

Aug. 17, 1926.

1,596,701

A. WILLIAMS

TRUING DEVICE FOR GRINDING WHEELS

Filed May 15, 1922

3 Sheets-Sheet 1

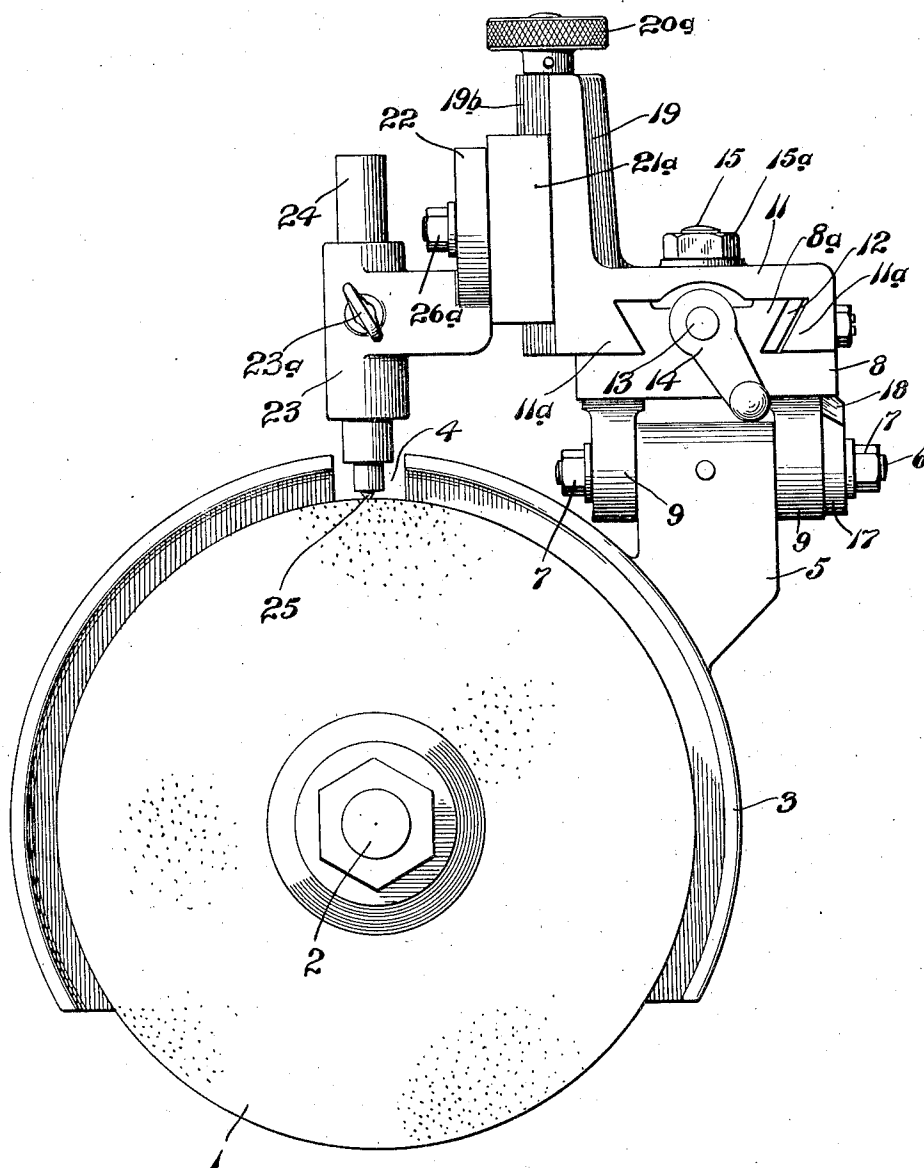


Fig. 1.

Inventor

Arthur Williams.

By Frank E. Liverance, Jr.
Attorney.

Aug. 17, 1926.

