

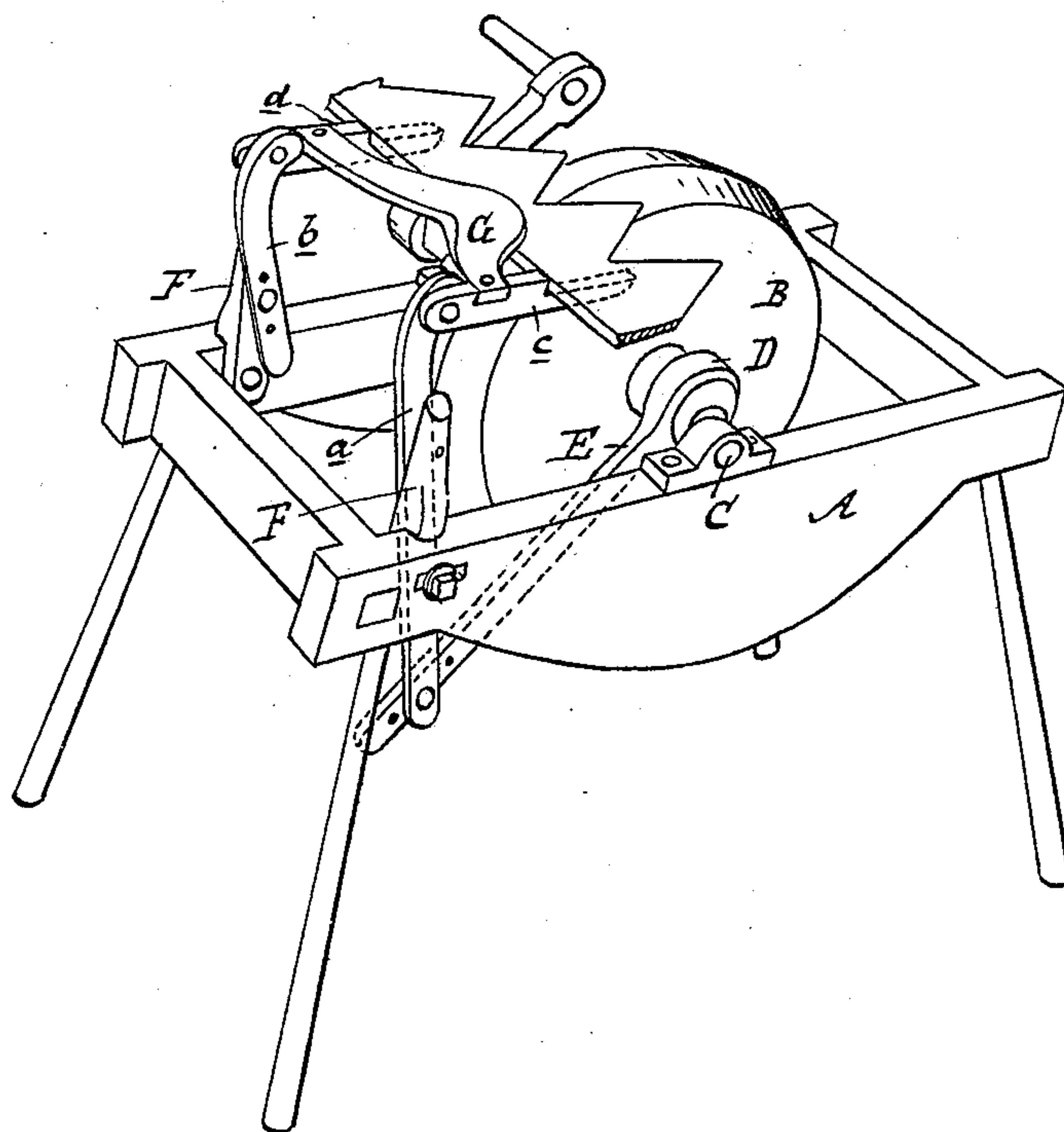
(No Model.)

W. CHALMERS.

ATTACHMENT FOR GRINDSTONES.

No. 300,845.

Patented June 24, 1884.



Attest:
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UNITED STATES PATENT OFFICE.

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ATTACHMENT FOR GRINDSTONES.

SPECIFICATION forming part of Letters Patent No. 300,845, dated June 24, 1884.

