

(No Model.)

2 Sheets—Sheet 1.

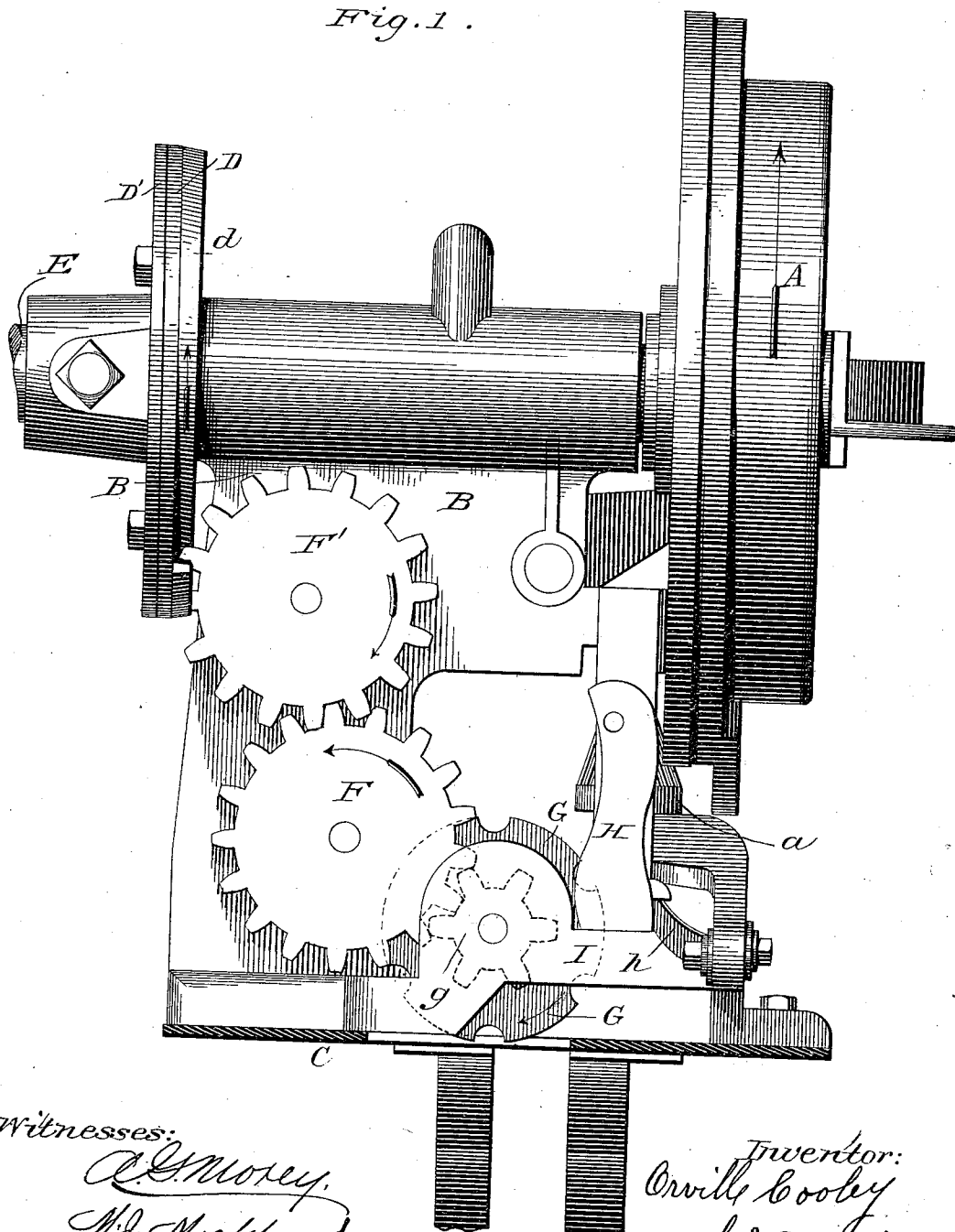
O. COOLEY.

CORD HOLDER FOR GRAIN BINDERS.

No. 335,273.

Patented Feb. 2, 1886.

