(No Model.)

W. H. GAINES.

HAY KNIFE.

No. 342,957. Patented June 1, 1886.

Fig. 1.

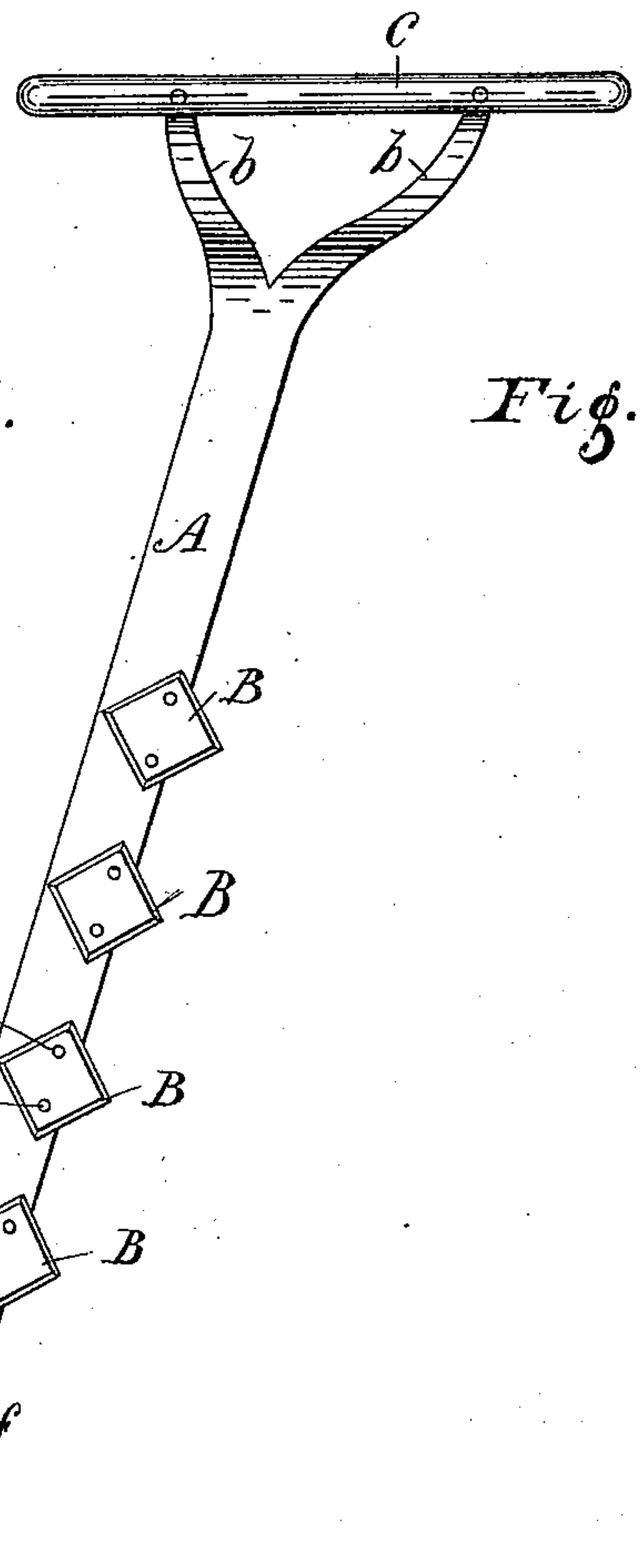
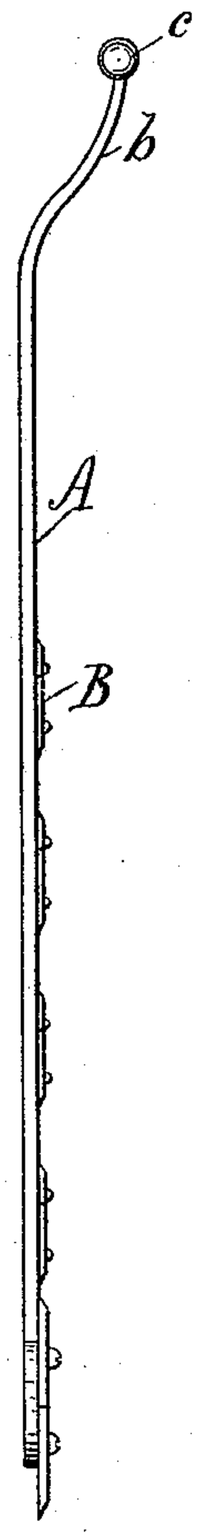


Fig. 2.



