

No. 620,059.

Patented Feb. 21, 1899.

B. J. SYKES.  
WAGON STARTER.

(Application filed Nov. 15, 1898.)

(No Model.)

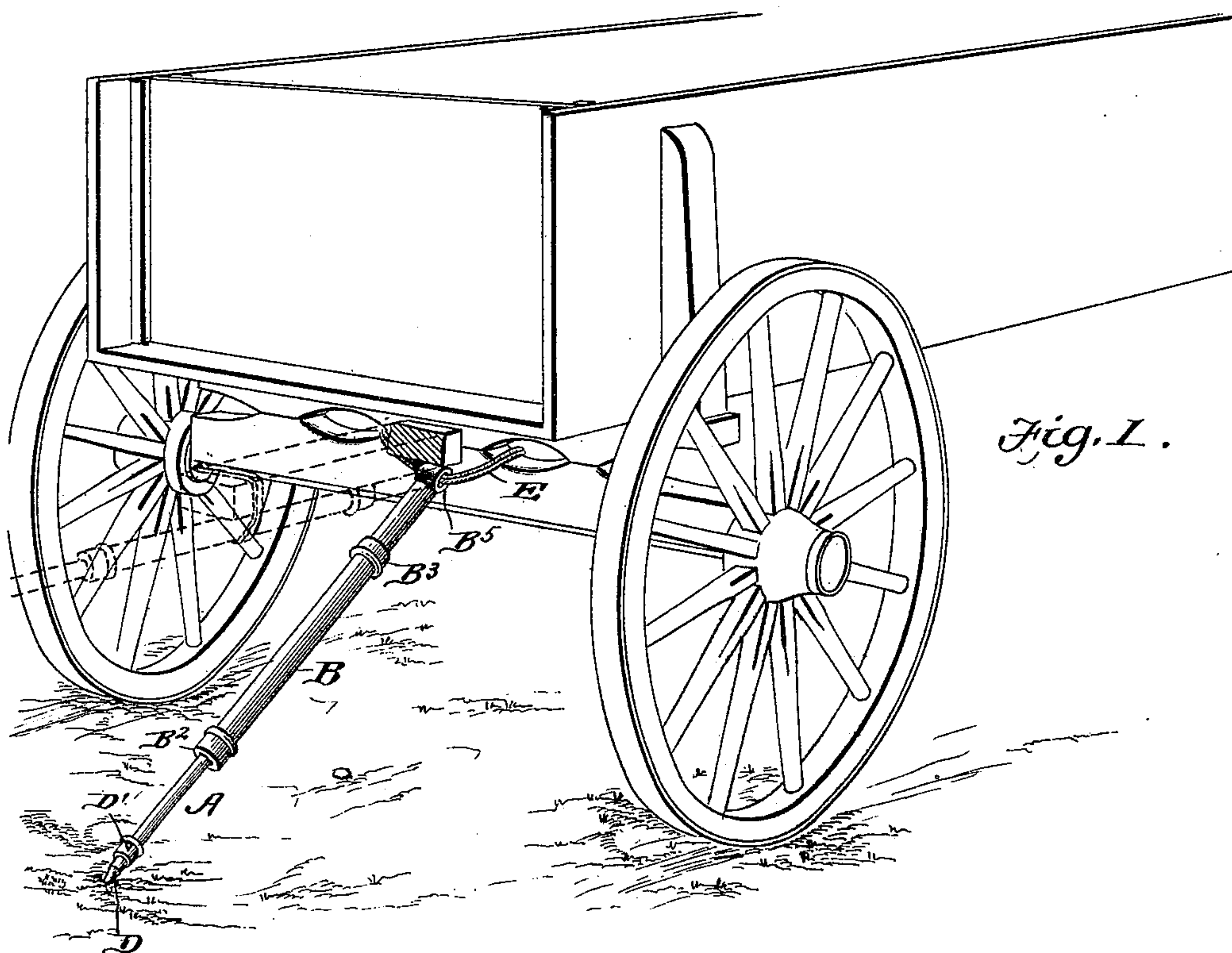


Fig. 1.

Fig. 2.

