

Patterson & Colburn.
Harvester Cutter.

No. 23190

Patented Mar 8 1859

Fig 1

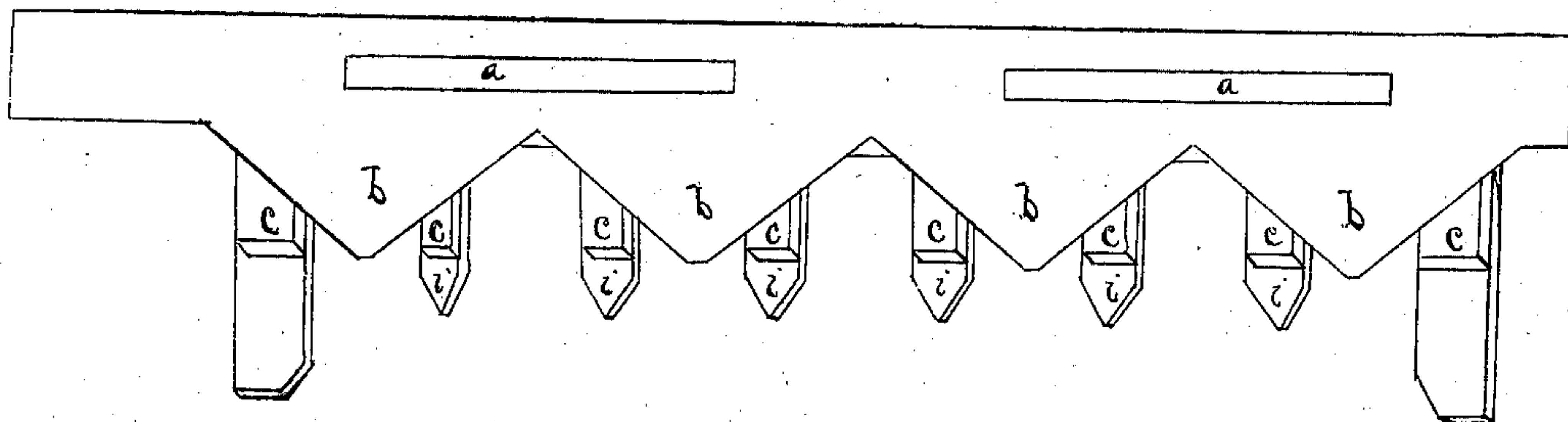


Fig 2