WITNESSES:
V. M. Hood.
Frank A. Jacob.

INVENTOR:
Wilbur H. Gaines.
By H. P. Hood.
Atty.

UNITED STATES PATENT OFFICE.

WILBER H. GAINES, OF TRENTON, INDIANA.

HAY-KNIFE.

SPECIFICATION forming part of Letters Patent No. 342,957, dated June 1, 1886.

Application filed February 26, 1886. Serial No. 193,271. (No model.)

To all whom it may concern:

Be it known that I, WILBER H. GAINES, a citizen of the United States, residing at Trenton, in the county of Randolph and State of Indiana, have invented a new and useful Improvement in Hay-Knives, of which the following is a specification.

My invention relates to an improvement in that class of hay-knives in which the cutting portions consist of thin sharp-edged steel plates secured to a flat bar, so as to project from one edge, and a point, which is also a thin steel plate, which operates as a guide to the knife.

The object of my improvement is, first, to so arrange the cutting-plate forming the point that it shall be adjustable relatively to the flat bar forming the body of the knife in such a manner as to assist the operator in holding the knife at an angle to the line of thrust when used, and, second, to so construct the cutters that they may be easily reversed to present new cutting-edges, all as hereinafter fully described.

The accompanying drawings illustrate my invention.

Figure 1 is a side elevation, and Fig. 2 an edge view.

A is a flat bar of iron or steel forming the body of the knife. Said bar is split at one end to form diverging arms *b b*, which are bent to one side, as seen in Fig. 2, and to which the handle C is secured, the arrangement being such that when the handle C is held in a level horizontal position the bar A is inclined, as seen in Fig. 1.

B B B B are thin rectangular plates of steel, having all their edges beveled, so as to form sharp cutting-edges. Said plates are secured at intervals along one side of bar A by means of rivets *d d*, there being two rivets to each cutter, and the arrangements being such that one corner of each of the plates projects beyond the edge of the bar.

Plates B are sharpened on all edges, for the purpose of presenting new cutting-edges when those edges projecting beyond the edge of the bar become dulled, the change being effected by removing the rivets *d d* and turning the opposite corner of the cutter outward.

D is a diamond-shaped plate having all its edges sharpened to form cutting-edges, and having also near each end transverse slots *e e*.

Plate D is pivoted to the side of bar A near the end, so as to swing laterally thereon by means of a rivet, *f*, and is further adjustably secured in position on the bar by means of screws *h h*, passing through the slots *e e*.

Plate D is for the purpose of opening a passage for and guiding the knife when it is thrust into a mass of hay, and it is adjusted in practice so that a line passing through its longest diameter from point to point is nearly or quite at right angles to the line of handle C, as seen in Fig. 1. The object of such adjustment is to assist the operator in keeping the bar A inclined at an acute angle to the line of movement of the knife when thrust downward, thereby causing the cutters B to move in different paths, instead of following each other in the same path. When one end of the plate D has become dulled, screws *h h* are removed, and the plate turned on its pivot till it is reversed, thus presenting new cutting-edges.

I claim as my invention—

The above-described hay-knife, consisting of bar A, having arms *b b*, handle C, plates B, plate D, having slots *e e*, rivet *f*, and screws *h h*, all combined as and for the purpose specified.

WILBER H. GAINES.

Witnesses:

JONATHAN A. BOTKIN,

JOHN W. MACY.