

B. F. WILSON.

Velocipede.

No. 89,960.

Patented May 11, 1869.

Fig. 1.

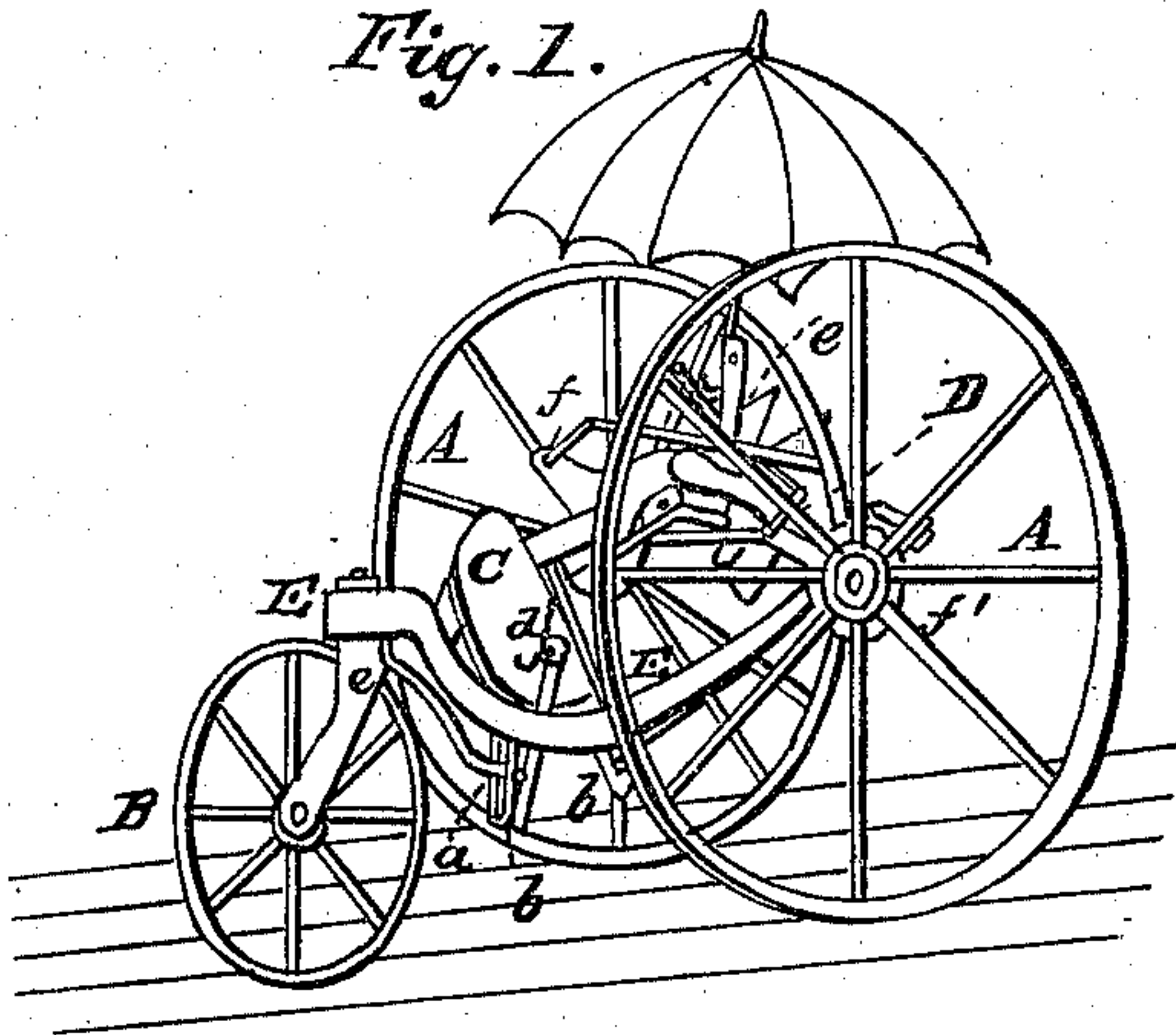


Fig. 2.