Fig. 1.



Witnesses:

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Fig. 2.

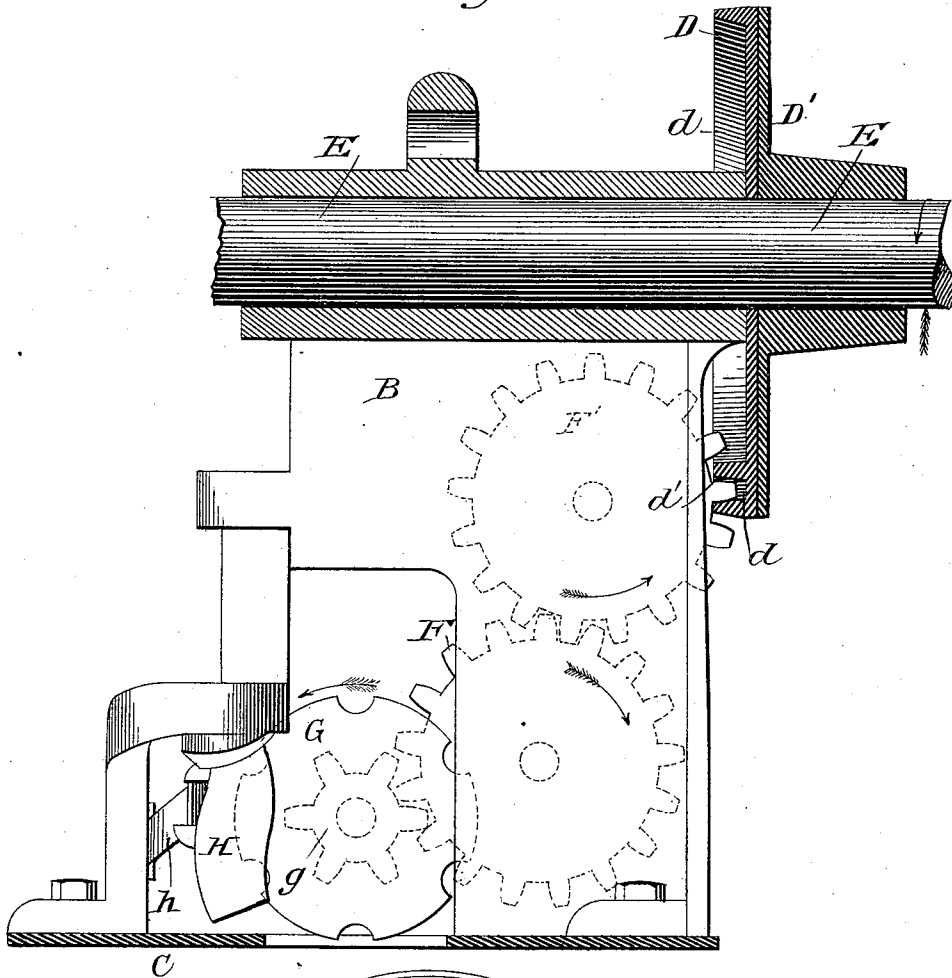
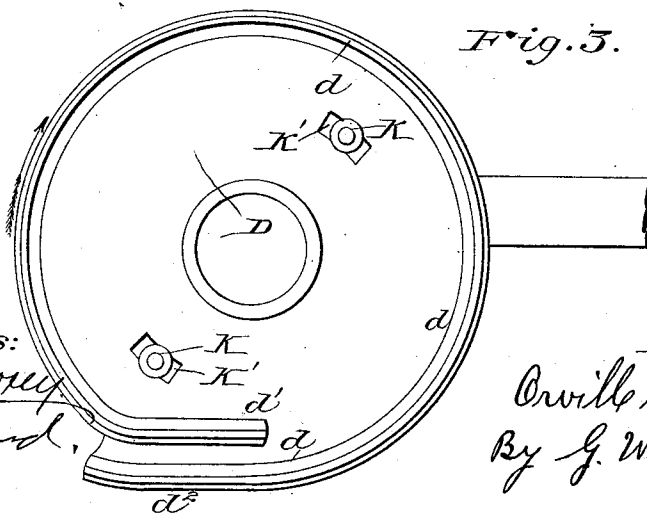


Fig. 3.



