2 Sheets—Sheet 1.

J. KIRKMAN.

Running-Gear.

No. 40,758. Patented Dec. 1, 1863

Fig. 1.

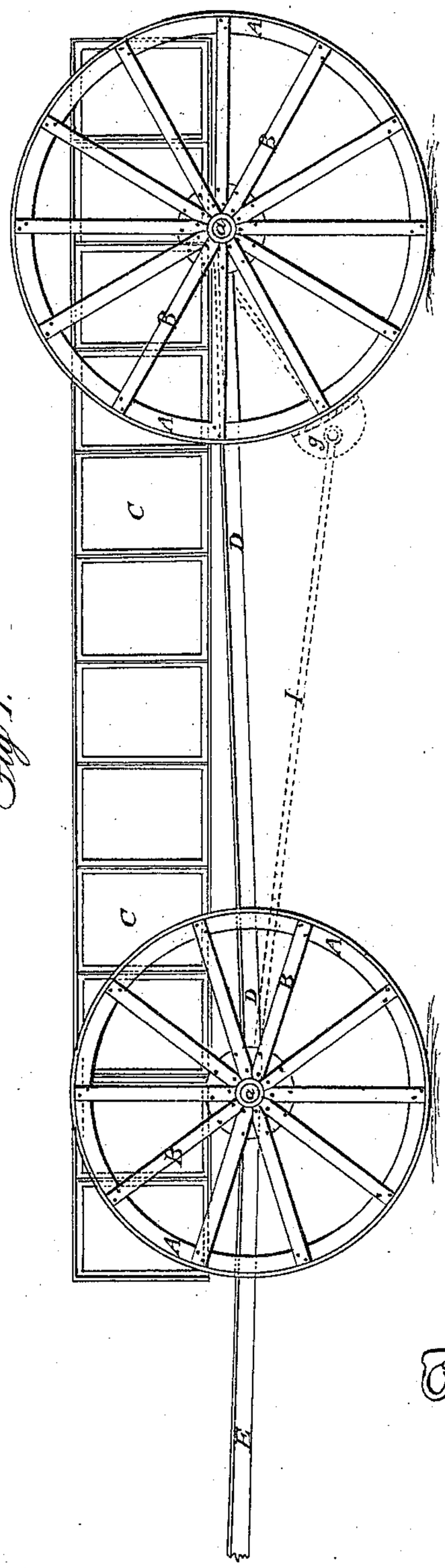
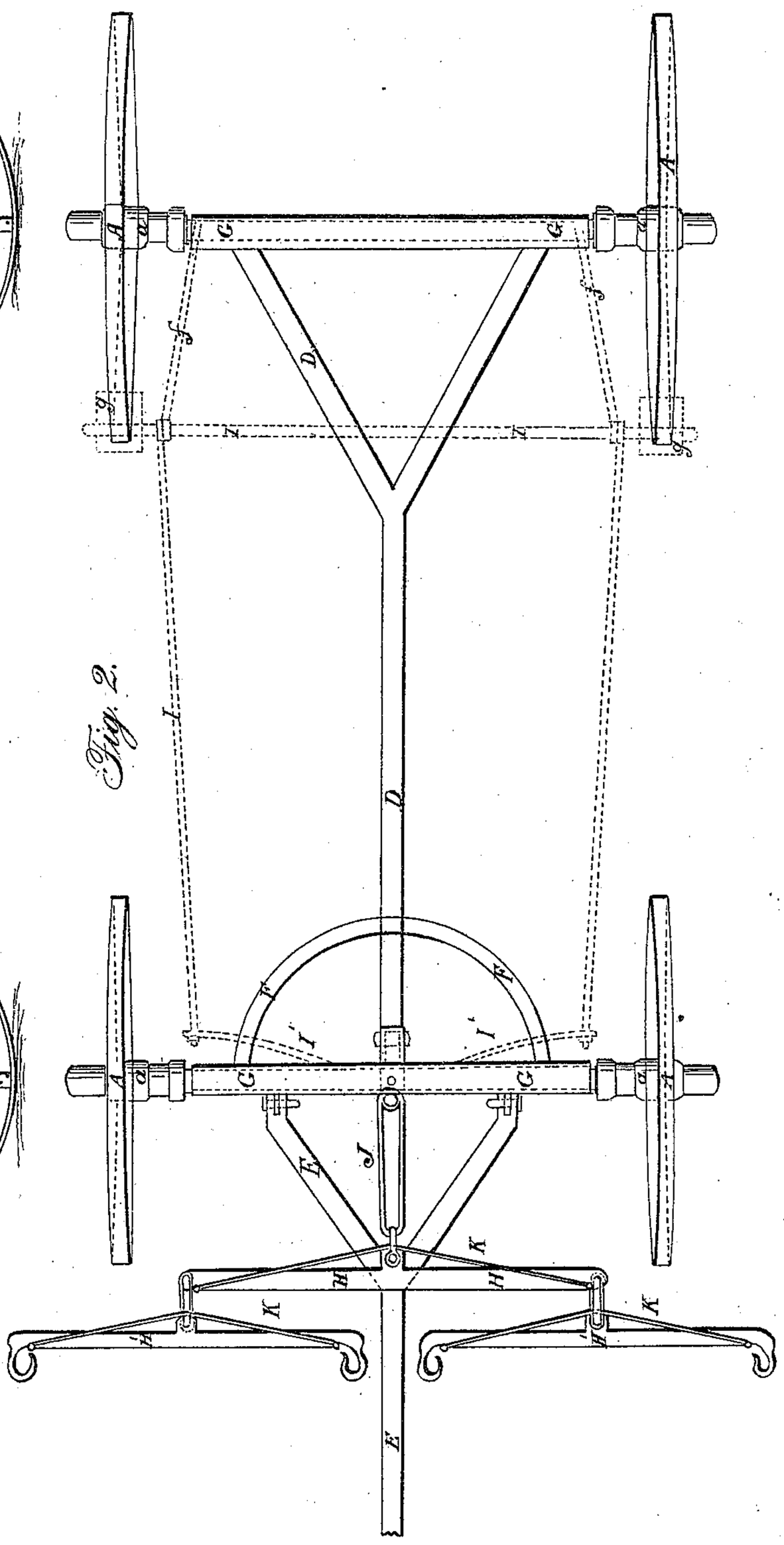


