A. CAMERON.

SICKLE-GRINDERS.

No. 195,700. Patented Oct. 2, 1877.

Fig. 1

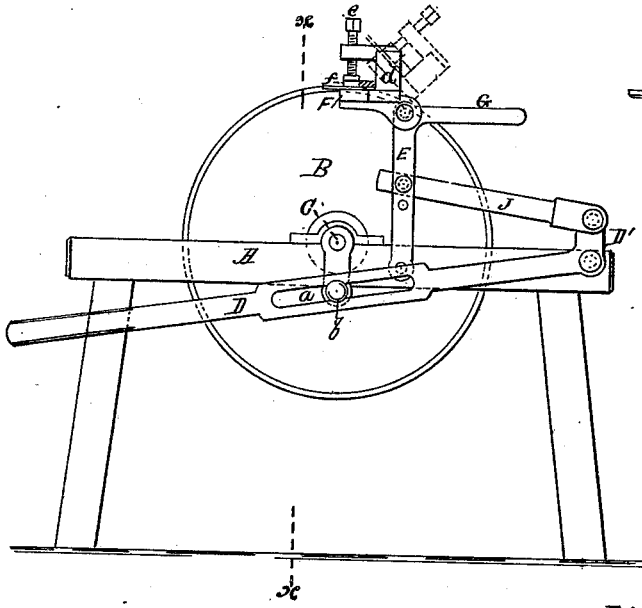


Fig. 2

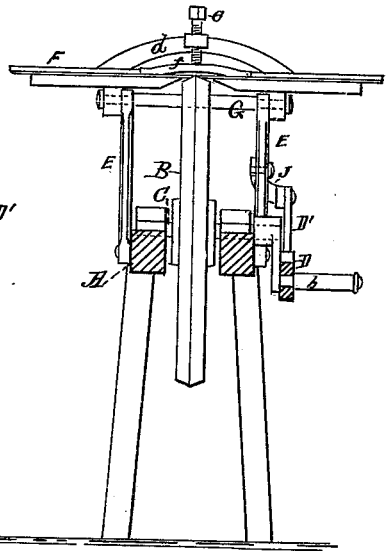
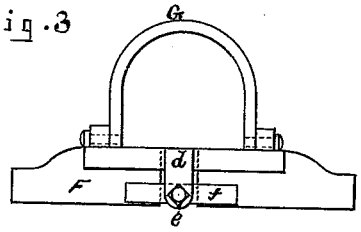


Fig. 3



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UNITED STATES PATENT OFFICE.

ALEXANDER CAMERON, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO GEORGE H. WORTHINGTON AND JAMES M. WORTHINGTON, OF AMHERST, OHIO.

IMPROVEMENT IN SICKLE-GRINDERS.

Specification forming part of Letters Patent No. **195,700**, dated October 2, 1877; application filed May 29, 1877.

To all whom it may concern:

Be it known that I, ALEXANDER CAMERON, of Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Sickle-Grinders; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a side elevation of a sickle-grinder embodying my invention. Fig. 2 is a sectional elevation of the same, showing the parts which are the right hand of the line *x x* in Fig. 1; and Fig. 3 represents a general plan or top view of the clamp employed to hold the sickle during the operation of sharpening the sickle.

Like letters of reference indicate like parts.

The object of my invention is to improve the construction and operation of that class of sickle-grinders now in use; and my invention consists in the construction and combination of the several parts, as hereinafter more fully described and claimed.

In the drawings, A represents the framework of the machine, which may be made in the form shown, or may be made in any other suitable form that will receive and support the operating parts.

B is the grindstone, which is mounted upon a transverse shaft, C, journaled to the center of the frame A, as shown in Fig. 1.

D is a horizontal lever, which is fulcrumed at one end to the end of the frame A, and is so arranged as to admit of a free and easy tilting movement. This lever is provided at a point near its center with a longitudinal slot, *a*, through which the crank-pin *b* of the shaft C loosely passes. The length of the slot *a* is equal to the diameter of the circle described by the crank-pin, so that a rotary movement is imparted to the shaft C and grindstone B by the ascending and descending movement of the lever.

E is an upright frame, which is pivoted at its lower end to the frame A on each side thereof, and is so arranged as to admit of a free and easy oscillating movement.

F is a transverse bar, which is hinged or pivoted to the upper end of the frame E on opposite sides thereof, and is so arranged as to admit of a free and easy rocking movement on the pivots, and to oscillate with the frame. The bar F is provided at its rear edge with an upright bracket, *d*, through which is passed a thumb-screw, *e*, carrying a clamp-plate, *f*, as shown in Figs. 1 and 2. The arrangement of the screw *e* and clamp-plate *f* relative to the bar F is such as to allow the sickle to pass between the clamp-plate and bar when the screw is loosened, and to hold the sickle in a fixed position, and in contact with the face of the stone, when the screw is tightened and the bar thrown forward to the position shown in Fig. 1.

The frame E is provided at its upper end with a horizontal arm, G, extending backward therefrom, as shown in Fig. 1, and so as to form a rest or support for the bar F when thrown backward, so as to bring the sickle in proper position to enable the operator to see the cutting-edge thereof.

The grinding-face of the grindstone is beveled from its center outward in the usual manner, as shown in Fig. 2.

The lever D is provided with a vertical arm, D′, located above and near the fulcrum of said lever. J is a connecting-rod, which is pivoted at one end of the arm D′, and at the opposite end to the frame E, so that an oscillating movement is imparted to the said frame jointly with the rotary movement of the grindstone by the ascending and descending movement of the lever.

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

1. The combination, with the crank-pin *b* of the shaft C, carrying the grindstone, of the slotted lever D, pivoted to the frame, and arranged to impart a rotary motion to the grind-

stone, and provided with the arm D′, said arm being connected to the frame E by the connecting-rod J, for imparting a vibrating movement to the said frame jointly with the rotary movement of the grindstone, substantially as and for the purpose specified.

2. The combination, with the oscillating frame E and bar F, hinged to said frame, of the arm G, substantially as and for the purpose specified.

ALEXANDER CAMERON.

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