

R. D. CURRIE.
ATTACHMENT FOR DRILLING MACHINES.
APPLICATION FILED OCT. 25, 1909.

980,610.

Patented Jan. 3, 1911.

3 SHEETS—SHEET 1.

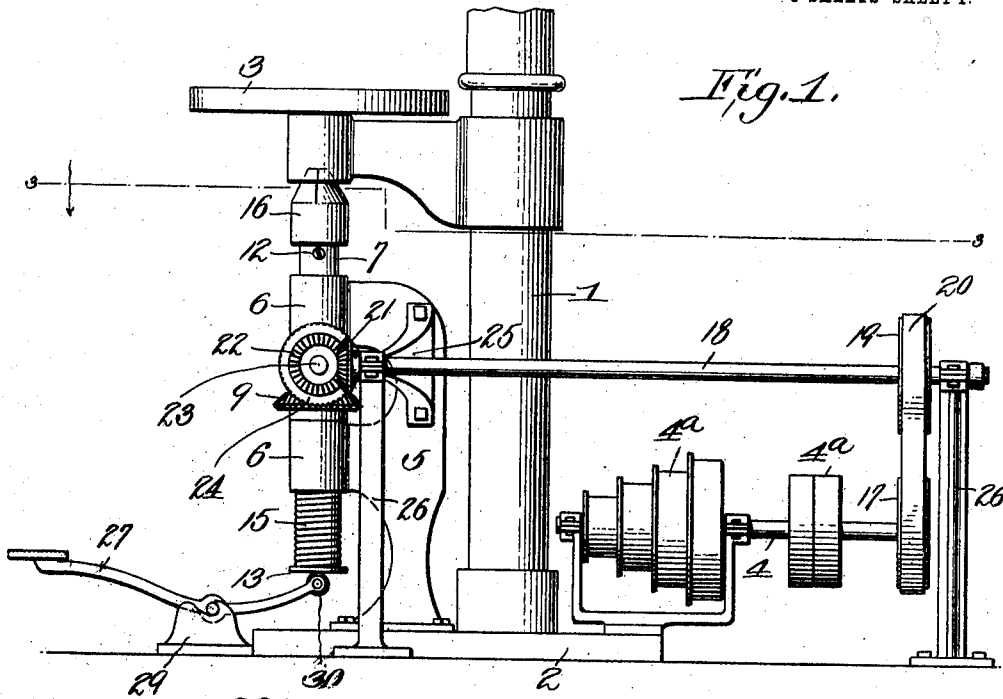


Fig. 1.

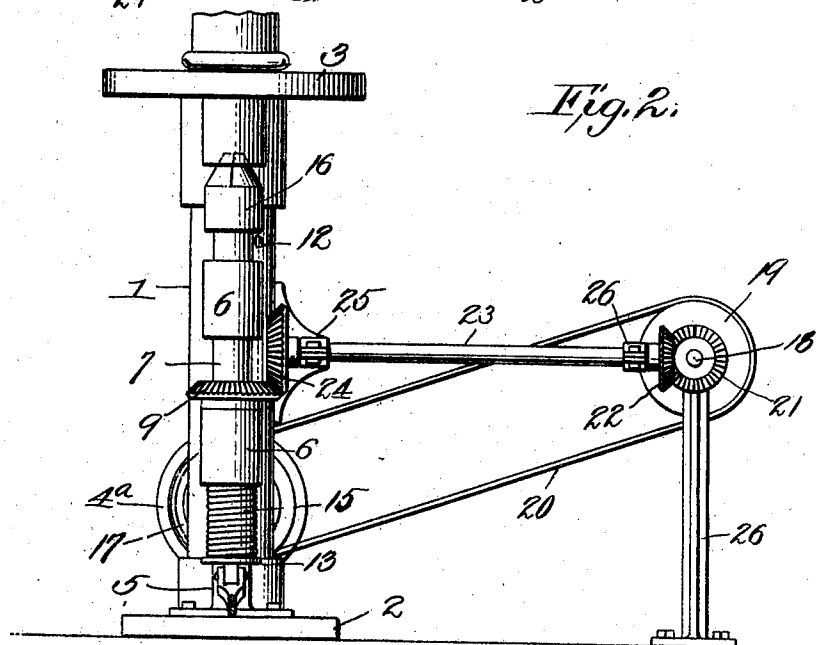


Fig. 2.