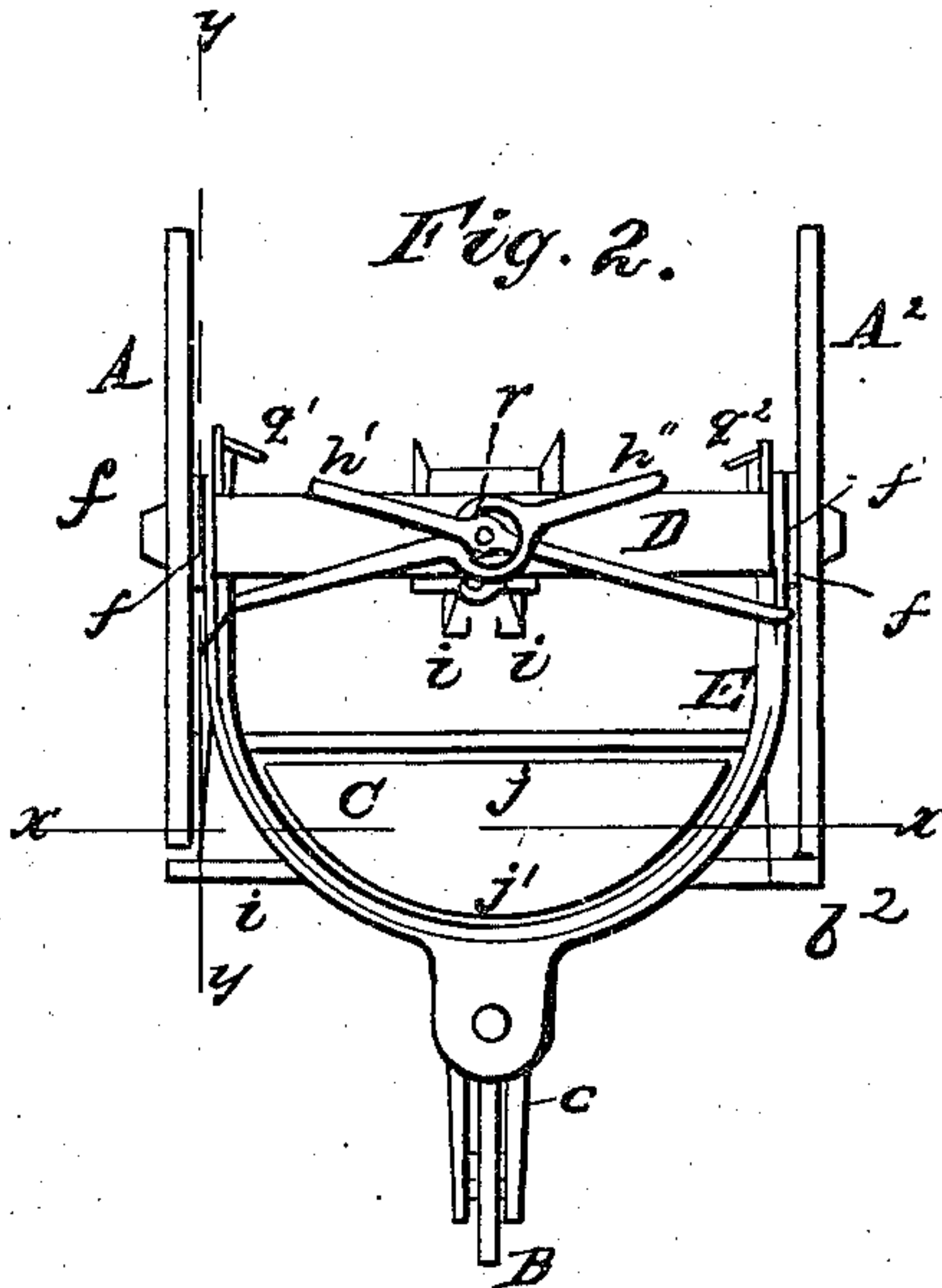


Fig. 4.

