S. D. Locke,
Grain Binder

No. 97533. Patented Dec. 7. 1869.

Fig. 1.

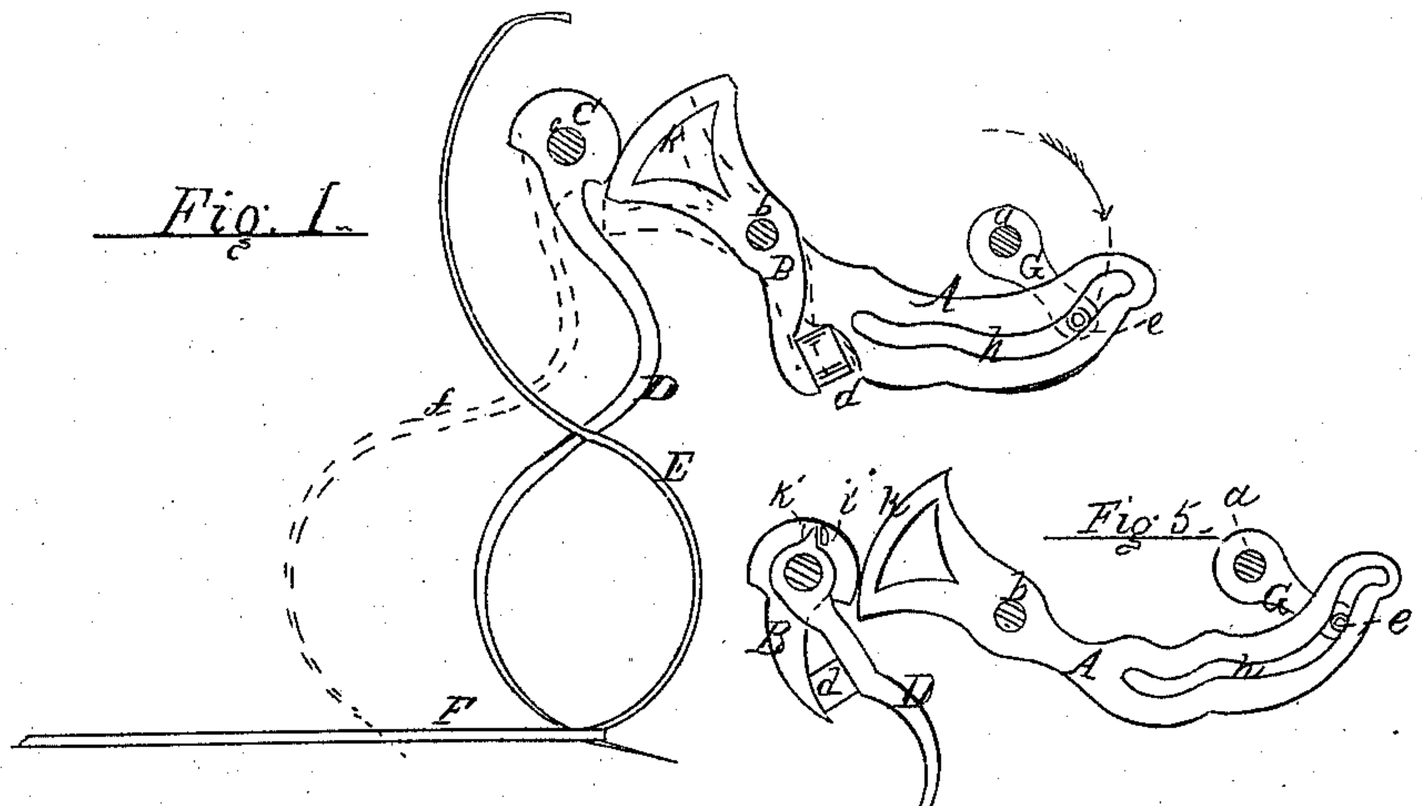


Fig. 5.

Fig. 4.

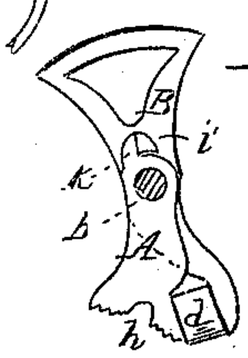


Fig. 2.

