

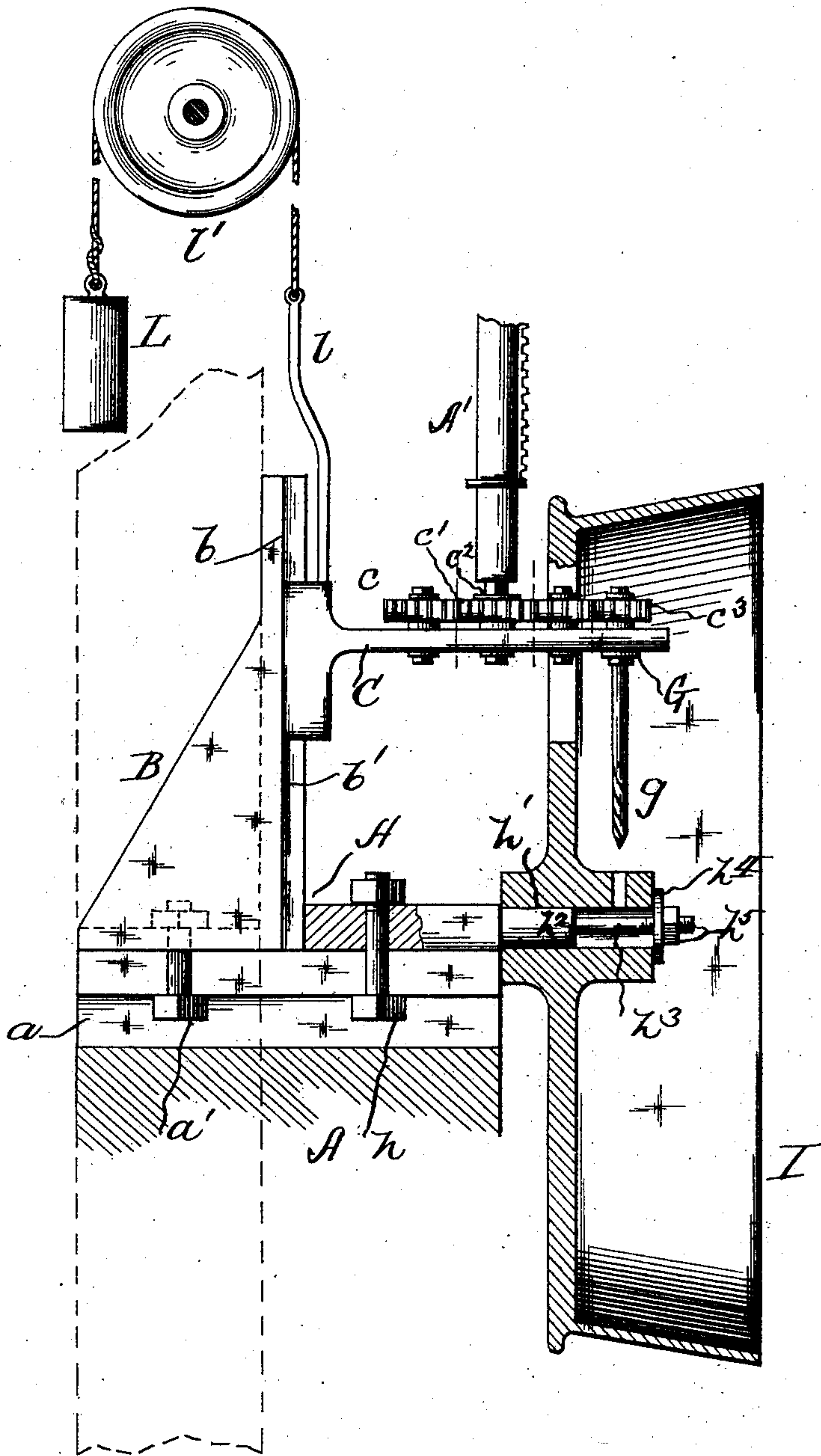
(No Model.)

W. EVANS.

ATTACHMENT FOR DRILLING MACHINES.

No. 374,181.

Patented Dec. 6, 1887.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## ATTACHMENT FOR DRILLING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 374,181, dated December 6, 1887.

Application filed May 2, 1887. Serial No. 236,823. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM EVANS, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Drill Attachments for Drilling-Machines, of which the following is a specification, reference being had therein to the accompanying drawing, which is a sectional view showing part of the bed of a drill-press and the drill-chuck thereof and my improvements.

My invention has relation to a drilling attachment for boring holes in the hubs of wheels or other fixtures at right angles to the shaft-opening; and it has for its object to provide a simple, inexpensive, and efficient drilling attachment which is portable, so as to be adapted for use upon various forms of drilling-machines or drill-presses, which attachment also supports the wheel or fixture in which the holes are to be drilled.