Application filed November 3, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM CHALMERS, of Detroit, in the county of Wayne and State of Michigan, have invented new and useful
5 Improvements in Attachments to Grindstones; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, which forms a part of this specification.

10 The nature of this invention relates to certain new and useful improvements in attachments to grindstones, by means of which the stone is hung, and the edge-tool to be ground is adjustably supported and presented to the
15 face of the stone in the most favorable manner to produce the most perfect results.

The invention consists in the peculiar construction of the parts and their combinations, as more fully hereinafter described and
20 claimed.

In the accompanying drawing, which forms a part of this specification, my invention is shown in perspective, with a portion in dotted outlines the better to show the construction and operation of the various parts.

25 In the drawing, A represents a grindstone-frame of the usual construction, wherein the stone B is hung upon a shaft, C, which is designed to be driven from any suitable source of power, and all in the usual way. An eccentric, D, is secured upon said shaft between
30 the stone and one of the boxes in which the shaft is journaled.

E is a rod connecting said eccentric with the lower end of the oscillating frame, which is
35 composed of the vertical arms *a* and *b*, which are pivotally secured to the brackets F F. The arm *a* is longer than its fellow, in order to form a suitable connection with the eccentric-rod. The brackets F F are provided with
40 any suitable and known devices which will allow them to be longitudinally adjusted with relation to the frame to which they are secured. The arms *a* and *b* are also provided
45 with any suitable and known means by which they may be vertically adjusted with relation to their pivotal points. The upper end of the arms *a* and *b* are curved inwardly toward the main shaft, as shown, forming an overhang,
50 and between their ends, or to them, is pivot-

ed the tool-holder, which is composed of the heads *c* and *d*, coupled together by the cross-bar G, the front end of which is designed to rest upon the tool presented for sharpening, and which rests in or upon the forward ends
55 of the heads.

This device, constructed substantially as described, is peculiarly adapted for grinding harvester-cutters, and in this case the construction presented is the one I desire to use upon
60 a stone with two beveled faces; but, if desired to be used for grinding axes or smaller tools, the necessary adjustment or change may be made in the head, without departing from the spirit of my invention, to adapt the tool-holder
65 er to hold the device to the stone, substantially as described above. Of course, for straight-edge tools a flat periphery of the stone would be preferable, while the double-beveled periphery, as shown, is more preferable in
70 grinding the harvester-knives. By this arrangement it will be seen that the various adjustments may be had which will enable the device to be used for nearly or quite all the
75 purposes required in grinding all kinds of tools requiring cutting-edges, and the tool will be advanced and receded upon the periphery by every revolution of the crank through the operation of the eccentric, giving, as nearly
80 as is practical, the various movements always employed by an expert in grinding tools, using the hand as the tool-holder.

What I claim as my invention is—

1. In combination with a grindstone and its frame, a tool-holder constructed to present
85 the tool to the stone, an eccentric on the main shaft, and means, substantially as described, for connecting the tool-holder with said eccentric, whereby a combined rocking and reciprocating movement in the direction of the
90 movement of the surface of the stone is given to the tool, as described.

2. In combination with a grindstone-frame the shaft of which is provided with an eccentric, a rod connecting such eccentric directly
95 with a tool-holding frame pivotally secured to the main frame, substantially as and for the purposes specified.

3. In combination with a grindstone-frame the stone-supporting shaft of which is pro- 100

vided with an eccentric and rod connecting
said shaft with an oscillating tool-carrying
frame, adjustable brackets, by means of which
the tool-holder-carrying frame is pivotally se-
5 cured to the main frame, substantially as set
forth.

4. In combination with a grindstone-frame
the stone-supporting shaft of which is pro-
vided with an eccentric and rod connecting
10 said shaft with an oscillating tool-holder-car-
rying frame, and brackets to which said tool-
carrying frame is pivotally secured, a tool-
holder pivotally secured thereto, substantially
as described.

5. A grinding apparatus composed of a 15
stone, shaft, and frame, of any usual con-
struction, an eccentric on said shaft, a rod con-
necting with said eccentric, an oscillating
tool-holder-carrying frame, and a tool-holder
pivotally secured to said tool-holder-carry- 20
ing frame, the parts being constructed, com-
bined, and operating substantially as and for
the purposes specified.

WILLIAM CHALMERS.

Witnesses:

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H. S. SPRAGUE.