

(No Model.)

D. A. MOON.
ROLLING COLTER.

No. 382,239.

Patented May 1, 1888.

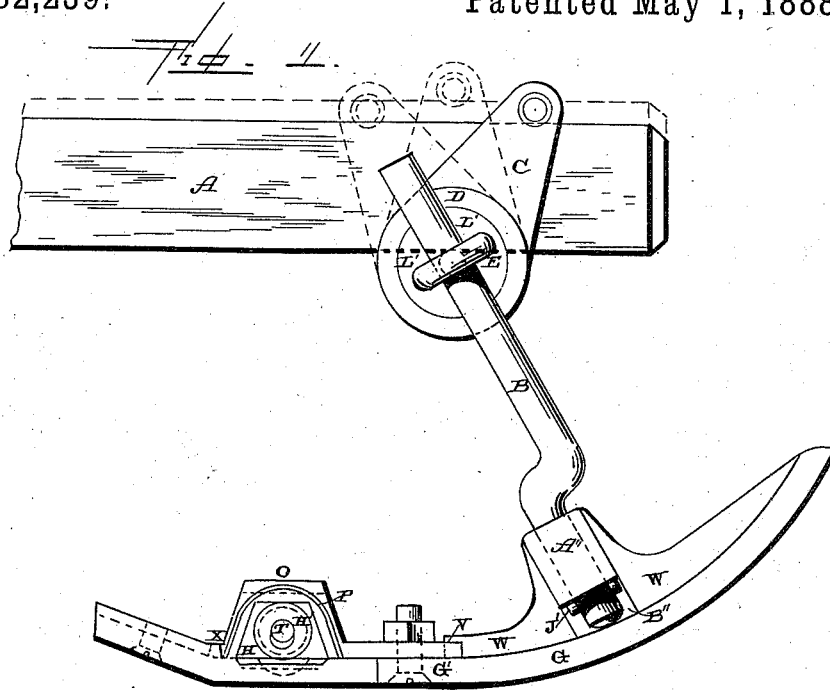
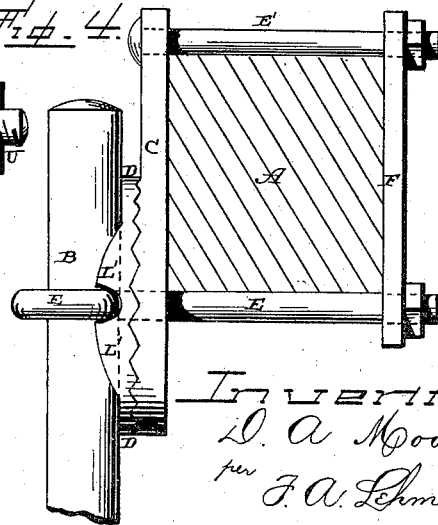
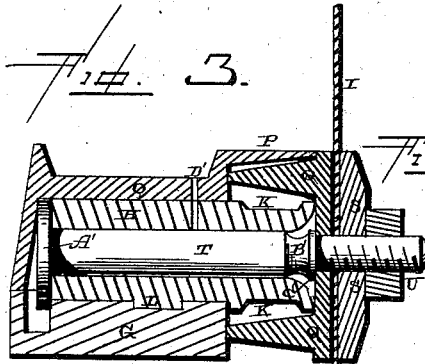
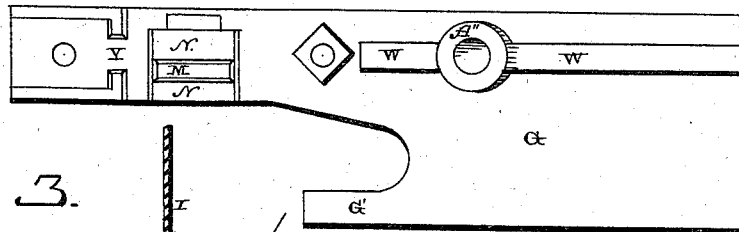


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

DEWITT A. MOON, OF ORLANDO, FLORIDA.

ROLLING COLTER.

SPECIFICATION forming part of Letters Patent No. 382,239, dated May 1, 1888.

Application filed January 16, 1888. Serial No. 260,920. (No model.)