My invention accordingly consists of the combination, construction, and arrangement of parts, as hereinafter more fully set forth, having reference particularly to a slide having a train of gearing, one of which gears is provided with a stem adapted to the drill-stock of the press or machine upon which the attachment is placed, and another of which is provided with a drill stock or chuck for receiving the drill, and to a bar preferably separate from said slide and having an end for the reception of the wheel or fixture to be drilled, which end terminates in a reduced extremity to provide a space between it and the walls of the shaft-opening in said wheel or fixture for the point of the drill to penetrate into, so as to make a clean or finished opening through the wheel-hub or fixture being drilled.

Referring to the accompanying drawing, A represents the bed-plate of a drilling machine or press of any suitable construction having the usual ways or slots, *a*.

To plate A is secured, by means of the bolts *a'*, a sliding bracket, B, which is shown arranged in a vertical position; but this depends upon the position of the bed-plate A, to which the bracket B is secured. This bracket is provided upon its side *b* with a dovetail or other suitably-configured groove or tenon, *b'*, for a ver-

tically-sliding arm, C, by means of which the latter is attached to the bracket.

Upon arm C is mounted, as desired, a train of gearing, *c*, of any suitable kind and number. One of the gear-wheels, *c'*, has an elongated shaft to form a stem, *c''*, fitting in or adapted to the drill-stock A' of the machine or press upon which the herein-described drill attachment is located, and another of the gear-wheels, *c''*, preferably the outer one, has a drill stock or chuck, G, for the drill *g*.

H indicates a bar, preferably separate from bracket B, which bar is bolted, as indicated at *h*, to bed-plate A, so that the end *h'* thereof extends beyond the edge of the bed-plate, as illustrated. The bar H is preferably square or angular in cross-section for obtaining for it firm support upon the bed-plate, and its end *h'* has a cylindrical part, *h''*, to fit the bore of the wheel I to be drilled. The extreme end *h'''* of the end *h'* is reduced in diameter, as indicated, so as to leave a space between said reduced end and the bore of the shaft-opening in wheel I for the drill to penetrate into and make a finished or clean hole without coming into contact with the end *h'''* of bar H. The extremity of said end is threaded for the reception of a washer, *h''''*, and screw-nut *h'''''*, by means of which the wheel I is firmly secured to bar H.

To steady the arm C, it may have a connection, *l*, with a counter-balance, L, said connection or rope running over a pulley, *l'*, suitably located as desired.

The operation is obvious. A rotation of drill-stock A' is transmitted by gearing *c* to the stock G and drill *g*, and the latter is fed by operating the usual feeding mechanism for the drill-stock A', said feeding mechanism not being shown in the drawing, as they are well known.

When the attachment is applied to vertical drills or to the columns or other like fixtures therefor, the bracket B is dispensed with, as indicated by dotted lines in the figure, which represents the column or base of a vertical drilling-machine. In this case the bar H is secured to the bed-plate, as above described, and the counter-balance L is then used as before.

As the attachment is portable, it is obvious that it can readily be applied to any form of



drill press or machine, and can correspondingly be removed.

What I claim is—

1. The combination, with slide C, having a  
5 train of gearing, *c*, one of which gears has a stem or shaft adapted for a drill-stock and another of which has a drill stock or chuck, of a rod or bar, H, having reduced end *h*<sup>3</sup>, and nut *h*<sup>5</sup> on said end, substantially as set forth.

10 2. A drilling attachment composed of a slide or arm having a train of gears, one of which has a stem for a drill stock or chuck and another a drill-stock attached thereto, and a bar having a reduced end for the reception of the  
15 wheel or fixture to be drilled, substantially as set forth.

3. A drilling attachment composed of a bracket, B, a sliding arm, C, having a train of  
20 gears, *c*, one of which has a stem for engagement with a drill-stock and another has an attached drill-stock, and a bar, H, having a bear-

ing, *h*<sup>1</sup>, and a reduced end, *h*<sup>3</sup>, having nut and washer thereon, substantially as and for the purpose set forth.

4. A drilling attachment composed of a  
25 bracket, B, a sliding arm, C, having counterpoise L, and a train of gears, *c*, one of which has a stem for engagement with a drill-stock and another has an attached drill-stock, and a bar, H, having nut and washer thereon, sub-  
30 stantially as and for the purpose set forth.

5. A drilling attachment composed of a slide, C, having train of gear-wheels *c*, one of which has a stem to fit a drill-stock and another has  
35 a drill-stock attachment, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM EVANS.

Witnesses:

FRANK H. MASSEY,

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