W. C. DOUTHETT.

Traction Engine.

No. 107,233. Patented Sept. 13, 1870.

Fig. 4.

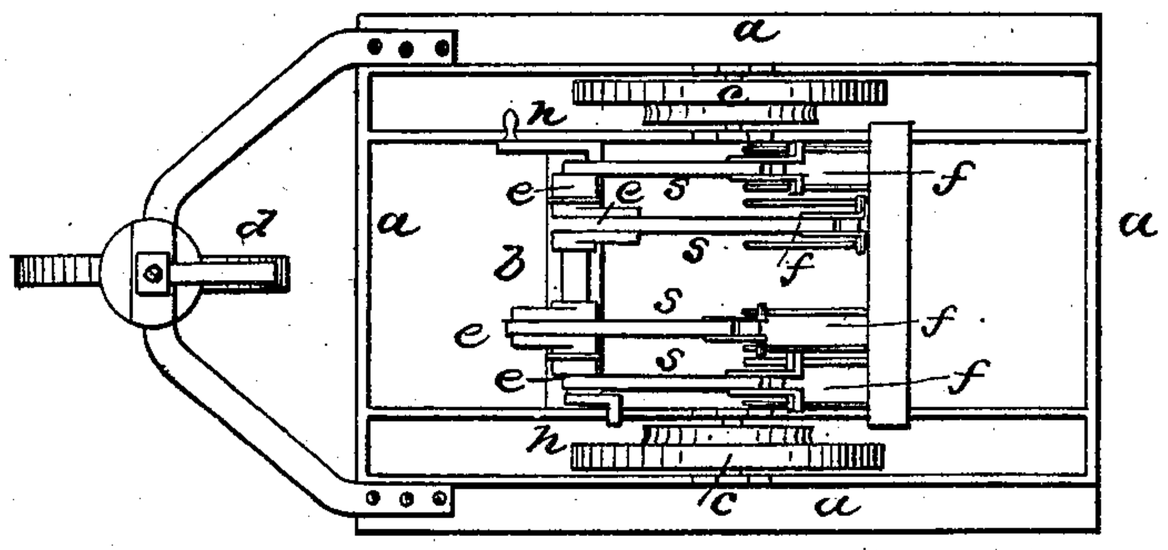


Fig. 3

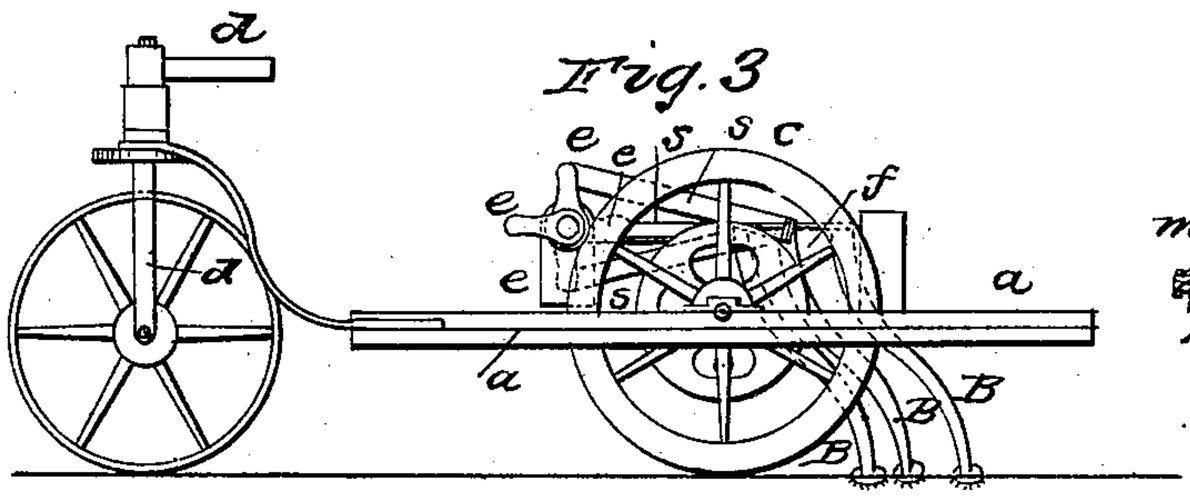


Fig. 5.

