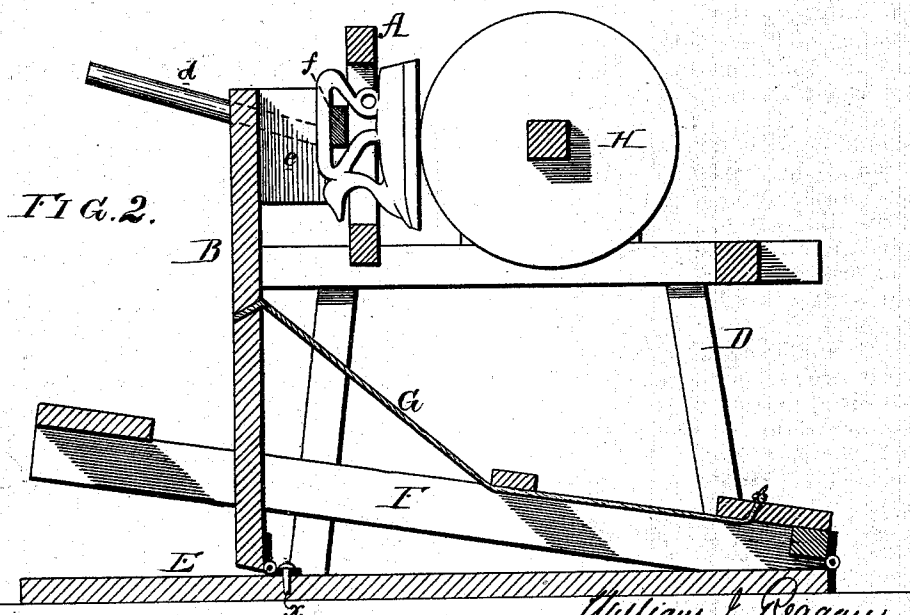
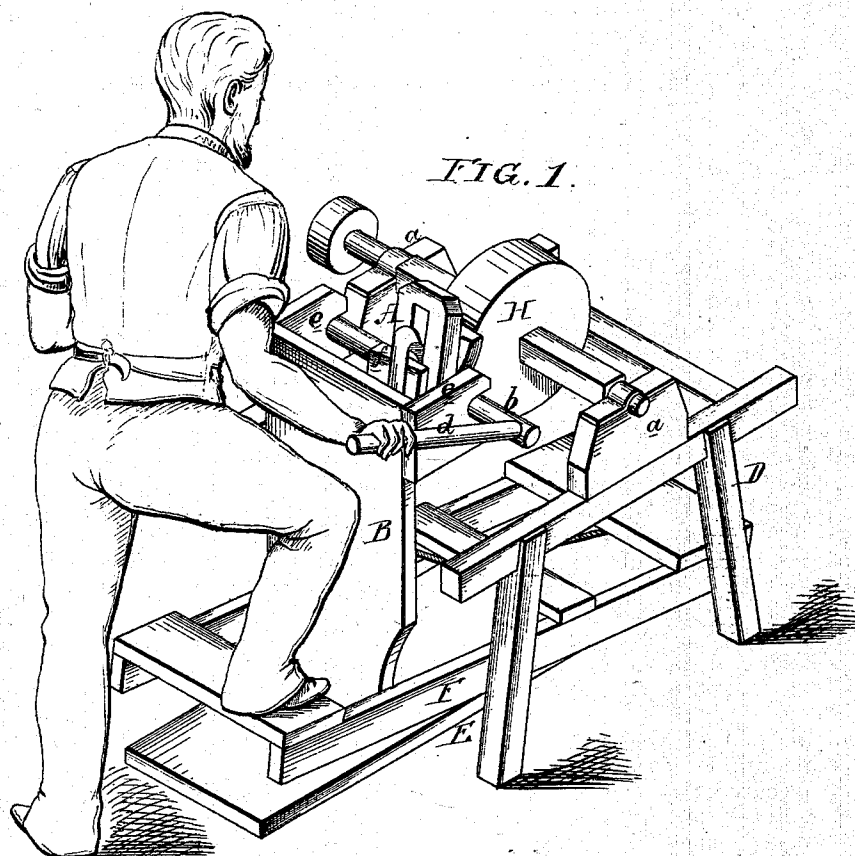


W. J. REAGAN.
Grinding-Machines.

No. 146,279.

