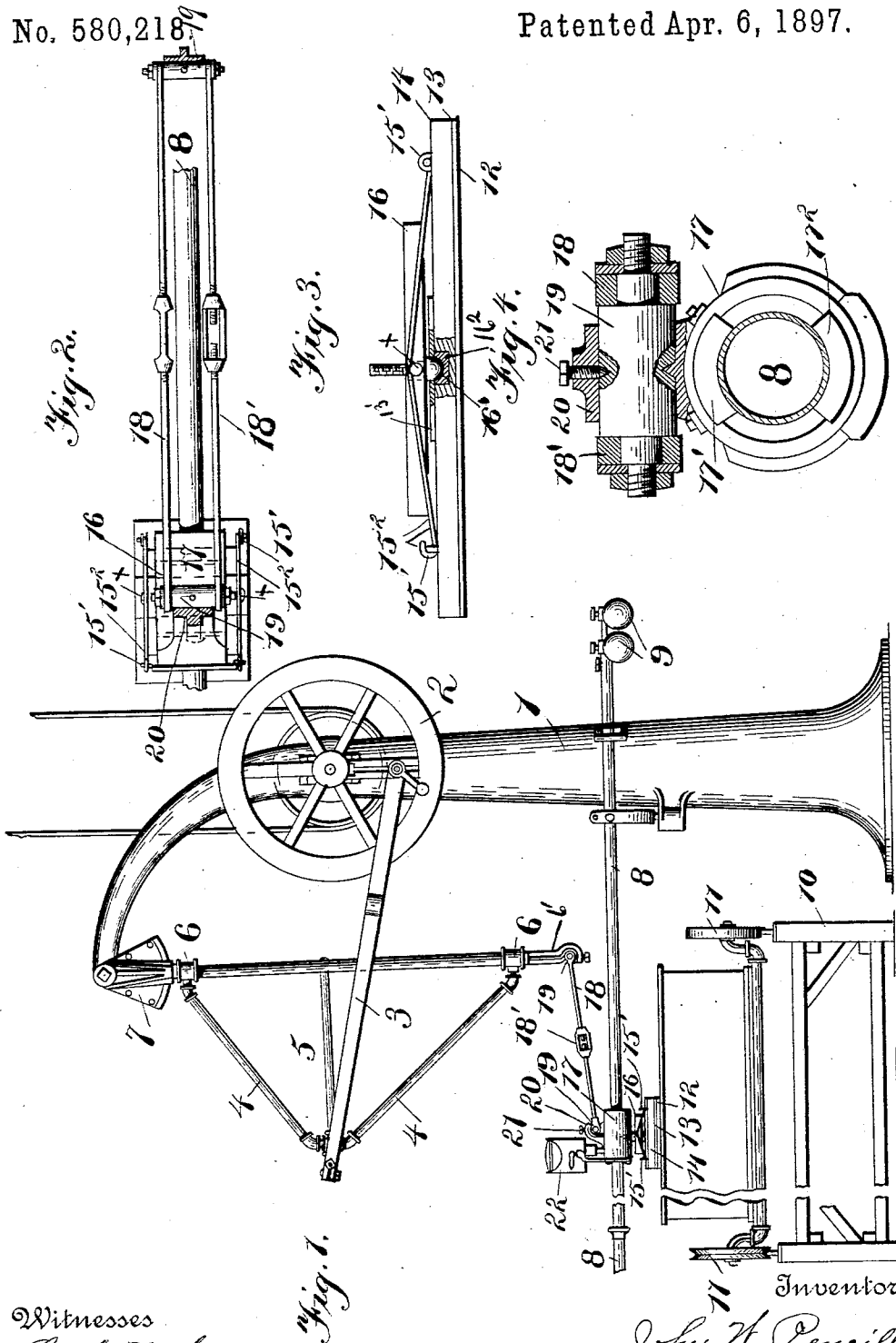


(No Model.)

J. W. PENCILLE.
RUBBING MACHINE.

No. 580,218

Patented Apr. 6, 1897.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN W. PENCILLE, OF JAMESTOWN, NEW YORK.

RUBBING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 580,218, dated April 6, 1897.

Application filed July 15, 1896. Serial No. 598,880. (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 Chautauqua 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 and letters of reference marked thereon, which form a part of this specification.

The object of my invention is to provide rubbing or polishing machines with a rubbing-block and means for controlling the motion of the same.

