K.H.C. Preston,
Harvester Cutter.

No. 2261
33265

Patented. Sept. 10. 1861.

Fig: 1.

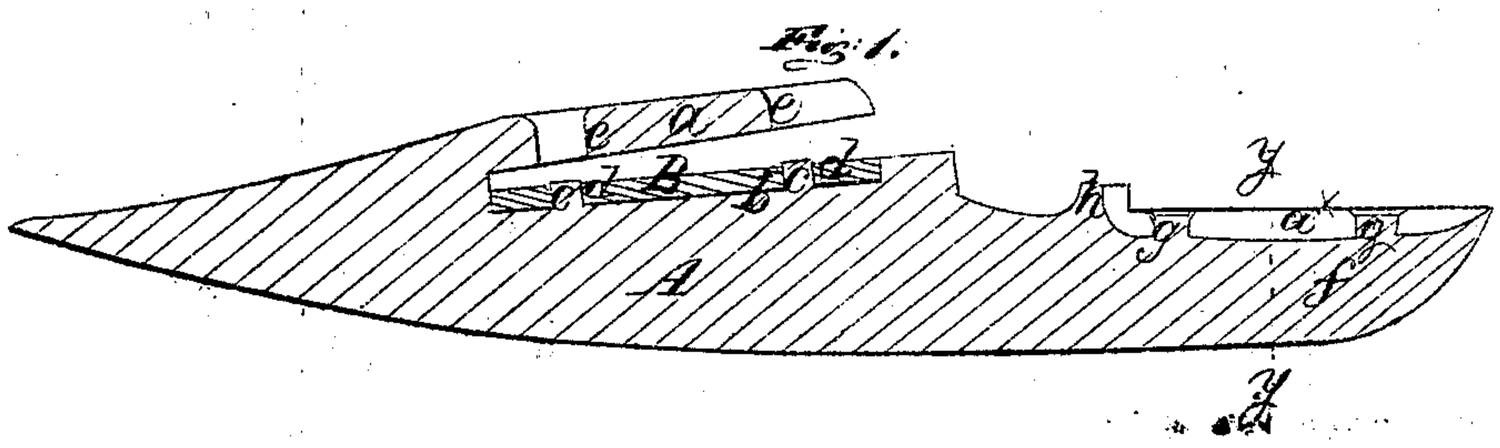


Fig: 4.

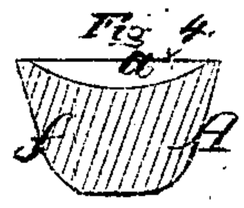


Fig: 3.

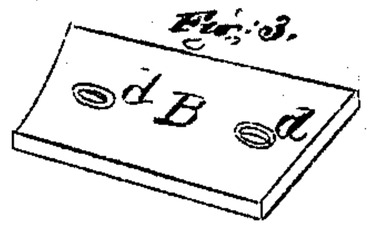
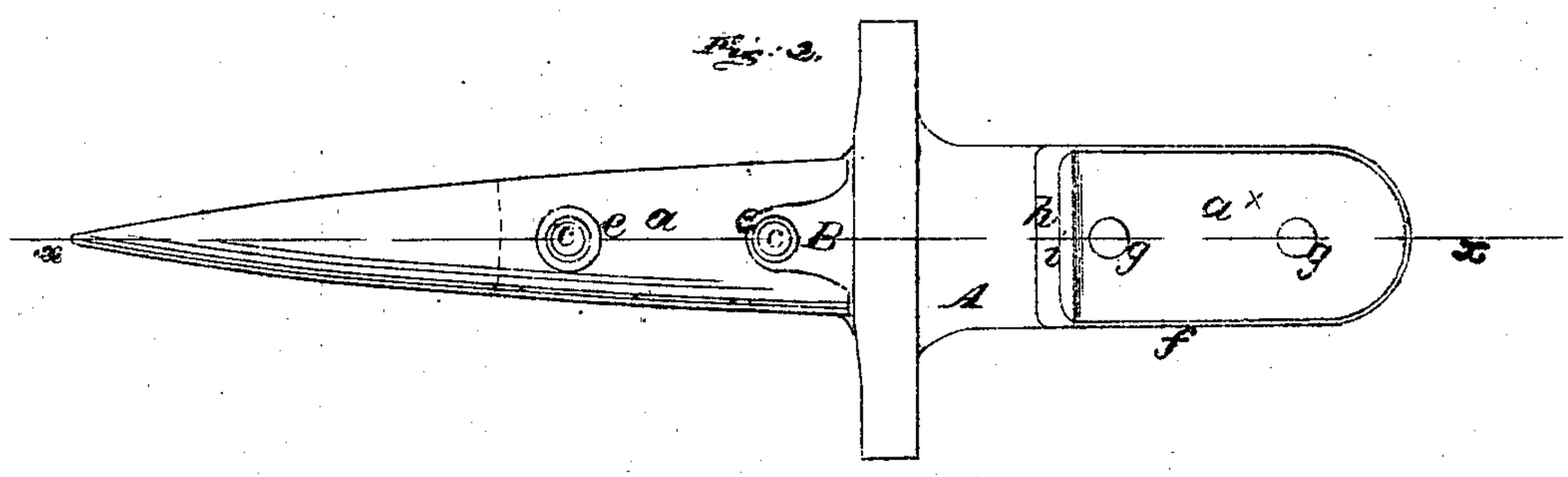


Fig: 2.