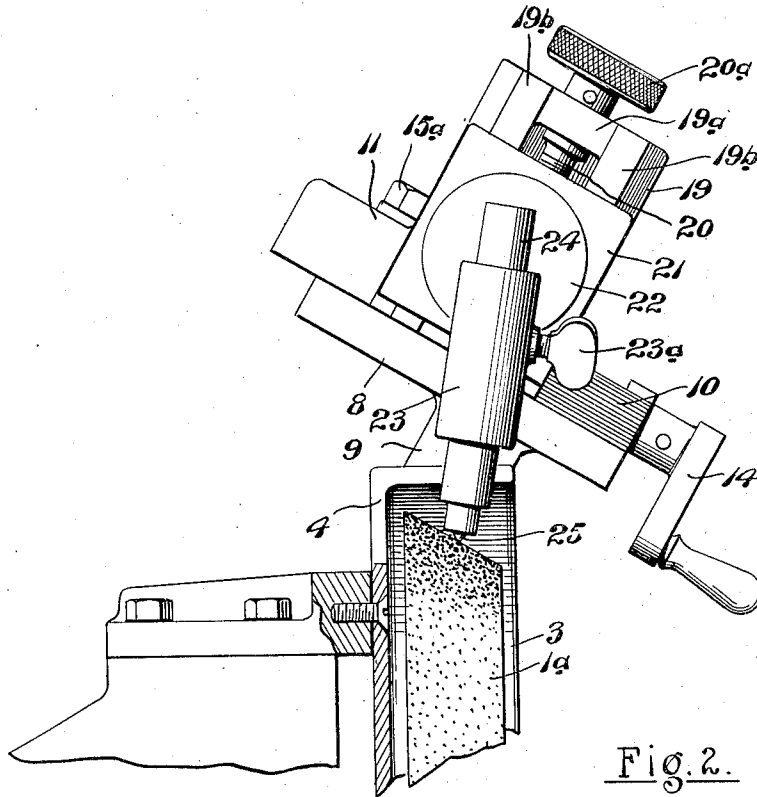
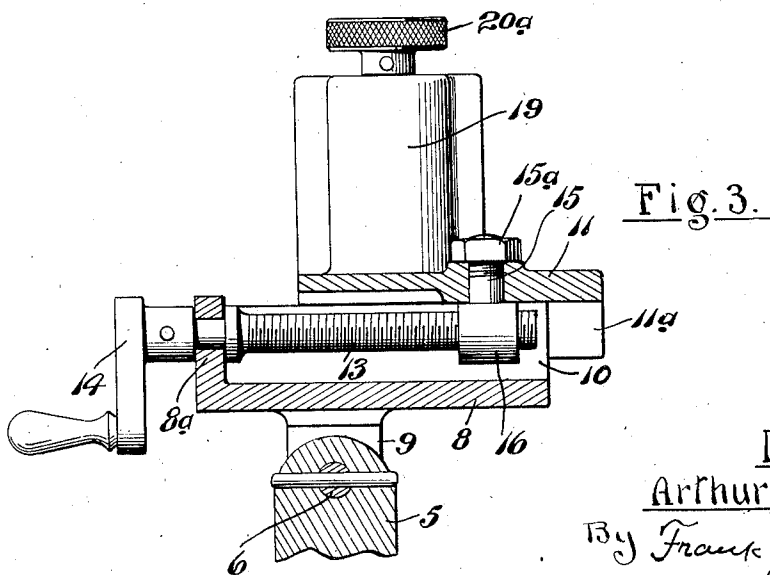
1,596,701

A. WILLIAMS

TRUING DEVICE FOR GRINDING WHEELS

Filed May 15, 1922

3 Sheets-Sheet 2



Inventor
Arthur Williams
By Frank E. Llewellyn, Jr.
Attorney.

Aug. 17, 1926.

1,596,701

A. WILLIAMS

TRUING DEVICE FOR GRINDING WHEELS

Filed May 15, 1922

3 Sheets-Sheet 3

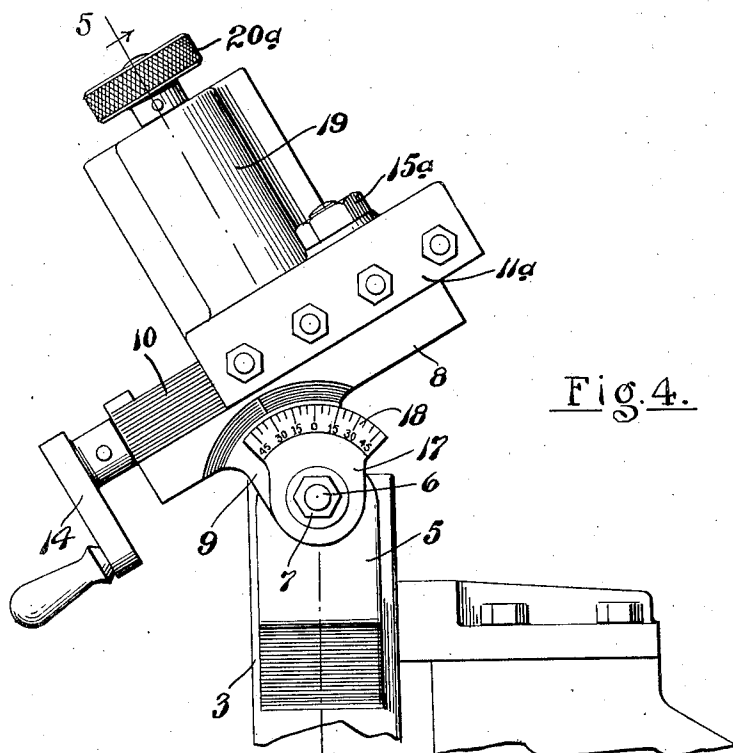


Fig. 4.

