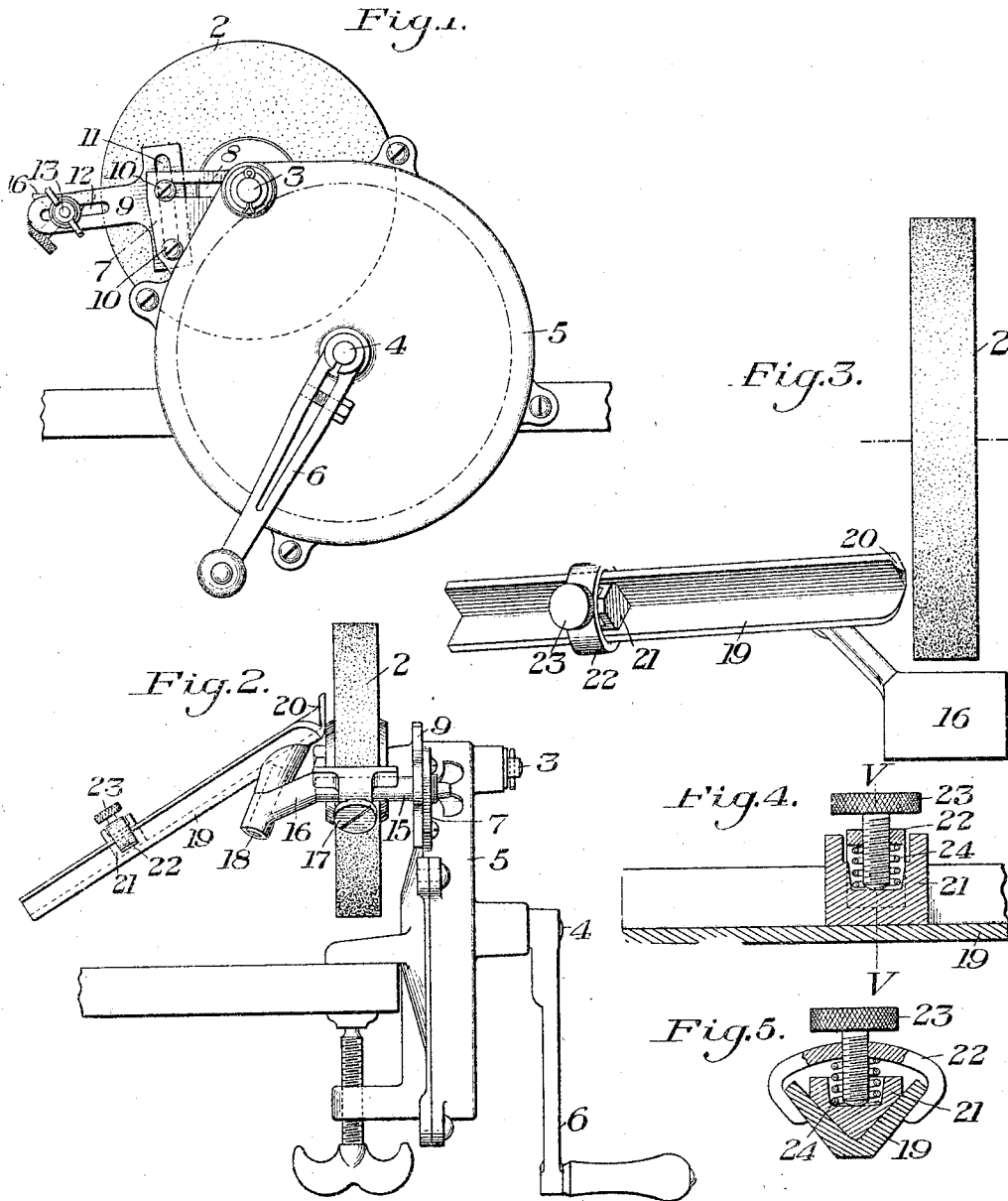


A. G. RODGERS.
 DRILL SHARPENING ATTACHMENT FOR GRINDING MACHINES.
 APPLICATION FILED SEPT. 6, 1912.

1,052,968.

Patented Feb. 11, 1913.



WITNESSES

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UNITED STATES PATENT OFFICE.

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DRILL-SHARPENING ATTACHMENT FOR GRINDING-MACHINES.

1,052,968.

Specification of Letters Patent.

Patented Feb. 11, 1913.

Application filed September 6, 1912. Serial No. 719,023.

