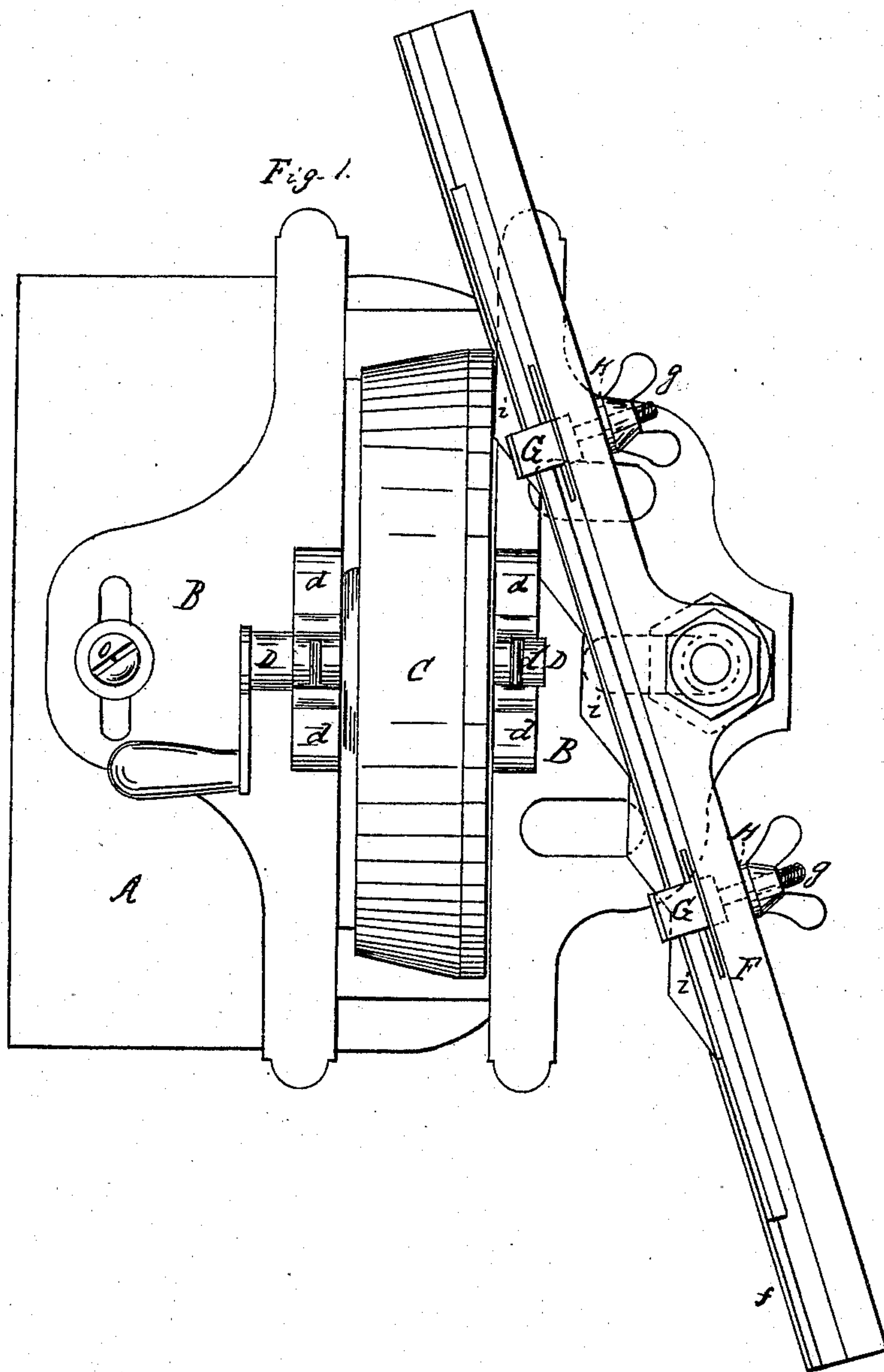


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MACHINE FOR GRINDING CUTTERS OF HARVESTING MACHINES.  
No. 74,731. Patented Feb. 18, 1868.