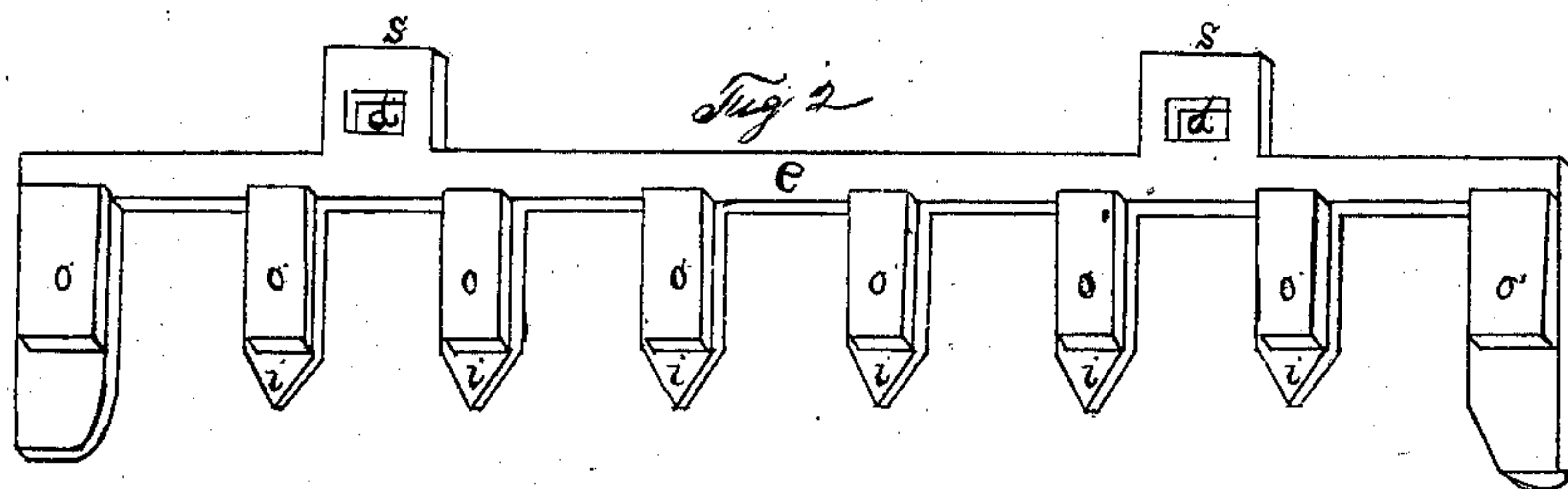


Fig 3

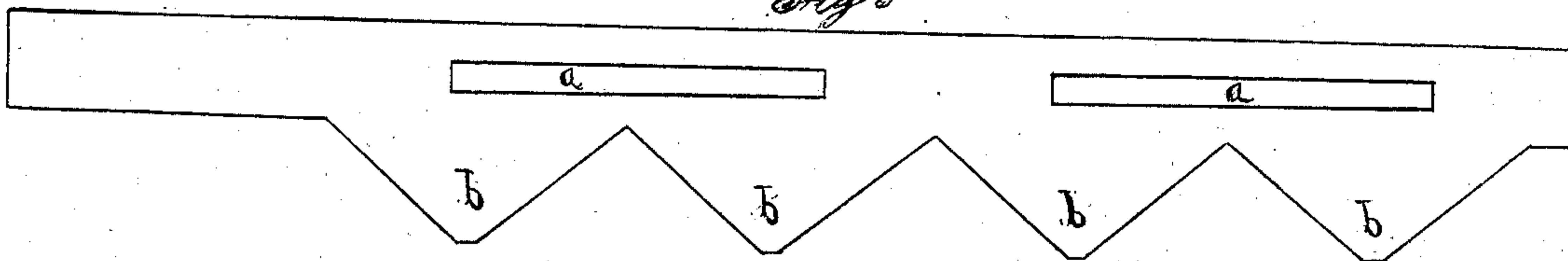
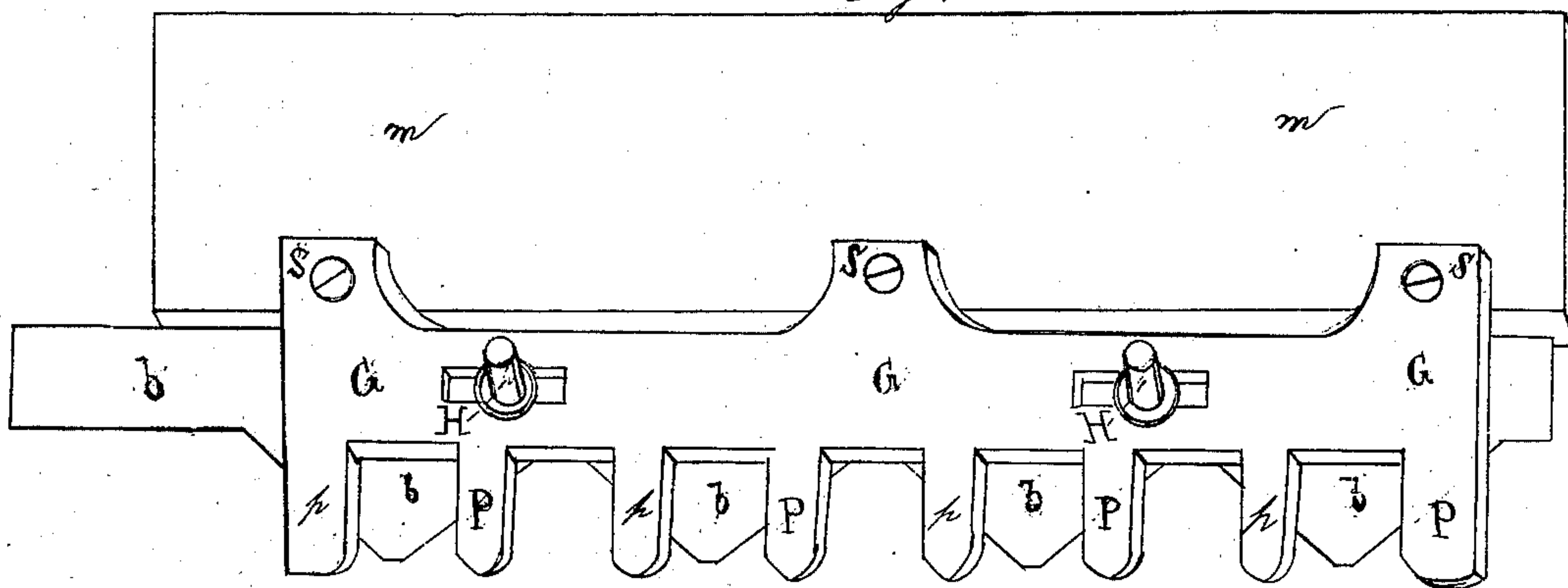


