

Aug. 5, 1941.

J. ENGLISH

2,251,702

MOUNTING FOR ABRADING WHEELS

Filed May 16, 1940

Fig. 2.

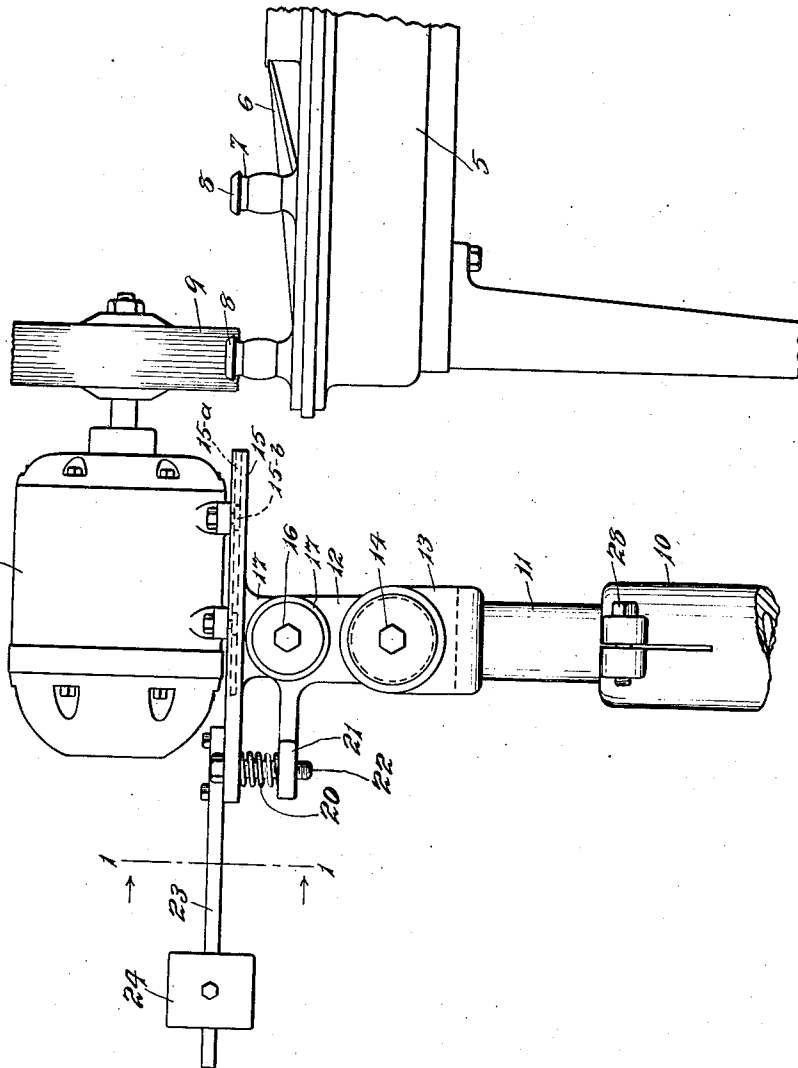
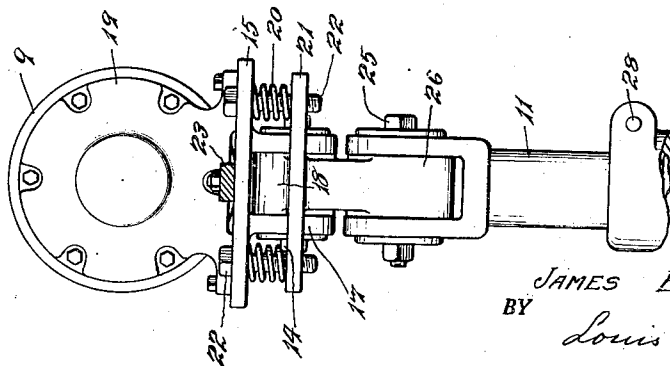


Fig. 1.



INVENTOR.
JAMES ENGLISH.
BY *Louis V. Lucia*
ATTORNEY.

UNITED STATES PATENT OFFICE

2,251,702

MOUNTING FOR ABRADING WHEELS

James English, Winsted, Conn.

Application May 16, 1940, Serial No. 335,589

5 Claims. (Cl. 51—166)

This invention relates to a mounting for abrading wheels or the like, and has, for its object, the provision of novel means for adjustably mounting such wheels with relation to abrading machines.

A further object of the invention is to provide an adjustable mounting for the motor which operates the abrasive wheel of an abrading machine.

A still further object is to provide an adjustable mounting, for such an abrading wheel, which includes adjustable means for resiliently positioning said wheel to apply a desired pressure upon the work which is brought into contact therewith.

Further objects of the invention and advantages thereof will be more clearly understood from the following description and from the accompanying drawing in which:

Fig. 1 is an end view, in elevation, of my improved support on line I—I of Fig. 2.

Fig. 2 is a side view of my improved support shown in association with an abrading machine of a conventional form.

