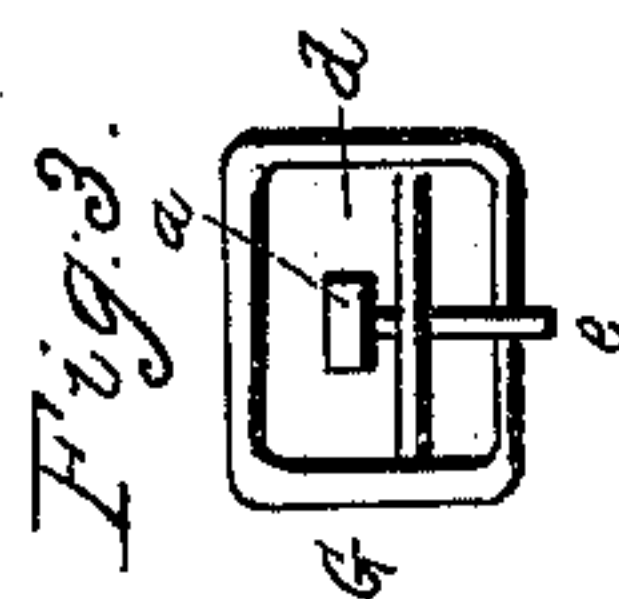
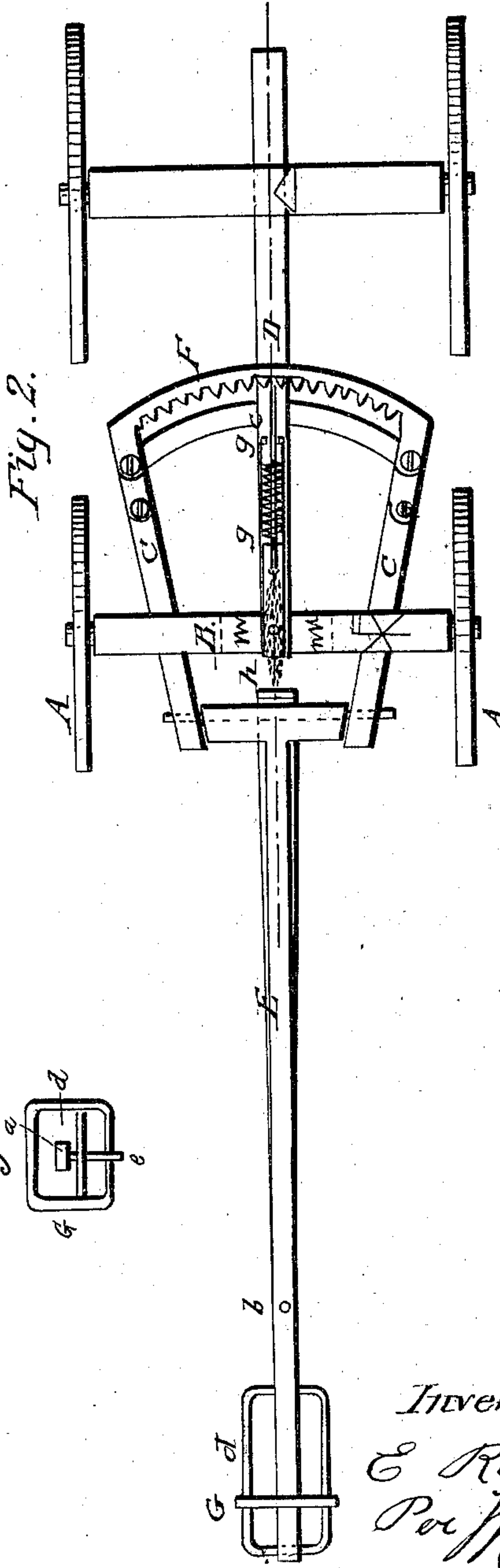
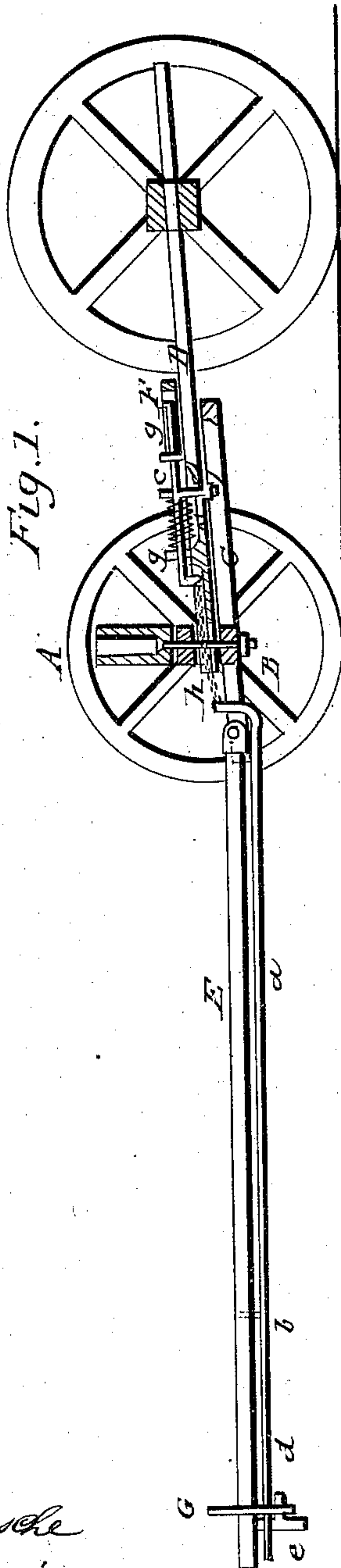


E. ROBINSON.
Tongue-Support.

No. 67,802.

