(No Model.) 2 Sheets—Sheet 1.

S. TRIPP.

HAY TEDDER.

No. 345,338. Patented July 13, 1886.

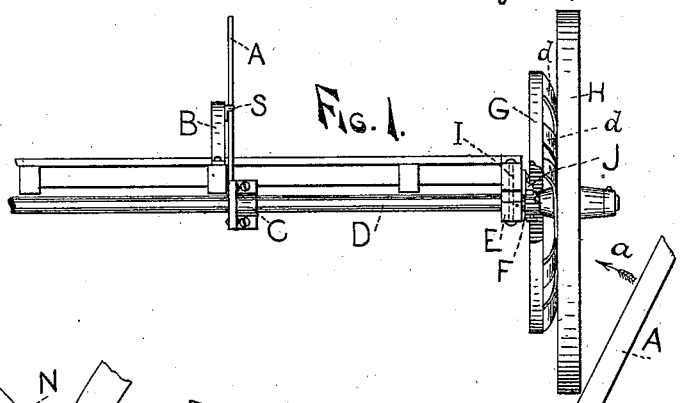

Fig. 1.

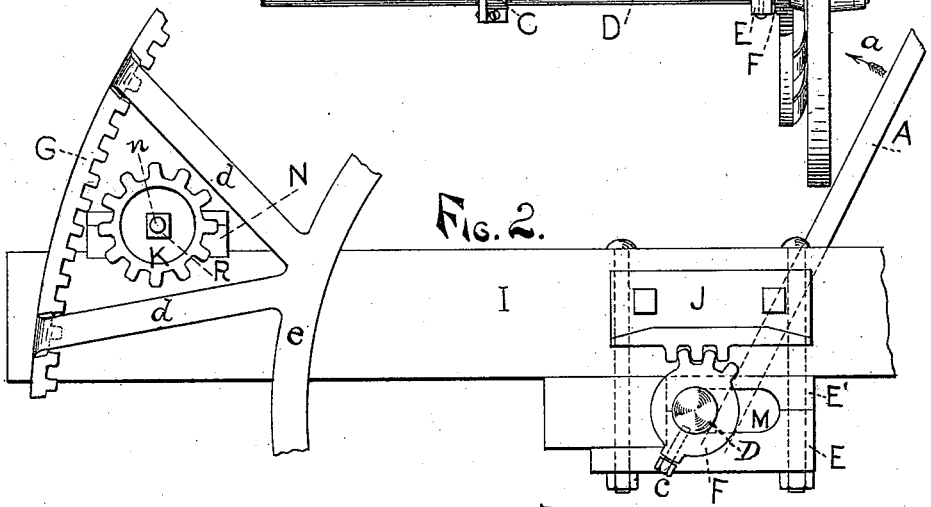

Fig. 2.

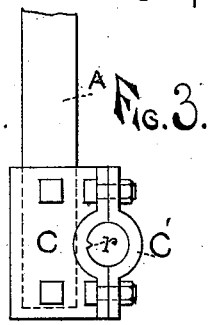

Fig. 3.

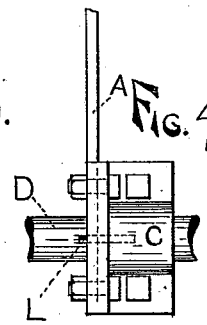

Fig. 4.

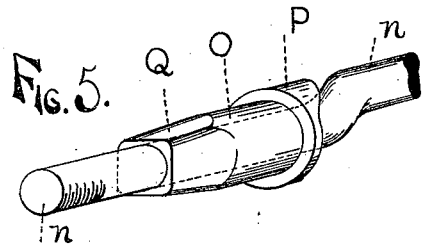

Fig. 5.

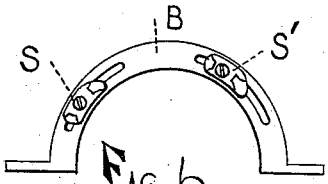

Fig. 6.

WITNESSES:
Fred. H. Stevens.
Arthur C. Denison.

INVENTOR
Solomon Tripp
BY Edward Tagart
his ATTORNEY

(No Model.) 2 Sheets—Sheet 2.

S. TRIPP.

HAY TEDDER.

No. 345,338. Patented July 13, 1886.

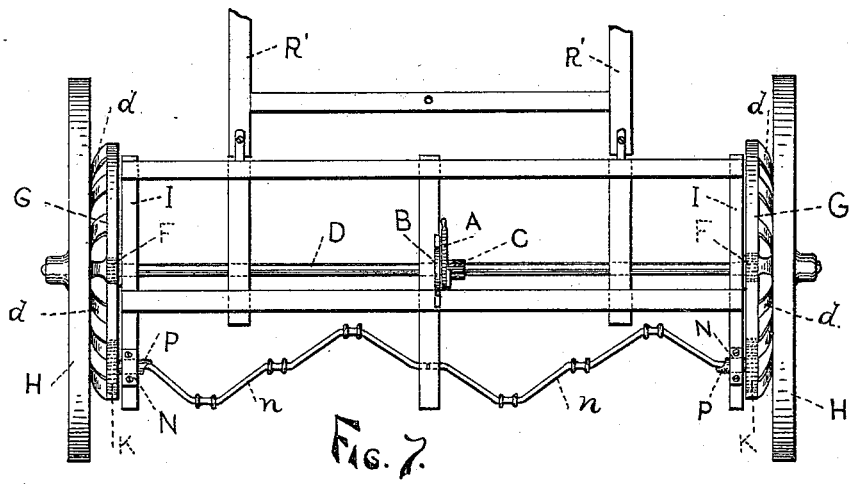

FIG. 7.