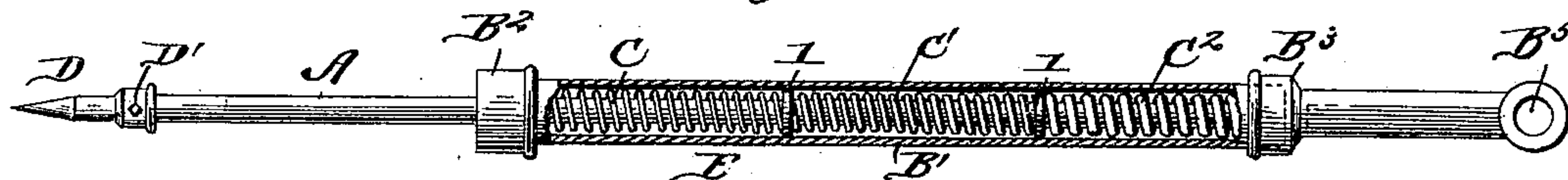


Fig. 3.

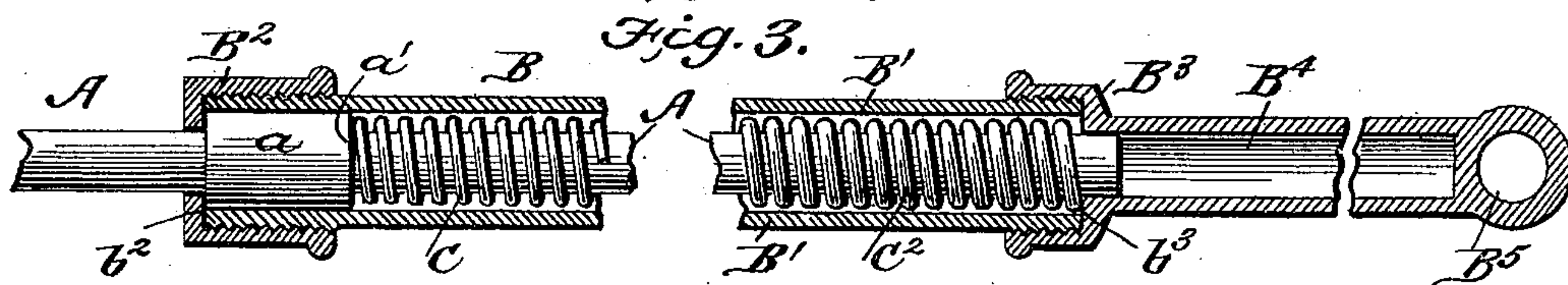


Fig. 4.



Fig. 5.

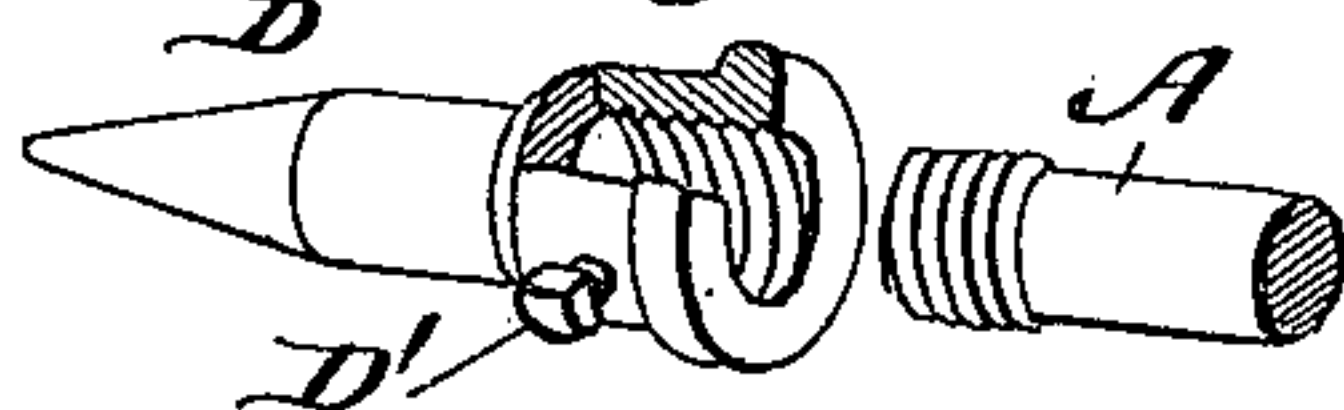


Fig. 7.

