

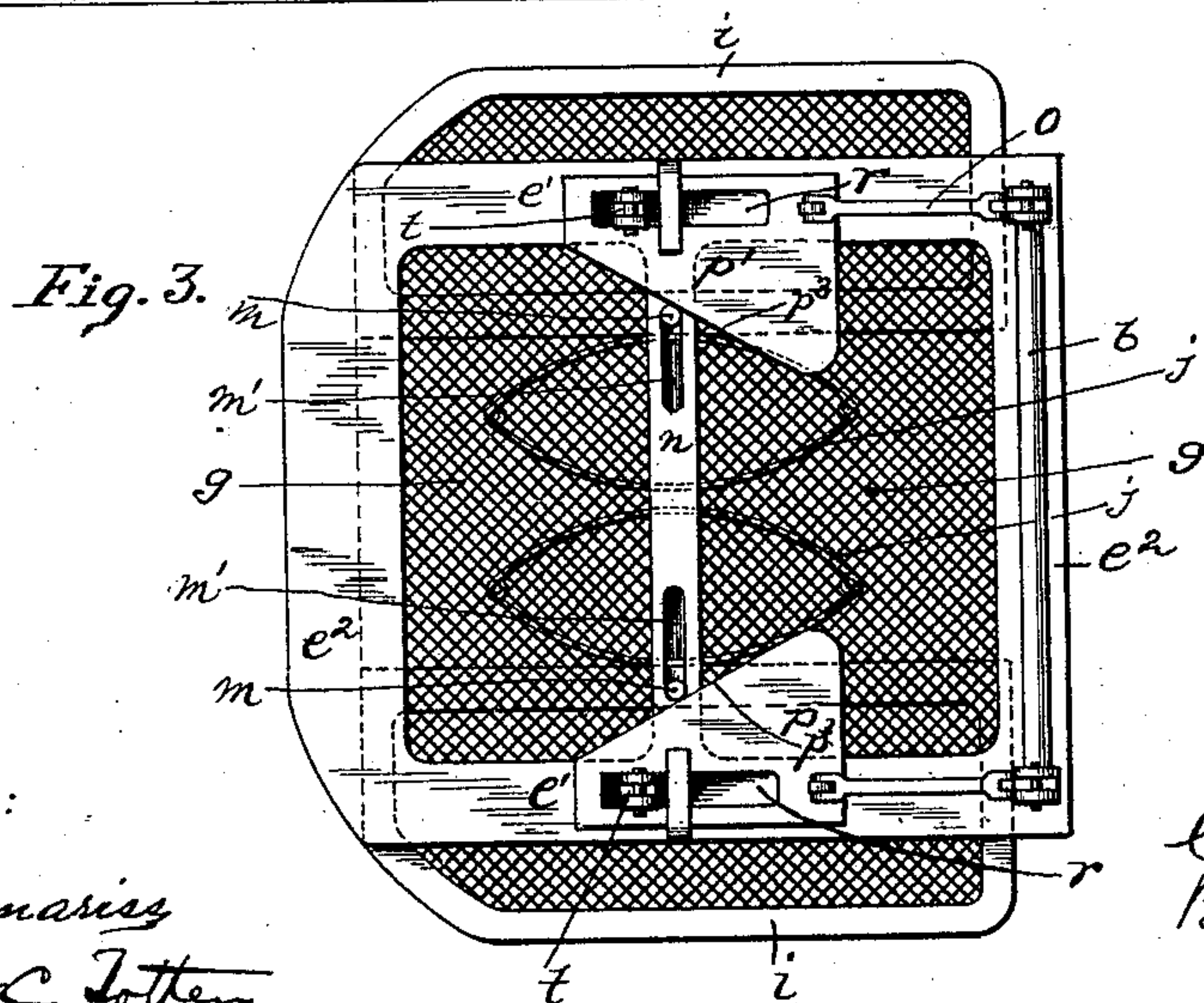
