No. 609,832. Patented Aug. 30. 1898.

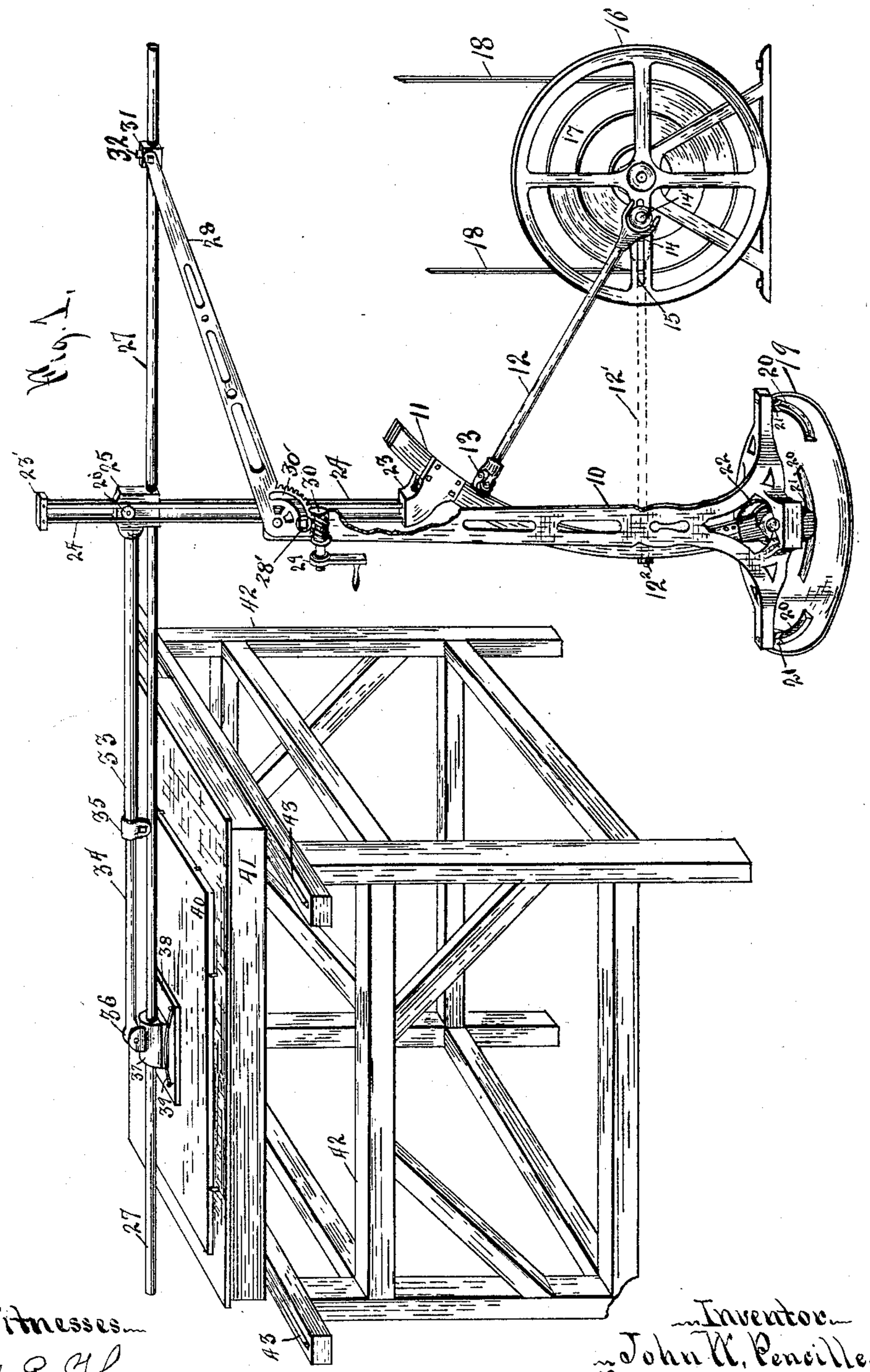
J. W. PENCILLE.