Fig. 2.



Witnesses:

James Sims

Henry Birman

Inventor:

John Kirkman

2 Sheets—Sheet 2.

J. KIRKMAN.

Running-Gear.

No. 40,758. Patented Dec. 1, 1863

Fig. 3.

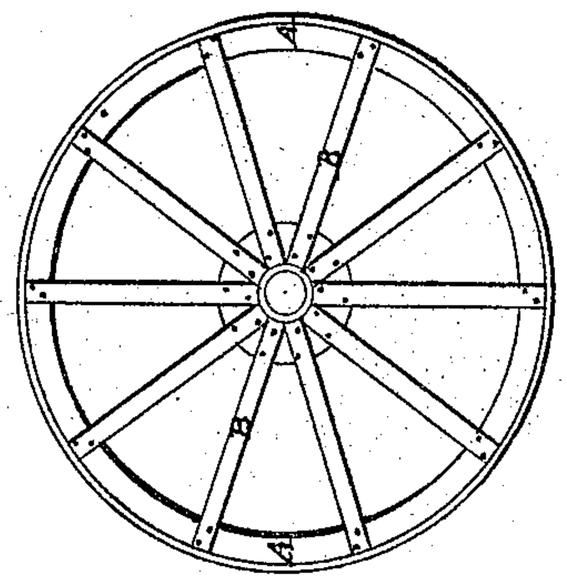


Fig. 4.

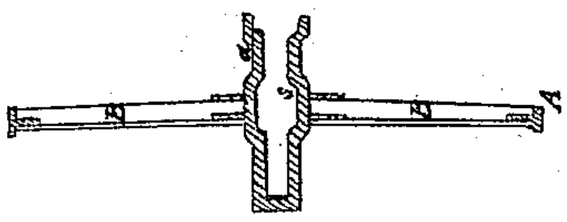


Fig. 5.