WITNESSES:
Fred N. Stevens
Everett D. Comstock

INVENTOR
Solomon Tripp
BY Edward Taggart
his ATTORNEY

UNITED STATES PATENT OFFICE.

SOLOMON TRIPP, OF GRAND RAPIDS, MICHIGAN.

HAY-TEDDER.

SPECIFICATION forming part of Letters Patent No. 345,338, dated July 13, 1886.

Application filed May 13, 1884. Serial No. 131,380. (No model.) Patented in Canada February 25, 1885, No. 21,148.

To all whom it may concern:

Be it known that I, SOLOMON TRIPP, a citizen of the United States, residing at the city of Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Hay-Tedders, of which the following is a specification.

My invention relates to that class of hay-tedders in which the tedder-forks are operated or put in motion by mechanism connected with the main supporting-wheels of the machine; and the objects of my invention are, first, to furnish an effective device for throwing the tedder crank-shaft into and out of gear with the drive-wheels; second, to connect the pinion on the tedder crank-shaft to the shaft by a sleeve-journal; and I attain these objects by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a rear elevation of a portion of the hay-tedder. Fig. 2 is a side view of the same with the supporting-wheel removed. Fig. 3 is a side view of the lever-grip. Fig. 4 is a front view of the lever-grip. Fig. 5 is a perspective view of the sleeve-journal which attaches the pinion to the tedder-crank, and Fig. 6 is a side view of the lever-arc with adjustable lugs. Fig. 7 is a plan view of a hay-tedder constructed in accordance with my invention, showing the several newly-invented portions of the tedder in their relative positions.

Similar letters refer to similar parts throughout the several views.

The frame of my tedder with supporting and drive wheels does not differ from hay-tedders now in use, except as hereinafter set forth.

D is the axle, supported by the wheels H H.

G is the cog-wheel, attached rigidly to the wheel H, and having inwardly-projecting cogs, as shown in Fig. 2, which cogs engage with and operate the pinion K.

In Fig. 2, *d d* and *e* are a portion of the frame-work which supports cog-wheel G. The pinion K is rigidly attached to the tedder-crank *n*.

F is a pinion rigidly attached to the axle D by means of a set-screw, *c*. This pinion is provided with cogs, which engage with the cogs on the rack-bar J.

E E′ is a journal-box having a horizontal slot, M, for the journal of axle D. To the axle D is attached the lever A by means of the lever journal grip C C′ *r*, as shown in Figs. 3 and 4, the projection *r* on the journal-box engaging with the groove L on the axle D. The rack-bar J is supported by the frame I, as shown.

B is an arc, provided with the adjustable lugs S and S′. Each lug is formed with a lip at either end, so as to receive between the lips the lever A and lock or hold it, as shown in Fig. 1. The lugs S and S′ are each attached by a set-screw passing through the lug and a slot in the arc B, in order that each lug may be adjusted to the required position on the arc. This adjustment compensates for any wear of the journals or journal-boxes, and enables the operator to lock the lever at any required position in connecting or disconnecting the pinion K and cog-wheel G.

O is a sleeve-journal, which fits upon the tedder-shaft *n*, and is rigidly attached thereto. The tedder-shaft is bent as shown in Fig. 5, and the sleeve-journal O has a shoulder or projection, P, which fits upon this bent portion, so as to bind or lock the sleeve upon the tedder-shaft in such a manner that the sleeve must rotate with the shaft. Sleeve O is also provided with a sloping part, Q, which is square in cross-section and adapted to receive the pinion K, which is held thereon by means of a nut, R, on the end of the tedder-shaft *n*. The portion of the sleeve between the pinion K thus attached and the shoulder P turns in the journal-box N, and is the journal of the tedder-shaft. The sleeve O may be readily removed, and in case of wear it can be cheaply and easily replaced.

The arrow *a* represents the direction the lever A is moved in order to throw the tedder-shaft into gear, it being shown out of gear in Fig. 2.

The operation of my invention is as follows: Let the pinion K be out of gear, as shown in Fig. 2. Then throw the top of lever A in the direction indicated by the arrow *a*, and the pinion F will carry back the frame I, and with it the shaft *n* and pinion K, mounted thereon, bringing the cogs of pinion K in working con-

tact with the cogs of wheel G, thus putting the tedder-shaft into gear. The tedder is thrown out of gear by moving the lever forward.

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

1. In a hay-tedder, the combination of the driving gear-wheel G, the frame I, provided with the slot M, the tedder crank-shaft mounted on said frame, the pinion K, secured to said crank-shaft and adapted to engage said gear-wheel G, the rack-bar J, secured to said frame, the axle which passes through said slot M, the pinion F on said axle engaging said rack-bar, and mechanism to rock the axle, whereby the frame is moved back and forth, thus effecting the engagement of the pinion K and gear G, substantially as set forth.

2. In a hay-tedder, the combination of the driving gear-wheel G, the frame I, the journal-box E E′, secured to said frame, and provided with the slot M, the tedder crank-shaft mounted on said frame, the pinion K, secured to said crank-shaft and adapted to engage the gear-wheel G, the rack-bar J, secured to said frame, the axle passing through the slot M, the pinion F on said axle, engaging said rack-bar, and the operating-lever A, secured to the axle, substantially as and for the purpose set forth.

3. The combination of the sleeve O, provided with the shoulder P and square end Q, with the pinion K, tedder-shaft *n*, and nut R, as and for the purpose described.

SOLOMON TRIPP.

Witnesses:
CHAS. C. WILMOT,
ARTHUR C. DENISON.