J. J. THACHER.

WHEEL DRESSING MECHANISM.

APPLICATION FILED OCT. 1, 1918.

1,350,531. **Patented Aug. 24, 1920.**

Fig. 1.

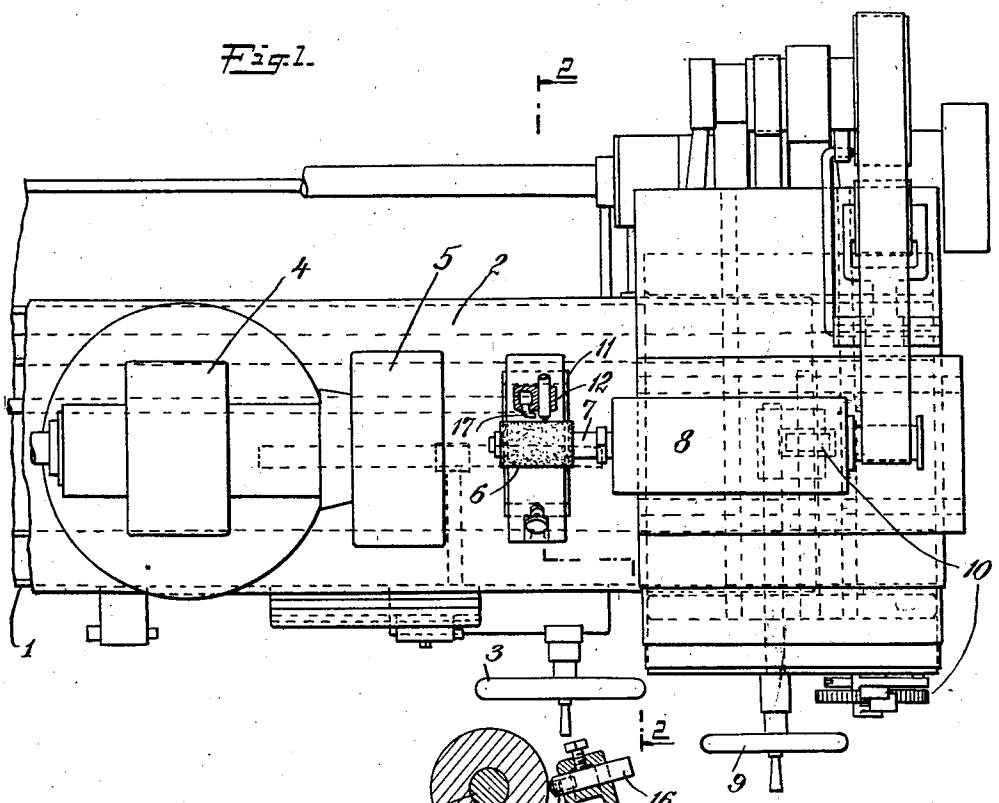
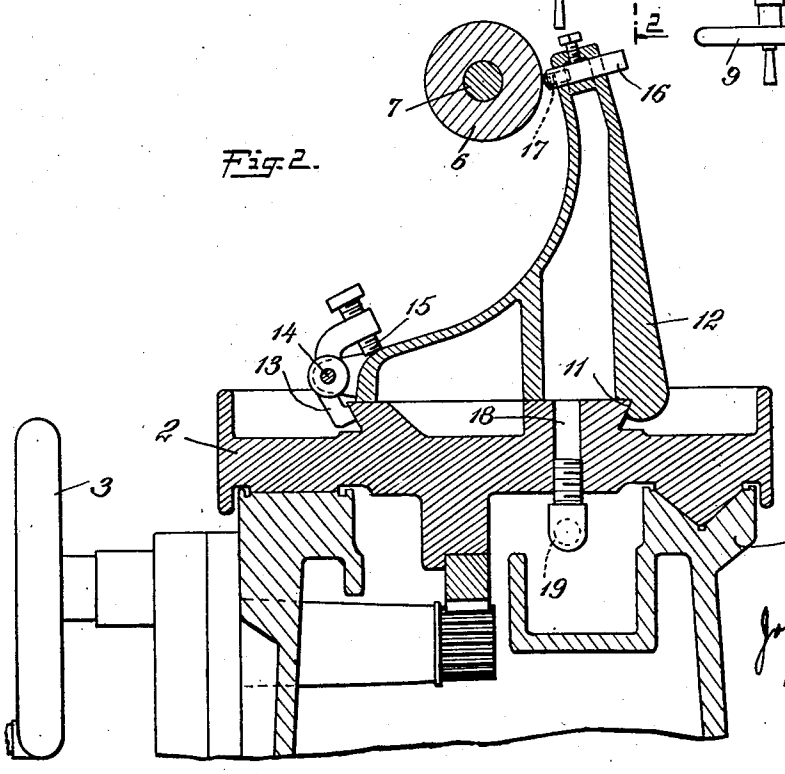


Fig. 2.