To all whom it may concern:

Be it known that I, ASHMEAD G. RODGERS, a resident of Niagara Falls, Niagara county, New York, have invented a new and useful Drill-Sharpener Attachment for Grinding-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of a grinding machine showing one form of my improved attachment connected thereto; Fig. 2 is an end view of the same; Fig. 3 is a plan view of the wheel, together with the drill holder and support in one position when used for grinding a drill; Fig. 4 is a longitudinal sectional view through the drill holder and stop; and Fig. 5 is a transverse section on the line V—V of Fig. 4.

My invention has relation to attachments for grinding machines for holding drills to be sharpened, and more particularly for twist drills; and is designed to provide a cheap and efficient device of this character which can readily be attached and removed from a hand grinding machine, and which can be adjusted in order to vary the angle of the cutting edge of the drill, and which can also be moved about an axis which is the proper angle to give the drill sufficient clearance.

The precise nature of my invention will be best understood by reference to the accompanying drawings, which will now be described, it being premised, however, that various changes may be made in the details of construction and general arrangement of the parts without departing from the spirit and scope of my invention as defined in the appended claims.

In the accompanying drawings, the numeral 2 designates a grinding wheel, which is rotatably mounted on a shaft 3, which is driven by means of gearing connected to a shaft 4, and within a gear casing 5. Connected to one end of a shaft 4 is an operating crank 6.

Formed integrally with the casing 5 and extending parallel with the grinding wheel 2 is a bracket 7, which is provided with a slot 8 at its upper end. Secured to this bracket 7 is an adjustable bracket 9, which is secured thereto by means of screws 10, one of which passes through the slot 8 in the

bracket 7, and a slot 11 in the adjustable bracket 9. The outer end of this adjustable slot 12, for receiving a screw extension 13 on the end of a supporting bar 15, which bar extends parallel with the axis of the grinding wheel, and on which is adjustably secured a drill holder support 16 by means of a screw 17. The support 16 is provided with a work rest and a forwardly and downwardly extending arm, and connected to this arm is an upwardly and forwardly extending pivot pin 18. 19 designates the tool holder, which is provided with a V-shaped groove in its upper face for the reception of the drill to be ground, and is also provided with a stop 20 at its upper end for the point of the drill to be ground. Slidably mounted within the groove of the drill holder is an angle block 21, which is arranged to form the back stop for the drill to be ground, and 22 is a clip which is provided with downwardly and inwardly extending arms which engage the outer walls of the drill holder 19.

23 is a set screw for retaining the V-block 20 and the clamp 21 in their adjusted position. The upper face of the angle block 21 is recessed to receive a spring 24, which surrounds the screw 23 and engages the block and the clamp 22.

The operation of the device is as follows:—Various parts are secured in the positions shown in the drawings, and the drill holder support is adjusted at the proper angle on the supporting post 15 and secured in position. The drill is then placed in the holder and the screw 23 is slackened and the stop 21 is moved into position against the back of the drill. The wheel is then rotated and the holder is swung about the pin 18 to grind one of the lips of the drill, and after the first lip is ground the drill is rotated 180 degrees in the holder and the other lip is ground. The spring 24 between the clip and the V-block 21 of the clamp is arranged to hold these parts in engagement with a drill holder when the screw is slackened, so that they will not move down along the holder by the force of gravity. By adjusting the position of the tool holder on the supporting bar 15, the angle of the lip of the drill can be varied.

The advantages of my invention result

from the provision of an attachment for grinding drills which can readily be secured to and detached from the hand grinding machine. Further, from the provision
5 of means for retaining the back stop from movement along the drill holder when the set screw is slackened.

I claim:—

1. A drill holding attachment for grinding machines comprising an adjustable support, means for securing the support to a grinding machine, an adjustable stud extending parallel with the axis of the grinding wheel, means for securing said stud to the
10 support, a work rest adjustably mounted on said stud, means for securing said work rest in its adjusted position, and a drill holder supporting arm connected to the work rest; substantially as described

2. A drill holding attachment for grinding machines, comprising an adjustable support, screws for securing the support in its adjusted position to the grinding machine, an adjustable stud connected to said support and extending parallel with the axis of the grinding wheel, a screw device for securing the stud in its adjusted position, a drill holder support adjustably mounted on the stud, and a drill holder rotatably mounted on the drill holder support; substantially
25 30 as described.

In testimony whereof, I have hereunto set my hand.

ASHMEAD G. RODGERS.

Witnesses:

C. H. GREENWOOD,
GEORGE N. ALLEN.