 26 and 27 form bell crank toggle levers, thus securing the greatest power with the minimum of labor. Engaging the end of lever 28 farthest from pivotal point 29 is a hook 31 that is formed with an offset portion 32 which has passed therethrough, a second hook 33 which is threaded for substantially its entire length in order to permit any desired adjustment for causing a longer or shorter movement of lever 28. In order to properly locate hook 33 in its movement nuts are provided above and below the offset portion 32 of the hook 31 for clamping the hook positively against movement. The hook 33 is passed through an ear 34 that is adjustably clamped to the foot lever 35 by any desired means, preferably by bolts. By thus adjustably clamping the ears 34 in position the same may be adjusted longitudinally of the foot lever 35 for giving a greater or less amount of strain.

The foot lever is formed of a pair of bars 36 and 37 that are pivotally mounted upon a standard or support 38. The ends of the bars 36 and 37 project beyond standard 38 and are brought together for receiving a balancing weight 39 which is slidably mounted thereon and arranged to be held in any adjusted position by means of bolts 40. Bolt 40 is designed to pass entirely through weight 39 and also through apertures formed in bars 36 and 37. To the ends of bars 36 and 37 opposite weight 39 is pivotally secured a treadle or foot member 41. In order to properly accommodate treadle

41 bars 36 and 37 are bent downward at 42 and 43 respectively and the treadle or foot member 41 is pivotally mounted upon bolt 44 through the end of bars 36 and 37. A bolt 45 also is passed through bars 36 and 37 and has positioned between the same and the end of treadle 41 a cushion 46 preferably of rubber so that when any pressure is brought to bear by the workman upon treadle or foot member 41 the same will be conveyed to bolt 44 and to cushion 46, and thence to bars 36 and 37 from which the power is conveyed effectually to beams 10. By the provision of the cushion 46 the vibration and jar of the pressing means upon the lever which is placed on the table formed of beams 10 is greatly lessened.

The reason for duplicating the various levers and other parts is in order that each end of the table formed of beams 10 will be raised at the same time and with the same pressure so as to evenly force any article placed thereon against the pressing mechanism.

When using the pressing mechanism the same is positioned in a leather rolling machine, as for instance machine 49 seen in Fig. 4. The machine 49 is of the type having a reciprocating pressing roller 50 against which the beams 10 are pressed when rolling a piece of leather. In operation, one or more pieces of leather are placed upon the beams 10, and then the same are elevated by having the operator force treadle or foot member 41 downward. Any desired pressure may be brought to bear upon the lever, and after such pressure has been brought to bear upon the lever the roller 50 is started and caused to move back and forth over the leather. Meanwhile the same is being held tightly against the roller.

In Fig. 1 the pressure device is arranged to operate with a swinging or pendulum mechanism. When used with this kind of a machine, the pendulum 51 is moved back and forth by a reciprocating arm 52. The pendulum 51 is pivotally mounted at 53 to a support 54 of any desired kind and has connected at the opposite end a pressing wheel 55 for engaging the leather 56 mounted upon arc-shaped bed 57 which in turn rests upon the table composed of beams 10. The movement of the beams 10 upward and downward causes the leather 56 to engage to a greater or lesser extent with the roller 55.

Other forms of pressing means could be used with the pressing device forming the present invention, but these are shown in order to disclose fully the operation of the device. By reason of the system of levers as set forth, the same pressure or substantially the same pressure is acting upon the beams 10 at all times; that is, at the beginning of its stroke and throughout its entire movement up to the extreme upward move-

ment thereof. By this means the leather positioned between the pressing device and the pressing roller may be pressed uniformly regardless of the thickness of the leather, as 5 the same pressure is exerted on the treadle or foot lever 41 in pressing each piece of leather.

What I claim is:—

1. In a device of the character described, 10 a reciprocatory table, standards positioned beneath said table, a knife edge fulcrum loosely mounted in said standards, a lever mounted on said fulcrum, means pivotally connecting said lever with said table, a second lever 15 pivotally connected with said first lever, a treadle connected to the said second lever to impart motion to the said levers, and the first said pivotal means connected to said table to impart motion to said table.

2. In a device of the character described, 20 a reciprocatory table, a link pivotally connected to said table at each end thereof, a lever pivotally connected with each of said links, a loosely mounted fulcrum for engaging each of said levers, a second lever pivot- 25 ally connected with said first lever, a treadle connected to said second lever whereby when motion is imparted to said treadle the said first mentioned lever and said second mentioned lever and said link are operated to 30 impart motion to said table.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD Y. B. ENGELMAN.

Witnesses:

GEO. J. REMMELL,

FRANK H. WEINSHEIMER.