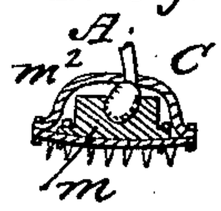


Fig. 2.

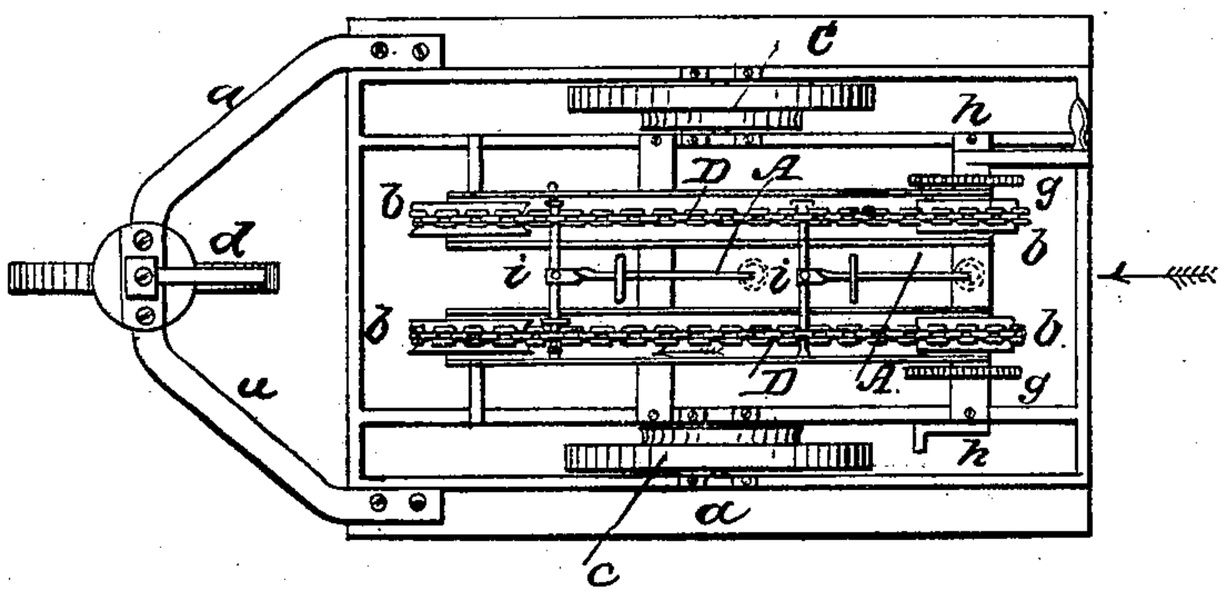
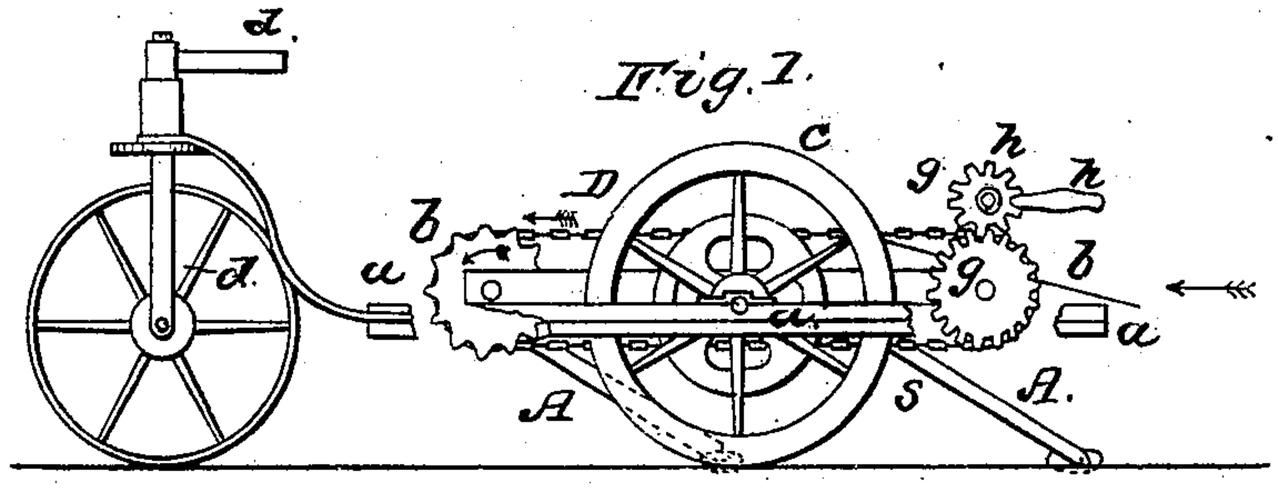