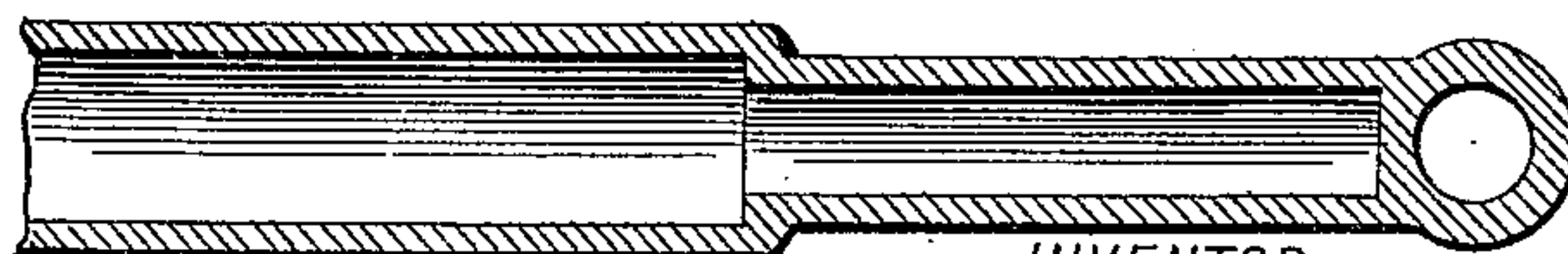
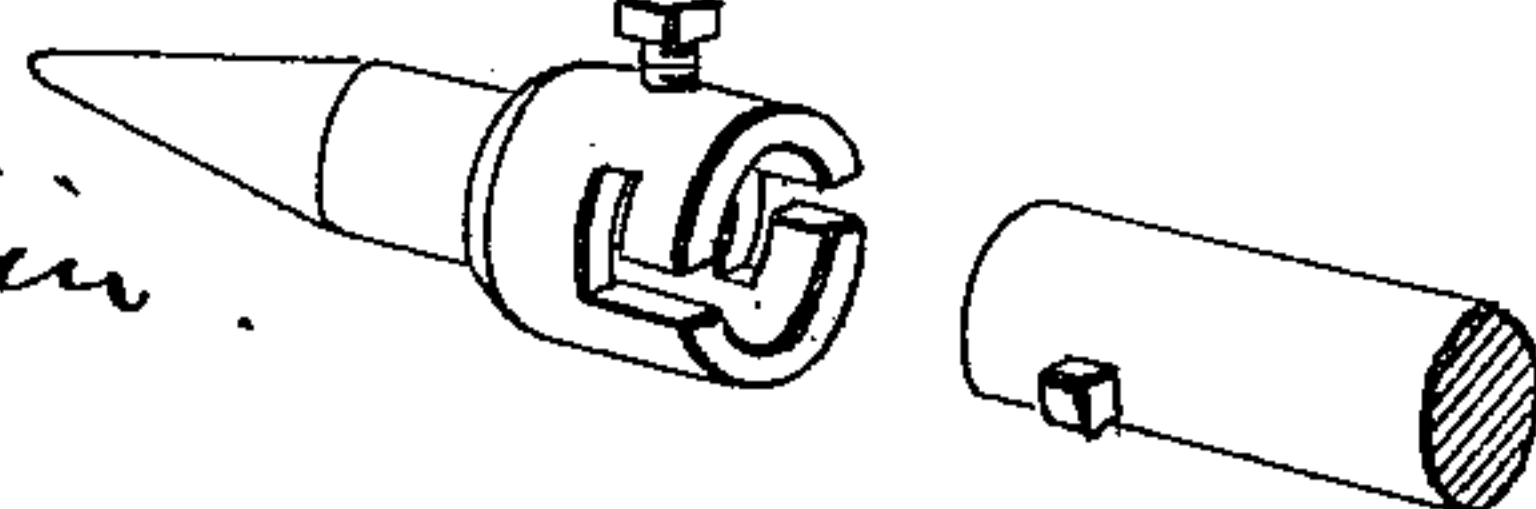


Fig. 6.



WITNESSES:  
M. S. Blouddell.  
O. B. Swipin.

INVENTOR  
Benjamin J. Sykes.

BY Munn & Co.

ATTORNEYS.



# UNITED STATES PATENT OFFICE.

BENJAMIN J. SYKES, OF TROUTVILLE, PENNSYLVANIA.

## WAGON-STARTER.

SPECIFICATION forming part of Letters Patent No. 620,059, dated February 21, 1899.

Application filed November 15, 1898. Serial No. 696,562. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN J. SYKES, residing at Troutville, in the county of Clearfield and State of Pennsylvania, have made certain new and useful Improvements in Wagon-Starters, of which the following is a full, clear, and exact specification, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the rear portion of a wagon provided with my improvements. Fig. 2 is a side view of the improved device, partly broken away in section. Fig. 3 is a vertical longitudinal section of the device, parts being broken away and others shown in section. Fig. 4 is a detail view of the sliding rod. Fig. 5 is a detail view illustrating the means for securing the removable point upon the sliding rod. Fig. 6 is a detail view showing a modification of the construction shown in Fig. 5, and Fig. 7 illustrates a modification in the casing.

