M. FRIED & R. HARVEY.

LEATHER DRESSING MACHINE.

APPLICATION FILED SEPT. 22, 1908.

924,756.

Patented June 15, 1909.

Fig. 1.

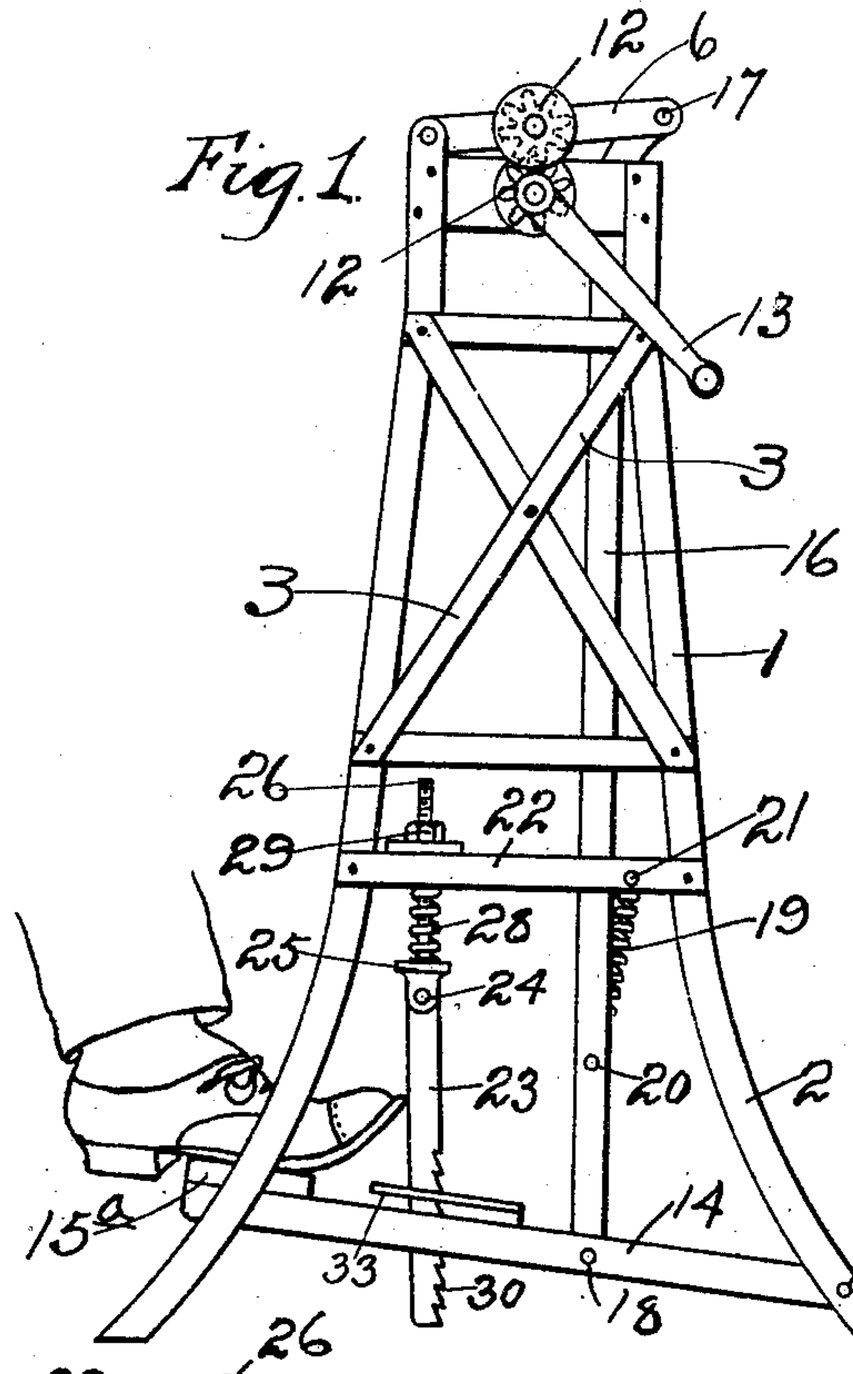
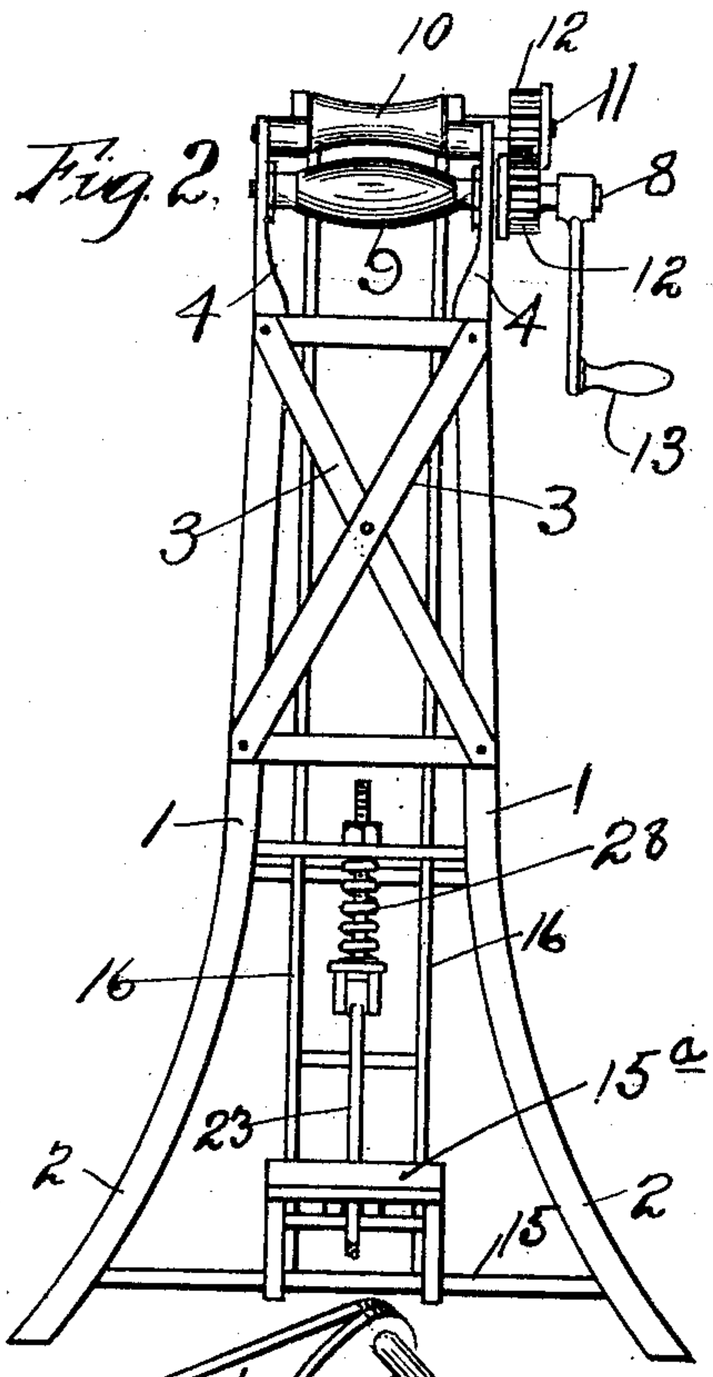