Witnesses
M. M. Livingston
G. W. Reed

Inventor.
N. H. C. Preston
per Munn & Co
Attorneys

UNITED STATES PATENT OFFICE.

K. H. C. PRESTON, OF MANLIUS, NEW YORK.

IMPROVEMENT IN GUARD-FINGERS FOR HARVESTERS.

Specification forming part of Letters Patent No. **33,265**, dated September 10, 1861.

To all whom it may concern:

Be it known that I, K. H. C. PRESTON, of Manlius, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Guard-Fingers for Harvesters; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a longitudinal vertical section of my invention, taken in the line *x x*, Fig. 2. Fig. 2 is a plan or top view of the same. Fig. 3 is a detached perspective view of the stationary cutter, which is fitted in the guard-finger. Fig. 4 is a transverse section of Fig. 1, taken in the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to obtain a simple, cheap, and efficient means for securing steel plates in the guard-fingers of harvesters—those fingers which are provided with caps. These steel plates form the bearing-surfaces for the sickle, and also form ledger blades or cutters, which greatly assist the teeth of the reciprocating sickle in their cutting operation. In securing these plates in guard-fingers which are provided with caps, considerable difficulty has been experienced in consequence of the caps extending over the plates, and various plans have been devised for effecting the purposes, none of which have proved satisfactory, the plates being liable to work loose, and their adjustment in the fingers, although imperfect, is still attended with a considerable expenditure of time. To obviate this difficulty I cast two nipples or pins on the face of each finger, and in a recess or rabbet on the face which receives the plate, and in the cap of the finger, directly over each nipple or pin, there is a hole sufficiently large to allow a punch to pass through them to rest on the nipples and rivet or head the same, the nipples passing through holes in the plate, and the former, when headed, firmly secures the plate in the finger.

The invention has further for its object a more ready and perfect means than hitherto for fitting the guard-fingers to the finger-bar, whereby the work may be rapidly done and at a much less cost than by the usual mode, as will be fully described hereinafter.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a guard-finger, which is of metallic cast-iron and provided with a cap, *a*. The finger may be of the usual form, and secured to the finger-bar in any proper way. The finger is cast with a recess or rabbet, *b*, in its face, said recess or rabbet being sufficiently deep to receive the steel plate B, the upper surface of which is flush with the top of the face of the finger.

In the recess or rabbet *b* there are two nipples or pins, *c c*—one near the front and the other near the back part of the recess or rabbet *b*. These nipples or pins extend up as high or a trifle higher than the top of the plate B, and pass through holes *d* in the plate, the orifices of which are countersunk. The sides of the plate B are ground, so as to form perfect angles at their upper edges, which are the stationary or ledger cutters over which the teeth of the reciprocating sickle work.

In the cap *a* of the finger A, and directly over each nipple or pin *c*, there is made a hole, *e*, sufficiently large to allow a punch to pass through it. By this means the upper ends of the nipples or pins *c c* are headed, so as to secure the plate B firmly in the recess or rabbet *b*, the end of the punch being placed on the upper end of each nipple, and the latter headed by striking the punch with a hammer. Thus it will be seen that the plate B may be expeditiously and firmly secured to the face of the guard-finger, the cap of the latter, which has hitherto prevented the work being done in a proper manner, in the present instance offering no impediment to the proper execution of the work. The back part, *f*, of the finger A—the part which abuts against the under side of the finger-bar—is made concave, to form what may be termed "a cap," and this cap has two upright nipples or pins, *g g*, which are cast with the finger, but do not extend up quite as high as the sides or edges of the part *f*. The lip *h*, which is at the front of the part *f* and abuts against the front edge of the finger-bar when the finger is secured to the finger-bar, is also made concave, as shown at *i* in Figs. 1 and 2. These concave surfaces are fitted with any suitable soft metal or composition, *a**—lead, for instance, or a composition of lead and tin. These concave surfaces

are filled with the soft metal, so as to be even or flush with the edges of the concaves, and the soft metal is secured in the part *f* of the finger by slightly bending or riveting the nipples or pins *g g*. (See Fig. 1.) By this arrangement it will be seen that the fingers may be snugly adjusted to the finger-bar, and with the greatest facility, as a true surface may be obtained for the finger-bar to abut against, and the trouble and expense of planing and stamping or swaging—modes hitherto employed to obtain a true surface—avoided. In my invention the guard-finger is secured or clamped to a plate of steel having the desired position of the finger-bar, and the cavities of the finger are then filled with the molten soft metal. Thus a perfectly-accurate adjustment of the fingers to the finger-bar is obtained.

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

1. The securing of the plate B to the face of the guard-finger A by means of the nipples or pins *c c*, cast with the finger and passing through holes in the plate, and headed by means of a punch passed through holes *e e* in the cap, directly over the pins or nipples, substantially as described.

2. Fitting the guard-fingers snugly to the finger-bar by means of soft-metal bearing-surfaces *a**, the latter being run in a molten state into cavities or cups made in the parts *f* and lips *h* of the guard-fingers, and secured therein by the headed nipples or pins *g g*, substantially as described.

K. H. C. PRESTON.

Witnesses:
JOSEPH BAKER,
J. W. MANTLER.