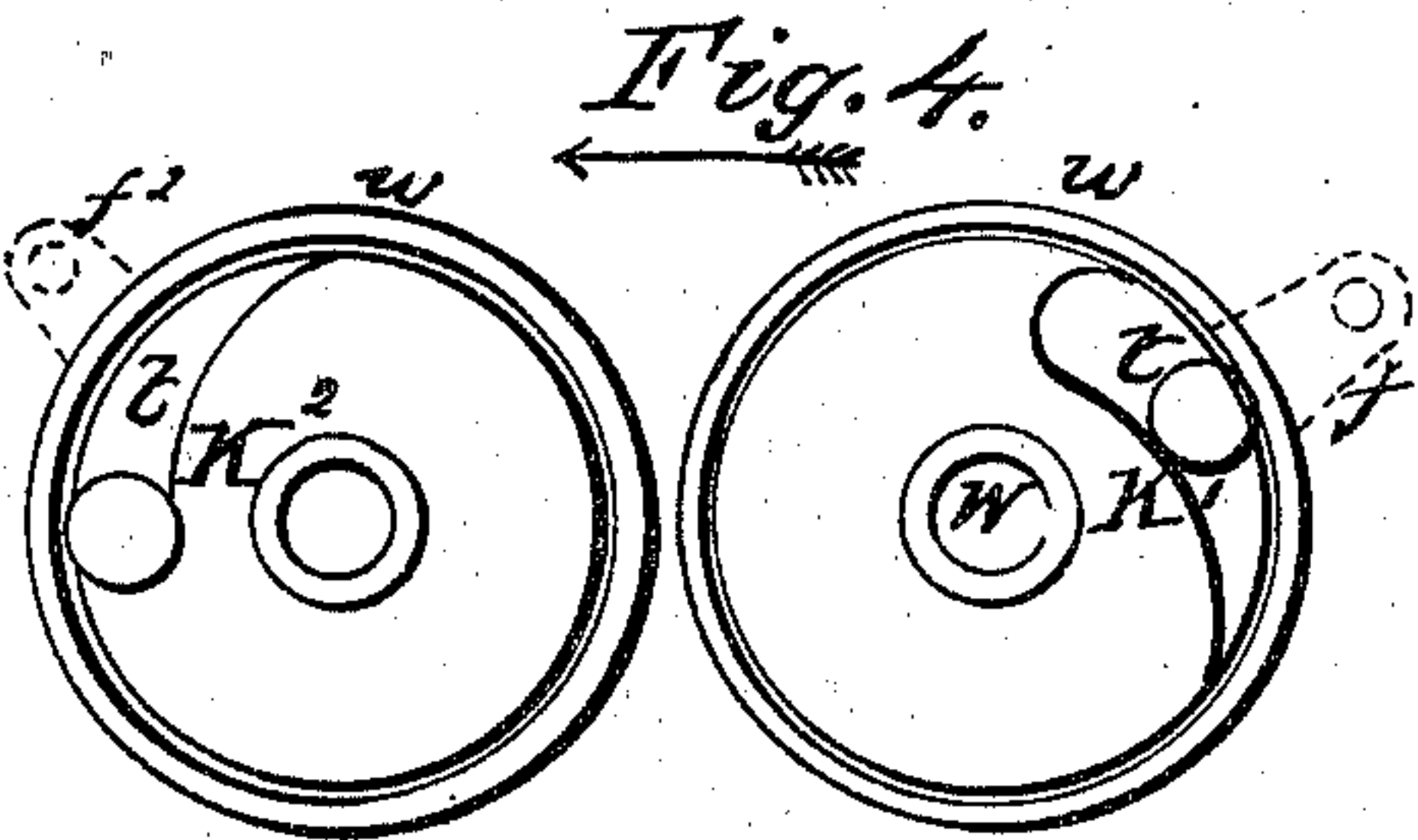


Fig. 3.

