

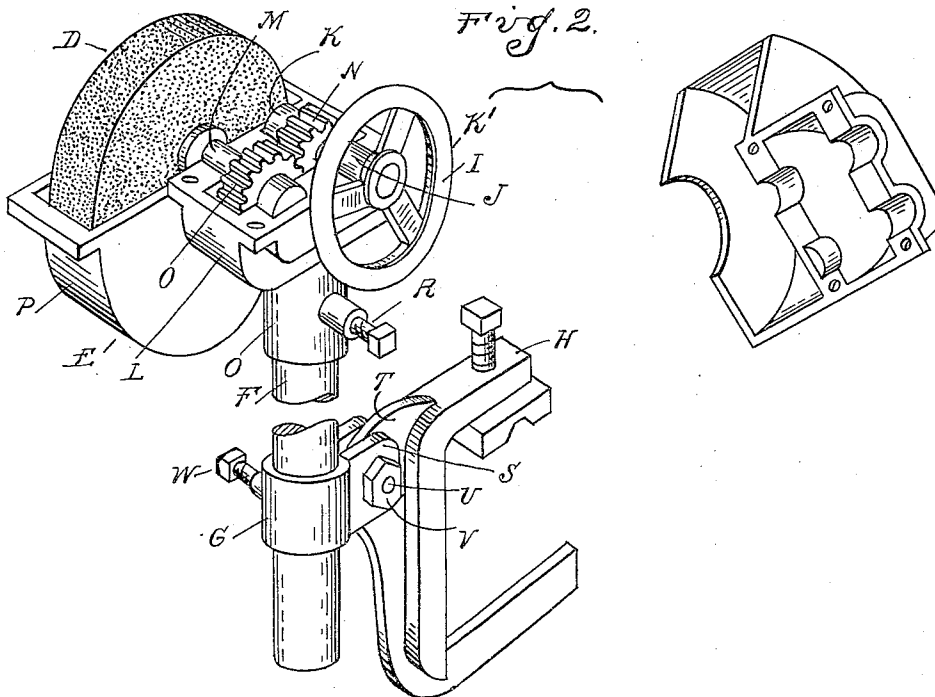
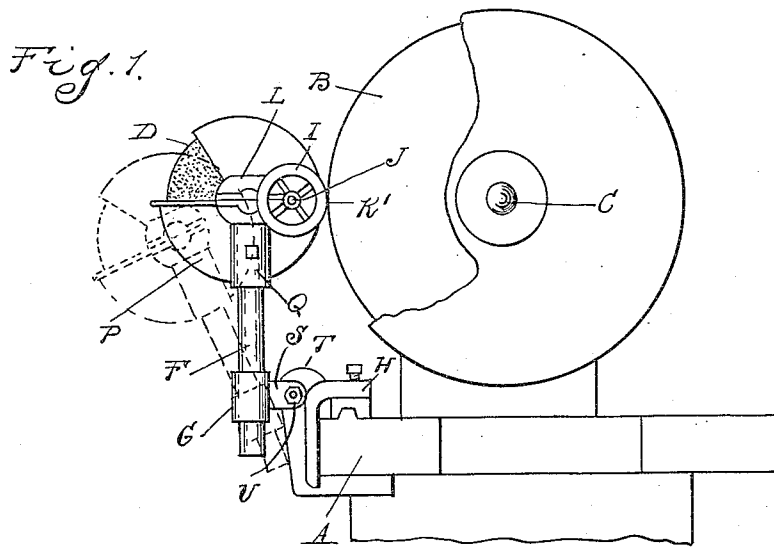
W. W. BLAKELY & W. S. MILLER.

LATHE ATTACHMENT.

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Witnesses
W. H. Ford
James P. Barry

Inventors
William Warden Blakely &
William S. Miller
 By *Whittemore Hulland & Whittemore*
Attys

UNITED STATES PATENT OFFICE.

WILLIAM WARDEN BLAKELY AND WILLIAM S. MILLER, OF DETROIT, MICHIGAN;
SAID MILLER ASSIGNOR TO SAID BLAKELY.

LATHE ATTACHMENT.

1,050,263.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, WILLIAM WARDEN BLAKELY and WILLIAM S. MILLER, citizens of the United States of American, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Lathe Attachments, of which the following is a specification, reference being had therein to the accompanying drawings.

Our invention relates to grinder attachments for lathes, and has among the objects thereof to provide an attachment whereby the grinder may be operated by the driving mechanism of the lathe simultaneously with the working of the latter, and which may be moved into or out of engagement with the driving mechanism without affecting the operation of the lathe; to provide a simple and compact structure and one which may be readily adjusted for engagement with lathes of various sizes; and to so arrange the mechanism which drives the grinder that the latter will be rotated in a direction to throw the sparks occasioned during grinding away from the operator.