My invention is in the nature of a wagon-starter, and is designed for use for holding the wagon on a hillside and for storing up energy to aid in starting the wagon, so a team can be stopped while ascending a hill and the wagon be held by the improved device, which will also store up energy from the weight of the wagon to aid the team in starting again. This is accomplished by the construction shown in the drawings; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described, and pointed out in the claims.

My improved wagon-starter includes a rod A and a casing B, in which such rod slides longitudinally. In Figs. 1, 2, and 3 the casing B is composed of the main tubular section B', the lower end cap B<sup>2</sup>, and the upper cap B<sup>3</sup>, such caps B<sup>2</sup> and B<sup>3</sup> being threaded on the opposite ends of the main portion B', as is best shown in Fig. 3. The cap B<sup>2</sup> has its end extended inwardly, forming a shoulder b<sup>2</sup>, while the cap B<sup>3</sup> has an inwardly-projected shoulder b<sup>3</sup> for the purpose presently described. In Fig. 7 the upper cap is formed integral with the main tube, being in other respects similar to the construction shown in Fig. 3. The slide-rod A operates in the casing and is provided with an enlargement a, which bears at its outer end against the shoul-

der b<sup>2</sup> and forms at its other end at a' a shoulder to receive the pressure of the springs C, C', and C<sup>2</sup>, which bear between the shoulder a' of the slide-rod and the shoulder b<sup>3</sup> of the upper cap, such springs C, C', and C<sup>2</sup> encircling the slide-rod and the upper end of such rod working up in the bore B<sup>4</sup> of the cap B<sup>3</sup> when the spring C is compressed.

At the lower end of the slide-rod I provide the point D, which may be threaded upon the lower end of the rod A and secured by a set-screw D', as shown in Fig. 5, or the point may be connected with the slide-rod by a bayonet-joint, as shown in Fig. 6, and similarly locked by a set-screw, as will be understood from said figure.

In operation the device is connected with the rear axle and is arranged, as shown in Fig. 1, so the point will dig into the ground. In connecting it with the wagon it is preferred to use means which will permit the convenient application and removal of the device, so it can be carried when in use in the wagon and readily applied when occasion demands. This I accomplish by the special construction of the cap-piece B<sup>3</sup>, with a ring B<sup>5</sup> at its upper extremity adapted to receive a rope E, by which the improved device is secured to a wagon, may be readily applied and removed, and is adapted for application to any ordinary construction of vehicle. The importance of this will be readily understood, as it enables me to put my device on the market ready for use, so the purchaser can apply it to his wagon simply by means of a piece of rope and without the aid of skilled labor.

In operation as the weight of the wagon moves back upon the starting device the springs will be compressed, thus storing energy, which will come into play to assist in starting the vehicle when desired. The device is simple, easy of application, can be readily carried out of the way when not in use, and is ready for the market and for application to the vehicle without the assistance of skilled labor.

To adapt the device for use on vehicles differing in weight, I make the springs C C' C<sup>2</sup> of different tension, the spring C being lightest, the spring C' heavier, and the spring C<sup>2</sup> still heavier, so the device will respond to different loads, the spring C being compressed by a



light load, the spring C' by a heavier, and so on. Washers 1 are arranged between the springs to form proper bearings.

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

1. A device for use in starting wagons consisting of a casing having a lower cap, a tubular main portion fitted removably thereto, an upper cap fitted removably to the other end of the main portion and having a bore to receive the end of the slide-rod and provided at its extremity with a ring for the passage of a securing-rope, the slide-rod operating in said casing, the spring actuating said rod, and the removable point at the lower end of the rod all substantially as and for the purposes set forth.

2. A wagon-starter comprising a casing having an upper cap portion provided at its extremity with a ring, the slide-rod operating in said casing and the spring on the rod within the casing and adapted for use substantially as set forth.

3. The herein-described wagon-starter consisting of the casing provided at its lower end with a shoulder B<sup>2</sup> and having an opposite shoulder B<sup>3</sup> and a cap portion provided with a ring for the passage of a rope, the slide-rod having a portion *a* bearing against the shoulder b<sup>2</sup>, and the spring bearing between said portion *a* and the shoulder b<sup>3</sup> all substantially as set forth.

4. A wagon-starter composed of the casing formed in detachable sections, the slide-rod operating in said casing and protruding therefrom, and the spring substantially as set forth.

5. A device for use in starting wagons comprising the casing the slide-rod operating therein and the springs of different tension on said rod within the casing and adapted to respond to different loads substantially as set forth.

BENJAMIN J. SYKES.

Witnesses:

SOLON C. KEMON,  
PERRY B. TURPIN.