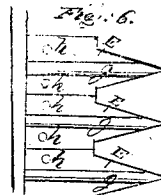
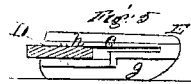
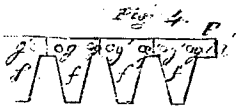
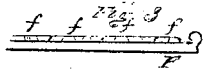
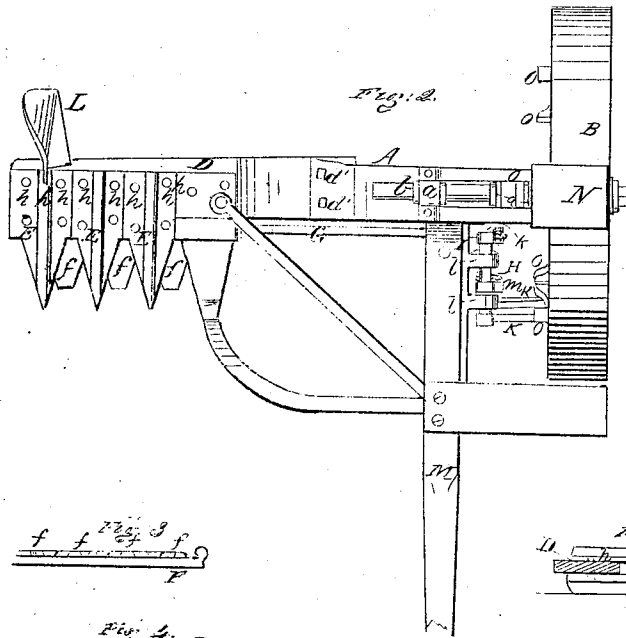
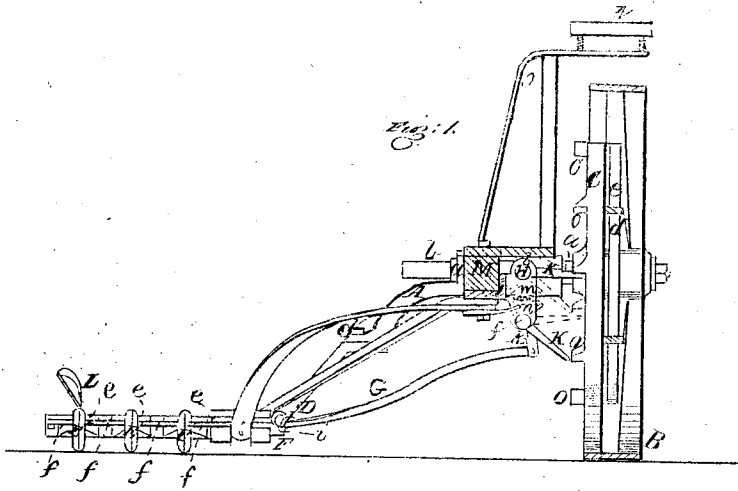


Jana. W. Little,
Mower.

No 13176

Patented July 3, 1885



UNITED STATES PATENT OFFICE.

JAMES LITTLE AND WYLIE LITTLE, OF PRINCETON, INDIANA.

IMPROVEMENT IN ATTACHING THE CONNECTING-BAR TO THE CUTTERS OF HARVESTERS.

Specification forming part of Letters Patent No. 13,176, dated July 3, 1855.

To all whom it may concern:

Be it known that we, JAMES LITTLE and WYLIE LITTLE, of Princeton, in the county of Gibson and State of Indiana, have invented a new and Improved Mowing-Machine; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a front view of our improved machine, the driving-wheel being bisected vertically through its center. Fig. 2 is a plan or top view of the same. Fig. 3 is a front view of a portion of the sickle. Fig. 4 is a plan or top view of the same. Fig. 5 is a side view of one of the fingers, the finger-bar to which the fingers are attached being bisected transversely. Fig. 6 is an inverted plan of three of the fingers attached to the finger-bar.

Similar letters of reference indicate corresponding parts in the several figures.

Our invention consists in the peculiar manner of attaching the pitman or connecting-rod to the sickle-bar, as will be hereinafter shown and described.

To enable others skilled in the art to fully understand and construct our invention, we will proceed to describe it.

