

(No Model.)

C. W. GILLIS.
FODDER BINDER.

No. 449,072.

Patented Mar. 24, 1891.

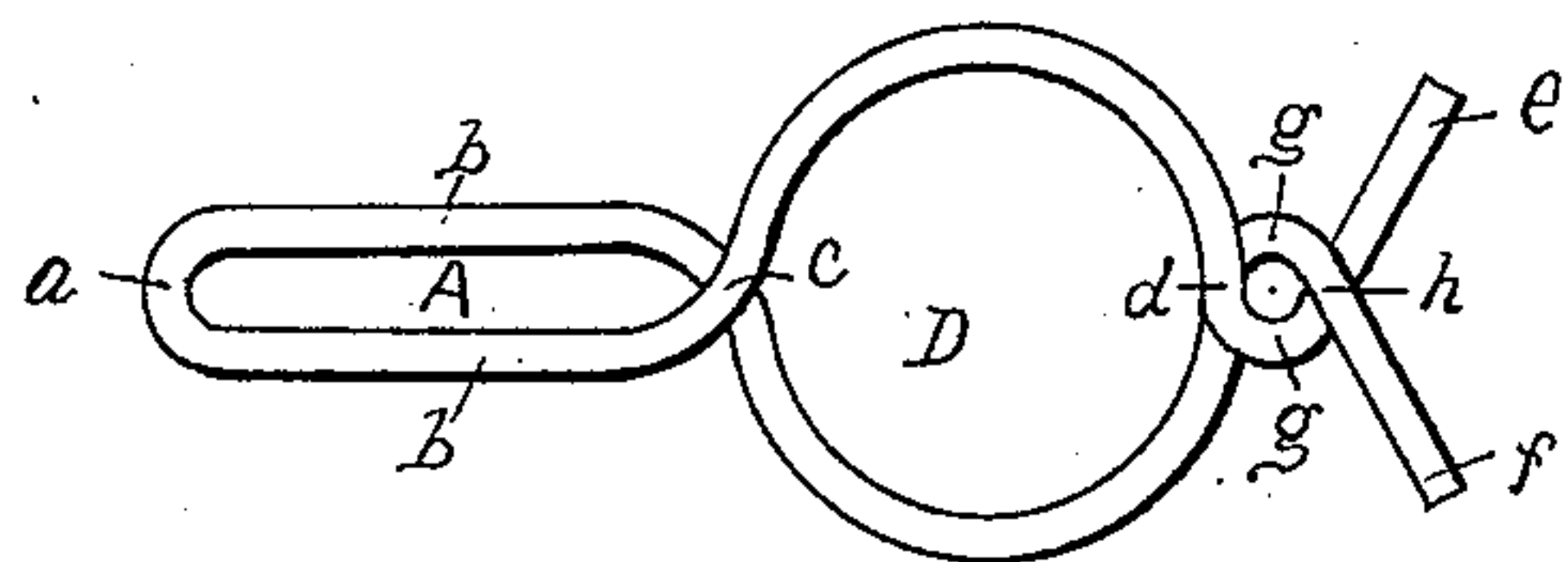


Fig. 1



Fig. 2

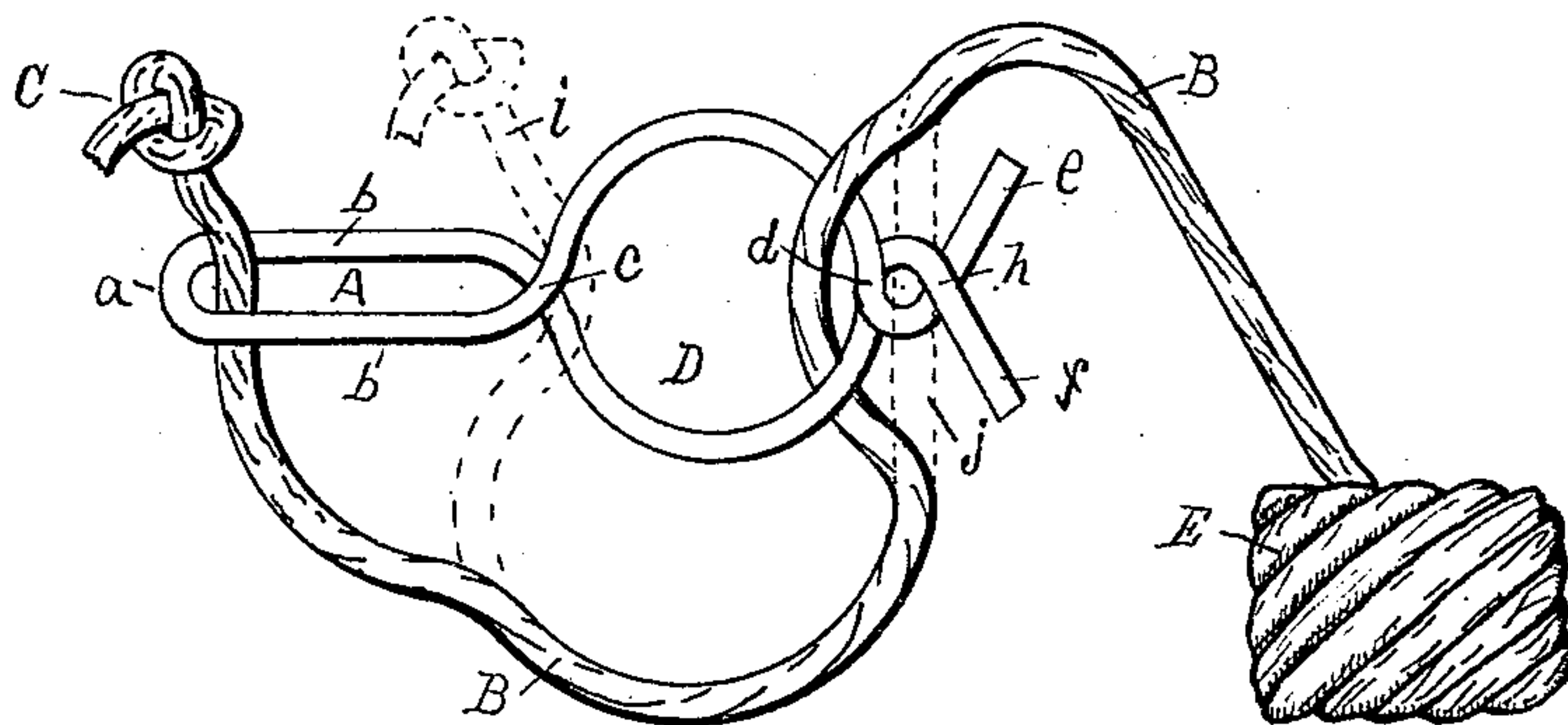


Fig. 3

Witnesses

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UNITED STATES PATENT OFFICE.

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FODDER-BINDER.

SPECIFICATION forming part of Letters Patent No. 449,072, dated March 24, 1891.

Application filed June 19, 1890. Serial No. 356,026. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. GILLIS, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Fodder-Binders; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in fodder-binders of that class consisting of a binding-cord and a wire fastener; and the objects of my improvements are, first, to provide a fastener that is reversible; second, to provide a fastener that is flexible, in which the cord is more easily inserted and positively retained; third, to provide such form of construction that the cord may be laterally inserted therein and tied before being detached from the ball.

Figure 1 represents a plan of the fastener; Fig. 2, a side elevation of Fig. 1. Fig. 3 shows manner of inserting the cord in the fastener.

A represents an oblong loop or eye extending about half the length of the entire fastener and formed by a central bend of the wire at *a* into parallel sides *b*, which are slightly twisted, thence crossed at *c* without contact.

D is the body of the fastener, made circular in form by extending the wire from *c* in opposite semicircles until it crosses at *d*, with contact and on the same sides, as at *c*. Hooks *g* are then formed to interlock loosely without contact, terminating at ends *e* and *f* in the extended plane of body D, together forming an obtuse angle. Both sides of the fastener being alike it is reversible, and it may be used with either side against the bundle.

B shows the binding-cord attached to ball E, its extremity knotted at C to prevent being pulled through loop A. Cord B is inserted in loop A by passing knot C through body D and laterally pressing said cord between the wire at *c*, as shown by dotted lines *i*, Fig. 3. During this operation said fastener springs

