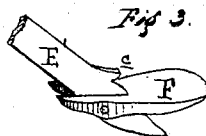
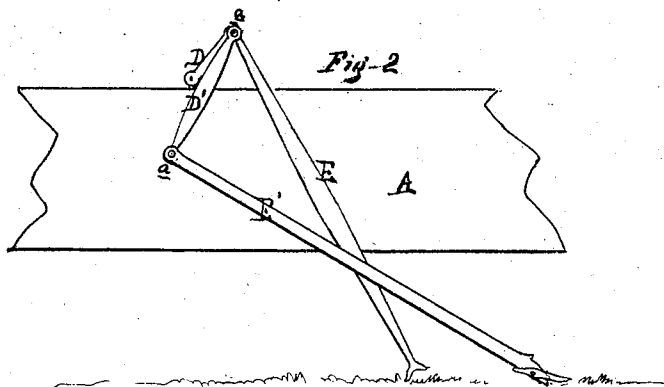
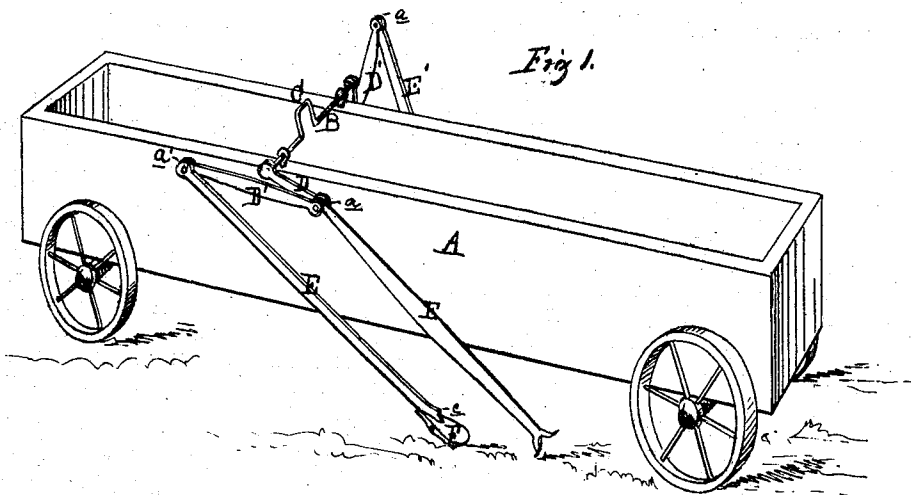


H. SELLS.

Improvement in the Mode of Propelling Vehicles,
Traction-Engines, &c.

No. 128,178.

Patented June 18, 1872.



ATTEST
N. S. Sprague
H. F. Chert

INVENTOR:
Hugh Sells
Per Atty.
N. S. Sprague

UNITED STATES PATENT OFFICE.

HUGH SELLS, OF VIENNA, CANADA.

IMPROVEMENT IN THE MODE OF PROPELLING VEHICLES, TRACTION-ENGINES, &c.

Specification forming part of Letters Patent No. 128,178, dated June 18, 1872.

To whom it may concern:

Be it known that I, HUGH SELLS, of Vienna, in the county of Elgin and Province of Ontario, Canada, have invented a new and useful Improvement in the Propulsion of Vehicles, Traction-Engines, &c.; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a perspective view of a vehicle fitted with my propelling devices. Fig. 2 is an elevation, showing the cranks in a different position; and Fig. 3 is an enlarged perspective view in detail of a shoe attached to the ends of the propelling-lever.

Like letters refer to like parts in each figure.

The nature of this invention relates to an improvement in the propulsion of wheeled vehicles of that class wherein the power is exerted upon the ground to propel the vehicle, through the medium of trundling-levers; and it consists in the peculiar arrangement of the cranks—both the direct and reverted crank—in such a manner as to obviate or preclude their catching or stopping on their centers.

In the drawing, A represents the body of a wheeled vehicle, across which is journaled the shaft B having a crank, C, forged in it, through which it is rotated. At the ends of the shaft the cranks D are secured thereto at right angles with each other, each provided with a wrist, *d*, at its extremity, to the extremity of which is keyed a reverted crank, D', twice the length of the crank D, but swung back of the line from center to center of said crank D, in order to give the latter a "lead" or throw past the center in advance of the reverted

crank. To the wrist *d* one end of a trundle-lever, E, is pivoted by means of an eye in its end, or with a strap, as may be preferred, its free end extending back and resting on the ground. E' is a similar lever, in like manner connected to a wrist, *d'*, at the free end of the reverted crank. The free end of the levers may be forked, as shown, to engage with the soil without sinking into it, or be provided with a shoe, F, Fig. 3, so pivoted thereto as to prevent them from sinking deeper than the shoe in soft ground; the levers are provided with stops *c*, which prevent the rear parts of the shoes from rising to or above a right angle with the longitudinal plane of the levers. In the rotation of the crank-shaft, which can be effected by any approved form of the steam-engine or other motor, the levers E E' of each side are alternately drawn forward and forced back, but moving back only until their ends or shoes take foot-hold, when the vehicle will be propelled forward during the remainder of the half-revolution of the crank which reciprocates the lever at work, and so on with the other lever, so that the vehicle will be continuously propelled.

The described arrangement of the cranks and reverted cranks precludes the possibility of their being caught on their centers.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the rod D' with the levers E E' and crank D, as described.
2. The shoe F, recessed to receive the lever E', in combination with the said lever having the stop *c*, as described.

HUGH SELLS.

Witnesses:

H. F. EBERTS,
H. S. SPRAGUE.