It consists, first, in providing the block with a heavy metal base to prevent warping or getting out of line, the method of securing the block to the head, and, second, improved arms for keeping the head-block in line, and one adapted to take the head lower than those heretofore used, all of which will be fully understood by this specification and the accompanying drawings, in which—

Figure 1 is a side elevation of a rubbing-machine having my improvements. Fig. 2 is a plan view of my improved rubbing-block. Fig. 3 is a side elevation, partly in section, of rubbing-block and connection. Fig. 4 is a sectional view of the connection for the arms, enlarged, with sleeve in cross-section.

In the working of rubbing-machines as heretofore made I have found several serious faults. They are generally made with a single arm centrally pivoted at each end to drive the reciprocating polisher-carriage on the guide-bar, and are thus liable to tilt or careen to one side; also, the outer end of the arm is set too high, giving too great distance from the surface of the rubbing-block, so that much of the motion is lost and they are unwieldy and liable to get out of order. Then the rubbing-blocks are made wholly of wood and are liable to warp and become untrue, causing very unsatisfactory work to be done. To overcome these objections is the principal object of my invention.

As before stated, in the drawings my improvements are shown on a type of rubbing-

machine, but they may be used on any other style of frame where a reciprocating motion is given the polishing-head. Accordingly only my improvements need be pointed out in this description.

In Fig. 2 of the drawings, at each end of the arms 18 and 18', I have metal piece 19, which is shown enlarged in Fig. 4, the two pieces 19 19 being made alike for convenience. These pieces are turned to a proper size to rest in bearings, one at the end of the vertical rod 6', the other in the arm of sleeve 17, and are held in position by spurs or pointed screws having bearings in their center, their ends being turned down to receive the ends of the drive-arms 18 18', which are secured to them by suitable washers and nuts, as shown in Fig. 4. 20 is the upper part of the sleeve-head, and 21 is the pivot-screw, with pointed or spurred end. 22 is the water-cup.

Instead of the spurs or pointed screws 21 a bolt might go through the piece, but the adjustment would not be as good. The arms might be each of one piece of metal or hard wood, but I find it better to make each arm in two parts and connect them by the adjustable screw-link or swivel, as shown. These pieces 19 19 and their connecting-arms 18 18' form a strong driving mechanism and one that never tilts or careens and one which allows of a much lower connection to the movable sleeve 17 than those heretofore used, thus greatly shortening the distance to the bottom of the polishing-block 13 14.

I prefer to make my rubbing-block of a piece of wood 14, having a heavy metal piece 13 secured to its under surface to prevent warping, and a cross-piece of metal 13' on top of the wood, and to the center of plate 13' is attached a metal center piece, the wood being hollowed out to receive it, and the metal center piece 16² is hollowed out to receive the oval-headed screw-bolt 16', which passes up through block 16 and screws into sleeve 17 to hold block 16 to it. Block 16 has oval-headed pins *x x* in each side, as shown. Rubbing-block 14 has screw-eyes 15' on its upper surface near each end, and into these are hooked the steel-wire springs 15², which are sprung over the oval-headed pins *x x* in the center to hold the rubbing-block to the upper block and sleeve 16 and 17. The rubbing-block being

on the oval-headed bolt 16' allows it to rock in all directions and adapt itself to all surfaces where slightly uneven. Wires 15² allow the block to be easily removed for re-covering
5 with the rubbing-felt 12, which should go over the whole under surface.

It is evident that in making this rubbing-block the exact description given might be departed from, but I have found the one de-
10 scribed substantial and practical.

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

1. In rubbing and polishing machines, the
15 adjustable reciprocating arms 18, 18', their ends having bearings on centrally-pivoted pieces 19, 19, to connect the vertical bar 6' with reciprocating sleeve 17, substantially as shown and described.

2. In rubbing and polishing machines, a 20 rubbing-block composed of wood piece 14, heavy metal piece 13, flexible piece 12, metal cross-piece 13', having suitable connecting parts to secure the block to sleeve 17, substantially as shown and described. 25

3. In rubbing and polishing machines, a rubbing-block composed of parts 12, 13, 13', 14, as described, having screw-eyes 15, 15', and spring-rods 15², 15², block 16, having pins *x, x*, with screw-bolt 16' to secure the parts 30 to sleeve 17, substantially as shown and described.

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

JOHN W. PENCILLE.

Witnesses:

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