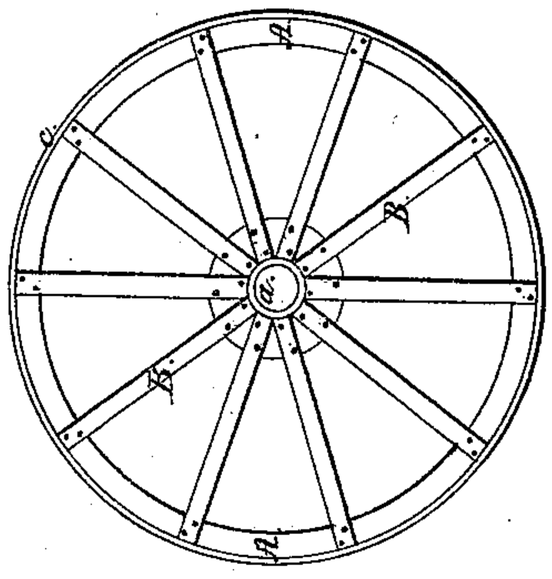


Fig. 6.

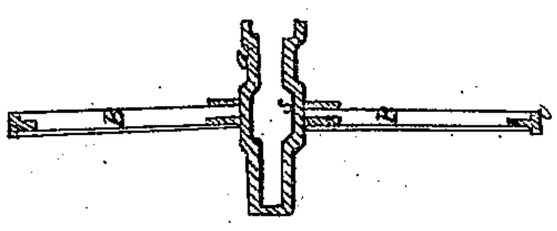


Fig. 13.

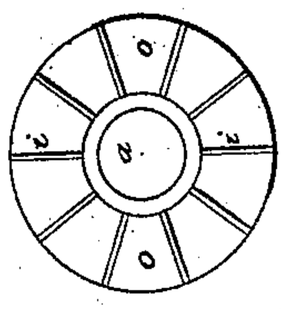


Fig. 7.

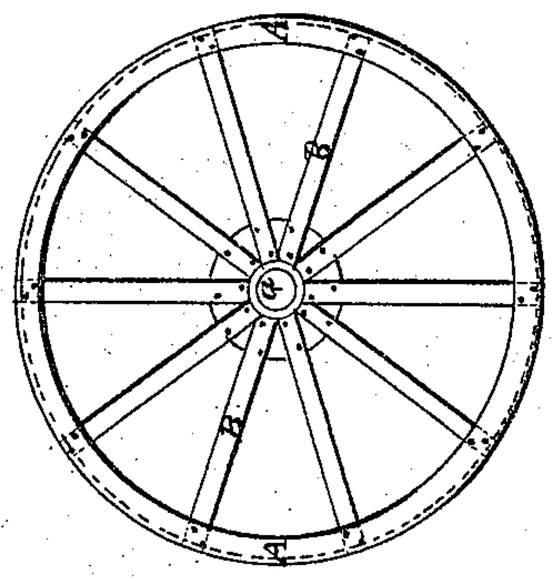


Fig. 8.

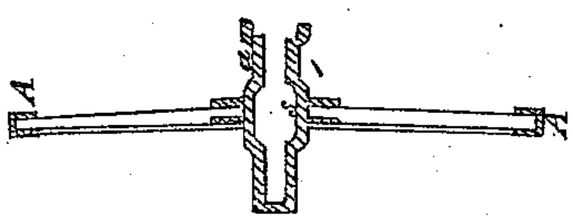


Fig. 9.

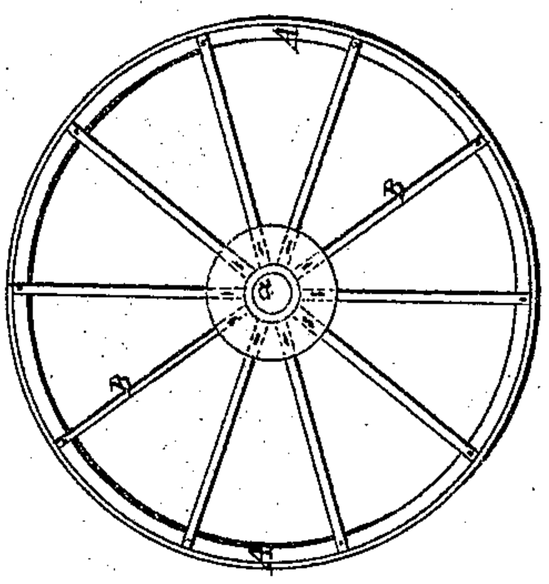


Fig. 10.