Patented Jan. 6, 1874.



Witnesses, Hubert Howson
Harry Smith

William J. Reagan
by his Attys
Howson and Son

UNITED STATES PATENT OFFICE.

WILLIAM J. REAGAN, OF ROYER'S FORD, PENNSYLVANIA, ASSIGNOR TO
ROYER'S FORD IRON-FOUNDRY, OF SAME PLACE.

IMPROVEMENT IN GRINDING-MACHINES.

Specification forming part of Letters Patent No. 146,279, dated January 6, 1874; application filed
October 28, 1873.

To all whom it may concern:

Be it known that I, WILLIAM J. REAGAN, of Royer's Ford, Montgomery county, Pennsylvania, have invented a Machine for Grinding Sad-Irons, &c., of which the following is a specification:

The object of my invention is to facilitate the grinding of sad-irons and other articles by attaching them to a holder, A, so adapted to a frame, B, that an operator can move the sad-iron to and fro laterally, and vibrate it against the face of the grindstone H with his hands, while the frame is so hinged and so connected to a treadle that with his foot the operator can apply the necessary pressure of the sad-iron against the stone, all as shown in the perspective view, Figure 1, of the accompanying drawing.

The spindle of the grindstone H is caused to revolve in suitable bearings *a a* on a frame, D, which is secured to a base-plate, E, and to the latter is hinged the rear end of a treadle, F, which is so connected by a cord, strap, or other suitable device to the rocking frame B that the operator can, by placing his foot on the treadle, force the said frame toward the grindstone, from which, however, the frame will fall back when the treadle is released from the pressure of the foot.

It should be here understood that while the lower end of the frame B is so hinged that it can be vibrated from and toward the grindstone, the hinge is so connected to the base by a pin, *x*, that the frame can be vibrated laterally on the said pin, for a purpose explained hereafter.

The holder A consists of a spindle, *b*, provided with handles *d*, the spindle being adapted to slots in projections *e e* in front of the frame B, the central portion of the spindle between the said projections *e e* being formed for the reception of the object to be ground. In the present instance, this portion of the spindle consists of a slotted plate, through which the handle of the sad-iron is inserted, and there confined by a wedge, *f*, as shown in the vertical section, Fig. 2.

The operator seizes the handles *d d* of the holder, and, while applying pressure to the

treadle with his foot, vibrates the holder in its bearings on the frame B, or moves the holder to and fro laterally, or performs both operations simultaneously, so that every part of the face of the sad-iron may be exposed to the action of the stone.

The sad-iron may, through defect in casting, be occasionally of such a character as to demand a greater reduction at some points than others. This the operator is enabled to accomplish by twisting the frame B laterally on its pin *x*, and thereby directing to the grindstone that portion of the face of the sad-iron which demands the most reduction.

After the grinding of the sad-iron has been completed, the operator removes his foot from the treadle, permits the frame B to fall back, removes the holder, detaches the sad-iron therefrom, affixes a new one to the holder, adjusts the latter to the frame, and repeats the above-described operation.

It will be evident that my invention is not restricted to the grinding and polishing of sad-irons, for there are many articles of cast-iron and other metal the grinding of which may be facilitated by the above-described machine, which demands no alteration to fit it for the grinding of different objects than the adapting of the central portion of the holder to the retention of the object to be ground and polished. It will also be evident that the machine may be used for grinding other than plane surfaces. Rounded objects, for instance, can be ground and polished by it with facility.

I claim as my invention—

The combination, with a grindstone, of a rocking frame, B, to be controlled by the operator's foot, and a holder, A, so adapted to the said frame that it can be both vibrated and moved to and fro laterally therein, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WM. J. REAGAN.

Witnesses:

WM. A. STEEL,
HARRY SMITH.