Fig. 2.



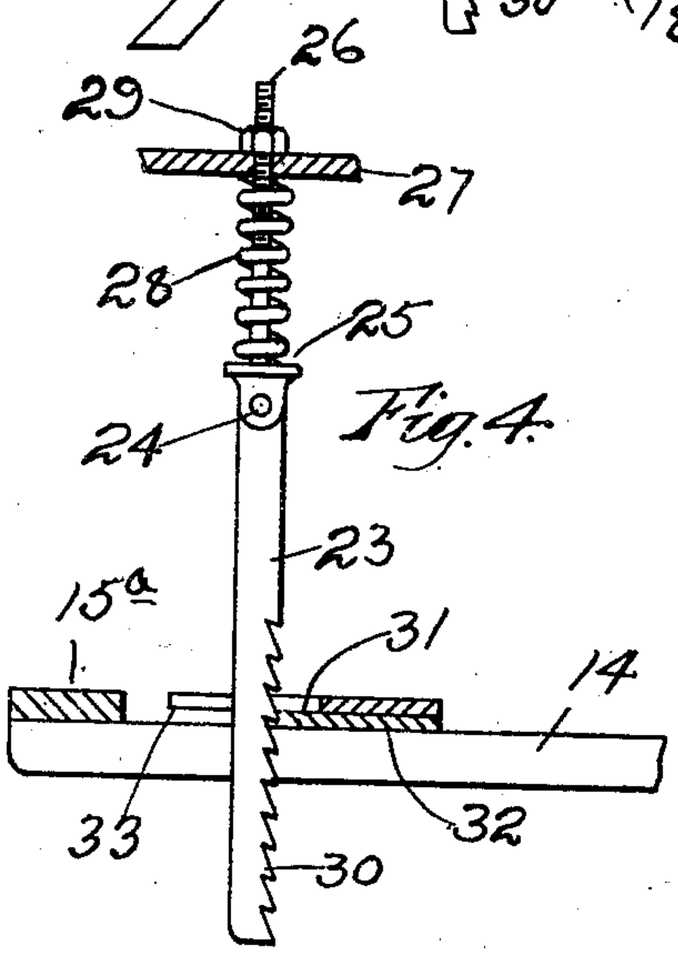


Fig. 4.

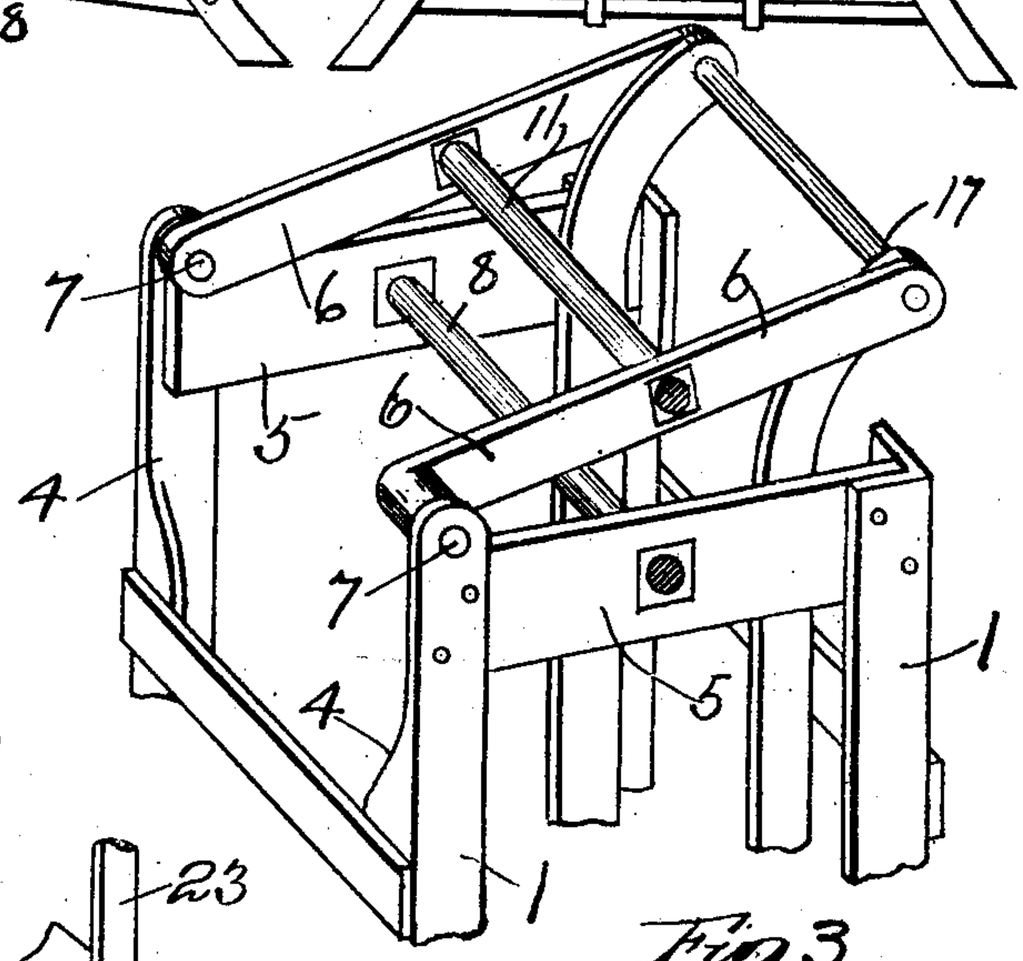


Fig 3.

