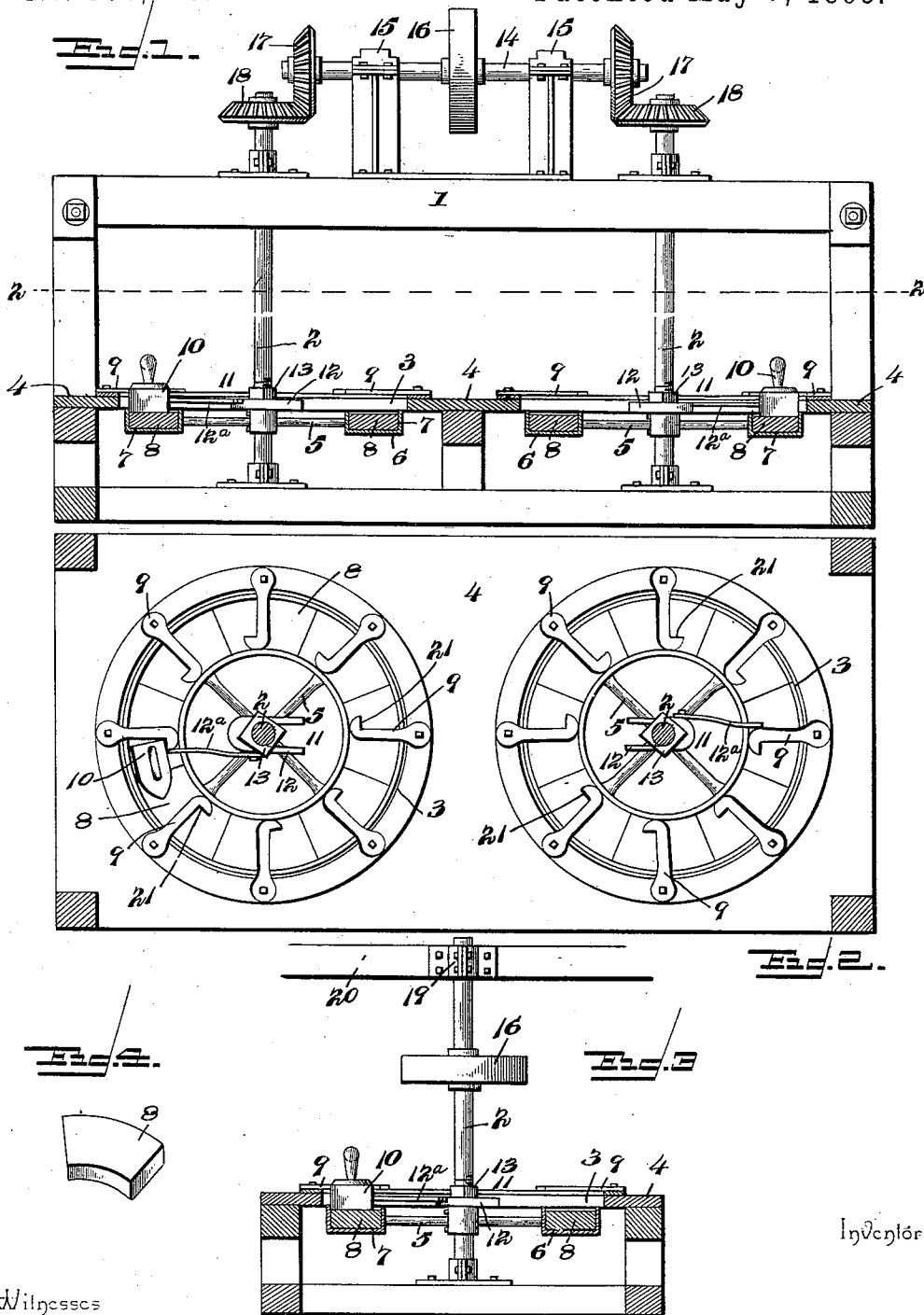


(No Model.)

C. P. PETERSON.
SAD IRON POLISHING MACHINE.

No. 538,743.

Patented May 7, 1895.



Witnesses

E. H. Stewart
E. H. Stewart

By *his* Attorney

C. P. Peterson

Cashow & Co.

UNITED STATES PATENT OFFICE.

CHARLES P. PETERSON, OF RIDGEDALE, TENNESSEE.

SAD-IRON-POLISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 538,743, dated May 7, 1895.

Application filed December 20, 1893. Serial No. 494,236. (No model.)