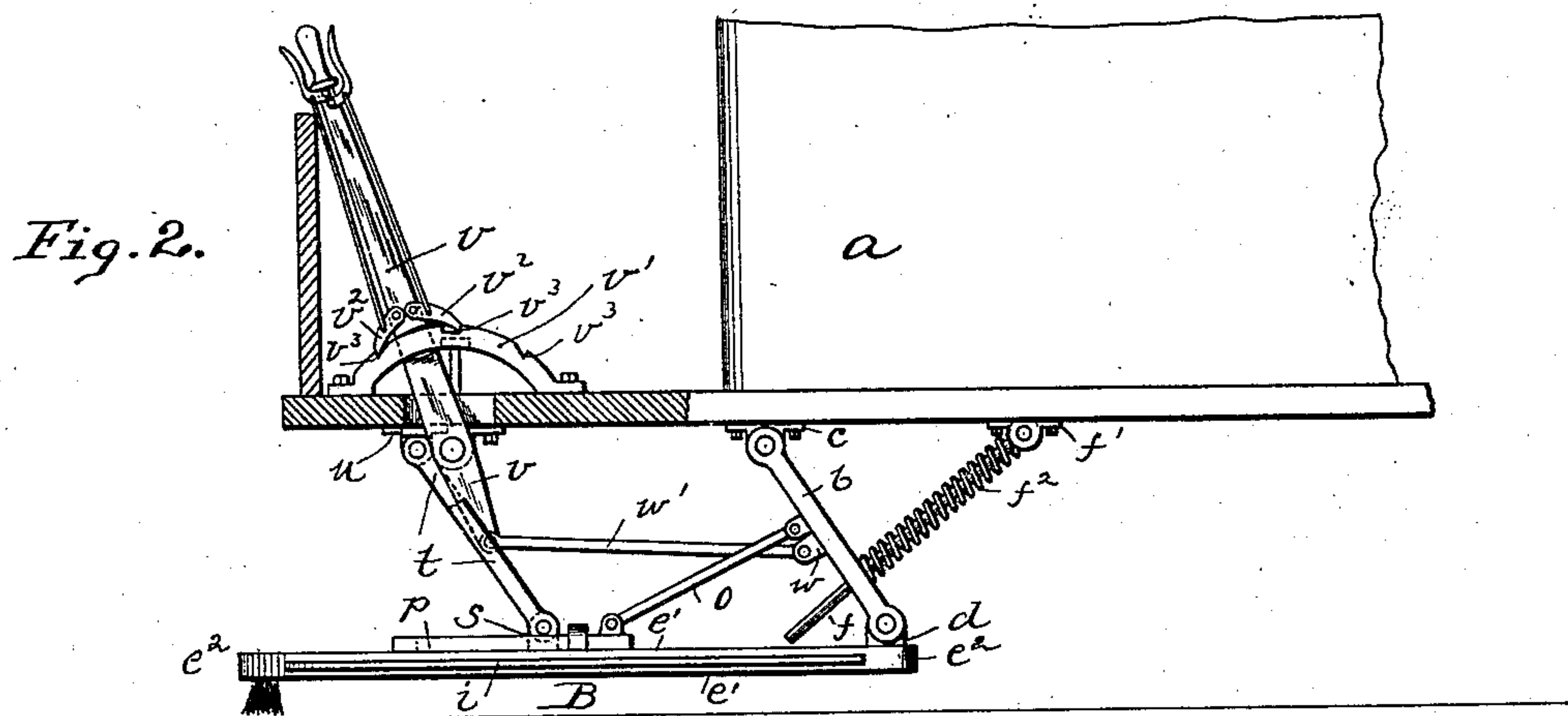