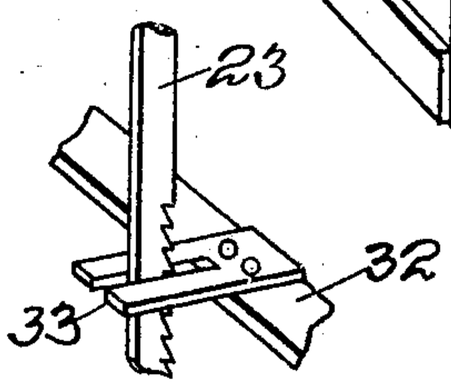


Fig. 5.

WITNESSES

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UNITED STATES PATENT OFFICE.

MARCUS FRIED AND ROBERT HARVEY, OF PROVIDENCE, RHODE ISLAND, ASSIGNORS, BY MESNE ASSIGNMENTS, OF ONE-HALF TO HARRY B. BORNSIDE, OF PROVIDENCE, RHODE ISLAND.

LEATHER-DRESSING MACHINE.

No. 924,756. Specification of Letters Patent. Patented June 15, 1909.

Application filed September 22, 1908. Serial No. 454,195.

To all whom it may concern:

Be it known that we, MARCUS FRIED and ROBERT HARVEY, citizens of the United States, residing at the city of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Leather-Dressing Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

Our invention relates to leather dressing machines, and has for its object to provide a simple, effective and inexpensive machine comprising a pair of compression rollers adapted to condense and harden leather by pressure, and also shape the leather into the desired form, either into heels, soles and upper for shoemakers' use, or the machine may be used for any other desired purpose for which the same may be adapted.

A feature of this invention is that the movable or adjustable roller is mounted in a pair of swinging arms thereby obviating the expense and necessity of providing sliding ways for the bearings or boxes, and at the same time providing the most effective means for applying the power to the compression rolls.

Another feature of this invention is that a foot operated ratchet or toothed locking bar is provided for engaging the foot pressure lever whereby any tension on the rolls may be secured and retained allowing the operator to remove his foot from the pressure bar in order to more effectively apply his strength to turning the pressure rolls to force the leather through the machine.

With these objects in view, the invention consists of certain novel features of construction, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings: Figure 1—is a side elevation of the machine illustrating a man's foot in position on the pressure lever and also engaging and operating the locking bar. Fig. 2—is a front elevation of the machine. Fig. 3—is an enlarged view showing the upper portion of the machine in perspective with the pressure rolls removed. Fig. 4—is an enlarged view showing the foot operated locking bar and the manner of hanging the same. Fig. 5—is a detail perspective view showing the fork for guiding the lock bar.

Referring to the drawings, 1 designates the frame of the machine the four legs of which are preferably made of wrought angle iron, the lower ends of each leg being bent outward as at 2 to provide a larger base on which the machine may stand. These legs are tied together by cross bars 3—3 in various ways to strengthen the machine at the same time forming an inexpensive yet rigid construction. The front legs project up beyond the rear legs, the front angled portion of said forward legs being preferably cut away at 4 to provide a flat place against which the cross bars 5—5 may be bolted.

A pair of arms 6—6 are pivoted at 7—7 at one end to the upper end of the front legs. These pivoting points it will be noted are above the center line of the lower roll shaft 8 bringing said arms substantially on a level when the rolls are in their operating position, thereby producing the most effective action on said rolls.

The lower compression roll 9 is mounted on and fixed to the shaft 8 and is preferably of a convex shape but may be made and used in any other form to best produce the work for which the machine may be adapted. The upper roll 10 is preferably of a concaved shape, but may be made of a form to correspond to and register with the lower roll when desired. This roll is mounted on and fixed to shaft 11, said two shafts 8 and 11 being geared together by long toothed gears 12—12 which teeth are adapted to mesh and operate the two rollers in time with each other, either when the thickest or thinnest pieces of leather are being passed between the rollers. A handle 13 is fixed to shaft 8 whereby these rolls may be manually operated, but a pulley or other driving means might be applied to said shaft whereby the same may be operated by power if desired.

