Nov. 5, 1929. A. M. DRAKE 1,734,080

GRINDING WHEEL SLIDE AND ADJUSTING MECHANISM THEREFOR

Filed Jan. 30, 1926

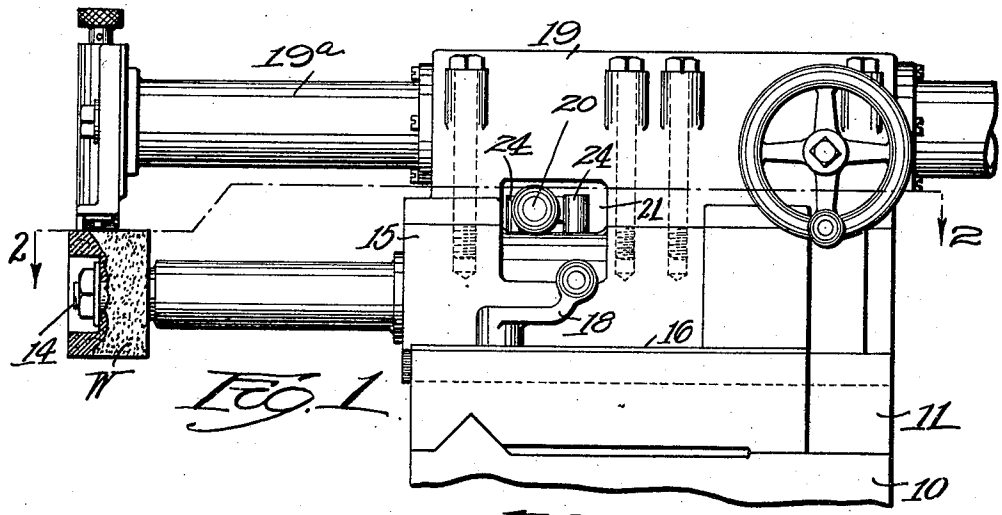


Fig. 1.

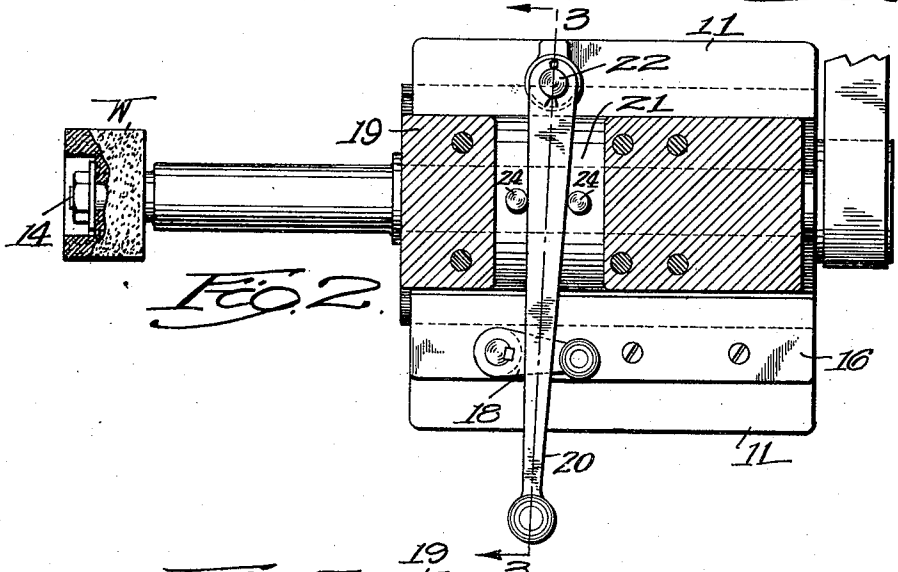


Fig. 2.

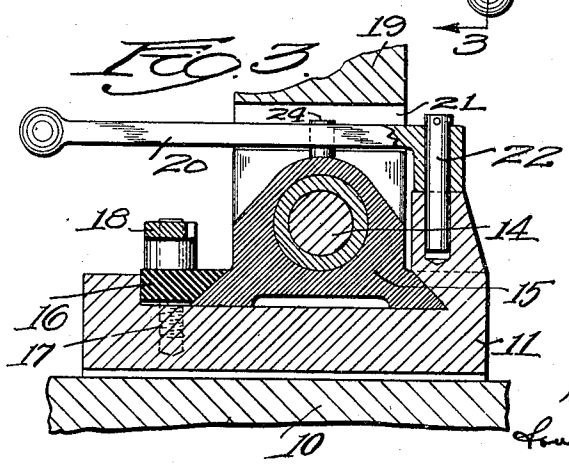


Fig. 3.

