

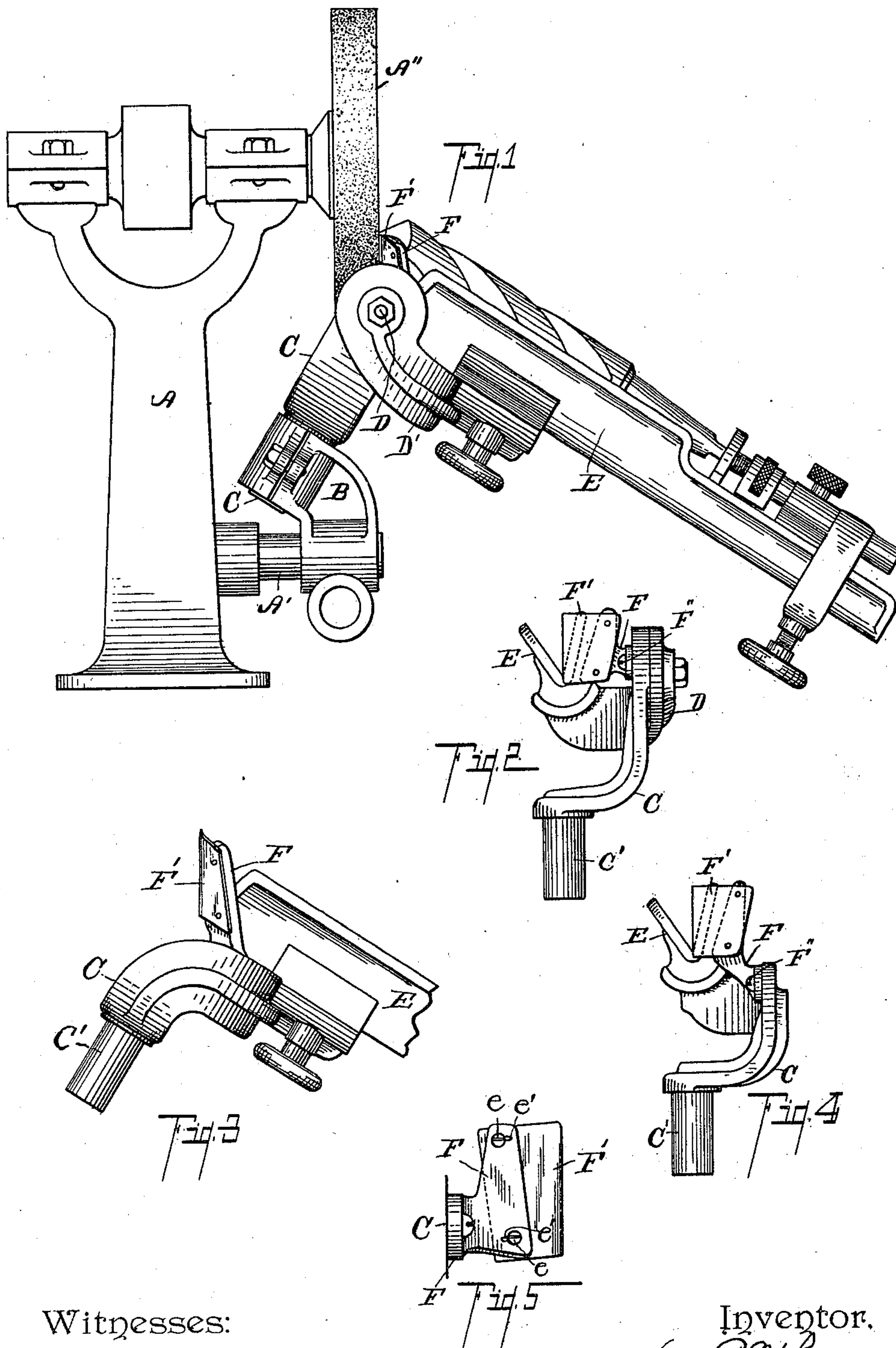
No. 684,889.

Patented Oct. 22, 1901.

H. P. WHITE.
DRILL GRINDING MACHINE.

(Application filed July 31, 1900.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

HENRY P. WHITE, OF KALAMAZOO, MICHIGAN, ASSIGNOR TO THE WILMARTH AND MOREMAN COMPANY, OF KALAMAZOO AND GRAND RAPIDS, MICHIGAN.

DRILL-GRINDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 684,889, dated October 22, 1901.

Application filed July 31, 1900. Serial No. 25,379. (No model.)

To all whom it may concern:

Be it known that I, HENRY P. WHITE, a citizen of the United States, residing at the city of Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented certain new and useful Improvements in Drill-Grinding Machines, of which the following is a specification.