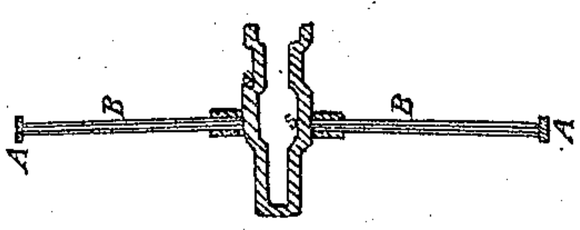


Fig. 14.

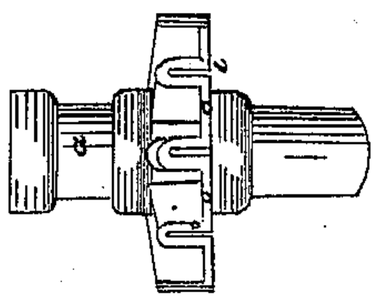


Fig. 12.

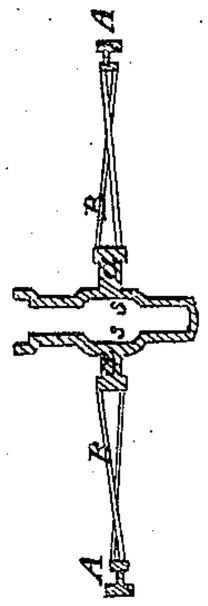


Fig. 11.

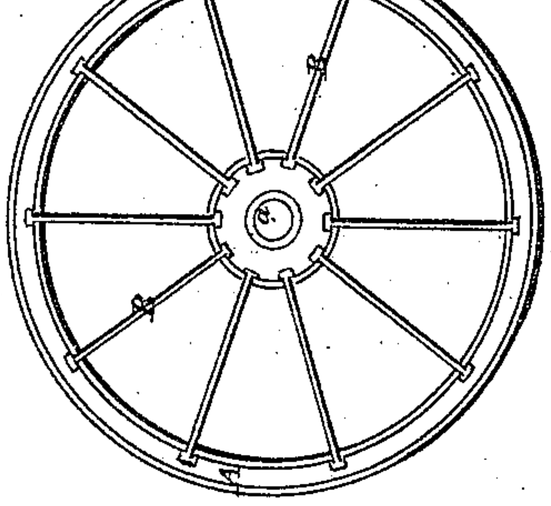
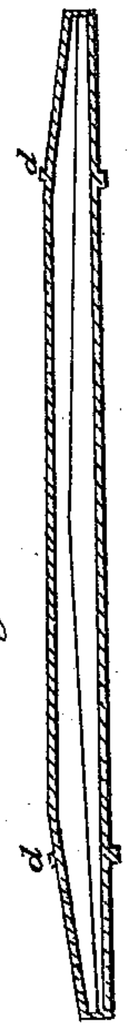


Fig. 15.



Witnesses:

James Innis

Henry Birmiah

Inventor:

John Kirkman

UNITED STATES PATENT OFFICE.

JOHN KIRKMAN, OF PEORIA, ILLINOIS.

IMPROVEMENT IN CONSTRUCTING WAGONS, CARRIAGES, &c.

Specification forming part of Letters Patent No. **40,758**, dated December 1, 1863.