RUBBING MACHINE.

(Application filed Jan. 11, 1897.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.



Witnesses
N. E. Thomas
H. H. Warren

Inventor
John W. Pencille
By
Harris & Baldwin
Attorneys

No. 609,832. Patented Aug. 30, 1898.

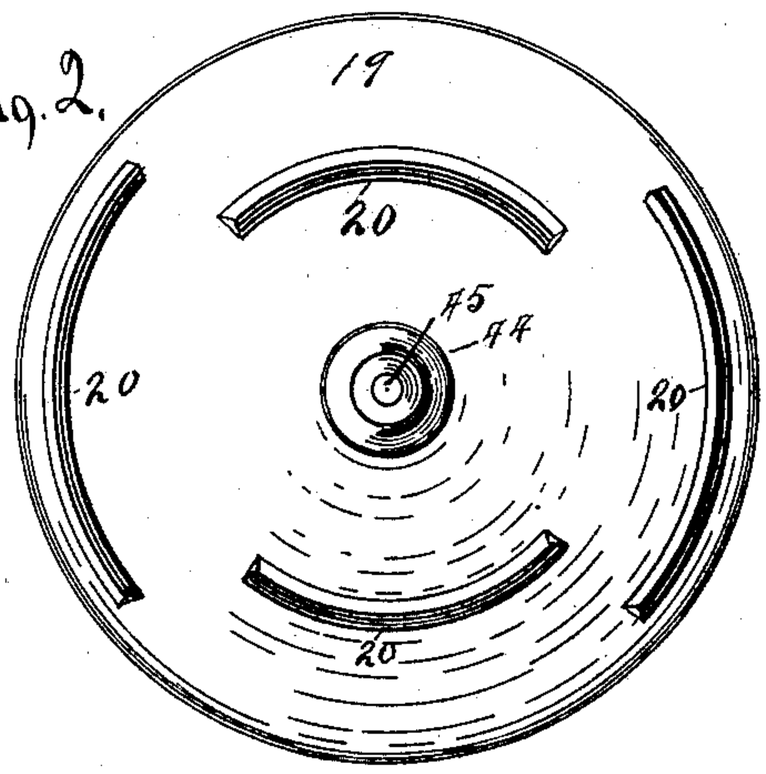
J. W. PENCILLE.

RUBBING MACHINE.

(Application filed Jan. 11, 1897.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 2.



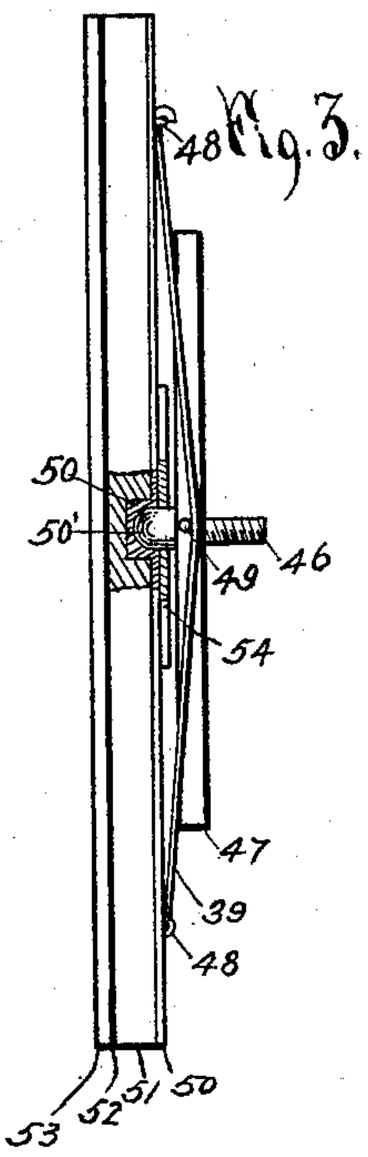


Fig. 3.