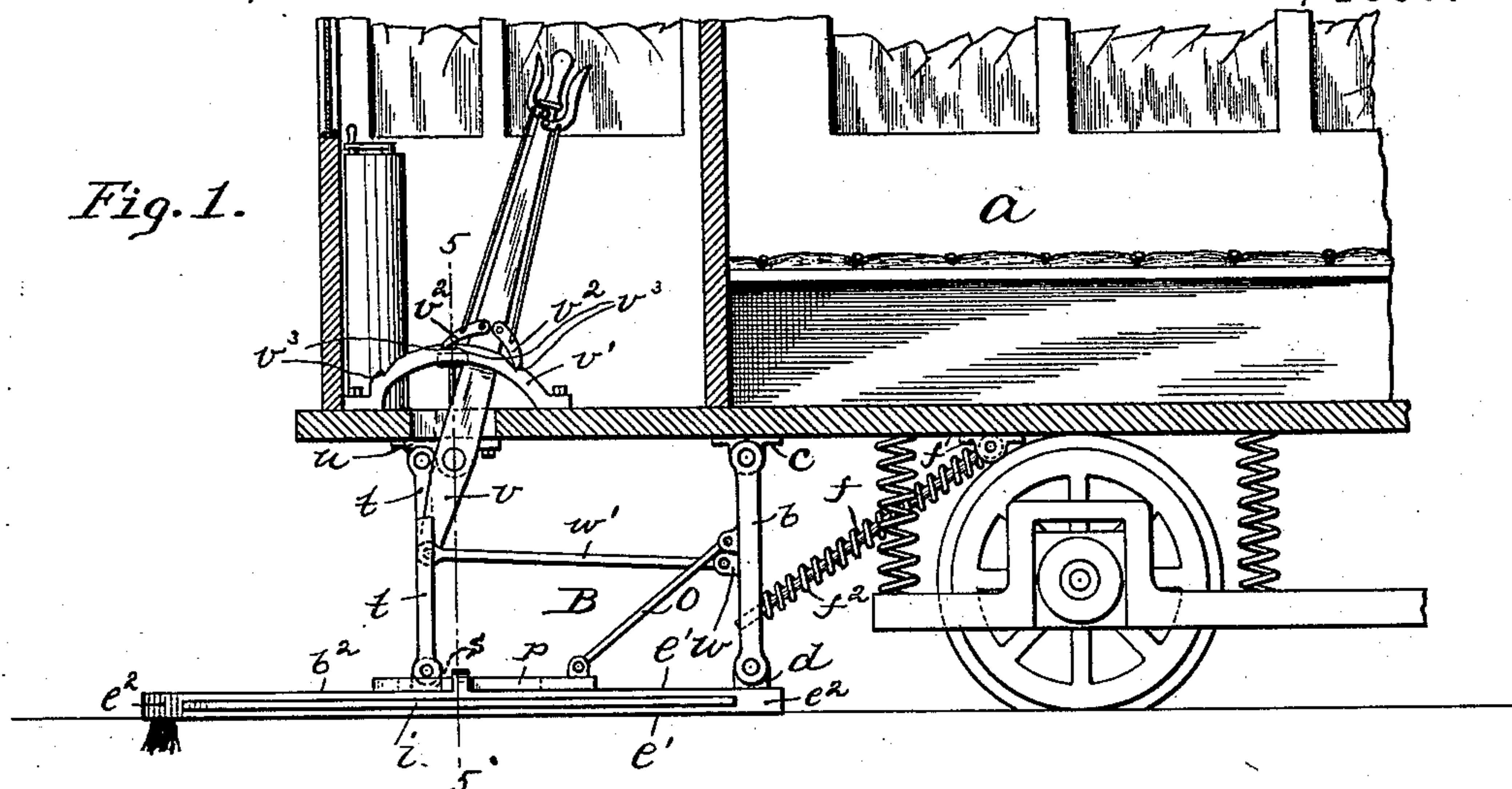
(No Model.)