To all whom it may concern:

Be it known that I, JOHN KIRKMAN, of Peoria, Illinois, have invented a certain new and useful improvement in the construction of wagons, carriages, and other common road conveyances; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of an iron wagon, exhibiting the locking position of the rubber. Fig. 2 is a plan or top view of the wheels, running-gear, and other appendages of my invention, to be hereinafter described. Fig. 3 is a side elevation of an iron wheel, and Fig. 4 is a sectional elevation of the same. Figs. 5, 7, 9, and 11 are side elevations of modified forms of iron wheels, and Figs. 6, 8, 10, and 12 are respectively sectional elevations thereof. Fig. 13 is a vertical transverse section of a hub, and Fig. 14 is an elevation thereof. Fig. 15 is a longitudinal section of a hollow iron axle.

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

The subject of this invention is a wagon constructed of iron and provided with a device for automatically locking and releasing the wheels, as will be hereinafter fully explained.

In order that others skilled in the art to which my invention appertains may be enabled to fully understand and use the same, I will proceed to describe its construction and operation.

In the accompanying drawings, C C may represent a wagon box or body constructed of T or angle iron and mounted in any suitable manner. The iron reach D D may also be made of T or angle iron, and supported at front and rear by hollow iron axles S, which are provided with collars *d d*, to preserve the wheels in proper position thereon.

E represents a wagon tongue or pole, which in like manner may be made entirely of T or angle iron. To the front axle are attached hounds F F, also made of T or angle iron. H H H H represent iron whiffletrees secured to the tongue E E and provided with trusses or brace-rods K. The tongue E is provided with a slot, in which the bolt of the double-tree H H is designed to move back and forth for the purpose to be explained. To this double-tree H H is attached a link, J, which is attached at its other end to springs I′ I′, to each of which is attached a rod, I. These rods I I are jointed at their rear ends to rods or arms *f f*, which are pivoted to the rear axle of the wagon at a point somewhat above the axis of the wheels. At the junction of each arm *f* with the rods I is attached a rubber, *g*. These rubbers *g g*, while the wagon is being drawn forward by the horses, are held out of contact with the peripheries of the wheels by the double-tree H H acting through the springs I′ I′ and rods I I, but while the wagon is passing down a hill or slope the springs I′ I′, being relieved of the dratt of the horses, will cause the rubbers *g g* to move back against the peripheries of the wheels, when the rubbers, by the friction of said peripheries, will be carried to a point where the rods *f f* will not admit of further movement in the direction in which the wheel turns, owing to the eccentric position in which they are pivoted on the axle. The wheels are thus firmly locked, in which condition they remain until the draft of the horses again becomes necessary, when the whiffletree H H, being drawn to its forward position upon the tongue E, will retract the rubbers *g g* from the wheels through the medium of the springs I′ I′ and rods I I. It will be seen that this locking device is entirely automatic, and performs its function in a most efficient manner.

The wheel illustrated by Figs. 3 and 4 may have its rim or felly A A made from one piece of T-iron, and the spokes B B made from T, L, H, U, or S form of iron and rived at their respective ends to the fellies A A and the hub *a*, the construction of the latter being clearly shown in Figs. 2, 13, and 14.

s s represent a cavity for containing oil for lubricating purposes.

The wheel illustrated by Figs. 5 and 6 has its rim A A made from two rings of L-iron riveted together by separate tire *c*, set upon the outside of them.

The wheel represented by Figs. 7 and 8 has its rim A A formed with a flange on each side, and that represented by Figs 9 and 10 has its rim made from T-iron, with a small T-shaped flange on the inside. The spokes B B are made of round iron with T-heads on each end, which fit in grooves prepared to receive

them in the rim A A and hub *a*, and thus serve to connect the fellies securely together.

The wheel-hub *a*, which is clearly illustrated in Figs. 13 and 14, may be closed at the outer end to prevent the escape of oil, and provided with a loose collar at the opposite end, forming a tight joint and preventing any waste or escape of the lubricating material in this direction. The hub is formed with a flange, *o o*, and grooves *i i*, in which the spokes are fitted and riveted.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

In combination with a wagon constructed as described, the springs I′ I′, rods I I, eccentrically-pivoted arms or rods *f f*, and rubbers *g g*, all arranged and operating substantially as set forth.

JOHN KIRKMAN.

Witnesses:

WENTWORTH FLIEGER,

ALFRED KIRKMAN.