I. Van. Doren,
Harvester Cutter.

No. 19582

Patented. Mar. 2. 1858

Fig. 1.

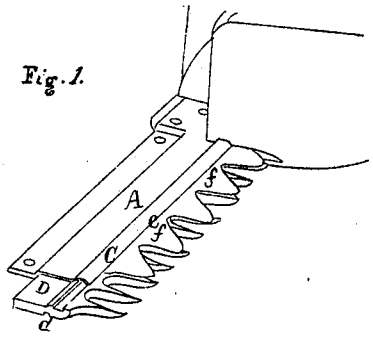


Fig. 2.

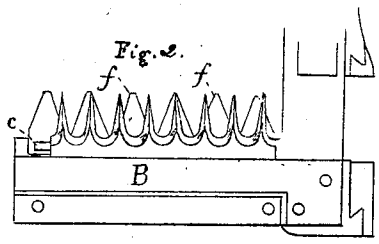
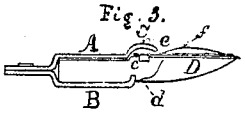


Fig. 3.



Witnesses
J. D. Keller
L. D. Law

Isaac Van Doren

UNITED STATES PATENT OFFICE.

ISAAC VAN DOREN, OF SOMERVILLE, NEW JERSEY.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **19,522**, dated March 2, 1858.

To all whom it may concern:

Be it known that I, ISAAC VAN DOREN, of Somerville, Somerset county, and State of New Jersey, have invented a new and Improved Sickle-Beam for Harvesters; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

Figure 1 is a top view of the beam. Fig. 2 is a bottom view of same. Fig. 3 is a sectional view with guard-finger.

The nature of my invention consists in so constructing the sickle-beam and out of such materials that it will support and confine the guard-fingers without the necessity of bolting, &c., and also act as a guard to the sickle bar and teeth, at the same time allowing the use of an open guard. The beam is made of plates of iron, galvanized iron preferred, an upper, A, and a lower, B, which are so struck up or shaped that the upper plate shall furnish a recess, C, for the movement or vibration of the sickle-bar *c*, and keep the sickle down upon the guard-fingers, and the lower plate enter or fit into a groove, *d*, in the guard-fingers to confine and keep firm such fingers and in their proper position, the two plates being bolted or screwed together at their backs and ends to keep the whole in position.

The whole form and arrangement of the sickle-beam when together is best seen by Fig. 3, as is also the adaptation or construction of the lower plate so as to fit the groove *d* and confine the guard-fingers D, and also at the same time permit such guard-fingers to be slid out or removed as desired or rendered necessary. The flat portion of the upper plate, A, rests against or forms a support for the rear part of the guard-fingers, while the arched portion C gives sufficient space for the easy vibration of the sickle-bar, the front edge, *e*, of which part lies or rests upon the shanks of the sickle-teeth *f f* and keeps them in close contact with the guard-fingers. The curved form of the part C gives it increased strength, and thus renders its action in keeping the sickle-teeth down upon the guard-fingers more perfect. Its action in this respect also permits dispensing with the upper part of the guard-finger, or that part above the sickle-tooth, and the object of which is to keep the tooth or its cutting-edge against the fingers and permit the use of an open guard with all the advantages or benefits which could be derived from the old method or plan of construction, but without any of its disadvantages, as increased liability of clogging, &c.

The benefits to be secured by my improved sickle-beam are that it is light but strong, the parts mutually sustaining each other, and also confining and keeping firm the guard-fingers and allowing the sickle and guard-fingers to be freely and easily removed, and also securing the benefits of an open guard.

I am aware that sickle-beams have been constructed with a sort of cap to protect reversible knives, and therefore I do not generally claim so constructing the sickle-beam as merely to furnish a cap for the sickle; but

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

The arrangement and construction of a sickle-beam, substantially as described, so that it shall hold and keep firm the guard-fingers, and also by means of the arched lip C keep the teeth close to the fingers and permit the use of an open guard.

ISAAC VAN DOREN.

In presence of—
J. V. D. KELLEY,
S. D. LAW.