Patented Aug. 13, 1867.



Witnesses:
Theo. Encke
J. A. Service

Inventor:
E. Robinson
Per *Munn & Co.*
Attorneys

United States Patent Office.

EDWARD ROBINSON, OF GREENBUSH, WISCONSIN.

Letters Patent No. 67,802, dated August 13, 1867.

IMPROVEMENT IN WAGONS.

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, EDWARD ROBINSON, of Greenbush, in the county of Sheboygan, and State of Wisconsin, have invented a new and useful Improvement in Wagons; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a longitudinal sectional view of a wagon with my improvement attached.

Figure 2 is a top view of the same.

Figure 3 is a detail.

Similar letters of reference indicate like parts.

This invention relates to a device to be attached to ordinary farm-wagons for the purpose of preventing the tongue from striking the horses or rocking the collars when driving over rough roads. On rough country roads the fore end of the tongue of an ordinary wagon is violently thrown about from side to side so that it strikes the horses and rocks the collars, producing bruises and galls. This invention is designed to obviate this difficulty, and consists in a segmental rack placed on the hounds over the reach, so as to turn with the front axle, in connection with a long lever running under the draught-pole which takes the draught directly, and by engaging and disengaging a catch in the segmental rack prevents the violent lateral movement of the tongue, as hereinafter described.

In a common farm-wagon A A are the fore wheels, B the fore axle, C C the hounds, D the reach, and E the draught-pole or tongue, as usual. On the hounds is a segmental rack, F, with the teeth on the concave side towards the front axle B, as shown in fig. 2. On the under side of the draught-pole E is placed a lever, *a*, that reaches from end to end of the draught-pole. The lever *a* has its fulcrum at a pin, *b*, which passes down through the draught-pole, and allows lateral play to the lever for the purpose of shifting a catch, *c*, in and out of the segmental rack F. The front end of the lever *a* is formed in a loop, *d*, which limits its lateral play by striking against a stop, *e*, projecting down from the end of the draught-pole inside of the loop *d*. The catch *c* is a sliding-rod that plays back and forth in two guides *g g* on the upper side of the reach D, and is provided with a spiral spring, as shown in the drawings, which, by its expansion, engages the catch in the rack when allowed to act as hereinafter described. The catch *c* is attached to the rear end of the lever *a* by a chain, *h*.

For operating these devices a detached iron frame, G, of rectangular form, is slipped over the loop *d* on the front end of the lever *a*, behind the stop *e*, as shown in fig. 1, and this frame is attached to the team neck-yoke. The frame G encloses the loop *e*, and by bearing on its sides moves it upon its fulcrum *b* to a limited extent, being stopped either way in the lateral movement by the stop *e*, as clearly illustrated in fig. 3. Now, if we suppose the wagon to be moving in a straight line, either forwards or backwards, the catch *c* will engage by the pressure of the spiral spring in the teeth of the segmental rack F, and thus prevent the front wheels A A from giving any lateral motion to the draught-pole. Now, if we wish to turn the wagon in either direction, the pressure of the frame G upon the side of the loop *d* on the front end of the lever *a*, will cause it to move laterally at the rear end to act upon the catch *c* and disengage it from the segmental rack F, when, as will be seen, the fore axle B will be free to move upon the reach D. But as soon as the pressure upon the loop *d* is removed, the lever *a* will reassume its former position in a right line under the draught-pole, and the catch *c* will be thrown back by the spiral spring to engage again with the segmental rack F, and hold the fore axle rigid. The catch *c* is thus governed at all times by the movement of the team, and keeps the front axle rigid until a turn is made either by design or suddenly by the starting of the team sidewise, when in either case the neck-yoke presses upon the lever to remove the catch before the tongue can be pressed upon by the neck-yoke, so that the fore axle is free to turn upon the reach before the power requisite for the turning can be applied to the end of the tongue. The device may also be adapted to the hind axle of a wagon.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent—

1. The combination of the segmental rack F, the catch *c* pivoted with a spiral spring to operate it, the lever *a*, the tongue E, and the axle B, arranged and operating substantially as and for the purpose herein described.

2. The detached frame G combined with the loop *d* on the lever *a* and the tongue E, arranged and operating substantially as and for the purpose specified.

EDWARD ROBINSON.

Witnesses:

HENRY STANNARD,
HIRAM BARRAGAR.