Fig 4



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES W. PATTERSON AND LEVI H. COLBORN, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. 23,190, dated March 8, 1859.

To all whom it may concern:

Be it known that we, JAMES WILLARD PATTERSON and LEVI HANFORD COLBORN, of the city and county of Baltimore, and State of Maryland, have invented new and useful Improvements in Mowing and Reaping Machines; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 represents a perspective view of the main attaching-bar and guards with the knife upon it. *a* in Fig. 1 represents the slots in the knife; *b*, the angles of the knife; *o*, the top part of the guard on which the knife is resting.

Fig. 2 represents a view of the lower attaching or main bar. *S* represents in this figure back projections, in which are mortises for admitting the bolt, for purposes hereinafter specified.

Fig. 3 represents a top view of the cutter or knife. *a*, the slots in the back, and *b* the angles, of the knife.

Fig. 4 represents a view of a wood bar, *m*, with a top metallic plate over the knife, and the knife suspended under the top plate, with bolts passing through the slot in the knife, also the top plate, for purposes hereinafter mentioned.

Fig. 5 represents a side view of the lower guard or finger, made in two parts, and has a point turning upward, for purposes hereinafter mentioned.

To enable those skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

In Fig. 4, *g* represents a top plate, attached to a wood bar, *m*, by means of ears *s*, projecting backward for the purpose of admitting bolts or screws wherewith to make it fast to the bar. This plate is constructed with projecting fingers *p*, that reach forward to the points of the knife, or thereabout. The use of these fingers of the top plate is to aid the knife in cutting, and may be used in connection with a vibratory knife without any lower guards, as represented in Fig. 4, where the knife is suspended to this top plate by means of a screw-bolt at each end, or near the end,

the bolt passing through the knife and top plate in a slot or mortise which allows the knife to vibrate. This top plate is metallic, and may be made in one piece or in sections, or otherwise put together. This top plate may be otherwise used in connection with the bottom bar, Fig. 2, with guards *i*, and the knife, Fig. 3, by bolting the three parts together through the slots in the same.

S represents rear projections from the guard-bar *e*, which have mortises for the admission of screw-bolts *h*, as represented in Fig. 4. *o* are elevated projections upon the lower guards, *i*, which are terminated in a line with the forward edge of the bar *e*, to which the guards *i* are attached. A clear space is thus left between the knife and the bar *e*, which admits of the free passage of anything under the knife or between any of the lower guards and the knife during the operation of mowing or reaping. The lower guard, as shown in Fig. 5, is turned up in front. The thickness of the projection *o* shows the depth of the space between the knife and the bar *e*. It may be made solid or in two pieces.

Fig. 3 is the cutting-knife, to which a horizontal reciprocating motion in the direction of its length is given in any convenient manner. *a* are slots through which the screw-bolts *h* pass, which guide the knife and maintain it in position. They correspond with mortises or slots in the top plate, *g*, and in the projections *S*. The inner angles of the cutting-knife extend to the rear of the projections *o* upon the guards *i*, forming with the rear edge of said projections a cutting or shearing apparatus, which effectually clears the machine from any obstruction arising from grass or straws insinuating themselves between the knife and the guards. Thus the shearing action takes place not only upon the sides but upon the rear termination of the portion of the guard with which the cutting-edge of the knife comes in contact, rendering it impossible for the action of the knife to be obstructed by anything which is within its ability to cut. The lower guard-bar and knife are suspended from the top plate, *g*, by means of the screw-bolts *h* in such a manner as to leave open spaces between them and the wood bar *m*, thus affording a clear passage for anything which may

have passed under the top plate either above or below the knife.

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

The combination of the cutting-knife *b*, the bar *e*, and projections *o* upon the guards *i*, ar-

ranged substantially in the manner and for the purposes herein described.

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Witnesses:

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