To all whom it may concern:

Be it known that we, FRANCIS G. MEDHURST and ALBERT J. MEDHURST, citizens of the United States, residing at Fromberg, 5 in the county of Carbon and State of Montana, have invented certain new and useful Improvements in Bur-Sharpening Machines; and we do hereby 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.

This invention relates to new and useful improvements in bur sharpening machines and the principal object of the invention is to provide a novel means for holding and sharpening burs.

Another object of the invention is to provide a novel means for mounting the sharpening wheel in position for operation.

A still further object of the invention is to provide a novel means for supporting the bur being sharpened.

With these and other objects in view, the invention consists in the novel combination and arrangement of parts which will be fully set forth in the following specification and accompanying drawings, in which:

Figure 1 is a top plan view of a bur sharpening machine constructed in accordance with this invention. Fig. 2 is a front view in elevation of Fig. 1. Fig. 3 is a sectional view on line 3-3 of Fig. 1, and Fig. 4 is a sectional view on line 4-4 of Fig. 1.

Referring to the drawings by characters of reference, the numeral 1 designates the main supporting table comprising the base 2, having the upstanding flange 3 formed at the rear edge thereof. This table is provided at spaced intervals with transverse grooves 4, which are designed to form channels in which the guides of the movable table slide. The movable table above referred to is designated generally by the numeral 5 and comprises the body 6 having secured to the under side thereof the guide 7 and secured at a suitable point on the body is the disk 8, which is held in place by means of a screw 9.

Hingedly connected as at 10 to the rear wall 3 is the grinding wheel support 11 comprising the rectangular body 12 on which the bearing blocks 13 are mounted. These bearing blocks are babbitted as at 14 and 55 the metal 14 is shaped to provide the rib 15 which extends into the groove formed near each end of the shaft, which will be more fully hereinafter described. The shaft above referred to is designated by the numeral 16 and is provided near its each end with a groove 17 in which the rib 15 engages. A suitable belt wheel 18 is carried at one end of the shaft and opposite end of the shaft is provided with a collar 19 and a screw threaded extension 20 on which the nut 21 fits. The grinding wheel is designated by the numeral 22 and is clamped between the collar and the nut so as to rotate upon the rotation of the shaft.

It will be apparent from the foregoing that in use the bur 23 to be sharpened is placed on the disk 8 so that the same surrounds the disk and upon setting the machine in motion, the wheel 22 will rotate and upon passing down on the support 11 it will be seen that the bur will be ground. In order to return the support 11, a suitable eye 24 is provided and forms connection for the spring 25, the opposite end of which is connected to a suitable eye 26 carried by the wall 3. As illustrated in the dotted lines in Fig. 3, it will be seen that the spring normally tends to hold the support 12 up and the wheel from engagement with the bur.

While in the foregoing there has been shown and described the preferred embodiment of this invention, it is to be understood that such changes may be made in the combination and arrangement of parts as will fall within the spirit and scope of the appended claim.

What is claimed is:

A bur sharpening machine comprising a table, an upstanding flange at the rear edge of said table, guides on the upper surface of the table extending at right angles with relation to the flange, a movable table slidably mounted on the guides, a grinding wheel supporting arm, a hinge connecting the grinding wheel supporting arm with the flange, a grinding wheel rotatably mounted
on the supporting arm, the rear end of said arm adapted to abut the flange upon the downward movement of the grinding wheel to limit said movement, and a spring connected to the upper edge of the flange and to the supporting arm intermediate its end to yieldably hold the free end of said supporting arm and the grinding wheel upwardly.

In testimony whereof we affix our signatures in presence of two witnesses.

FRANCIS G. MEDHURST.
ALBERT J. MEDHURST.

Witnesses:
Ed Lester,
J. J. Zaun.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D.C."