To all whom it may concern:

Be it known that I, DEWITT A. MOON, of Orlando, in the county of Orange and State of Florida, have invented certain new and useful Improvements in Roller-Colters; and I do hereby 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in roller-colters, and is an improvement upon patent granted to me February 15, 1887, No. 357,848; and it consists in, first, the widening of the shoe at its forward end and extending it backward along the outer side of the colter for the purpose of holding the vines down upon both sides thereof, and thus enable them to be more easily severed; second, the combination of a separate boxing, a spindle which passes through the boxing, the colter secured to its outer end, a hollow mandrel extending inward over the outer end of the boxing, and a cap provided with a flange which projects over the mandrel, and by means of which cap the boxing is secured to the shoe; third, in a clamp adapted to be secured to a plow-beam, the combination, with two clamping-plates placed upon opposite sides thereof, one of the plates having serrations, of an adjustable plate having serrations which engage the serrations made upon one of the clamping-plates and having stops upon its outer face, a bolt passing through the clamping-plates at one end, and an eyebolt passing through the adjustable plate and clamping-plates at their opposite ends, and a bar which passes through the eyebolt, the two bolts being respectively above and below the beam, whereby the bar is clamped to the beam; fourth, in the arrangement and combination of parts, which will be more fully described hereinafter, and pointed out in the claims.

One of the objects of my invention is to widen the forward portion of the shoe and to extend it rearward along the outer side of the colter, whereby the grass and vines are held upon both sides of the colter, which prevents them from slipping when the colter comes in contact with them, and enables the vines to be more readily cut thereby.

Another object is to provide a separate and dust-proof boxing for the colter spindle, whereby should a boxing become broken or worn out it can be removed and another supplied in its place without affecting the shoe.

Another object is to provide a clamp for securing the bar to which the shoe is fastened to the beam without boring a hole in the beam, as is necessary in my patent above referred to.

Figure 1 is a side elevation of my invention. Fig. 2 is a plan view of the shoe. Fig. 3 is a vertical cross-section of the shoe, boxing, and cap. Fig. 4 is an end view of the clamp.

A represents an ordinary plow-beam, B the bar to which the shoe is secured, and G the shoe. The shoe G is widened at its forward end and has the rearwardly-projecting portion G', which extends along the outer side of the roller-colter I. By means of this portion G' the grass and vines are securely held against the ground upon both sides of the colter, and thus prevented from slipping or bending forward out of the way of the colter when it comes in contact therewith. When the shoe holds the grass and vines upon one side only of the colter, the vines are liable to bend forward and the colter fail to sever them; but this cannot be the case when the shoe extends upon both sides of the colter, as here shown.

To obviate the catching of vines, grass, &c., upon the end of the bar B, which extends below the shoe in my patent herein referred to, I form upon the forward portion of the shoe the thimble A", for the reception of the lower end of the bar B, and which is supported by the ribs W, formed upon the shoe. An opening or space, B", is left between the lower end of the thimble and the upper surface of the shoe, in order that a pin, J', may be passed through the lower end of the bar for securing it to the shoe and to form a bearing for the pin upon the under side of the thimble. This construction prevents the necessity of boring a hole in the shoe and presents a perfectly-smooth under surface of the shoe to the ground, thus preventing the catching or clogging of any grass or vines.

In my patent above referred to the boxing for the colter-spindle is made directly in the shoe, which is objectionable for the reason that when the boxing becomes worn out the whole of the shoe is worthless. By the use of a sepa-