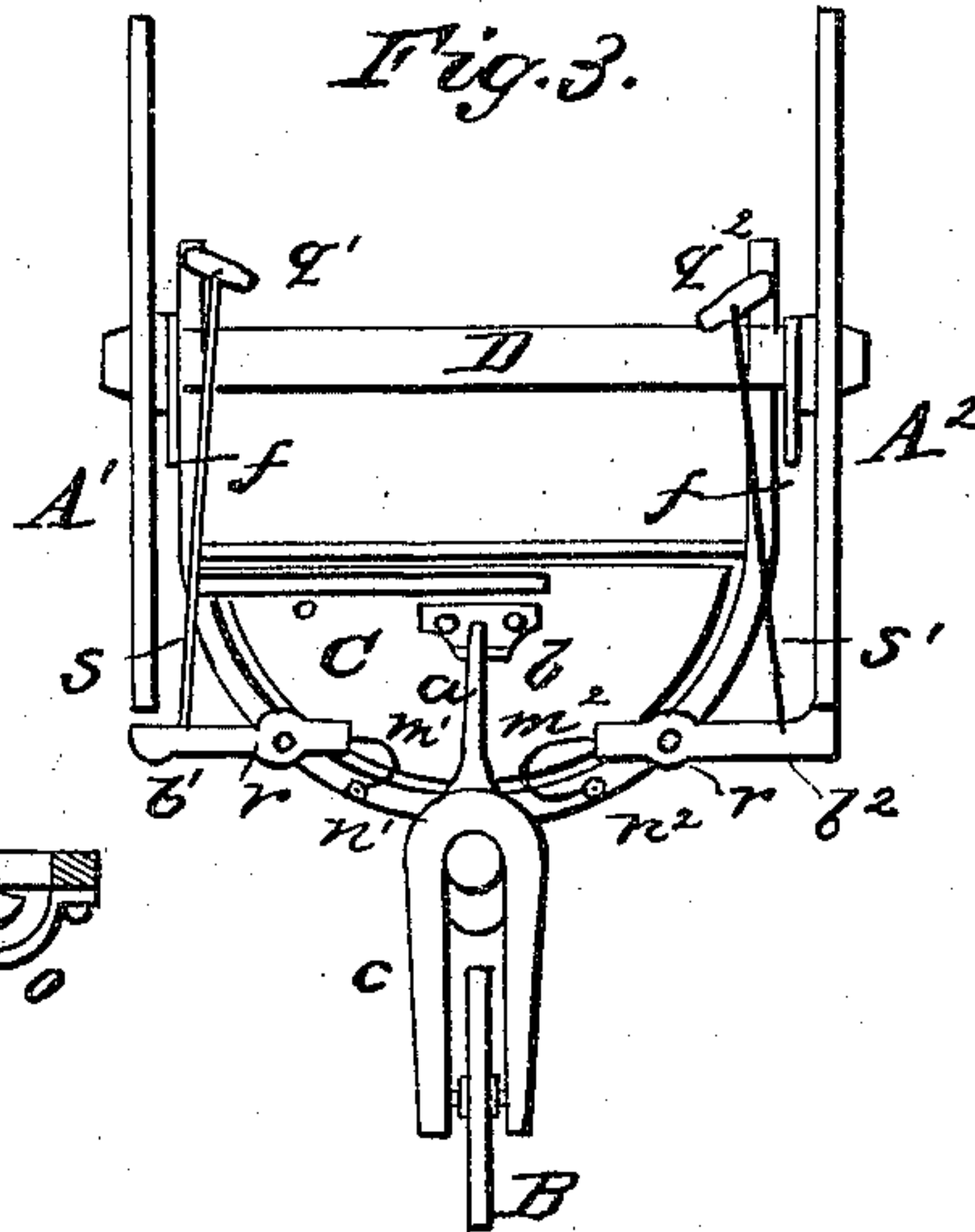
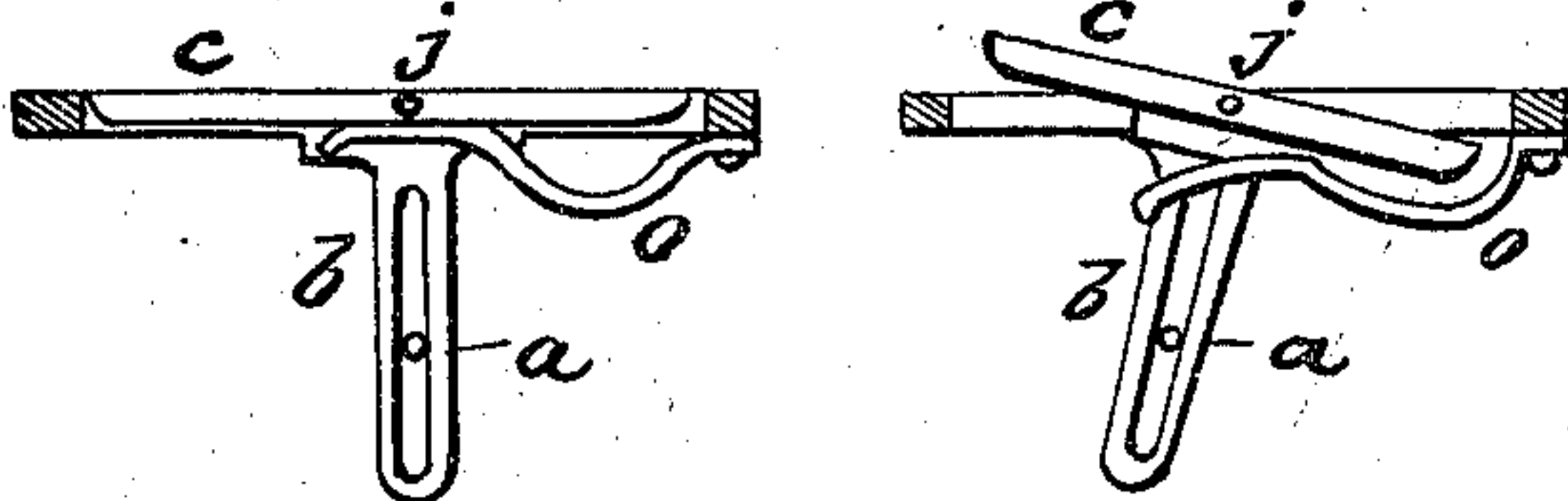