Inventor

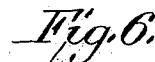
Witnesses

Oliver H. Holmes.
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3 SHEETS—SHEET 2.



Chas. H. Holmes
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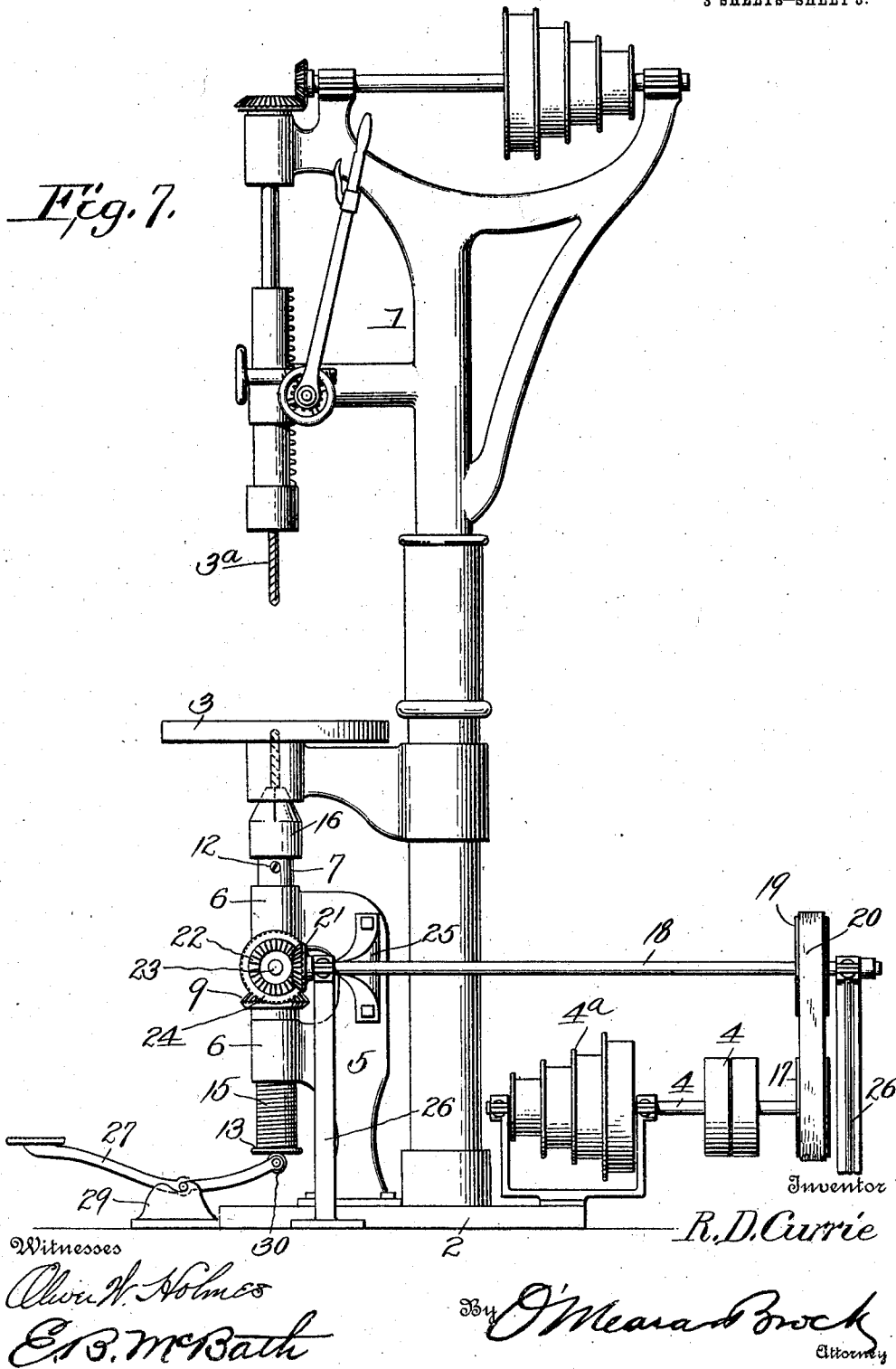
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Attorney

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UNITED STATES PATENT OFFICE.

RUFUS D. CURRIE, OF HILLSBORO, OHIO.

ATTACHMENT FOR DRILLING-MACHINES.

980,610.

Specification of Letters Patent.

Patented Jan. 3, 1911.

Application filed October 25, 1909. Serial No. 524,578.

