J. S. JOHNSTON.

Colter-Attachment.

No. 167,256. Patented Aug. 31, 1875.

Fig. 1

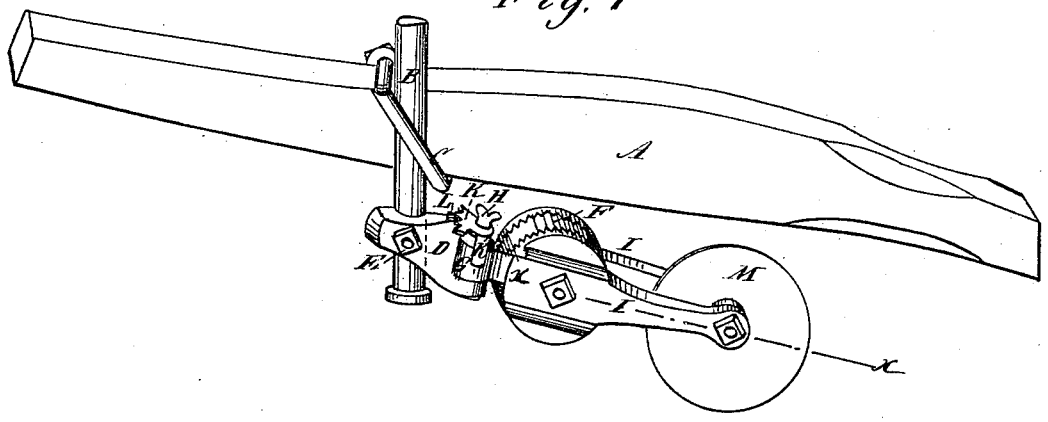



Fig. 2

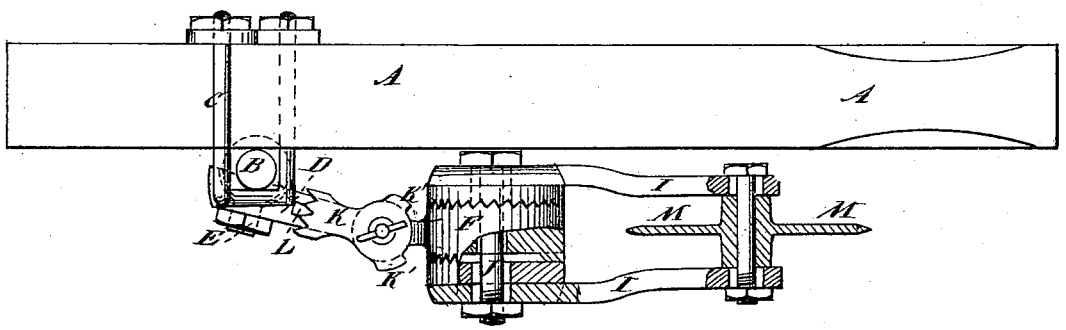
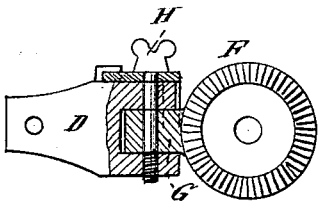



Fig. 3




WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOHN S. JOHNSTON, OF ROCKFORD, ILLINOIS.

## IMPROVEMENT IN COLTER ATTACHMENTS.

Specification forming part of Letters Patent No. **167,256**, dated August 31, 1875; application filed June 26, 1875.

*To all whom it may concern:*

Be it known that I, JOHN S. JOHNSTON, of Rockford, in the county of Winnebago and State of Illinois, have invented a new and Improved Colter Attachment, of which the following is a specification:

This invention consists of a simple and efficient contrivance of apparatus to attach a revolving colter so that it can be readily adjusted as to height, the width of the furrow, and to the line of draft.

Figure 1 is a perspective view of my improved attachment. Fig. 2 is partly a top view and partly a horizontal section, the section being taken on the line *x x* of Fig. 1. Fig. 3 is a vertical section of some of the parts.

Similar letters of reference indicate corresponding parts.

A is the plow-beam, to which the strong vertical rod B is clamped by the clevis C, so that it can be shifted up and down at will. D is a connecting-piece, connected to the rod by the latter passing through it, so that it can shift up and down, and also shift around the rod, and having a set-screw, E, to fasten it at any point. F is a strong clutch-block, coupled to piece D by an eye-stud, G, and the screw-pin H. I represents clutch-arms fastening to clutch-block F at the front by the bolt J, and carrying the revolving colter K at the rear. It will be seen the height of the colter may be varied by shifting the rod up or down on the beam, shifting the connecting-piece D up or down on the rod, or shifting the clutch-arms on the clutch-block. For width, it is shifted by turning the connecting-piece D on the rod, which changes the line of draft toward and from the beam, while the joint G H allows the colter to swing into the draft-line. The adjusting-guard K K′ is employed to prevent the colter from running too far out of line, which it may do sometimes one way and sometimes the other, its position is controlled by the notched part K and the stud L, and it controls the colter by its parts K′ acting against the eye-stud G. The colter may be drawn under the beam for narrow furrows, or to the land side for wide ones, as needed.

The usefulness of the clutch will be appreciated when the variations in the height of the beam, due to the differences in the depth of the furrows, are considered, making it necessary, in some cases, to shift the rod C so high up on the beam that the connecting-piece D cannot be used to adjust the height of the colter for want of space to shift it along the rod.

A special advantage of the adjusting-piece D will be seen when it is understood that the plow-beam is shifted laterally on the plow-standard for adjusting the plow from two to three horse, and vice versa, which also shifts the colter relatively to the plow, so that in one case it would cut much wider than the plow turns, but by turning the shifting-piece D on the standard B, the colter can be brought back to the right condition again.

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

1. The clutch-block F, clutch-arms I, and colter M, combined with the connecting-piece D, substantially as specified.

2. The adjusting-guard K K′, combined with the clutch and the connecting-piece D, substantially as specified.

3. The clutch-bars I, colter M, clutch-block F, and the connecting-piece D, combined with the rod B, attached to a plow-beam, substantially as specified.

JOHN S. JOHNSTON.

Witnesses:
HENRY COX,
THOMAS SULLY.