This invention relates to improvements in drill-grinders.

The objects of the invention are to provide in connection with a drill-grinder of the class illustrated in my Patent No. 643,703, of February 20, 1900, an improved rest to prevent the rotation of the drill which shall permit the independent adjustment of the drill-holder, whereby the drill-lip rest will be properly located in relation to the grinding-surface to support the same to the best advantage.

A further object is to provide such an independent drill-lip rest for use in connection with holders for drill-grinders generally.

I accomplish these objects of my invention by the devices and means described in this specification.

The invention is clearly defined and pointed out in the claims.

A structure embodying the features of my invention is fully illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a detail side elevation of a drill-grinder embodying my improvements, the same being shown with a short standard to be placed upon a bench or other support. Fig. 2 is a detail front view of the holder and its bracket detached from the machine. Fig. 3 is a detail side elevation of a modification of the drill-holder in which the drill-holder bracket is not jointed. Fig. 4 is a detail front view of the structure appearing in Fig. 3. Fig. 5 is a detail view of the drill-lip rest and its supporting-bracket, showing the means of adjusting the same.

In the drawings similar letters of reference refer to similar parts throughout the several views.

Referring to the lettered parts of the drawings, A is a suitable standard, A' is the grind-

ing-wheel, and A' is the stud on which the drill-holder mechanism is supported. On this stud is provided a bracket B, which is provided in its upper portion with an oblique journal-bearing box, the cap of which is adjustable to put slight friction on the journal. On this is supported a bracket C, which has an oblique journal C'. In the preferred construction this bracket is provided with a pivot-joint at D, the axis of which is horizontal and if extended would intersect the apex of the V-shaped drill-holder E. The drill-holder E is adjustable in a suitable curved seat carried by the arm D'. These parts enumerated are the same in function and structure as those appearing in my patent application filed on the 3d day of April, 1900, Serial No. 11,399. A small bracket F is provided, which is secured by a suitable screw or other means F'' to the inside of the arm C, and on this is carried a lip-rest F', which is arranged to project beyond the front of the V-shaped drill-holder E, as clearly appears in Figs. 2 and 4. This is so arranged that it comes close to the front of the drill-holder, but does not contact with it, so that the drill-holder can be adjusted on the pivot D to any angle without changing the lip-rest F', which will be held constantly in the proper position to support the drill-lip. The drill-lip rest F' is supported adjustably on the bracket F by two screws e e, extending through transverse slots e' e' in the bracket F. This enables the adjustment of the drill-lip rest to hold the drill in any desired or required position and relieves the V-shaped drill-holder of all encumbrances of any kind and avoids the necessity of an accurate fitting of the same. The drill-lip rest is also capable of use where the oscillating bracket C is not jointed at D and saves much unnecessary fitting of the V-shaped holder in that relation, although, of course, it performs no function there in the matter of adjustment of the drill-holder to grind drill-points of different angles. It will be observed that this independent support of a drill-lip rest in connection with a drill-holder has a like advantage when used in any style of drill-grinding machines, and

I do not wish to be understood as claiming this feature merely in connection with this particular style of drill-grinder I have shown, as I also wish to claim it in connection with
5 other styles of drill-grinding machines.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a drill-grinding machine, the combination of a V-shaped drill-holder E; a suitable oscillating bracket C therefor, containing a joint at D, the axis of said joint being transverse to said holder and substantially in line with the apex of the drill-holder; a bracket
10 F on the said drill-holder bracket C; and a drill-lip rest F' adjustably supported on the bracket F, and arranged in front of the V-shaped drill-holder, for the purpose specified.

2. In a drill-grinding machine, the combination of a V-shaped drill-holder E; a suitable oscillating bracket C therefor, containing a joint at D, the axis of said joint being transverse to said holder and substantially in line with the apex of the drill-holder; a bracket
15 F on the said drill-holder bracket C; and a

drill-lip rest F' supported on the bracket F, and arranged in front of the V-shaped drill-holder, for the purpose specified.

3. In a drill-grinding machine, the combination of a V-shaped drill-holder supported
30 on a suitable oscillating bracket; a drill-lip rest supported from the said oscillating bracket; independent of the V-shaped holder and arranged in front of said holder, for the purpose specified.

4. In a drill-grinding machine, the combination of a drill-holder; a suitable oscillating bracket for the said holder, containing a pivot-joint; a drill-lip rest supported on said oscillating bracket and arranged in front of
40 said holder whereby the said holder is adjustable independent of said lip-rest, for the purpose specified.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses. 45

HENRY P. WHITE. [L. S.]

Witnesses:

A. E. HOUGHTON,
OTIS A. EARL.