

(No Model.)

J. J. WOOD, Sr., & F. CHRISTEN.

MACHINE FOR GRINDING HARVESTER KNIVES.

No. 300,183.

Patented June 10, 1884.

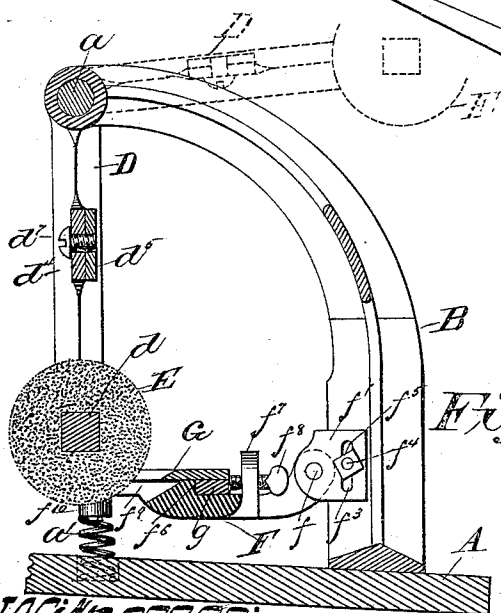
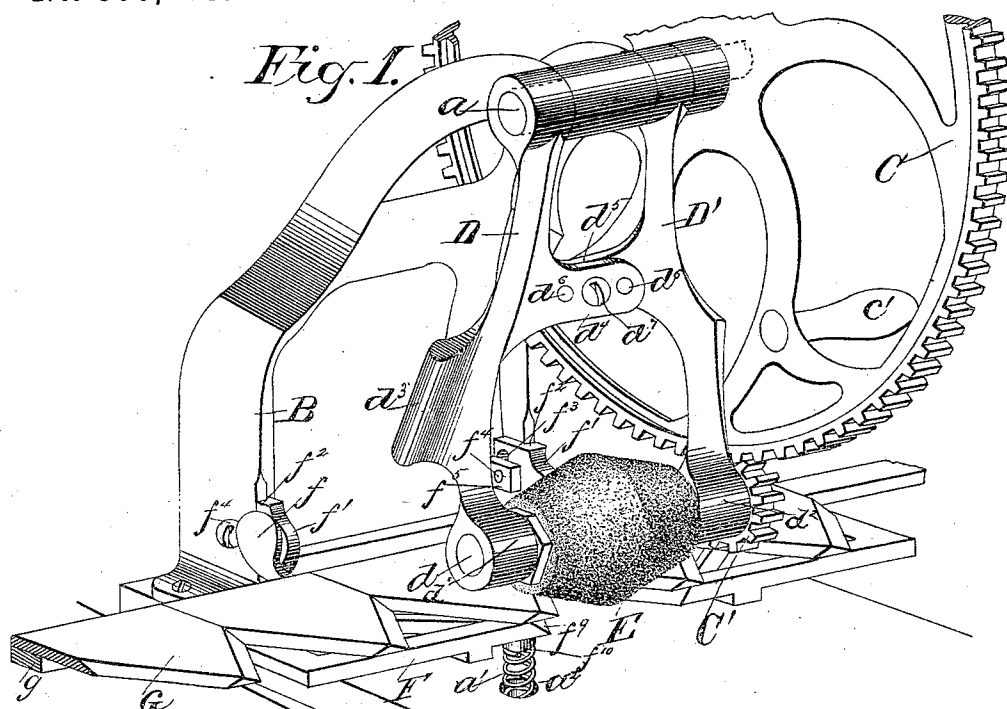


Fig. 3.

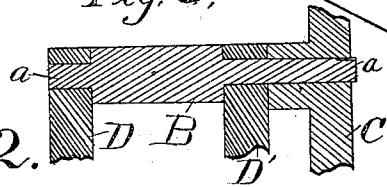


Fig. 2.

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UNITED STATES PATENT OFFICE.

JOHN J. WOOD, SR., OF BERLIN, WISCONSIN, AND FRED CHRISTEN, OF
IOWA FALLS, IOWA.

MACHINE FOR GRINDING HARVESTER-KNIVES.

SPECIFICATION forming part of Letters Patent No. 300,183, dated June 10, 1884.

Application filed April 11, 1884. (No model.)