To all whom it may concern:

Be it known that I, RUFUS D. CURRIE, a citizen of the United States, residing at Hillsboro, in the county of Highland and State of Ohio, have invented a new and useful Improvement in Attachments for Drilling-Machines, of which the following is a specification.

This invention relates to a counter sinking and reaming attachment adapted for use in connection with any drill press provided with a bottom plate and an adjustable table. The attachment is placed directly beneath the table and in line with the spindle of the drill press, and a foot pedal is provided which upon downward pressure will lift a suitable chuck into position so that the material drilled can be countersunk or reamed without removing the work from the drill press table, without turning the work over, or without moving or changing any part of the press. To secure these results I provide the novel attachment constructed as hereinafter described, pointed out in the claim and shown in the accompanying drawings, in which,

Figure 1 is a side elevation, showing the attachment in position, the upper portion of the drill press being broken away. Fig. 2 is a front elevation of Fig. 1. Fig. 3 is a section on the line 3—3 of Fig. 1, the chuck being shown in elevation. Figs. 4, 5, and 6 are detail perspective views illustrating the construction of the essential portions of my attachment. Fig. 7 is a side elevation of a standard drill with my invention applied thereto.

In these drawings, 1 represents a standard of a drill press provided with a bed plate 2, a vertically adjustable table 3 and the usual drill 3^a. I also show a shaft 4 and certain pulleys 4^a which form a portion of the means for driving the drill press.

Upon the bed plate 2 I bolt the base of an upright 5 provided with forwardly extending arms 6 in which I journal a spindle 7. This spindle as shown in Fig. 4 is longitudinally slotted at 8 and a bevel gear 9 is splined to the slotted portion of the spindle 7. A chuck shank 10 is turned to fit within the spindle 7 and is provided with a series of openings 11 adapted to be engaged by a screw 12 which works through the spindle, and by means of which the shank 10 may be locked to the spindle in adjusted position. A flanged plug 13 closes the lower end of the

spindle and is locked in place by a set screw 14. The spindle is rotatably journaled in the arms 6, the gear wheel 9 working between the arms and upon the lower portion of the spindle. A chuck 16, supplied by the user and of any desired kind is mounted upon the upper tapered end of the shank 10.

In order to drive the mechanism described I mount upon the shaft 4 a supplemental pulley 17 and upon a parallel shaft 18 I fix a pulley 19 driven by a belt 20 from the pulley 17, and upon the front end of the shaft 18 is mounted a beveled gear wheel 21 which meshes with a beveled gear 22 carried by one end of a shaft 23 which also carries a beveled gear 24 meshing with the bevel gear 9. The upright 5 is provided with a curved laterally extending arm 25 which forms a bearing for the inner end of the shaft 23 and I also provide suitable supports and bearings as shown at 26 for the shaft 18 and for the outer end of the shaft 23. A foot pedal 27 is pivoted in suitable bearings 29 and is provided at its inner end with a roller 30 which bears upon the under face of the plug 13, and when said pedal is pressed down with the foot the spindle and chuck will be lifted into operative position against the tension of the spring 15. Upon removal of the foot the spring will return the spindle and chuck to normal position.

With the ordinary form of drill press in order to ream, drill, tap or countersink, the drill must be taken from the chuck, and the reamer must be placed in the chuck in order for the work to be reamed. If the work is to be tapped the drill has to be placed in the socket, and if a piece has to be drilled and countersunk the drill must be removed and a countersink drill has to be placed in the chuck. With my attachment in position beneath the table and in line with the spindle of the drill press the constant removal of the drill is avoided. Pressure upon the foot pedal lifts the chuck 16 into position so that the material drilled by the drill press proper can be reamed, countersunk, or tapped without removing the work from the drill press table, without turning the work over, or without moving or changing any part of the drill press.

What I claim is:—

The combination with a drill press having a bed plate, a vertically adjustable table, and a drill above the table, of an upright mounted upon the bed plate, a vertically

arranged spindle supported by said upright
and in alinement with the drill and beneath
the table, a chuck shank adjustably fitting
within said spindle and adapted to receive a
5 chuck at its upper end, a gear wheel splined
to the spindle, means for rotating said gear
wheel, a spring normally holding the spindle
and chuck shank in their lowermost posi-

tion, and means for lifting the said spindle
and shank into operative position beneath 12
the table, said spindle sliding through the
gear wheel.

RUFUS D. CURRIE.

Witnesses:

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