To all whom it may concern:

Be it known that I, CHARLES P. PETERSON, a citizen of the United States, residing at Ridgedale, in the county of Hamilton and State of Tennessee, have invented a new and useful Improvement in Sad-Iron-Polishing Machines, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to grinding and polishing machines, and particularly to devices for dressing sad-irons, the objects in view being to provide a simple and efficient device for grinding the working or polishing surfaces of sad-irons in the course of their manufacture; and with this object in view the invention consists in a certain novel construction, combination, and arrangement of parts fully described hereinafter in connection with the accompanying drawings, and particularly pointed out in the appended claims.

In the drawings, Figure 1 is a sectional view of a machine embodying my invention. Fig. 2 is a horizontal section of the same on the line 2 2 of Fig. 1. Fig. 3 is a vertical section of a slightly-modified form of the machine. Fig. 4 is a detail view, in perspective, of one of the grinding and polishing blocks.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

I designates a supporting frame, in which are mounted the vertical spindles 2, said spindles being concentric with openings 3 formed in a horizontal platform 4 supported in the framework. Carried by these spindles 2 slightly below the plane of said platform are rotary grinding wheels 5 having rims 6, which are channeled upon their upper sides, as shown at 7, for the reception of grinding or polishing blocks 8 of emery or other suitable abrasive material. These grinding and polishing blocks 8 are segmental in shape and are independently removable from the channeled supporting wheels, whereby one of the segmental sections or blocks may be replaced without affecting the others when worn or injured.

Secured to the platform 4 around the openings 3 therein are series of fixed holding arms 9, with which are engaged the irons 10, which rest upon the upper surfaces of the grinding

and polishing blocks. These holding arms maintain the irons from rotation with the grinding and polishing wheels.

Secured to the vertical spindles 2 slightly above the plane of the channeled rims of the wheels 5 are the agitating arms 11, which extend radially from the spindles and consist of a slotted block 12 having a terminal spring 12^a to engage the side surfaces of the irons successively during the rotation of the spindles to give a vibratory motion to the irons to bring their lower surfaces into contact with different parts of the grinding surfaces of the blocks 8 to avoid grooving or channeling such blocks. These agitating arms are slotted to receive the spindles and are secured to the spindles by means of nuts 13, or similar devices. The means for operating said vertical spindles 2 may be varied as desired, but in the construction shown in Fig. 1, said means consist of a driving-shaft 14 mounted in bearings 15 and carrying a belt-pulley 16, and intermeshing beveled gears 17 and 18 fixed respectively to the extremities of the driving shaft and the upper ends of the spindles.

In the construction illustrated in Fig. 3 the operating mechanism is more simple in construction and is adapted especially for use in connection with a machine in which only one grinding wheel is employed, in which case the belt-pulley 16 is attached directly to the spindle 2, the upper end of the latter being mounted in a bearing 19 in an overhanging or superjacent beam 20.

This being the construction of the improved mechanism the operation thereof, briefly stated, is as follows: The irons are placed with their operating or polishing surfaces upon the grinding blocks supported by the wheel, the rear ends of said irons being engaged by the holding arms 9, which are provided with terminal shoulders 21 to prevent lateral displacement, and the spindle 2 is rotated to cause a rotary movement of the wheel. As the agitating arm 12 engages the irons successively, it pushes the smaller or reduced ends of said irons outward or toward the periphery of the wheel. The rotation of the wheel has a tendency to move said smaller or reduced ends of the irons inward or toward the center of rotation, and hence the regular

vibration of the irons during the operation of the machine.

It will be understood that in practice various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit of the invention or sacrificing any of the advantages thereof.

Having described my invention, what I claim is—

1. In a machine of the class described, the combination of a horizontally disposed wheel provided with a channeled rim, grinding blocks fitting in said channeled rim, means for holding irons from rotation with the wheel while their lower surfaces are in contact with said grinding-blocks, a radial agitating arm mounted at concentric with and above the plane of the wheel and having its outer end arranged in position to engage the irons supported by the wheel, and means for rotating said wheel and agitating arm, substantially as specified.

2. In a machine of the class described, the combination with a supporting framework, of a vertical spindle mounted in bearings therein, a wheel fixed to the said spindle and provided with a channeled rim, separable segmental grinding blocks arranged in said channeled rim, stationary holding arms arranged above the plane of the wheel to engage and hold irons from rotating with the wheel, an agitating arm fixed to the spindle and having a terminal spring arranged with its outer free end in position to engage the irons successively during the rotation of the spindle, and means for operating the spindle, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

C. P. PETERSON.

Witnesses:

C. A. WILLARD,
J. CARDWELL.