Dec. 16, 1930. G. H. EKSTROM 1,785,695

PAD HOLDER FOR RUBBING MACHINES

Filed June 11, 1923

FIG. 1

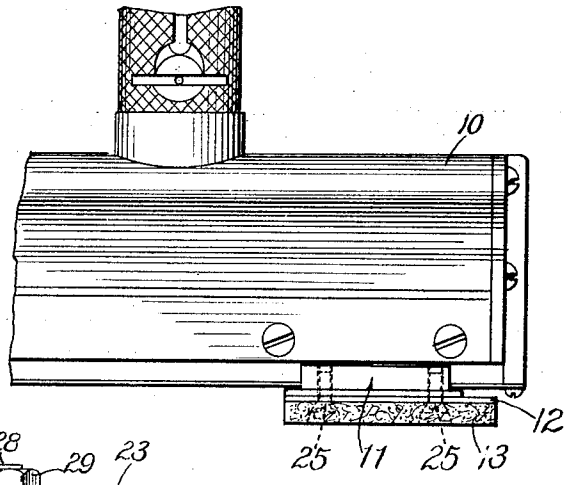
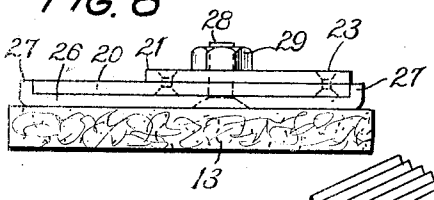


FIG. 6



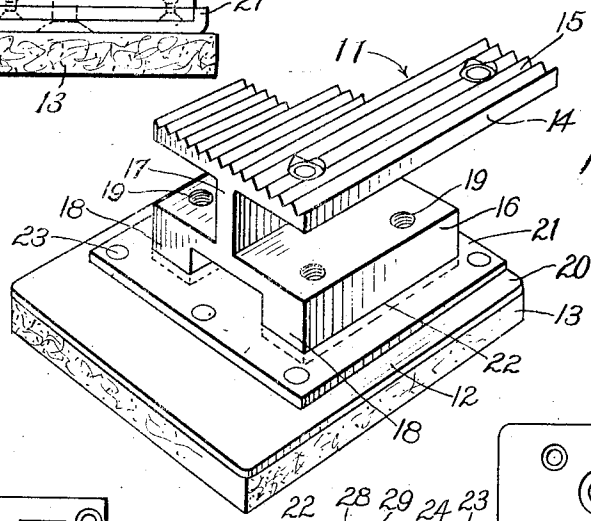


FIG. 2

FIG. 4

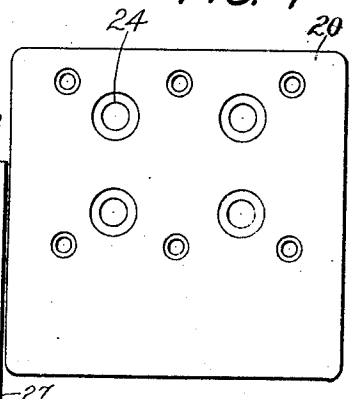
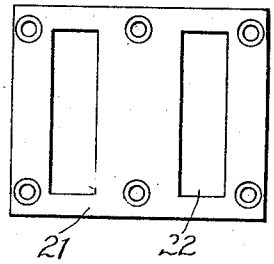


FIG. 3



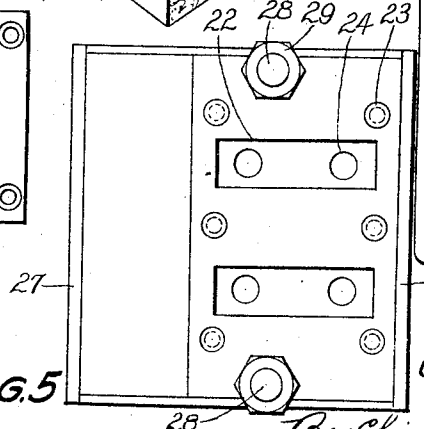


FIG. 5

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UNITED STATES PATENT OFFICE

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PAD HOLDER FOR RUBBING MACHINES

Application filed June 11, 1923. Serial No. 644,567.

The invention relates to improvements in pad holders for rubbing and polishing machines, and particularly for such machines having reciprocating pads and bearing slides.

Bearing slides for machines of the above character are commonly constructed with an upper bearing plate, mounted for reciprocation within the machine body, and a lower parallel pad holder supporting plate integrally connected therewith by a central upright web. The supporting plate is usually provided at each side with a downwardly extending projection to which the pad holder is secured. Heretofore pad holders have been provided with upstanding lugs adapted to fit over the ends of the projections. The lugs are held in position by bolts or pins extending through the projections lengthwise of the machine. Heavy felt rubbing pads are separately mounted upon the flat backing of each pad holder.

The rubbing pads are thus positioned at a material distance from the body of the machine, thereby increasing the overall vertical dimension of the latter. When in operation, the pads have a large leverage upon the bearing slides thereby causing increased friction and binding between the slides and their guideways.

The horizontal bolts or pins by which the pad holders are held in place are subject to an objectionable amount of end thrust which results in wear and lost motion.