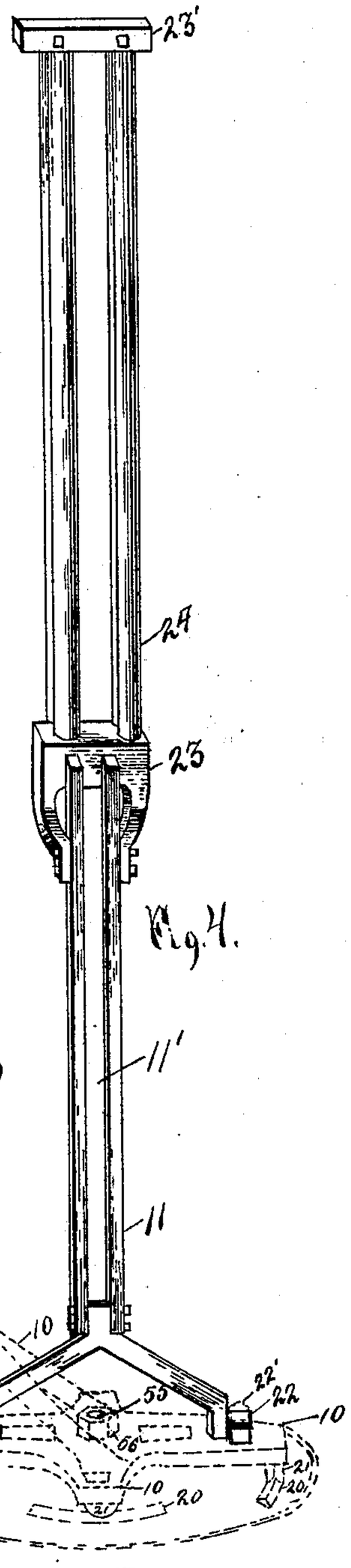


Fig. 4.

Witnesses—
H. E. Thomas
H. L. Warren

Inventor—
John W. Pencille—
By—
Harris and Baldwin—
Attorneys—

UNITED STATES PATENT OFFICE.

JOHN W. PENCILLE, OF JAMESTOWN, NEW YORK.

RUBBING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 609,832, dated August 30, 1898.

Application filed January 11, 1897. Serial No. 618,785. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. PENCILLE, a citizen of the United States, residing at Jamestown, in the county of Chatauqua and State of New York, have invented certain new and useful Improvements in Rubbing-Machines; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

The object of my invention is to make a strong and durable rubbing-machine and one which can be adapted to all kinds of cabinet-work, it being quickly geared to a long or short stroke and to any height, all of which will be readily understood from this specification and the accompanying drawings, in which—

Figure 1 is a side elevation of my rubbing-machine and table. Fig. 2 is a plan view of base-plate with tracks for machine thereon. Fig. 3 shows side elevation, partly in section, of improved rubbing-block. Fig. 4 shows detail of reciprocating frame.

Similar numerals refer to similar parts throughout the several views.

In the drawings, 19 represents a base-plate, which is firmly anchored to a solid foundation by large bolt 55 and nut 56, as shown in Fig. 4. Upon this plate are the raised tracks 20 20 20 20, Figs. 1 and 4, upon which travel the wheels 21 21 21 21, turning frame 10 back and forth when a lateral motion is desired to reach any part of the article to be rubbed. Resting upon the lower part of frame 10 in boxes 22′ is the reciprocating frame 11, as shown in Figs. 1 and 4. Within the slot 11′ is adjusted one end of pitman 12 by adjusting-nut 12, and the position of this pitman may be varied as a longer or shorter stroke is desired, as indicated at 12′. Universal joint 13 and swivel-joint 14 allow the machine to turn upon its track while in motion, if desired. Adjustable wrist-pin 14′ is made sufficiently long to allow pitman 12 to clear wheel 16. Slot 15 in wheel 16 allows a change in the length and speed of the stroke. Thus each end of the pitman may be adjusted and any desired stroke acquired.

