J. W. Langdon.

Running Gear.

No. 19,372. Patented Feb. 16, 1858.

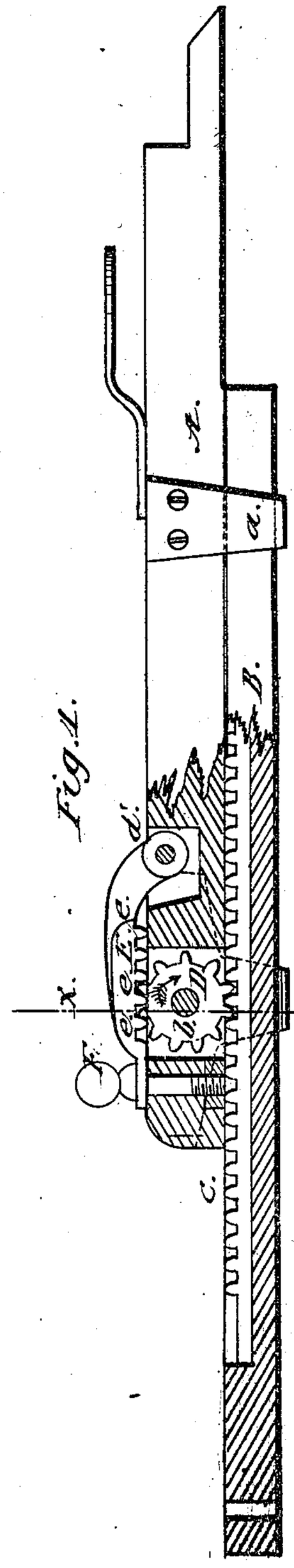

Fig. 1.

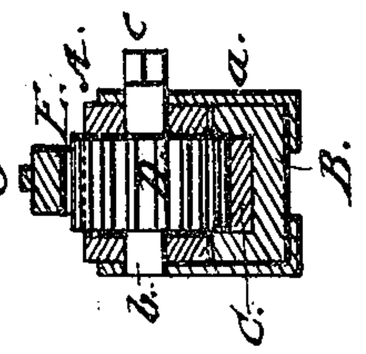

Fig. 2.

UNITED STATES PATENT OFFICE.

J. W. LANGDON, OF MARENGO, ILLINOIS.

EXTENSION-REACH FOR WAGONS.

Specification of Letters Patent No. 19,372, dated February 16, 1858.

To all whom it may concern:

Be it known that I, J. W. LANGDON, of Marengo, in the county of McHenry and State of Illinois, have invented a new and Improved Extension-Reach for Wagons; and I do 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 longitudinal section of my improvement. Fig. 2, is a transverse vertical section of ditto, taken in the line (*x*) (*x*) Fig. 1.

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

This invention consists in forming the reach of two parts, one part being placed over the other, and connected by clasps or guides which keep them together but still allow them to slide longitudinally. To one part a rack is attached and a pinion is fitted in the other, the pinion gearing in the rack and provided with a stop or pawl the whole being arranged as hereinafter described whereby an extension reach is not only obtained but also a device to assist the team in extricating wagons from sloughs and helping them over obstacles.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, B, represent the two parts of the reach, the front axle being attached to the front end of part B, and the back axle to the back end of part A. To the part A, two clamps or guides (*a*) (*a*) are attached in which the part B, is fitted and allowed to slide therein. The clamps are merely metal plates attached to the sides of the part A and having their ends bent in a horizontal position to inclose the part B as shown clearly in Fig. 2. In the upper surface of the part B, there in fitted a rack C, and in the back end of the part A a pinion D is placed said pinion gearing into the rack C. The axis (*b*) of the pinion D projects beyond the side of the part A, and has a square (*c*) formed on it. To the upper surface of the part A there is attached by a pivot (*d*) a pawl E. This pawl fits over the pinion D and has several teeth (*e*) in its under side which fit between the teeth of the pinion. The pawl is secured down upon the pinion by means of a thumbscrew F.

From the above description of parts it will be seen that by loosening or unscrewing the screw F, the pawl E may be raised and by turning the pinion D, by applying a wrench to the axle (*b*) the two parts A, B, may be extended and the reach made of the desired length the parts when adjusted as desired being firmly secured by placing the pawl E, over the pinion D and securing it down on the part A by the thumb screw F. In case the front wheels of the wagon enter a slough and the team is unable to draw them out, the driver by raising the pawl E free from the pinion D, applying the wrench to the axis (*b*) and exerting his strength so as to turn the pinion D in the direction of the arrow, at the same time urging the team forward the front wheels may be readily raised out of the slough the back wheels being blocked or scotched so as to prevent their backward movement. The back wheels are assisted out of sloughs by blocking or scotching the front wheels so that they cannot move backward, and then attaching the team by means of a rope or chain to the front end of the part B, and turning the pinion as before and urging forward the team.

This reach may be cheaply constructed and will prove highly valuable in those cases where it is designed to employ the same running gear for both box wagons and wagons for drawing lumber and similar articles where a box is not required and where the reach requires to be varied in length according to the work to be performed.

I am aware that reaches have been devised in various ways so as to be rendered capable of being extended as occasion may require, and I do not broadly claim constructing a reach of two parts so connected as to be extended or shortened; but,

I claim at new and desire to secure by Letters Patent—

The arrangement of the pawl E, screw F, pinion D, and rack C, as and for the purposes herein set forth, whereby the reaches may be expanded, contracted, and locked at pleasure, and effective assistance given to the team, when necessary, by the driver.

J. W. LANGDON.

Witnesses:
WM. P. CLINE,
E. B. STEINNER.