Witnesses.

Geo. S. Payton  
Baltis D. Long

Inventor.

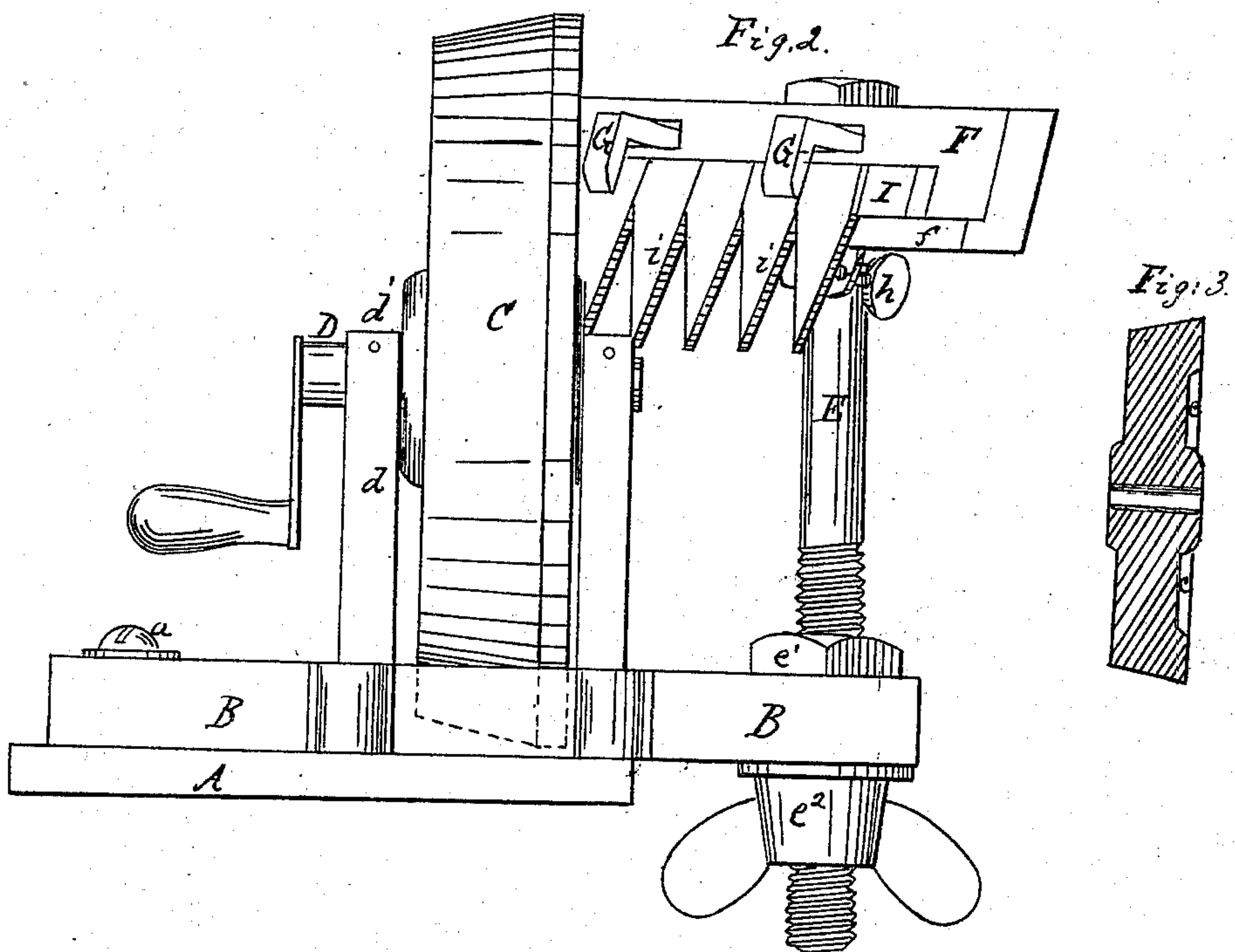
Wm. H. Stevenson  
by his atty  
Baldwin & Son

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Paul A. Winsor



# United States Patent Office.

WILLIAM H. STEVENSON, OF AUBURN, NEW YORK.