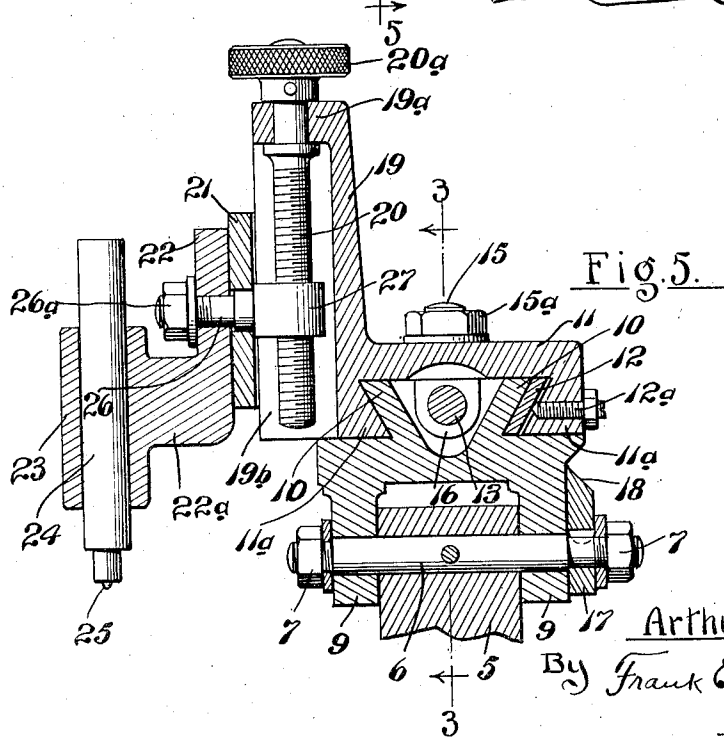


Fig. 5.

Inventor
Arthur Williams
By Frank E. Luerance, Jr.
Attorney

UNITED STATES PATENT OFFICE.

ARTHUR WILLIAMS, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO WILMARTH & MOR-
MAN COMPANY, OF GRAND RAPIDS, MICHIGAN, A CORPORATION OF MICHIGAN.

TRUING DEVICE FOR GRINDING WHEELS.

Application filed May 15, 1922. Serial No. 561,114.

This invention relates to a truing device for grinding wheels, adapted and designed to true the periphery of grinding wheels either horizontally across the same or at any desired angle, to the vertical. A primary object and purpose of the present invention is to make a device of this character which is to be mounted on the hood covering the wheel to be trued and provide the same with various means of adjustment for the different angles of wheel surfaces to be trued and for feeding the truing point across the wheel by hand, together with manually operable means for moving the truing point into or out of engagement with the wheel. The invention includes various novel constructions and arrangements of parts for attaining the above described and other ends not stated, as will appear fully, as understanding of the invention is had from the following description, taken in connection with the accompanying drawings, in which:—

Fig. 1 is a front elevation of a grinding wheel and hood therefor with my invention applied thereto.

Fig. 2 is a side elevation thereof, with parts in section.

Fig. 3 is a vertical section taken on the plane of line 3—3, of Fig. 5.

Fig. 4 is a side elevation looking at the opposite side from that shown in Fig. 2, and

Fig. 5 is a vertical section substantially on the plane of line 5—5, of Fig. 4.

Like reference characters refer to like parts in the several figures of the drawings.

The grinding wheel 1 is mounted for rotation on a horizontal spindle 2 and its upper portion is covered by a hood 3 permanently connected in any suitable manner to the stationary supporting part of the grinding machine, a fragmentary part of said support being shown in Figs. 2 and 4. The hood at its central upper point is slotted, as at 4 for the entrance of the dressing point or tool.

A post 5 is cast integral with the hood at one side, extending upwardly therefrom. A rod 6 passes through the upper end of the post and is pinned securely thereto, at each end extending beyond the post and being threaded to receive clamping nuts 7. A table 8 is located over the post and formed

with integral downwardly extending and spaced apart ears or lugs 9 through which rod 6 passes, it being evident that the table may be tilted to different positions with respect to the post and clamped by nuts 7 in any position to which adjusted. The table is formed at its upper side and longitudinally thereof with guides 10 substantially V-shaped with respect to each other, connected at one end by an integrally cast cross member 8^a.

