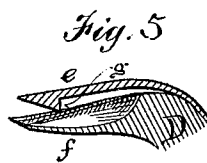
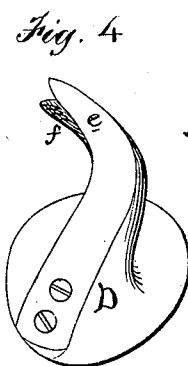
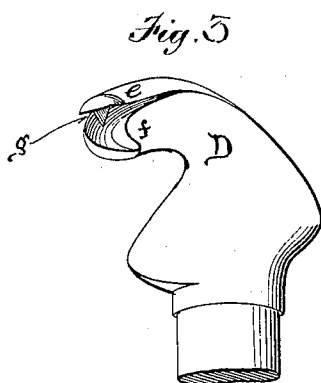
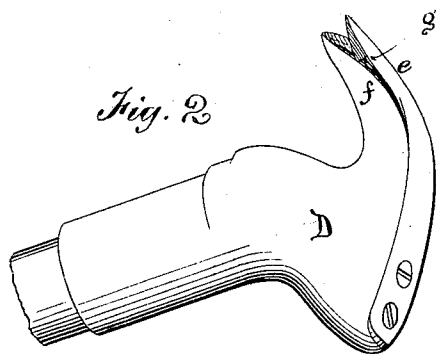
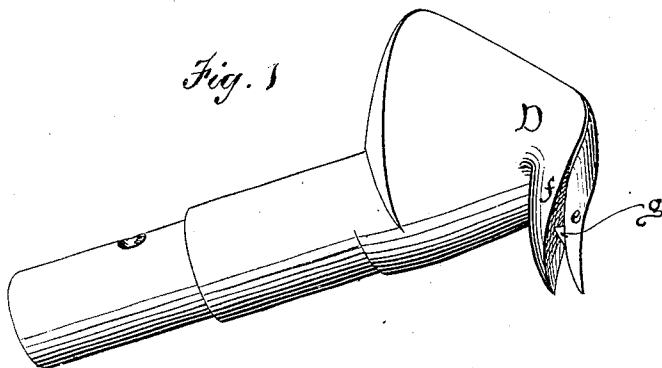


S. D. LOCKE.
Grain-Binders.

No. 139,008.

Patented May 20, 1873.



Witnesses.

C. M. Gallaher.

Inventor

Sylvanus D. Locke
By his atty R. D. Smith

UNITED STATES PATENT OFFICE.

SYLVANUS D. LOCKE, OF HOOSICK FALLS, NEW YORK.

IMPROVEMENT IN GRAIN-BINDERS.

Specification forming part of Letters Patent No. **139,008**, dated May 20, 1873; application filed March 17, 1873.

To all whom it may concern:

Be it known that I, SYLVANUS D. LOCKE, of Hoosick Falls, in the county of Rensselaer and State of New York, have invented a new and useful Improvement in Knotting-Hooks for Grain-Binders; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, in which—

Figures 1, 2, 3, and 4 are views from different positions, showing the form of my improved hook; and Fig. 5 is a central longitudinal section through the jaws of the same.

This invention relates to an improvement in knotting-hooks for which Letters Patent were issued to me December 19, 1865, No. 51,600, to which reference is hereby made for a particular description of the mode of operation and general construction of my device. In the knotting-hook described in my said patent, the binding-cord is retained between inflexible jaws by a spring-latch, which, being necessarily slight, is liable to derangement, and the severed ends of said cord are discharged only by drawing through said jaws sidewise. My present improvement consists in a flexible or elastic jaw, either carrying the retaining-shoulder, or closing down over it, combined with an inflexible jaw, whereby said cord may be securely held with less danger of derangement than can be the case with the hook provided with the spring-latch, as described in my said patent of 19th December, 1865, and whereby the cord may, if necessary, be discharged by the opening of said jaws, as hereinafter more fully set forth.

With the hook described in my said patent, it is necessary that the binding-cord shall be severed at a point quite close to the hook; otherwise, in withdrawing the knot from the hook, the severed ends will not be drawn out of the knot of the cord before the latter is drawn tight. The consequence is, a bow-knot will be formed, and the loop of said bow will remain in the jaws of the hook, unable to escape, and a fracture of the loop or the cord at some other point will necessarily ensue before the sheaf can be discharged; hence the advantage of the elastic flexible jaw described

in this application. With the elastic jaw of this hook the cord may be severed at any distance from the hook, because, if the severed ends of the cord are not drawn through the knot, said elastic jaw will yield and release the loop of the knot before the breaking strain has been reached.

That others may fully understand the construction of my said improvement, I will particularly describe it.

The mechanism by means of which the bundle is compressed, and the binding-cord conveyed around said bundle, is not shown or described in this application, for the reason that said mechanism does not form any part of the present invention, and the same is already well known in the art.

By the action of said mechanism, the cord is conveyed around the bundle, and the ends of the same brought together, and, with the unsevered portion, is laid obliquely across the neck of the hook D, as described in my said patent of 19th December, 1865. The subsequent revolution of the hook causes the winding of the cords around the neck and the entrance of the two parts of the cord between the jaws *e f* and the looping and knotting, as described in the patent before referred to. The jaw *f* is inflexible, and in the drawing is shown as channeled longitudinally in its inner surface; and the jaw *e* is elastic, being composed of a plate of elastic or spring metal, running over and secured to the back of the head of said hook, in the manner substantially as shown and described.

The beak or front end of this elastic plate forms the jaw *e*, and it is represented as having on its inner surface a longitudinal rib, terminated inwardly by an abrupt end or shoulder *g*; this rib enters into and occupies the channel of the opposite jaw *f*.

It is obvious the jaw *f* may have the rib, and the jaw *e* have the channel, if for any reason that arrangement shall be more desirable.

As before stated, the hook thus constructed will permit the severance of the binding-cord at a greater distance from the hook than would be feasible if the jaws were rigid or unable to yield to release the loop; and this is a condi-

tion of great practical importance, because, when the cord is severed close to the hook, the ends may separate before a knot is formed; and when severed far from the hook, the ends may be held in the knot and the cord broken.

Having described my invention, what I claim as new is—

A revolving knotting-hook, provided with

a retaining-shoulder, *g*, combined with an inflexible jaw, *f*, and a flexible jaw, *e*, constructed so as to yield and release the loop when the severed ends are retained in the knot, substantially as set forth.

SYLVANUS D. LOCKE.

Witnesses:

EDWARD MATHEWS,

C. A. CHENEY.