As shown in the drawing, the numeral 5 denotes the base of an abrading machine upon which is rotatably mounted a turret 6, having supporting chucks 7 thereon for holding parts of work 8 which are moved into contact with an abrading wheel for polishing or buffing the same.

My invention includes a support having a base 10 within which is slidably mounted, for vertical adjustment, a post 11 carrying a frame 12 which is pivoted to a fork 13 on said post 11, as at 14.

A table 15 is pivoted on said frame, as at 16, by means of depending portions 17 which are connected to an extension 18 of said frame.

A motor 19, which carries and drives the wheel 9, is mounted on said table and adjustably secured thereto by means of conventional dovetail slots 15-a and bolts 15-b. The said motor is so mounted that the weight thereof will tend to rock the table 15 on its pivot and force the wheel 9 downwardly in the direction of the work 8.

The rocking of the table 15 on its pivot 16, by the weight of the motor, is adjustably limited by means of bolts 22 which are threaded to an extension 21 on the member 12.

Springs 20 are provided, between said extension and table, to urge said table and wheel to their normal position.

The said table is provided with an extension 23, upon which is adjustably mounted a counterweight 24, against the weight of the motor, for regulating the pressure which is applied by the

wheel 9 to the work parts 8 as they are moved into contact with and under the said wheel.

The wheel 9 may be adjustably positioned with relation to the work parts 8 by adjustment of the post 11 and the member 12 and the weight which is applied to the wheel 9, by the motor, may be adjusted by shifting of the counterweight on the extension 23.

The vertical position and angle of the wheel, with relation to the work, may also be adjusted, as desired, by adjustment of the frame 12 in the fork 13. This adjustment being made by means of the clamping member 25 whereby, after the said frame has been adjusted, friction may be applied thereto by squeezing the portion 26 of said frame between the upright members of said form.

The height of the wheel may also be adjusted with relation to the turret 6, or the work 8, by raising the post 11 in the base 10 within which the said post is adjustably secured by such means as the clamping screw member 28.

From the foregoing description, it will be readily understood that, in the operation of my invention, the weight of the driving motor will tend to rock the table 15 on its pivot and force the wheel upon the work, as it is moved into contact with said wheel by the turret 6, with a pressure regulated by the counterweight 24.

It will be further understood that the springs 20 need not be used except to retain the table in its normal position as adjusted by the bolts 22. However, the said spring may act to force the wheel 9 against the work in such cases as where my improved mounting is adjusted to support the wheel at such an angle that the counterweight 24 will not be effective.

I claim:

1. A mounting for an abrading wheel, or the like, comprising an upright base, a post vertically adjustable in said base, a frame pivoted on said post, a wheel supporting member pivoted on said frame, a motor carrying said wheel and mounted upon said supporting member, and spring means for retaining said frame in normal position; the weight of said motor urging said wheel in a direction towards work carried past the same, and a counterweight for adjusting the amount of pressure which is applied to said work by said wheel.

2. A support for an abrading wheel comprising an adjustable upright member, a frame pivoted on said upright member, an extension on said frame, a wheel supporting member pivoted to said extension, a motor mounted to said support-

ing member and carrying said wheel in operating position relative to work brought into contact therewith, spring means urging said supporting member to move said wheel towards said work, means for adjusting said supporting member against the tension of said spring means to regulate the position of said wheel with relation to said work and a counterweight carried by said supporting member and adjustable to control the tension applied to said wheel by said spring means.

3. A mounting for an abrading wheel, or the like, comprising an adjustable upright member having a frame pivoted thereon, a supporting member pivoted to said frame, a pair of springs opposite the pivot of said supporting member urging the same away from said frame, a motor mounted on said table and carrying said wheel in position to engage work brought into contact therewith, means extending through said table and threaded to said frame for positioning said wheel against the tension of said springs, an extension on said supporting member, and a counterweight adjustable on said extension for regulating the amount of tension which is applied to said wheel by said springs.

4. A mounting for an abrading wheel, or the like, comprising a base, a post vertically adjustable in said base, a forked portion on said post, a frame pivoted in said forked portion, an ex-

tension on said frame, a motor support pivoted at one side thereof to said extension, a separate extension on said frame, spring means supported on said separate extension and urging the opposite side of said support away from said frame, a motor mounted on said support, a wheel rotatably carried by said motor in position to engage work on a machine adapted to carry said work past said wheel, screws extending through said motor support and springs and threaded to said separate extension for adjusting the position of said motor support to regulate the position of said wheel with relation to the work on said machine against the weight of said motor, and a counterweight for adjustably resisting the weight of said motor to regulate the amount of pressure with which said wheel is applied to work brought into contact therewith.

5. A support for an abrading wheel comprising an adjustable upright member, a frame pivoted on said upright member, a wheel supporting member pivoted on said frame, a wheel rotatably mounted on said supporting member and carried thereby in operating position relative to work brought into contact with said wheel, spring means urging said supporting member to move said wheel towards said work, and adjustable gravity means to control the tension applied to said wheel by said spring means.

JAMES ENGLISH.