The primary object of the invention is to avoid the above objections by providing a pad holder which brings the rubbing pad close to the body of the rubbing machine.

A further object is to provide a pad holder which is secured to the bearing slide by vertically extending screws, thereby eliminating the upwardly extending lugs and transverse screws.

Another object is to provide a pad holder in which the attaching screws for securing the holder to the bearing slide also serve to hold the rubbing pads in place.

A further object is to provide a pad holder in which the rubbing pad can be easily and quickly replaced, when worn out or when work of a different character is to be done.

Another object is to provide a pad holder which is made of simple and easily constructed parts, and which is efficient in use.

Further objects and advantages will become apparent as the description proceeds.

In the accompanying drawings which illustrate the preferred embodiment of my invention, Figure 1 is a fragmentary side view of a rubbing machine with my improved pad holder attached thereto. Fig. 2 is a view in perspective of a pad holder slide of common construction with my improved pad holder thereon. Fig. 3 is a plan view of the top plate, and Fig. 4 is a plan view of the bottom plate of the pad holder. Fig. 5 is a plan view of a modified form of pad holder, and Fig. 6 is a side view thereof.

In the drawings, 10 indicates the body of a rubbing machine of well known construction which encloses a bearing slide 11 adapted to be reciprocated by any suitable means, such as fluid actuated pistons. Mounted on the bearing slide below the machine body is a pad holder 12 to which is secured a rubbing pad 13 of any suitable character.

The bearing slide 11 has an upper plate 14, preferably made with a serrated bearing surface 15, and an attaching plate 16 rigidly connected thereto by a central upright web 17. The attaching plate is mounted for reciprocation just below the body of the machine. Mounted on opposite sides of the attaching plate are parallel downwardly extending projections 18 which extend lengthwise of the machine. Each projection is provided with a plurality of vertical tapped bores 19 for attaching the pad holder.

The pad holder 12 comprises a rectangular bottom plate 20 to which is secured the rubbing pad 13, and a rectangular top plate 21, somewhat smaller in size. Parallel slots or openings 22 in the top plate 21 are adapted to receive the lower ends of the projections 18. The plates are secured together by any suitable means such as rivets 23. Holes 24 in the bottom plate 20 underlie the slots 22, and are in alinement with the bores 19 when the assembled pad is in position on the bearing slide. The pad and pad holder are secured to the bearing slide by screws 25 which

extend through the pad and the holes 24 into the tapped bores 19. When the pad holder is in place, the projections fit directly against the bottom plate 20 through the openings 22, thereby bringing the rubbing pad close to the body of the machine and preventing any lateral displacement during operation.

In Figs. 5 and 6, the pads 13 are glued or otherwise secured to a plate 26 having upturned edges 27 adapted to fit over the edges of the bottom plate 20. The pad holder 12 is separately attached to the bearing slide 11 by the screws 25, and the plate 26 is then secured to the pad holder by bolts 28. The top plate 21 is lengthened to extend entirely across the bottom plate to provide a seat for the nuts 29 on the bolts 28. When the pad 13 is worn or when work of a different kind is to be performed, the plate 26 may be quickly removed and a new plate with the proper kind of rubbing pad substituted therefor.

I have eliminated the upstanding lugs found on prior pad holders and the longitudinal screws for securing the lugs to the projections. Instead I have utilized the screws for attaching the pads to the holders to also secure the holders to the bearing slides. The troublesome end thrust on the old screws is thus eliminated. The overall dimension of the machine is reduced. The parts of the pad holder are simple in construction and inexpensive to manufacture. The pad holder is held rigidly in place, and is durable and efficient in use.

While I have disclosed the preferred embodiment of my invention with considerable particularity for purposes of illustration, it should be understood that various changes may be made without departing from the spirit and scope of the invention as expressed in the appended claims.

I claim as my invention:

1. A pad holder for rubbing machines having, in combination a bearing slide having screw openings and downward projections, a top plate having slots for receiving the downward projections of said bearing slide, a bottom plate secured to said top plate and having holes underlying said slots, a rubbing pad, and screws extending through said holes into said screw openings for holding the rubbing pad against said bottom plate and said bottom plate against said bearing slide.

2. A pad holder for rubbing machines having, in combination, a bearing slide having downward projections, a top plate having openings therein for receiving the downward projections, a bottom plate fitting below said top plate and directly against said projections, means for securing said plates together, and screw means for securing said bottom plate to said projections.

3. A pad holder for rubbing machines having, in combination, a movable slide member having a projection extending in the line of movement, a plate having a slot fitting over said projection, a second plate fitting directly against said projection, means for rigidly securing said second plate to said projection, means rigidly connecting said plates, and a rubbing pad on said second plate.

4. A pad holder for rubbing machines having, in combination, a movable operating member, a removable plate in interlocking engagement with said member, a second plate fitting directly against said removable plate, a rubbing pad on said second plate, means securing said second plate to said first plate, and means removably securing said second plate to said member, said second plate holding said first plate and said member in interlocking relationship.

In testimony whereof, I have hereunto affixed my signature.

GUSTAF H. EKSTROM.