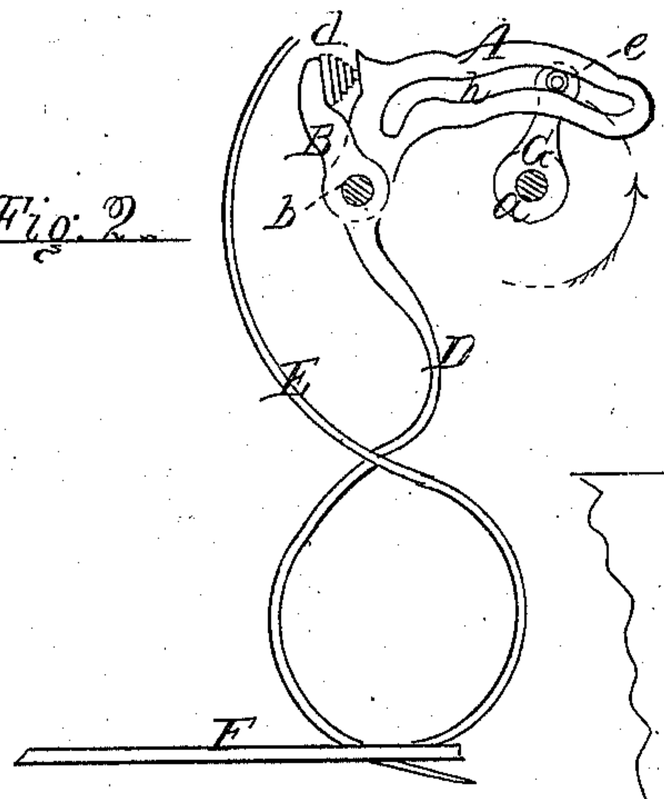
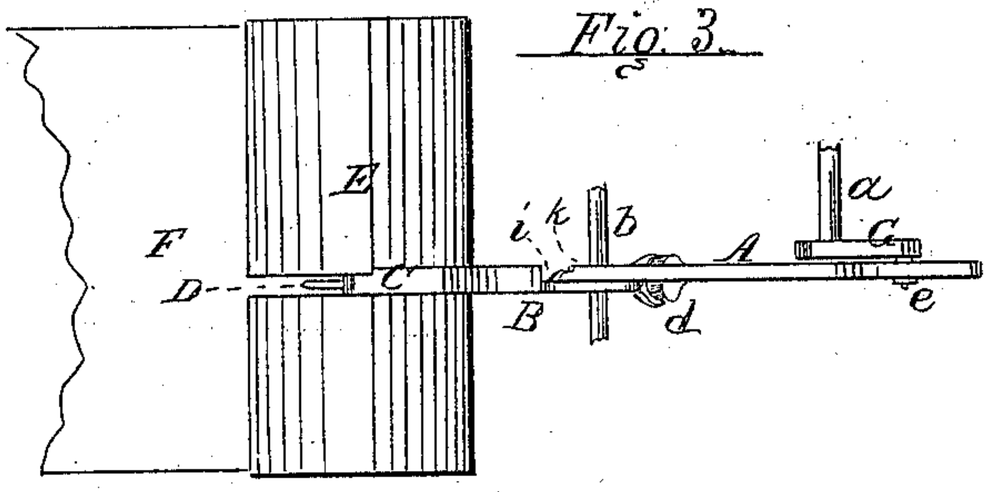


Fig. 3.



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UNITED STATES PATENT OFFICE

SYLVANUS D. LOCKE, OF JANESVILLE, WISCONSIN.

IMPROVEMENT IN GRAIN-BINDERS.

Specification forming part of Letters Patent No. **97,533**, dated December 7, 1869.

CASE C.

To all whom it may concern:

Be it known that I, SYLVANUS D. LOCKE, of Janesville, in the county of Rock and State of Wisconsin, have invented certain new and useful Improvements in Grain-Binders; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view. Fig. 2 is also a side view, showing another mode of applying the spring. Fig. 3 is a top view. Fig. 4 is a side view of the cam-arm, opposite to that shown in Fig. 1; and Fig. 5 is a side view, showing another mode of applying the spring.

The nature of my invention relates to compressing devices of grain-binders; and consists in the use of the devices hereinafter more particularly described.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the drawings, A represents the cam-arm, having a cam-groove, *h*, of any form requisite to produce the desired movement of the compressing-arm D. In this cam-groove *h* plays the wrist-pin *e* of the crank G, that is secured to the shaft *a* of the grain-binder. The cam-arm A is pivoted upon a short pin or shaft, *b*, and works in connection with a second or spring arm, B, Figs. 1, 3, and 4, that has upon its upper end a segmental gear, *k*, that plays in a segmental pinion, C, to which the compressing-arm is attached. The second or spring arm B is also pivoted upon the pin or shaft *b*, and is joined to the cam-arm A by a spring, *d*. The segmental pinion C and compressing-arm D are pivoted upon a short pin or shaft, *c*.

The shafts *a*, *b*, and *c* may be (one or all of them) the requisite shafts of a grain-binder, and may be secured to any suitable support or frame-work.

E is the grain-guard, against which the bundle is compressed, and F is the binding-platform, both of which may be of any form or material desired.

On the arms A B are the stop-lugs *h' i'*, respectively, Figs. 3 and 4, that are used to prevent the arms from separating, or to keep them in the position shown in the drawings.

In Fig. 2 the segmental gear *k*, segmental pinion C, and shaft *c* are dispensed with, the compressing-arm D being, instead of the segmental gear *k*, attached directly to the arm B.

In Fig. 5 is shown still another mode of applying the spring *d*, so as to allow the rigid non-elastic movement of the cam-arm A to produce a yielding or elastic movement of the compressing-arm. By this method the segmental gear *k* is attached directly to the cam-arm A, and the segmental pinion C is attached to the arm B, that plays on the shaft *c*, and is joined to the compressing-arm D by the spring *d* and stopping-lugs, precisely as it is joined to the cam-arm in Fig. 1.

The operation of my invention is apparent from an inspection of the drawings, as the movement of the crank G alternately raises the arm D, to allow the unbound grain to be brought in upon the platform F, and then forces it down and around the bundle, thereby compressing it against the grain-guard E with the full force of the spring *d*. If the bundle is large the spring *d* allows the arm D to take the position shown by the dotted arm *f* in Fig. 1, thereby enabling it to adjust itself to the size of the bundle.

It will be seen that by my invention the rotary movement of the driving mechanism of a reaper or grain-binder may be made to produce the requisite intermittent reciprocating movement of the compressing-arm of a grain-binder in a simple and positive manner, with but slight cost and less loss of power.

What I claim is—

1. The combination of the cam-arm A with the spring *d* and spring-arm B, substantially as described.

2. The combination of the cam-arm A, spring *d*, spring-arm B, and segmental gears *k* and C, for the purpose of producing a yielding or elastic, and at the same time a reciprocating, movement of a compressing-arm of a grain-binder, substantially as described.

SYLVANUS D. LOCKE.

Witnesses:
S. A. SKINNER,
J. L. LAMBERT.