Fig. 5.



Witnesses:

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# United States Patent Office.

BENJAMIN F. WILSON, OF GEDDES, NEW YORK.

Letters Patent No. 89,960, dated May 11, 1869.

## IMPROVED VELOCIPEDE.

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, BENJAMIN F. WILSON, of Geddes, in the county of Onondaga, in the State of New York, have invented a new and useful Improvement in Velocipedes, or carriages to be propelled by the hands or feet of the rider; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view;

Figure 2, a top plan;

Figure 3, a bottom plan;

Figure 4, enlarged view of section on line *y*, fig. 2; and

Figure 5, section of seat through line *x*, fig. 2.

In fig. 1, A A are the driving-wheels running loose on axle D.

B, following and steering-wheel.

c, (small,) forked carrier for same, pivoted into reach E.

O, seat, pivoted at *i-i'*, figs. 2 and 5.

Fig. 2 is a top view, showing propelling handles, *h-h'*, crossed at *r*, for a purpose which will be shown hereafter, and pivoted seat O.

Fig. 3 is a view of bottom of vehicle, *q<sup>1</sup> q<sup>2</sup>* being the brake-pedals; *s s*, connecting-rods to brakes *l<sup>1</sup> l<sup>2</sup>*; check-pins *n<sup>1</sup> n<sup>2</sup>*; brake-springs *m<sup>1</sup> m<sup>2</sup>*; seat-spring *o*; tiller *a*; and slotted arm attached to seat, and marked *b*.

Fig. 4 is an enlarged view of driving-yoke *f*, taken on line *y y*, fig. 2, showing cam-shaped recess in yoke *f*, hub-band *u*, and engaging-rollers *k<sup>1</sup> k<sup>2</sup>*.

Fig. 5, section of seat, taken on line *x x*, fig. 2, showing retaining-spring *o*, seat O, with slotted arm *b*, attached rigidly to the seat, in such position as to embrace the tiller *a*.

*e* and *d*, in fig. 1, are adjustable umbrella, parasol, or awning-brackets.

The nature of my invention consists in crossing the handles of the propelling-apparatus of a velocipede in such manner that right hand or right foot shall operate upon the left-hand wheel of the vehicle, the utility of which will appear hereafter.

Also, in providing engaging and releasing-apparatus inside the hub-bands of the driving-wheels, which will be more fully described hereafter.

Also, in providing brakes to operate upon the wheels in a peculiar manner, more fully shown hereafter.

Also, in arranging and attaching to the seat-steering-apparatus, to operate upon the tiller of the steering-wheel, and in providing umbrella, parasol, or awning-brackets, to operate in such manner as to be adjustable.

Also, in providing a spring to operate upon the seat in such manner as to retain the seat in a horizontal position generally, but yielding to force applied to tilt the seat, for the purpose hereinafter shown.

Also, in pivoting the seat, to allow its being tilted or placed in a slanting position, for the purpose of steering or guiding the vehicle.

Having so far shown the nature of my invention, I will further explain its construction and operation.

I cross the propelling-handles *h h'*, fig. 2, in such manner that the right-hand handle *h* shall operate upon the left-hand driving-wheel A, fig. 2, through connecting-rod V, yoke *f<sup>1</sup>*, and engaging-apparatus, fig. 4, to the end that the operation of pulling the right-hand handle more vigorously than the left shall have similar effect to pulling the right-hand rein, in driving horses, that is, to make the vehicle go to the right.