Fig. 1.



Witnesses

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E. C. Brown

Inventor.

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WILLIAM C. DOUTHETT, OF CHICAGO, ILLINOIS.

Letters Patent No. 107,233, *dated September* 13, 1870; *antedated September* 1, 1870.

IMPROVEMENT IN TRACTION-ENGINES.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern.

Be it known that I, WILLIAM C. DOUTHETT, of Chicago, in the State of Illinois, have invented a new and useful Improvement in Traction-Engines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing and letters of reference marked thereon, making a part of this specification.

To enable those skilled in the art to make and use this invention, I now proceed to describe its construction and operation.

Similar letters in the drawing refer to like parts.

The object of my invention is to provide a means of traction apart from the carrying-wheels, or in connection with them, by means of inclined levers, operated by means of chains, as is shown in figs. 1 and 2.

Figure 1 is a side view, showing levers worked by chains.

Figure 2 is a plan view of same.

Figure 3 is a side view, and

Figure 4, a plan view, showing levers worked by means of cranks.

Figure 5 is a sectional view of propelling-foot.

In the several figures—

Parts marked *a* is the supporting-frame.

c, carrying-wheels.

d, steering-wheel and handle.

h, cranks where power is applied.

In figs. 1 and 2—

A are propelling-levers.

g, cog-wheels, by means of which power is transmitted from cranks *h* to pulley-wheels *b*, over which chains D are made to revolve.

i, connecting-bars, to which levers A are attached.

The chains D, being made to revolve continuously in the direction indicated by the arrows, lift the levers A successively, as bars *i* ascend on the rear pulley-wheels *b*, and by means of slides said levers are carried up and forward in a horizontal or slightly inclined position by chains, until bars *i* reach the front of forward pulley-wheels *b*, when the foot of levers A are allowed to drop down and take hold of the ground, retaining this hold until bars *i* are carried back to the rear of pulley-wheels *b*, thus giving traction or means of propulsion.

Bars *i*, by means of a wrist, are allowed to turn on their axes in chain D, thus permitting levers A always to retain the same end forward, the foot of said lever being toward the rear of machine.

In fig. 5, the foot *c* of levers A is shown.

A variety of forms may be used, but the plan of construction I deem best is an iron plate, *m*, made convex on lower surface, and supplied with projections, and on upper part of which is a socket, *m'*, in which the circular projection on foot of lever A rests, being held in place by plate m^2 passing around said levers above projection, and bolted to lower plate *m*, in manner shown, so as to form a ball-and-socket joint, thus allowing the foot to adapt itself to the inequalities of the ground.

In figs. 3 and 4 is shown another mode of using levers for propelling, which may perchance be used.

The method is as follows:

Rods *s* connect with cranks *e* and with slide-heads *f*, to which levers B are attached. Power is applied to crank-shaft at *h*, which, being made to revolve, gives alternate reciprocating motion to the levers B, allowing them to catch and hold on the ground alternately, while power is applied.

What I claim as my invention is—

1. The combination of the foot C, constructed as described, with the lever A, in manner and for the purpose specified.

2. The combination of the pivoted levers A, chains D, and cross-bars *i*, in the manner described.

WILLIAM C. DOUTHETT

Witnesses:

GEO. E. BROWN,

C. O. BROWN.