To all whom it may concern:

Be it known that we, JOHN J. WOOD, Sr., of Berlin, in the county of Green Lake and State of Wisconsin, and FRED CHRISTEN, of Iowa Falls, in the county of Hardin, and in the State of Iowa, have invented certain new and useful Improvements in Machines for Grinding Harvester-Knives; and we do hereby declare that the following is a full, clear, and exact description thereof.

Our invention relates to improvements in machines for grinding harvester-knives, and will be fully described hereinafter.

In the drawings, Figure 1 is a perspective view of our improved grinder. Fig. 2 is a vertical longitudinal section through the center of the same. Fig. 3 is a detail section.

A is the bed of our machine, and firmly held on its upper face is the goose-neck stand B. In the upper end and on each side of said stand are provided suitable bearing-studs, *a*, on which are freely hung the vibrating arms D D', the stud bearing the arm D' being extended out sufficiently to receive the hub *c* of the cogged hand-wheel C, held freely thereon in any suitable manner, and to be revolved by means of its crank *c'*, its cogs meshing with those of the pinion C', keyed onto the shaft *d* of the grinding-wheel E. This shaft runs in the bearings *d'* *d''*, formed in the lower end of the arms D and D'.

*d*³ is the handle, through which the grinding-wheel is guided onto different points of the knife. The arms D D', which we prefer to make separate, are held together by means of the laps *d*⁴ *d*⁵, formed, respectively, on their inner edge with binding-studs *d*⁶ *d*⁷. A screw, *d*⁸, binds them firmly together. By this arrangement the grinder is adapted to be promptly and conveniently taken off and replaced by one of another form, according to the nature of the grinding required.

F is the knife-table, and this is provided on its rear edge with the knife *f*, connected to the front edge of the stand B by the hinging-

plate *f'*. This hinge-plate is provided on its outer face with a shoulder, *f*², which rests squarely against the stand-edge, and has a vertical slot, *f*³, cut close to its inner end, to receive the bolt *f*⁴, by means of which and of the nut *f*⁵ the table F is supported in suitable adjustment. This table F is recessed in its upper face to form the shoulder *f*⁶, against which the knife-bar *g* is squarely held when the knife G is put in position to be ground. In the center of the table and projecting above its rear edge is a vertical stud, *f*⁷, and this stud is adapted to carry the jambolt *f*⁸, whereby the knife may be secured in place when its ends are being ground. On the front edge of the table and below the grinding-wheel E the notch *f*⁹ is formed, to allow of the passage of said wheel as it revolves. On one side of said notch *f*⁹ a stud, *f*¹⁰, is formed on the lower face of the knife-table F, and this stud rests on the upper end of a coil-spring, *a'*, the lower end of which is embedded in a recess, *a*², formed in the upper face of the bed A of the machine. The knife-table is thus adapted to be depressed to allow the grinding-wheel E to reach innermost edge of the knife as the operator swings the same on its arms D D'.

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

1. In a grinding-machine for harvester-knives, in combination with the table F, having hinge *f*, and stand B, the adjustable hinging-plate *f'*, having shoulder *f*², and vertical slot *f*³, the screw-bolt *f*⁴, and fastening-nut *f*⁵, substantially as shown and described, and for the purpose set forth.

2. In a grinding-machine for harvester-knives, the combination, with the bed and knife-table, of the curved stand B, having overhanging bearing-studs *a*, the driving-wheel *c*, vibrating arms D D', and grinding-wheel, substantially as described.

3. In a grinding-machine for harvester-

knives, in combination with the stand B and the grinding-wheel E, the vibrating arms D D', each having the respective extensions $\bar{d}^1$ $\bar{d}^2$ overlapping each other, the studs $\bar{d}^6$ $\bar{d}^6$ and
5 respective perforations, and the binding-screw $\bar{d}^7$, substantially as shown and described, and for the purpose set forth.

In testimony that we claim the foregoing we have hereunto set our hands, at Berlin, in
10 the county of Green Lake and State of Wisconsin, and at Iowa Falls, in the county of Hardin

and State of Iowa, respectively, each in the presence of two witnesses.

JOHN J. WOOD, SR.
FRED CHRISTEN.

Witnesses to Wood's signature:

E. G. BLACKMAN,
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Witnesses to Christen's signature:

JOHN BALLHOUSE,
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