(No Model.)

# J. CRIST & F. M. OGLE.

## HARVESTER GUARD FINGER.

No. 336,473. Patented Feb. 16, 1886.

Fig. 1

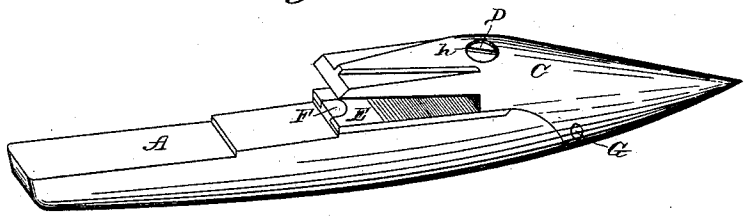



Fig. 2.

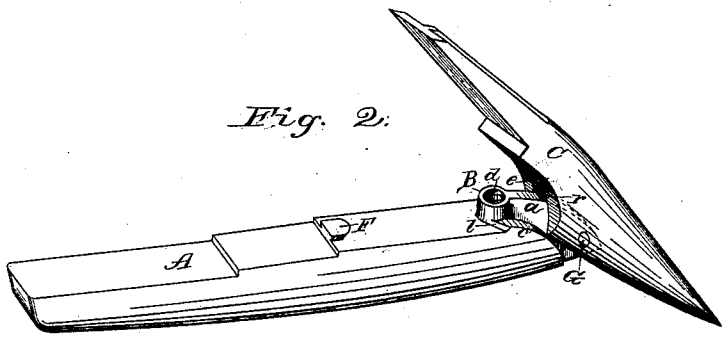



Fig. 3.

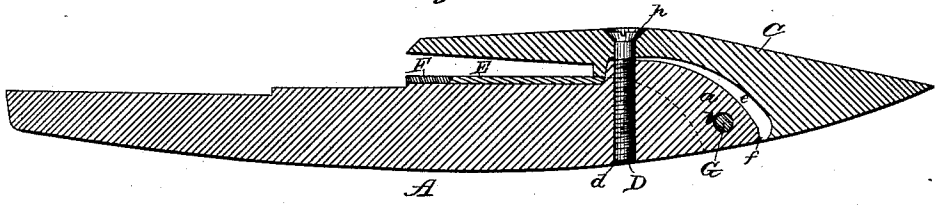



Fig. 5

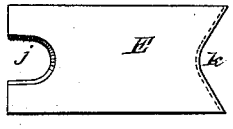
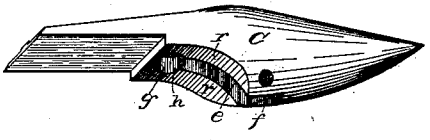



Fig. 4.




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# UNITED STATES PATENT OFFICE.

JOHN CRIST AND FRANCIS M. OGLE, OF BROWNING, MISSOURI.

## HARVESTER GUARD-FINGER.

SPECIFICATION forming part of Letters Patent No. 336,473, dated February 16, 1886.

Application filed May 2, 1885. Serial No. 164,219. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN CRIST and FRANCIS M. OGLE, citizens of the United States, residing at Browning, in the county of Linn and State of Missouri, have invented new and useful Improvements in Harvester Guard-Fingers, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to guard-fingers for harvesters, and to that class of the same in which a ledger-blade or steel plate is employed to take up wear; and it has for its object to provide a device of this character by means of which said plate may be taken off with perfect ease when found necessary to sharpen the same, or to replace it by a new one.

To this end the said invention consists in certain details of construction and combination of parts, as will be hereinafter set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of our improved guard-finger, showing it in its normal position for use. Fig. 2 is a similar view, the ledger-plate being withdrawn and the fender thrown up. Fig. 3 is a longitudinal section of Fig. 1. Fig. 4 is a detail perspective view of the fender. Fig. 5 is a plan view of the ledger-plate.

Like letters are used to indicate corresponding parts in the several figures.

Referring to the drawings, A designates the body or main portion of a guard-finger, provided at its forward end with a reduced curved portion, *a*, having a transverse hole or opening, *b*. The front wall of the body A, on each side of this reduced portion *a*, is curved, as at *c*, and at the top of this curved front wall projects a short vertical tube or socket, B. A threaded opening or passage is made through this tube entirely through the guard, as shown at *d*, this passage receiving a screw, as will be hereinafter explained. The bottom surface of the reduced portion *a* is on a line with the bottom of the body A, and the curved top surface of the portion *a* extends from said bottom surface upward in a curved line, meeting the tube or socket B on a horizontal line therewith.

C designates the fender, provided on its under side with a central curved recess, *e*, to receive the reduced portion *a*, the bottom wall of which recess near the front end being cut through, as at *f*, to allow the movement of the reduced portion *a*, the bottom surface of which fits flush with the corresponding surface of the fender. The rear end of the recess *e* is enlarged at *g*, to fit around the tube or socket B, and a vertical threaded passage, *h*, communicates with this enlargement and comes on a line with the threaded passage *d*, formed in the tube B. A set-screw, D, is inserted through the threaded passages *h d*, so as to hold the fender to the body A. The opening or passage *h* is made countersunk to receive the head of the set-screw D. On each side of the recess *e* the under side of the fender is curved, as at *r*, to fit over the curved front surfaces, *c*, of the body A.