A slide 11 is slidably mounted on and over the guides 10 having downwardly extending cooperating guide portions 11^a to engage therewith, the usual adjustable gib 12 being interposed at one side to take up wear. A threaded rod 13 is mounted lengthwise of the table 8 and between the guides 10, passing through the part 8^a, and having an operating handle or crank 14 secured to its end. At its opposite end portion, the rod passes through an interiorly threaded sleeve 16 formed at the lower end of a stud 15 which passes through the slide 11 and is equipped with a securing nut 15^a at its upper end as shown in Fig. 3. Between one of the nuts 7 and a lug 9, an indicating scale member 17 is secured against rotation to the rod 6, having an indicating scale 18 at its upper portion which, in conjunction with a suitable indicating mark on the table 8 indicates the degree of tilting adjustment to which the table is turned, as shown in Fig. 4.

The slide 11 at one side is formed with an integrally cast vertical post 19, recessed vertically in its outer side, the upper end of the post being closed by an end 19^a, and guides 19^b being formed at the sides of the post. An adjusting screw 20 is rotatably mounted in and passes through the upper end portion 19^a, said screw being located in the recess and at its upper end above the post having an operating wheel 20^a secured thereto. A slide 21 with cooperating guides 21^a is slidably mounted for vertical movements on the post. Against the outer face of the slide, a member 22 is placed, having a laterally extending off-set 22^a at its lower portion which at its end is formed into a vertical sleeve 23. A dressing tool 24 having a dressing point 25 at its lower end is adjustably mounted in the sleeve, being held in any desired position by set screw 23^a. A

stud 26 passes through the slide 21 and member 22, at its inner end having an interiorly threaded nut 27 through which the screw 20 passes, and at its outer end a clamping nut 26^a which serves to clamp member 22 to the slide. It is obvious that the member 22 and attached dressing tool may be angularly adjusted with respect to the slide to any desired position and clamped in such position. The angular adjustment of the member 22 carrying as it does the dressing tool 24 is of value as with such adjustment a more exact and nicer fitting of the dressing point may be had and also a different part of the point may be brought into play on the wheel being dressed should a portion or face thereof become worn, and this without changing the setting of the tool.

The lower end of the tool with its dressing point 25 may be passed through the slot 4 in the hood 3 and the point brought into dressing contact with the wheel. In Fig. 1, the wheel has a horizontal surface to be dressed and the table 8 is positioned horizontally. By turning the crank 14, the slide 11 with the attached devices thereon may be moved back and forth so that the point 25 may be carried across the outer curved surface of the wheel 1, dressing it to size as the wheel is rotated. In Figs. 2 and 4, the grinding wheel 1^a has a bevelled outer surface and the table 8 is tilted to correspond, whereupon the dressing point may be moved in correspondence with the bevel. It is of course obvious that if the bevel was in the opposite direction, or if the outer edges of the grinding wheel were V-shaped, the wheel could be readily dressed with my device, the adjustment of the table to correspond therewith being easily accomplished.

The dressing tool may be moved toward or away from the grinding wheel by manual operation of the wheel 20^a. The wheel may be dressed at any angle and the feed of the tool across the wheel manually controlled by the crank 14. The construction is relatively simple and inexpensive to manufacture. The mounting of the same on the hood reduces the device in size and it is not necessary to remove the device when it is not in use and replace it when it is to be used. The device is practical and efficient in every way. The invention is defined in the claims appended hereto and I consider

myself entitled to all forms of construction coming within their scope.

I claim:—

1. In a construction of the class described, a grinding wheel, a hood thereover having a slot in its upper side, a vertical post projecting from the hood at one side of the slot, a table pivotally mounted on the post to turn about a horizontal axis, means for securing the table in any position to which turned, a slide slidably mounted on the table, means for manually moving the slide over the table in either direction, a post at one side of the slide, a second slide slidably mounted for vertical movements on the post, a member rotatably mounted on the second slide, means to clamp said member in any position to which adjusted, means for manually raising or lowering said second slide, a sleeve on said member, a dressing tool adjustably mounted in the sleeve and extending through the slot in the hood, and a dressing point at the lower end of the tool, substantially as described.

2. In a construction of the class described, a rotatably mounted grinding wheel, a hood thereover having a transverse slot therein at its upper side, a vertical post extending from the hood at one side of the slot, a rod extending through the post horizontally and at right angles to the axis of rotation of the wheel and secured thereto, a table located above the post, lugs depending from the table one at each side of the post through which said rod passes, clamping nuts on the ends of the rod, a slide slidably mounted on the table to move in a direction at right angles to the length of the rod, means for manually moving the slide back and forth on the table, a vertical post at one side of the slide, a second slide mounted for vertical sliding movements on the post, means for manually moving the second slide, a member pivotally mounted to turn about a horizontal axis connected with the second slide, said member having a lateral off-set terminating in a vertical sleeve, a dressing tool passing through the sleeve and provided with a dressing point at its lower end, and a set screw passing through the sleeve against the tool.

In testimony whereof I affix my signature.

ARTHUR WILLIAMS.