A lever 14 pivoted to the legs 15 near the lower end thereof is adapted to extend out to the front of the machine and receive at 15[a] the foot of the operator by which the pressure may be applied to the rolls.

A pair of connecting rods 16—16 are attached at 17 to the outer ends of the pivot arms 6, the upper portions of these connections being bent inward to pass downward within the frame, and be connected at their lower ends 18 to the pressure lever 14. A spring 19 is attached at one end to these connections at 20, and at its opposite end at 21

to the cross bar 22 for exerting a tension on said connections to raise the rolls and hold them normally out of engagement one with the other.

It is found in practice that when the operator is obliged to apply his weight to the pressure lever to obtain the proper compression on the leather passing through the rolls, that he cannot at the same time possibly apply his strength to the best advantage to the turning of the rolls in order to force the leather through the machine. To obviate this difficulty a lock has been provided whereby the rolls may be retained at any compression desired, which lock consists of a lock bar 23 pivotally hung at its upper end at 24 to the head 25. This head is provided with a threaded bolt 26 that passes up through a plate 27 on the frame. A heavy tension spring 28 is also arranged between said plate and said head by means of which this bar may be adjusted to any desired degree of compression by the setting of the nut 29. The rear edge 30 of this lock bar is serrated or notched and hangs normally out of engagement with the catch or beveled edge 31 of the plate 32 on the pressure lever whereby when said lever is pressed downward the end of the shoe of the operator may engage and press said lock bar over so as to cause the teeth to come in contact with and engage said beveled edge 31, to lock or hold the pressure lever in its down position to exert the desired pressure on the rolls.

It is found in practice that the leather to be operated upon is not always of the same thickness and when the rolls are set hard together to compress the leather firmly, upon coming to a thicker portion the spring 28 allows the rolls to yield a trifle and so prevent the breaking of the machine.

A guide fork member 33 attached to the bar 32 is adapted to extend forward and engage and guide the lock bar and to insure its notched edge always facing in the right direction.

As this machine is designed to sell to shoemakers and repairers, and other small dealers and leather manipulators, it is found necessary that the same should be constructed strong, durable and yet inexpensively so as to withstand the hard usage to which it is subjected and at the same time sell at a figure within the reach of those desiring to purchase the same. With this in mind our invention is designed to fully meet the above requirements and a simple, practical, inexpensive and efficient machine has been produced which by the use of the locking device on the foot lever enables a single operator to exert his power to the best advantage and operate the machine quickly under the greatest pressure to produce the best results.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent, is:

1. A machine of the character described comprising a frame, a pair of compression rolls, the lower roll of said pair being rotatably mounted in said frame, pivoted arms in which the upper roll is mounted, gears connecting said rolls, means by which said rolls may be rotated, a pressure applying lever, and means for locking said lever so as to obtain a predetermined pressure on the stock when passed through said rolls.

2. A machine of the character described comprising a frame, a pair of compression rolls, the lower roll of said pair being rotatably mounted in said frame, pivoted arms in which the upper roll is mounted, gears connecting said rolls, a handle for manually operating said rolls, a foot operated pressure applying lever, a lock bar adapted to engage said lever and retain the same to obtain any desired amount of pressure on said rolls.

3. A machine of the character described comprising a frame, a pair of compression rolls, arms pivoted to the upper end of the forward legs, the upper roll of said pair being mounted to swing in said arms, gears connecting said rolls, a handle for manually operating said rolls, a foot operated pressure applying lever, a foot operated lock bar adapted to engage said lever and retain the same to obtain any desired amount of pressure on said rolls.

4. A machine of the character described comprising a frame, a pair of compression rolls, arms pivoted to the upper end of the forward legs, the upper roll of said pair being mounted to swing in said arms, gears connecting said rolls, a handle for manually operating said rolls, a foot operated pressure applying lever, a flexibly connected depending toothed lock bar pivoted to hang normally out of engagement with said lever, said bar being arranged near the front of the machine to be moved into engagement with said lever by the foot when applying pressure to said lever, whereby the desired amount of pressure may be applied to said rolls.

In testimony whereof we affix our signatures in presence of two witnesses.

MARCUS FRIED.
ROBERT HARVEY.

Witnesses:
HOWARD E. BARLOW,
E. I. OGDEN.