Letters Patent No. 74,731, dated February 18, 1868.

## IMPROVEMENT IN MACHINE FOR GRINDING THE CUTTERS OF HARVESTING-MACHINES.

The Schedule referred to in these Letters Patent and forming part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM H. STEVENSON, of Auburn, in the county of Cayuga, and State of New York, have invented a new and useful Improvement in Machines for Sharpening Harvester-Cutters, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which make part of this specification, and in which—

Figure 1 represents a plan or top view of my improved machine.

Figure 2 represents a view in elevation of the same, and

Figure 3 a transverse section through the stone.

The improvements herein claimed consist, first, in a novel method of constructing the grindstone with an annular depression on one of its sides, a portion of its periphery on the side next the depression parallel to the axis of rotation, and the remainder of the periphery bevelled, by which mode of construction the bevelled part of the periphery can be used for grinding chisels, planes, and other tools, while the harvester-cutters are ground on its side, and the portion of the periphery parallel to the axis can be worn away, and still leave a smooth edge on the periphery of the stone; second, in a novel method of combining the stone and the support for the cutters in an overhanging detachable frame, which may be secured to a bench, while in operation, and readily removed therefrom when not in use; third, in a novel method of sharpening harvester-cutters by clamping them, points down, in an oscillating-frame, which swings up against the face of the stone.

In the accompanying drawings, A represents a bench, on which the bed or base B may rest, and be secured by a clamp-screw, *a*. The grindstone C is mounted on a shaft, D, supported in open bearings in standards *d* rising from the bed. The shaft D is held in the bearings by pins *d'*, which can readily be taken out in order to remove the stone. A spindle, E, passes through a slot in the bed-plate, by which means it can be adjusted towards or from the grindstone, and is held by jam-nuts *e'* *e''*. The spindle can also be screwed up or down in these nuts. A bar or rack, F, is pivoted centrally on this spindle, so as to oscillate horizontally. Hooked clamps G move laterally in horizontal slots in this bar, and are held by jam-nuts *g*. Arms H on the back of this bar extend downward and carry set-screws *h*. The bar F has a ledge or flange, *f*, on its lower edge next the stone, to support the cutter-bar I, on which the cutters *i* are placed, with their bevelled edges next the stone, points downward.

The cutters are held by the clamps G, and the bar I can be moved endwise in the clamp-frame. The cutters are sharpened by grinding off their bevelled edges, which are pressed against the face of the stone by swinging the clamp-frame F horizontally, as shown in fig. 1.

About one-fourth of the periphery of the grindstone is parallel with its axis of rotation, the remaining portion being bevelled, as shown in the drawings. Chisels, planes, and other tools may be sharpened on this bevelled part. The cutters, however, are sharpened on the side of the stone near its periphery. Inside of this part of the stone I form an annular depression or groove, *c*, which leaves a raised band or ring on that side of the stone. By this mode of construction the cutters wear away this raised band only, and a smooth edge or corner is preserved on the periphery of the stone, as the other tools wear only on the bevelled part of the periphery.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The grindstone, constructed as described, with one part of its periphery bevelled, and the other part parallel to the axis of rotation, and having an annular groove in that side next the parallel surface, for the purposes set forth.

2. The combination, substantially as described, of the bench A, the overhanging detachable frame or bed B, the stone, and the spindle E, for the purposes set forth.

3. The combination, substantially as described, of the stone, the spindle, and the oscillating rack-bar or clamp-frame, whereby I am enabled to grind the knives with their points down.

In testimony whereof, I have hereunto subscribed my name.

WM. H. STEVENSON.

Witnesses:

HORACE T. COOK,  
E. W. BUTTON.