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WHEEL-DRESSING MECHANISM.

1,350,531. Specification of Letters Patent. Patented Aug. 24, 1920.

Application filed October 1, 1918. Serial No. 256,428.

To all whom it may concern:

Be it known that I, JOHN J. THACHER, a citizen of the United States, residing at Wethersfield, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Wheel-Dressing Mechanism, of which the following is a specification.

The invention relates to a wheel dressing mechanism which is particularly applicable for use on an internal grinding machine, but it will be understood that its use is not so limited.

One of the objects of the invention is to provide a wheel dressing mechanism having improved means for supplying water to the dressing tool during operation. Another object of the invention is to provide an improved means for supporting and holding the dressing tool. Other objects of the invention will be apparent from the following specification and claims.

Of the drawing which illustrates the preferred embodiment of the invention:

Figure 1 is a diagrammatic plan view of a grinding machine having a dressing mechanism embodying the invention.

Fig. 2 is a vertical transverse sectional view on an enlarged scale taken along the line 2—2 of Fig. 1.

Referring to the drawing, 1 represents the main frame of a grinding machine and 2 a table or slide which is longitudinally movable along the main frame in a fixed path under the control of a hand wheel 3. Carried by the table is a headstock 4 which carries a rotatable work holding chuck 5.

The grinding wheel is represented at 6 and this wheel is carried by a spindle 7 rotatably mounted in a support 8. The support 8 is transversely movable under the control of a hand wheel 9. Preferably also the support 8 is longitudinally reciprocable through a short distance by means of suitable mechanism such as indicated at 10.

A bracket 12 is carried by the table or slide 2, preferably being detachably connected therewith. As illustrated, the table 2 is provided with a short longitudinal dovetailed guideway 11 which is adapted to be engaged by the bracket 12. This bracket is shaped at one side to engage the inclined side of the guideway, and at the other side there is pivotally mounted a latch 13 which is pivoted to the bracket at 14 and which is provided with a clamp 15. It will be clear that by means of the screw the latch may be moved to force the lower end thereof against the adjacent inclined surface of the guideway and thus securely clamp the bracket in place. Obviously, the bracket 12 is capable of a certain limited adjustment longitudinally of the table along the guide-way 11. Secured to the bracket 12 near the top end thereof is a wheel dressing tool 16 which may be of any usual or preferred type.

It will be obvious that the operator, by means of the hand wheel 3, can move the dressing tool 16 longitudinally of the wheel 6. The wheel can be fed toward the dressing tool by means of the hand wheel 9.

In order to supply water to the tool and to the wheel while the latter is being dressed, the following construction is provided. The bracket 12 is made hollow, as shown, and is provided at its upper end with a discharge duct adjacent the dressing tool. Preferably this duct is in the form of a pipe 17 which has its outer end directed longitudinally so as to supply water to the tool longitudinally of the wheel. Preferably, as illustrated, the dressing tool 16 is located in a hole in the bracket which is entirely independent of and separated from the main interior opening thereof. Thus it is possible to remove or insert the dressing tool without permitting water to flow from the interior of the bracket except in the usual way through the pipe 17.

Water may be supplied to the interior of the bracket 12 in any desired way, but preferably, as shown, the table 2 is provided with an aperture 18 which communicates with the interior of the hollow bracket 12, and the aperture 18 at its lower end is connected with a pipe 19 which leads from a pump or other suitable source of water supply. As shown in the drawing, the opening in the bracket is sufficiently large to permit a limited longitudinal adjustment of the bracket

such as aforesaid without interfering with the communication between the aperture 18 and the said opening.

What I claim is:

1. A wheel dressing mechanism for a grinding machine comprising, in combination, a hollow bracket connectible with a slide of the machine whereby it is guided for movement in a fixed path along the face of the grinding wheel, a dressing tool carried by the bracket, means for supplying water to the interior of the bracket, and a duct for delivering water from the interior of the bracket to the wheel immediately adjacent the dressing tool.