E designates the ledger-blade, formed of a flat piece of sheet metal, preferably steel. This blade or plate (seen in Fig. 5) has at its rear end a notch, *j*, semi-elliptical in form, to fit around a correspondingly-shaped projection, F, formed in the upper face of the body A. The walls of the notch *j* are dovetailed to fit the corresponding dovetailed sides of the projection F. The front end of the blade or plate E is cut out, as at *k*, to enable it to fit around the tube or socket B. The top surface of the body A, adjacent to the tube B and in rear of the curved front surfaces, *c*, is provided with a shoulder, *l*, on each side of the tube. This shoulder *l* is inclined, as shown, to receive the correspondingly-inclined recess *k*, which recess is deepest at the center of the plate E, so as to cause the front ends of the plate to bear against the shoulders *l* on each side of the tube B, and thus lateral displacement of the plate is avoided. When in normal position, that portion of the fender in rear of and around the tube B rests upon the front end of the plate E, so as to hold the same down in place without the necessity of employing screws or rivets, the screw D, which holds the fender down, being all that is needed to complete the connection. The rear end of the fender above the plate E is recessed on the under side, to allow the cutter of the harvester to work in the usual manner. A rivet or pin, G, passes through the fender near the front end and through the reduced portion *a* of the body A, and forms a hinge for the fender, to

allow the latter to be thrown up when it is desired to sharpen the plates E or replace them by new ones.

The operation of our invention will be readily understood from the foregoing description, taken in connection with the annexed drawings.

The ledger blades or plates E soon become worn by the action of the knives or cutters, and it is found necessary for the practicable operation of a harvester to keep them sharpened. By hinging the fender it may be thrown back, as shown in Fig. 2, and in this position the plate or ledger-blade may be readily removed by drawing it upward from the front end, the recess *k* allowing the plate to work over the tube B. In normal position the plate E fits firmly around the projection F and flush therewith, and is held by such projection from lateral displacement at its rear end. The front end cannot move forwardly, since it abuts against the shoulders *l*, while the fender holds said front end from upward movement. In this manner said plate is held from forward, backward, upward, or sidewise movement while in use, yet when it is desired to sharpen the plate or replace it by a new one the fender can be thrown back in a moment's time to obtain access to the plate.

It will be observed that by the peculiar hinge-connection of the fender to the body A, the curved bottom surfaces, *r*, of the former fitting over the curved front surfaces, *c*, of the latter, and the reduced projecting portion *a* received neatly within the recess *e* of the fender the guard-finger has the appearance of those now in use, and there will be no projecting portions or cavities to become broken or clogged while in use.

It will be seen that by the novel connection of the plate in our guard, it being dovetailed at one end to fit around the projection and held down by the fender at the other end, said plate may be more readily removed than plates of other guards. The tube or projection B, which receives the screw G, strengthens the hinge and takes the strain off the screw, making the guard stronger than it would otherwise be.

Our guard-finger can be used on any machine now manufactured, the only change necessary being to regulate the rear end of the body A to fit different machine-bars.

Having described our invention we claim—

1. In a guard-finger, the combination, with the body or main portion, of the detachable plate or blade and the hinged or pivoted fender arranged and adapted to hold said plate in position and allow its removal at will, as set forth.

2. In a guard-finger, the body or main portion, in combination with the fender hinged or pivoted at an intermediate point of its length to the body, the rear end of the fender extending back over the body and held down in position by means substantially as described, as set forth.

3. In a guard-finger, the body or main portion, in combination with the detachable plate resting on the same and the fender hinged or pivoted to the front end of the body and resting on the plate to hold it down in position, as set forth.

4. In a guard-finger, the body or main portion, in combination with the detachable plate, the hinged or pivoted fender arranged to be thrown up out of contact with the plate, and a screw for holding the fender down in position, as set forth.

5. In a guard-finger, the body or main portion provided with a projection, in combination with the steel plate fitting at its rear end around the projection, the fender hinged or pivoted to the body and holding the front end of the plate down in position, and a screw to keep the fender in its normal position, as set forth.

6. In a guard-finger, the body or main portion provided with a projection and a tube or socket, in combination with a steel plate fitting at each end around the projection and tube, respectively, and the hinged or pivoted fender fitting over the tube or socket and bearing upon the front end of the plate, and a screw for holding the fender down, said screw working through the tube or socket, as set forth.

7. In a guard-finger, the body or main portion having at its front end a reduced projecting portion, *a*, and curved surfaces *c*, provided on each side thereof, in combination with a fender having a recess on its under side to receive the portion *a*, the under side of the fender on each side of the recess being shaped to fit over the surfaces *c*, and the screw for holding the fender down in position.

8. In a guard-finger, the body or main portion A, having a projection, F, dovetailed as described, and shoulders *l*, provided near the front end of the body, in combination with the steel plate having a notch at its rear end to fit around the projection, and a recess at its front end to enable it to bear against the shoulders, and the hinged or pivoted fender resting upon the front end of the plate and held down in position by a screw, for the purpose set forth.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

JOHN CRIST.
FRANCIS M. OGLE.

Witnesses:
F. P. WILLIAMS,
C. R. STIMSON.