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# UNITED STATES PATENT OFFICE.

ORVILLE COOLEY, OF BATAVIA, NEW YORK, ASSIGNOR TO THE JOHNSTON HARVESTER COMPANY, OF SAME PLACE.

## CORD-HOLDER FOR GRAIN-BINDERS.

SPECIFICATION forming part of Letters Patent No. 335,273, dated February 2, 1886.

Application filed June 26, 1884. Serial No. 136,103. (No model.)

*To all whom it may concern:*

Be it known that I, ORVILLE COOLEY, a citizen of the United States, residing at Batavia, in the county of Genesee and State of New York, have invented a new and useful Improvement in Cord-Holders for Grain-Binders, of which the following is a specification.

My invention relates to cord-holders for grain-binders; and it consists of the devices and combination of devices hereinafter described, and particularly pointed out in the claim.

The objects of my invention are to provide a simple and effective means for positively operating the cord-clamping disk and retaining it in place without the use of the springs, and reduce friction by dispensing with a number of pieces heretofore used in connection with the cord-holding devices. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an inverted plan or outer side view of a portion of a grain-binder, showing my improvement. Fig. 2 is a plan or inner side view of the same, showing the scroll-cam wheel in section; and Fig. 3 is a side face view of the scroll-cam wheel.

Like letters refer to like parts in all the figures.

As the improvement relates only to the manner of operating the cord-clamping disk, a description of the other portions of the binding mechanism will not be necessary further than to indicate some of the co-operating parts.

B is the cast-iron frame for carrying the knoter, the holder, and co-operating parts. C is the breast-plate secured to said frame.

E is the knoter-driving shaft. A is the cam and gear wheel fixed on said shaft, and provided with a segment-gear, which at the proper time meshes with the pinion *a* of the knoter for driving the latter.

G is the notched clamping-disk, pivoted on the plate I.

H is the grooved holding-jaw co-operating with the disk G to hold the cord. It is pivoted to the frame, and is pressed toward said disk by the spring *h*.

So far the construction is well known in the Appleby type of machines.

In my improvement the clamping-disk G is provided with the pinion *g*.

F F' are gear-wheels meshing together, and the former also meshing with the pinion *g* of

the clamping-disk. The wheel F' is partly rotated at the proper time to actuate the wheel F and the clamping-disk by the following means:

D' is a plate or disk secured to the knoter driving-shaft E. D is a cam disk-wheel mounted loosely on said shaft, and adjustably secured to the plate D' by means of the bolts K passing through the latter plate and through slots K' in the wheel D. These bolts are provided with nuts, whereby the plate and wheel may be clamped together in different relative positions. This adjustable feature is for a purpose which will presently appear. On the side of the wheel D, at its periphery, is formed the rib or flange *d*. This rib is not continuous, but is divided at one place, and its end portions, *d'* *d''*, lap by each other, as shown, with a space between them equal to the thickness of one of the teeth on the wheel F'. For the greater portion of its length the rib is concentric with the wheel; but its end portions are eccentric therewith, the portion *d'* being brought nearer the center. The rib *d* thus forms a helical or scroll-like cam. The thickness of the rib corresponds with the space between two adjacent teeth of the gear-wheel F', with which wheel said rib is always engaged. By this means, when, by the rotation of the cam-wheel D, the eccentric portions *d'* of the rib become engaged with the gear-wheel, the latter will be partly rotated, and through the wheel F and pinion *g* the clamping-disk G will be moved the distance from one notch to the next for each revolution of the cam-wheel D, and while the concentric portion of said rib is engaged the gear-wheels, and consequently the clamping-disk, will be retained in position.

The adjustable feature of the scroll-cam, above described, is for the purpose of taking up wear of the parts and adjusting the movement of the clamping-disk.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In combination with the clamping-disk and gear-wheels, the plate D', the ribbed wheel or scroll-cam-plate D, having the slots K', and the securing-bolts K, substantially as and for the purpose set forth.

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