Other objects of our invention will more fully hereinafter appear.

The invention resides in the peculiar construction, arrangement and combination of parts as hereinafter described and particularly pointed out in the claims.

In the drawings,—Figure 1 is a side elevation, showing a portion of a lathe with our improved attachment applied thereto; and Fig. 2 is a perspective view of the grinder attachment, with the cover thereof removed.

A designates the bed of the lathe, and B the driving cone pulley for the center C, these parts being of the usual construction.

Our improved attachment is arranged so as to be driven from the cone pulley and preferably is secured to the side edge of the bed. As shown, the grinder D and the drive mechanism therefor are arranged within a casing E carried by a suitable support, such as a rod F. This rod has a longitudinal adjustable engagement with a bracket G that is secured for rocking movement to a clamp H adjustable longitudinally of the bed A and adapted to be rigidly attached to the edge thereof.

The grinder wheel D is driven through

the medium of a wheel I having a friction tread K' for engaging one of the pulleys of the driving cone B, and in order that the direction of rotation of the grinder may be such as to prevent the sparks during grinding from being directed toward the operator a reversing gear is interposed between the wheel and the grinder. Thus, the wheel I is fixed to a shaft J journaled in a bearing K in a compartment or transmission box L formed in the casing E, while the grinder is secured to a second parallel shaft M also journaled in the transmission box and connected to the shaft J through the medium of intermeshing gears N O. The members D I are arranged without and upon opposite sides of the transmission box, the friction wheel being exterior of the casing E, while the grinder is positioned in a compartment P formed in the casing at one side of the transmission box L. Preferably the casing is provided with a cover, which as illustrated completely incloses the gears and also the major portion of the wheel D.

Q is a sleeve depending from the bottom of the casing for engaging the upper end of the rod F, and R is a set-screw for clamping the sleeve to the rod.

The bracket G is preferably in the form of a collar sleeved upon the rod F and provided with spaced ears S, which are positioned upon opposite sides of a lip T on the clamp, and secured to the lip by a bolt U which passes through aligned apertures in the lip and ears,—the bolt serving as a pivot upon which the bracket may be rocked. V is a nut on the bolt, through the medium of which the ears may be clamped to the lip against rocking movement, and W is a set-screw on the collar G for retaining the rod in its adjusted position.

In applying the attachment to the lathe, the clamp is secured to the bed adjacent the drive cone and the rod adjusted vertically to properly position the friction wheel in relation to one of the cone pulleys. When it is desired to use the grinder, the nut V is loosened and the support moved inward until the wheel I engages the pulley, and the nut V then tightened. When not in use the support is rocked outward as shown in Fig. 1.

It is apparent that both the engagement and disengagement of the friction wheel

with the pulley may be accomplished during the rotation of the latter, thereby permitting the grinding operation to be effected simultaneously with and without affecting the working of the lathe. This is a very desirable feature, since if it were necessary to disengage the work from the lathe in order to use the grinder the amount of work produced by the lathe would be materially lessened.

What we claim as our invention is,—

1. The combination with the bed and the driving pulley of a lathe, of a grinder attachment comprising a casing, a pair of shafts journaled in said casing, a grinder and a friction wheel fixed respectively to said shafts, a reversing gear connection between the shafts, a support for said casing secured to the bed for vertical and rocking adjustment, said friction wheel being adapted on rocking adjustment of the support to be moved into and out of engagement with the driving pulley.

2. The combination with the bed and the driving pulley of a lathe, of a grinder attachment comprising a casing, a grinder and a friction wheel carried by the casing, a reversing gear connection between the grinder

and wheel, a support for said casing secured to the bed for vertical and rocking adjustment, said friction wheel being adapted on the rocking of the support to be moved into and out of engagement with the driving pulley.

3. The combination with the bed and the driving pulley of a lathe, of a grinder attachment comprising a casing, a grinder and a friction wheel carried by the casing, a reversing gear connection between the grinder and wheel, a bracket secured to the bed and adapted to be adjusted horizontally thereof, and a support for said casing connected to a bracket for vertical adjustment, and for movement laterally of the bed inward toward and outward from the driving pulley, said friction wheel being adapted upon lateral inward and outward movements respectively to be brought into and out of engagement with the driving pulley.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM WARDEN BLAKELY.

WILLIAM S. MILLER.

Witnesses:

W. J. BELKNAP,

JAMES P. BARRY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."