rate boxing, as hereinafter described, this difficulty is overcome. The boxing H is made square at its inner end and its outer end made round, as shown at H', Fig. 1, and provided with the annular groove K. Formed in the shoe G is the seat N, in which the boxing H rests, and the recess M, in which the projection L, formed upon the under side of the boxing, fits and prevents the boxing from moving endwise upon the shoe. Made in the forward end of the cap O is the notch V, which engages the rear rib, W, made upon the shoe, and formed upon the opposite end of the cap is the projection X, which fits in the recess Y, made in the shoe, and by means of which the cap is held rigidly against any lateral movement upon the shoe. The boxing is secured to the shoe by the cap O, that fits over it, and which is bolted to the shoe and provided with the flange P, that projects forward over the boxing and hollow mandrel Q, and between which and the washer S the colter is secured to the outer screw-threaded end of the spindle T by means of the nut U. The spindle T is provided at its inner end with the head A', which prevents it from moving outward, with the annular groove B' at its outer end and a shoulder against which the inner face of the hollow mandrel Q rests. For the purpose of preventing sand and dirt from working into the boxing the outer end of the boxing is cut away or flared outward, as shown at C', and the hollow mandrel made slightly conical. By means of this construction it is almost impossible for sand to enter the boxing, as it must first pass between the flange or sand-guard P and the conical hollow mandrel, which, as it revolves with the colter, will carry any sand that may enter between the flange and mandrel around and drop it upon the ground. Should, however, any sand enter the mandrel, it will be caught in the groove K, made in the boxing, and gradually fall upon the mandrel, which, from its conical shape, will have a tendency to work the sand and dirt outward. To further provide against sand and dirt entering the boxing, the boxing is flared at C' and the spindle provided with the groove B', in which the sand and dirt will be caught, and by means of the flared portion C' of the boxing gradually worked outward. Oil is admitted to the spindle by the aperture D', made through the cap and the boxing.

In securing the bar B to the beam in such a manner as to overcome the necessity of boring a hole in the beam, I use the two bolts E E', which pass above and below the beam, instead of one which passes through the beam, as shown in my patent referred to. This clamp as now constructed consists of the two clamping-plates C F, which are placed upon opposite sides of the beam, the adjustable plate D, the ordinary bolt, E', and the eyebolt E, by means of which the plates are clamped to the beam. The plate C is serrated, preferably at its lower outer side, diverging from

the bolt E as a center, and the adjustable plate D is correspondingly serrated and engages with the serrations made in the plate C. This adjustable plate is also provided with a recess or projections, L', with which the bar B and the eye of the bolt E engage, whereby the bar is held rigidly in the position in which it is adjusted. In order to adapt the clamp to beams of various sizes, the plates are long enough to admit the largest size beam between the bolts, and in case of a small beam the bolts at the top and bottom come in contact with the beam and prevent the plates from turning farther. Therefore, if the beam is large, the position of the plates will be more perpendicular, as shown in dotted lines, Fig. 1, and vice versa.

Having thus described my invention, I claim—

1. The combination of the plow-beam, the bar attached to the beam at its upper end, and the shoe secured to the lower end of the bar, the shoe being widened at its front end and provided with a rearwardly-projecting portion, which extends along the outer side of the colter, for the purpose set forth, substantially as shown.

2. The combination, with the shoe provided with the seat N, recesses M Y, and rib W, of the boxing provided with the projections L and the cap bolted to the shoe, having the recess V, engaging the rib W, and the projection X, which fits in the recess Y in the shoe, whereby the boxing is rigidly and detachably secured to the shoe, substantially as specified.

3. The combination of the shoe, the boxing placed thereon, the cap bolted to the shoe, having the flange P, the headed spindle, hollow mandrel, the colter, the washer S, and the nut U, substantially as shown.

4. The combination of the shoe, the boxing having annular groove K, the cap bolted to the shoe, having the flange P, the spindle having a head upon its inner end and a screw-thread formed upon its outer end, the conical hollow mandrel, washer S, nut U, and the colter secured between the mandrel and the washer, substantially as set forth.

5. The combination of the shoe, the boxing having annular groove K and the flared or cut-away portion C', the headed and screw-threaded spindle T, having annular groove B', the cap having flange P, the conical hollow mandrel, the colter, washer S, and the nut U, substantially as specified.

6. In a clamp adapted to be secured to a plow-beam, the combination, with two clamping-plates placed upon opposite sides thereof, one of the plates having serrations, of an adjustable plate having serrations which engage the serrations made upon one of the clamping-plates, and having stops upon its outer face, a bolt passing through the clamping-plates at one end, and an eyebolt passing through the adjustable plate and clamping-plates at their opposite ends, and a bar which passes through

the eyebolt, the two bolts being respectively above and below the beam, whereby the bar is clamped to the beam, substantially as described.

5 7. The shoe provided with the ribs W and the thimble A', supported by the ribs, for the reception of the bar B, and an opening between the under side of the thimble and the

upper surface of the shoe, for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses. 10

DEWITT A. MOON.

Witnesses:

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P. W. LOWNES.