To the upper part of frame 10 is attached movable arm 28, which by means of worm-gear 30, crank 29, and block 31 regulates the height of guide-bar 27. When arm 28 is at the desired height, it is firmly secured and the weight and jar taken from worm-gear 30 by lock-nut 28′, working in slot 30′. Block 31 is locked to guide-bar 27 by set-screw 32, and when thus secured easily allows the turning of the frame 10 by moving the rub-block 38 sidewise in either direction.

The upper part of reciprocating frame 11 is made up of block 23, in which are set the four upright rods or tubes 24 24 and which are held by cap 23′ at their top. These rods or tubes are made, preferably, of tubing, since it is both lighter and stronger. Within these tubes carriage or block 25 freely passes up and down, guided by friction-wheels 26 on each side, guide-bar 27 passing freely back and forth through carriage 25 as frame 11 reciprocates.

Arm 36, connecting carriage or block 25 to carriage or block 37, is made adjustable by passing smaller tube 34 within larger tube 33, and the length is fixed by a clamp at the desired point.

Rub-block 38, Figs. 1 and 3, is made with oval-headed pin 46, working in socket 50′ and attaching the rub-block to the carriage 37, block 47 fitting to the bottom of this carriage, springs 39 holding block and carriage together.

50 is a metal plate extending all over the surface of wood block 51 and in its center having the small metal socket 50′, and to which the springs are attached by staples 48 48. I sometimes put in a wearing-piece 54, but this is not necessary and is often left off. Under the wood part 51 I place a strip of rubber 52, which serves the double purpose of protecting the wood of the block from being soaked, and consequently becoming warped and cracked, and it also furnishes a soft surface for the rubbing-felt 53. This soft surface becomes especially noticeable when the rubbing-felt wears thin.

In operating the machine the table-top or article to be rubbed is fastened to the top of

car 41, which travels back and forth on inclosed wheels on track 43 on frame 42. Applying the power to belt 18 18 and pulley-block 17, wheel 16 is set in motion, the pitman causing frame 11 to reciprocate and at the same time giving the same motion to the rub-block, carriages 25 and 37 playing freely back and forth on guide-bar 27, by which guide-bar the operator controls the work being done, the rub-block adapting itself on pin 46 to any small inequalities in the surface to be rubbed and rubbing all parts equally on account of this adaptation.

It will readily be understood that this machine is equally as well adapted for polishing and sandpapering.

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

1. In rubbing-machines, a stationary base having a frame mounted thereon, an adjustable arm one end of which is mounted in the top of said frame and the other end connected to a guide-bar, a reciprocating frame mounted at the base of the frame and provided with a long slot and an adjustable wrist, a pitman attached thereto, the opposite end being connected to a drive-wheel to give a reciprocating motion to a rubbing-block, and a lateral motion to the guide-bar, as shown and described.

2. In rubbing-machines, a reciprocating frame, the upper part having suitable rods, a head-block mounted therein, friction-guides secured thereto, a guide-bar mounted in the head-block, a sleeve connecting the guide-bar to a movable arm mounted in the frame, the arm having ratchets to connect with a worm-gear to raise and lower the guide-bar, a set-screw to lock the arm in position, as shown and described.

3. In rubbing-machines, a reciprocating frame mounted in the base of an upright standard or frame that rests on a base-plate securely mounted below the line of the machine, having connections with a drive-wheel to move the reciprocating frame, having guide-rods at the upper end and guide connections through which passes a horizontal guide-rod carrying a rubbing-block which is controlled by a guide-rod and sleeve, substantially as shown and described.

4. In rubbing-machines, the base 19 having ways 20 20, the upright standard 10, having wheels to run on the track, a reciprocating standard 11, a driving-wheel 16, pitman 12, movable wrist 13, guide-rods 24, adjusting-arm 29, mounted in the top of the main standard, guide-rod 27, a rubbing-block mounted thereon, adjusting-sleeve 35, and rod 36, all combined and arranged to operate in the manner and for the purpose set forth.

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

JOHN W. PENCILLE.

Witnesses:

ANNA H. FURLOW,

WILLIAM E. KING.