laterally apart at *c* and *d* until in contact at *h*, where hooks *g* cross. This permits sufficient space at *c* for easy passage of cord B, when the fastener returns to its normal position and retains said cord in loop A. The bundle or article to be secured is encircled by cord B. Said cord is then placed between hooks *g* in the plane of body D, as shown by dotted lines *j*, and held in tension while the fastener is given a half-turn axially in the direction of hooks *g*, which places the cord in body D, as shown. Said cord may now be drawn tight around the bundle and secured by ordinary turns on the projections *e* and *f* of hooks *g*, then severed from the ball near the tie and again knotted, as at C, and the operation repeated. In this manner only the amount of cord necessary for each band is used on either large or small bundles.

The usual method of first cutting the cords to lengths that are either too long for small bundles or too short for large ones, thus incurring annoyance and waste of cord, is by my improvements entirely obviated.

By the fastener being made reversible much time and annoyance are saved in its use.

The circular form of body D presents an easy surface at *d*, over which to draw the cord without tending to break it.

I am aware that prior to my invention fodder-binders have been made and patented, consisting of a wire fastener and a binding-cord. I do not, therefore, claim such a combination, broadly; but

What I do claim, and desire to secure by Letters Patent, is—

1. A reversible binding device consisting of a bent or doubled wire formed into a loop or retainer at the doubled portion and having the ends of the wire formed into interlocking hooks which terminate in the extended plane of the body of the device, substantially as described.

2. A binding device consisting of a wire bent or doubled to form a body portion and having its ends formed into hooks which interlock loosely and without contact, whereby the cord may be inserted before it is severed from the ball, substantially as described.

3. A binding device consisting of a wire bent or doubled to form a loop with substan-

tially parallel sides and a substantially circular body portion, the wires being crossed without contact between the loop and the body portion, and the ends of the wire being
5 extended from the body portion and formed into interlocking hooks, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES W. GILLIS.

Witnesses:

WILLIS C. JONES,
ROBERT S. CARR.