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UNITED STATES PATENT OFFICE

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GRINDING-WHEEL SLIDE AND ADJUSTING MECHANISM THEREFOR

Application filed January 30, 1926. Serial No. 84,917.

This invention relates to a wheel slide for a grinding machine and particularly to means for manually adjusting the wheel slide axially in the machine.

In certain types of grinding machines the wheel carriage has no axial movement during the operation of the machine and the work table moves axially to feed the work past the wheel. If the work table is moved by a hydraulic mechanism, it is not always easy to bring the wheel and work to an exact desired relation by means of the table feed, as the hydraulic mechanism is not well adapted to fine adjustment. But such exact positioning is frequently necessary, particularly when an end-facing operation is to be performed.

Accordingly I have provided a supplementary feeding mechanism or adjusting mechanism by which the grinding wheel may be adjusted axially relatively to the work.

In the preferred form of my invention I have provided a wheel shaft bearing or slide so mounted on the wheel carriage that it can be released therefrom when desired, and I have provided a manual device for moving the wheel slide when thus released.

My invention further relates to arrangements and combination of parts which will be hereinafter described and more particularly pointed out in the appended claims. A preferred form of the invention is shown in the drawings in which

Fig. 1 is a side elevation of parts of a grinding machine including my improved wheel slide and adjusting mechanism;

Fig. 2 is a sectional plan view, taken along the line 2—2 in Fig. 1; and

Fig. 3 is a sectional end elevation, taken along the line 3—3 in Fig. 2.

Referring to the drawings, I have shown a portion of a grinding machine base or frame 10 having a wheel carriage 11 slidable transversely thereon. A grinding wheel W is mounted on a wheel shaft 14 rotatable in bearings in a wheel slide 15 mounted in suitable guide ways in the wheel carriage 11.

A loose guide bar or gib 16 (Fig. 3) is provided at one side of the wheel slide 15 and this guide bar may be forced against the wheel slide by a clamping screw 17 and handle 18 to secure the slide in adjusted axial position.

A wheel truing device is mounted on a supporting member 19ª slidable axially in a bearing head 19, preferably secured firmly to the top of the wheel slide 15.

A lever 20 extends through a recess 21 in the upper part of the wheel slide 15 and swings about a stud or pivot 22 fixed at the rear of the carriage 11. Pins 24 on the wheel slide 15 engage the handle 20 on both sides thereof.

When it is desired to adjust the grinding wheel W axially toward or from the work, as is necessary in setting the wheel for an end-facing operation, the clamping handle 18 is moved to release the wheel slide, and the slide is then adjusted axially as may be desired by means of the handle or lever 20. When the wheel has been placed in a desired position, the wheel slide is again clamped in position by means of the clamping handle 18.

I have thus provided a very simple construction by which slight but accurate axial adjustments of the wheel relative to the work may be made when necessary, and by which the wheel, when thus adjusted, will be retained very firmly and rigidly in operative position.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein described otherwise than as set forth in the claims, but what I claim is:

1. In a grinding machine, a frame, a wheel carriage having axially extended guide ways therein, a wheel slide mounted in said guide ways, said slide having a transverse recess through its upper portion, and a lever mounted on said carriage and extending through said said recess, said lever directly engaging said wheel slide for manual adjustment thereof axially in said frame.

2. In a grinding machine having a frame, in combination, a grinding wheel, a wheel shaft, a slide for said wheel and shaft, said slide being capable of movement in said frame axially of said shaft and having a transverse recess therethrough, manual means to vary the adjusted axial position of said wheel slide, and means to hold said slide in fixed axial position in said frame, said slide having spaced

contact studs mounted thereon and positioned in said recess, said manual adjusting means comprising a lever pivoted at the rear of said wheel slide and extending thereacross through said recess to the front of said frame, said wheel slide being engaged by said lever for axial movement thereby manually in either direction when said holding means is released.

3. In a grinding machine having a frame, the combination of a grinding wheel unit comprising a wheel carriage having axially extended guideways therein, a wheel slide mounted in said guideways, a pair of parallel shafts mounted one above the other in said carriage, the lower of said shafts being mounted in said wheel slide and carrying a grinding wheel, the upper of said shafts being slidably mounted above said wheel slide and carrying a truing device, said wheel slide having a transverse recess arranged between said shafts, and a lever mounted on said carriage and extending through said recess, said lever engaging said wheel slide for manual adjustment thereof, axially in said frame and, a clamping device on said wheel slide, adapted to clamp said slide in adjusted position in said frame.

In testimony whereof I have hereunto affixed my signature.

ALDEN M. DRAKE.