2. A wheel dressing mechanism for a grinding machine comprising, in combination, a hollow bracket connectible with a slide of the machine whereby it is guided for movement in a fixed path along the face of the grinding wheel, the said bracket having a hole therein for the reception of a dressing tool, which hole extends entirely through the bracket and is independent of and separated from the main interior opening thereof, means for supplying water to the interior of the bracket, and a duct for delivering water from the interior of the bracket to the wheel immediately adjacent the dressing tool.

3. A wheel dressing mechanism for a grinding machine comprising, in combination, a hollow bracket connectible with a slide of the machine whereby it is guided for movement in a fixed path along the face of the grinding wheel, the said bracket having a bottom opening adapted to register with an aperture in the said slide whereby water is supplied to the interior of the bracket, a dressing tool carried by the bracket, and a duct for delivering water from the interior of the bracket to the wheel immediately adjacent the dressing tool.

4. A wheel dressing mechanism for a grinding machine comprising, in combination, a hollow bracket connectible with a slide of the machine whereby it is guided for movement in a fixed path along the face of the grinding wheel, a dressing tool carried by the bracket, means for supplying water to the interior of the bracket, and a pipe extending outward from the bracket for delivering water from the interior of the bracket to the wheel immediately adjacent the dressing tool.

5. A wheel dressing mechanism for a grinding machine comprising, in combination, a hollow bracket connectible with a slide of the machine whereby it is guided for movement in a fixed path along the face of the grinding wheel, a dressing tool carried by the bracket, means for supplying water to the interior of the bracket, and a pipe extending outward from the bracket for delivering water from the interior of the bracket to the wheel immediately adjacent the dressing tool, the end of the pipe being inclined laterally to direct the water longitudinally of the wheel.

6. The combination of a horizontally movable grinding machine table, a hollow bracket carried by the table and movable therewith in a fixed path along the face of the grinding wheel of the machine, a wheel dressing tool carried by the bracket, means for supplying water to the interior of the bracket, and a duct for delivering water from the interior of the bracket to the wheel immediately adjacent the dressing tool.

7. The combination of a horizontally movable grinding machine table, a hollow bracket detachably connected with the table and movable therewith in a fixed path along the face of the grinding wheel of the machine, a wheel dressing tool carried by the bracket, means for supplying water to the interior of the bracket and to the wheel immediately adjacent the dressing tool.

8. The combination of a horizontally movable grinding machine table, a hollow bracket detachably connected with the table and movable therewith in a fixed path along the face of the grinding wheel of the machine, the said bracket being longitudinally adjustable with respect to the table, a wheel dressing tool carried by the bracket, means for supplying water to the interior of the bracket, and a duct for delivering water from the interior of the bracket to the wheel immediately adjacent the dressing tool.

9. The combination of a horizontally movable grinding machine table, a longitudinal guide-way on the table, a hollow bracket engaging the guide-way on the table, a clamp for detachably connecting the bracket with the guide-way so that the bracket is movable with the table in a fixed path along the face of the grinding wheel of the machine, a wheel dressing tool carried by the bracket, means for supplying water to the interior of the bracket, and a duct for delivering water from the interior of the bracket to the wheel immediately adjacent the dressing tool.

10. The combination of a horizontally movable grinding machine table, having an aperture therein, a hollow bracket detachably connected with the table and movable therewith along the face of the grinding wheel of the machine, the opening in the bracket communicating with the aperture in the table, a wheel dressing tool carried by the bracket, means for supplying water through the aperture in the table to the interior of the bracket, and a duct for delivering water from the interior of the bracket to the wheel immediately adjacent the dressing tool.

11. The combination of a horizontally movable grinding machine table, having an aperture therein, a hollow bracket detach-

ably connected with the table and movable therewith in a fixed path along the face of the grinding wheel of the machine, the said bracket being longitudinally adjustable with respect to the table, the opening in the bracket communicating with the aperture in the table for all positions of the bracket, a wheel dressing tool carried by the bracket, means for supplying water through the aperture in the table to the interior of the bracket, and a duct for delivering water from the interior of the bracket to the wheel immediately adjacent the dressing tool.

In testimony whereof I hereto affix my signature.

JOHN J. THACHER.