A, Figs. 1 and 2, represents a metallic bar, having bearings *a a* on its upper surface, in which the axle *b* of a driving-wheel, B, works. The driving-wheel B is placed loosely on the axle *b*, and C is a wheel, which is permanently secured on said axle. The wheel C is somewhat smaller than the driving-wheel B, and it joins or works by the side of a circular rim, *c*, on the arms of the driving-wheel. On the outer edge or surface of the wheel C there is secured a pawl, *d*, one or more. (See Fig. 1.) The pawl or pawls catch against the edges of the arms of the driving-wheel B, said arms extending a trifle beyond the face of the rim *c*. The inner end of the bar A is bent or curved, as clearly shown in Fig. 1, and the finger-bar D is secured by bolts *d'* to the inner end of the bar A, said finger-bar being also bent, so as to bring a portion of it near the surface of the groove. (See Fig. 1.)

E E E are fingers, any proper number being used, and attached to the finger-bar D. The fingers E are formed each of a single piece of metal, and have a longitudinal slot, *e*, in them, extending nearly to their front ends, as shown

in Fig. 5. The back parts of the slots are rather wider than the front, so as to receive the bar D and sickle-bar F, the teeth *f* of the sickle working in the front parts of the slots. The lower edges of the fingers E have ledges or projections *g* on their under surfaces, as shown in Figs. 5 and 6, for the purpose of keeping the sickle the proper distance from the surface of the ground. The finger-bar D is placed in the back parts of the slots *e* of the fingers, and rivets *h* pass through both the top and bottom parts of the fingers and bar D, as shown in Fig. 5, one rivet being shown by dotted lines. The back parts of the fingers E, both on the upper and the lower side of the bar D, are in contact or join each other, (see Figs. 2 and 6,) so that the fingers are kept firm and prevented from working loose. The teeth *f* are attached to the bar F by rivets *g'*, and suitable spaces are left between the teeth, as shown in Fig. 4. One end of the bar F is provided with a cylindrical projection, *i*, over which one end of the pitman or connecting-rod G is fitted. The projection *i* is of slightly taper form, and the end of the pitman is provided with a loop, *j*, which is fitted over the projection *i*, as clearly shown in Fig. 1, thus forming a simple and efficient connection. The opposite end of the pitman or connecting-rod G is attached to the end of a lever, *k*, which is at the end of a small shaft, H, working in suitable bearings, *l*, attached to an arm, I, which is connected to the bar A. The shaft H has a small geared sector, *m*, upon it, (see Fig. 1.) and this sector gears into a corresponding sector, *n*, on a shaft, J, which works in suitable bearings underneath the shaft H. One end of both shafts H J has an arm, K, attached to it, against the ends of which teeth or projections *o* on the side of the wheel C act.

At the outer end of the finger-bar A there is attached, by a hinge or joint, *p*, a track-clearer, L. (Shown in Figs. 1 and 2.) This track-clearer, in consequence of the joint or hinge *p*, is allowed to pass over obstructions, and will rise or fall, accommodating itself to the unevenness of the ground.

M represents the tongue or draft-pole, attached to the arm I, as shown in Figs. 1 and 2.

N is the driver's seat, secured to a frame, O, said frame being attached to the bar A.

As the machine is drawn along the driving-wheel B, in consequence of the pawl *d* catch-

ing against its arms, rotates the wheel C, and the teeth or projections *o* act upon the ends of the arms K K, the upper arm K forces the sickle outward and the lower arm draws it in, and consequently a reciprocating motion is given the sickle, the connection between two shafts H J, to which the arms K K are attached, being formed by the sectors *m n*. If the machine is backed, the sickle is not operated, because the pawl *d* does not in that case catch against the arm of the driving-wheel, and consequently the driving-wheel will turn loosely on its axle.

By connecting the pitman or connecting-rod G to the bar F, as shown, the pitman may be readily detached from the bar, and the play or looseness which is soon occasioned by wear in the ordinary attachments is avoided. Our mode of connecting the pitman and bar is very durable, as the cylindrical projection *i* forms a solid mass of metal for the loop *j* to work

over, and the projection *i*, being of conical or taper form, compensates for any wear that may be caused by friction.

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

Connecting the pitman or connecting-rod G to the sickle-bar F by means of the cylindrical projection *i* on the end of said bar and the loop *j* at the end of the connecting-rod, as herein shown, whereby the pitman may be readily connected to and detached from the bar F, and at the same time a durable connection or attachment of the bar and pitman obtained.

JAMES LITTLE.
WYLIE LITTLE.

Witnesses:

A. I. WRIGHT,
JESSE HOORE.