

(No Model.)

E. POST.
GRINDING OR POLISHING MACHINE.

No. 497,477.

Patented May 16, 1893.

Fig. 1.

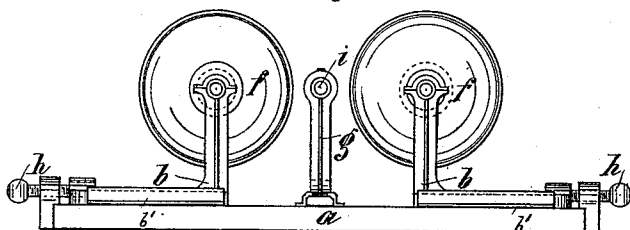


Fig. 2.

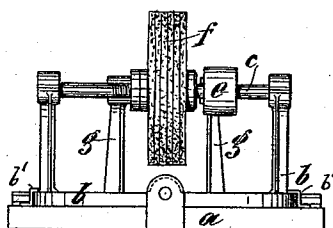


Fig. 3.

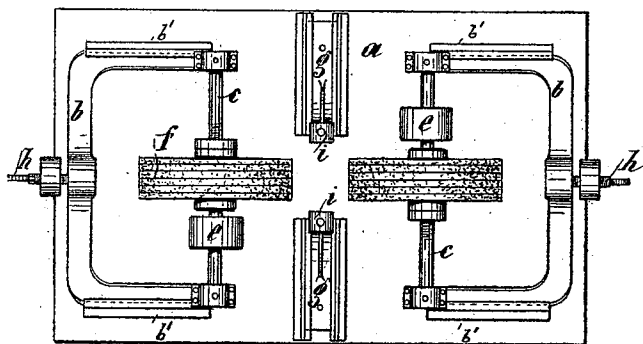
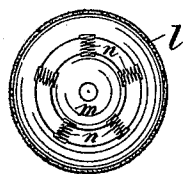


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

EUGEN POST, OF EHRENFELD-COLOGNE, GERMANY.

GRINDING OR POLISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 497,477, dated May 16, 1893.

Application filed May 6, 1892. Serial No. 431,995. (No model.)

To all whom it may concern:

Be it known that I, EUGEN POST, a subject of the King of Prussia, residing at Ehrenfeld-Cologne, Prussia, Germany, have invented new and useful Improvements in Grinding or Polishing Machines, of which the following is a specification.

This invention relates to a machine for grinding and polishing wire, metal rods, tubes, wooden rods and similar articles of any size and cross section by means of grinding and polishing substances applied to the periphery of two or more disks that act against one another.

The invention consists in the various features of improvement more fully pointed out in the claim.

In the accompanying drawings: Figure 1 is a side elevation of the machine. Fig. 2 is a front elevation and Fig. 3 is a plan of the same. Fig. 4 is an elevation of a modification of the polishing disk.

The letters *f*, represent two or more grinding or polishing disks arranged opposite to one another and fixed upon shafts *c*, which are hung in bearings or frames *b*. These frames engage suitable guides *b'*, on the bed plate *a*, in such a manner, that during the working of the apparatus, they may be adjusted nearer to or farther away from each other.

For a small apparatus, such for example as employed by gold workers, set screws *h*, are sufficient for moving the bearings *b*. In case of a larger apparatus the adjustment may be effected during operation, by means of hand wheels similar to those used in rolling mills.

At the side of the disks *f*, there are fixed upon the shafts *c*, belt pulleys *e*, by means of which the shafts *c*, and consequently the polishing disks *f*, are rotated toward each other. Between the shafts *c*, there is secured to the bed plate *a*, at each side of the polishing disks *f*, a sliding guide support *g*, as shown. At the level of the shafts *c*, these guide supports carry hollow bearings *i*, which are readily movable backward and forward and serve for the reception of the work.

The disks *f*, are composed of wood, felt or similar material, to the periphery of which the grinding or polishing substance is applied.

The apparatus operates in the following manner: The articles to be treated are passed

through the bearings *i*, of the guide supports and are thus placed between the disks *f*. The latter are then brought as close together as is requisite for the most favorable action upon the work and then the shafts *c*, are rotated. The work which is grasped at one end by the workman, can by reason of the ready movability of the bearings *i*, be continually rotated and fed lengthwise in such a manner, that the entire surface to be ground or polished can be subjected to a suitable extent and for a longer or shorter period to the action of the polishing disks. While the machine is in operation, the polishing disks and the bearings maintain their relative fixed position.

The disk illustrated in Fig. 4, consists of two concentric rings *m*, and *l*, connected by spiral springs *n*, and of which the outer ring *l*, carries the polishing material. The disk is by means of the spring *n*, rendered so elastic that it will yield to the projections and recesses of the work. This disk can be employed instead of all or any one of the disks *f*. By directly driving the machine through belt pulleys *e*, on shafts *c*, the rotation of the disks *f*, can be made very high, to cause a quick and effective operation.

It will be seen that by my invention grinding and polishing of articles of any size and cross section are possible; that the position of the work can be changed at any time and in any direction by the hand of the workman, and that the pressure of the work against the grinding and polishing material can be increased or diminished as desired. Moreover, unskilled labor can be employed and the workman is not liable to be struck by flying chips or broken polishing disks.

What I claim is—

The combination of guides *b'*, with sliding U shaped bearings *b* supported thereby, polishing disks *f*, hung in the bearings and with guides *g* and movable hollow bearings *i*, between the polishing disks, substantially as specified.

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

EUGEN POST.

Witnesses:

SIBILLA LANG,
H. A. MAXWELL.