I construct engaging and releasing-apparatus by placing a yoke, *f*, on the axle of each driving-wheel, with a cam or eccentric-shaped projection inside the band of driving-wheels *u*, fig. 4, between which bands and projections or cams the engaging-rollers *k<sup>1</sup> k<sup>2</sup>* operate, in the following manner:

*f<sup>1</sup>*, fig. 4, shows the yoke rolled back on the axle *w*, ready for a pull forward, with engaging-roller *k<sup>1</sup>* bound between the cam *t* and driving-wheel hub-band *u*.

On pulling right-hand handle *h*, fig. 2, the driving-yoke of left-hand driving-wheel A will be moved forward or rolled on the axle in the direction of the arrow, fig. 4 carrying driving-wheel A with it in the direction of the arrow.

On reaching the position shown by yoke *f<sup>2</sup>*, fig. 4, the yoke may stop turning on the axle.

Driving-wheel A, rolling forward by the impulse given, will cause engaging-roller *k<sup>1</sup>* to be released from contact between cam and hub-band, and roll by gravity to the end of recess, as at *k<sup>2</sup>*, and driving-wheel A, fig. 2, is free to roll on the axle.

By pulling both propelling-handles, or working both propelling-stirrups *i i*, fig. 2, simultaneously, the vehicle will be moved straight forward.

By operating the left-hand handle *h*, the vehicle will be driven to the left.

I construct steering-apparatus, in addition to that provided for in the propelling-apparatus, as shown in fig. 5, by pivoting the seat O, so that it may be tilted by the inclination of the body of the rider, and attaching to the seat, slotted arm *b*, in such position as to embrace the tiller *a*, as seen in fig. 1.

By tilting the seat to the right, as in fig. 5, it will be seen the steering-wheel B, fig. 1, by means of tiller *a*, will be turned in direction to cause the vehicle to go to the right.

It will be seen that a corresponding inclination to the left will cause the vehicle to go to the left.

I construct seat-spring *o*, fig. 5, and apply it in such manner as to hold the seat O in a horizontal position with considerable force, at the same time not so rigidly as to prevent the seat being tilted by an inclination of the body of the rider, for the purpose of steering and guiding the vehicle.

I construct tiller as shown at *a*, figs. 1 and 3, to be acted upon by the slotted arm of seat, as already shown.

I construct brakes, as shown in fig. 3, *i i* being brake-pieces, with slots *n<sup>1</sup> n<sup>2</sup>* and springs *m<sup>1</sup> m<sup>2</sup>*, so



arranged that the springs hold the brakes from contact with the wheels, except when operated upon by the feet by means of pedals  $q^1$   $q^2$  and connecting-rods  $s$   $s$ .

The brakes and springs are arranged in such a manner, in relation to the driving-wheels, and to the pins seen in slots  $n^1$   $n^2$  in brakes, that a moderate pressure upon the brake-pedals will give an easy and elastic pressure upon the rims or faces of the driving-wheels, one end of the brake being on the wheel, and the other held by the spring, to the end that the action of the brake on the wheel will not be too great in degree.

When more force is required on the brake, increased pressure on the pedal will cause the end of slot in brake-piece to strike stop-pin, as seen at  $n^2$ , when spring  $m^2$  will cease its action, and the brake will be held rigidly in contact with driving-wheel, the breaks being independent of each other, in order to facilitate the guiding of the vehicle by using right or left brake, as required.

I construct umbrella, awning, or parasol-brackets  $a$  and  $c$ , fig. 1, and apply in such manner as to be adjust-

able, so that the umbrella, awning, or parasol, may be held by them in any position to suit the convenience of the rider.

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

1. Crossed propelling-handles  $h'$   $h''$ , fig. 2, engaging and releasing-apparatus, as shown in fig. 4, when operating substantially in the manner described.

2. The pivoted seat  $O$ , spring  $o$ , and slotted arm  $b$ , when arranged and operating substantially in the manner set forth.

3. The independent spring-brakes  $l'$   $l''$ , fig. 3, slots, with pins  $n^1$   $n^2$  and springs  $m^1$   $m^2$ , when arranged and operating substantially in the manner shown and described.

4. The adjustable umbrella, awning, or parasol-brackets, when operating substantially in the manner set forth.

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Witnesses:

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THOS. S. McNEIRS.