2 Sheets—Sheet 1.

C. SHIREY.
CAR FENDER.

No. 578,528.

Patented Mar. 9, 1897.



Witnesses:

Walter Famariss
Robert C. Totten

Inventor:
Cyrus Shirey
By Kay & Johnson
Attorneys

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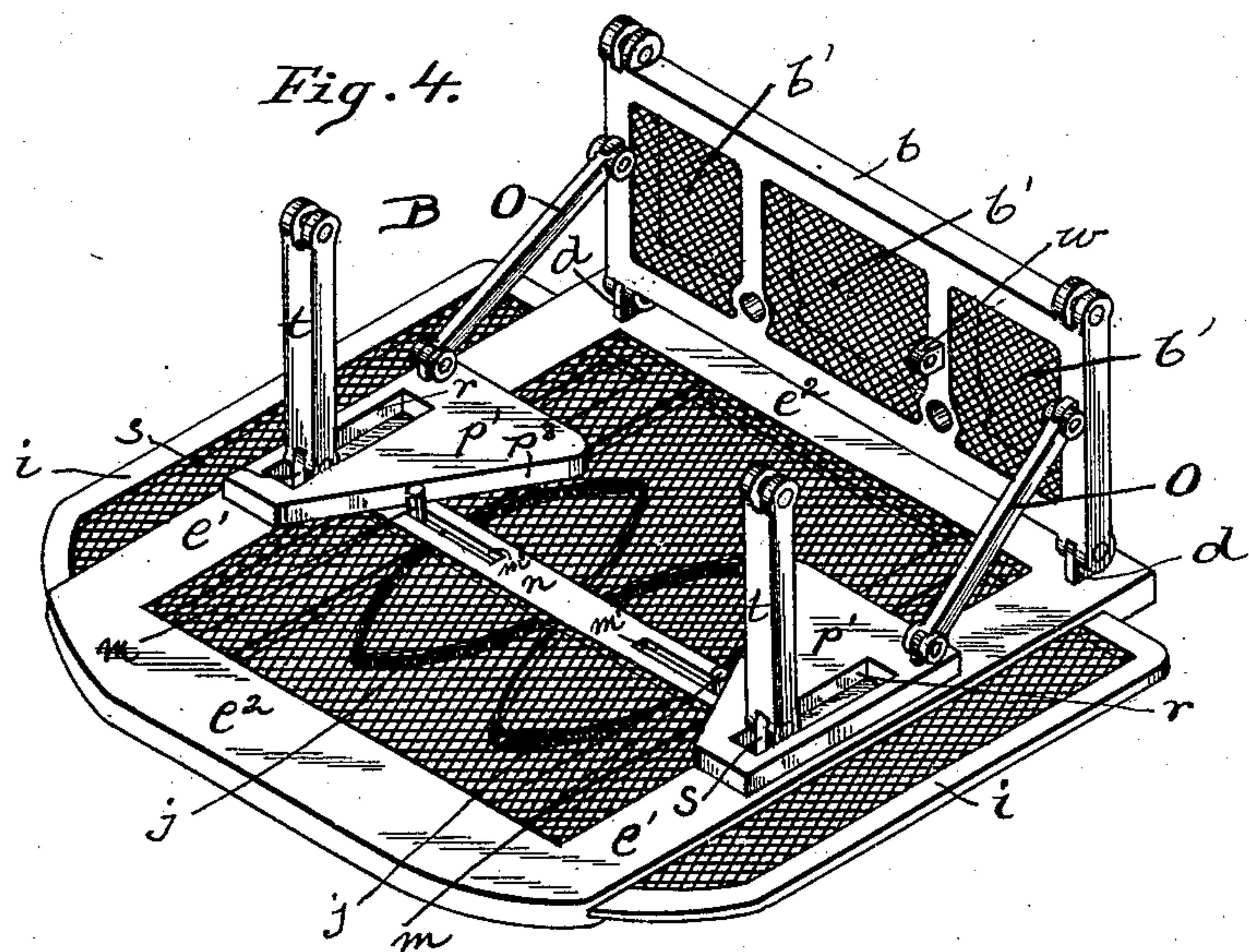
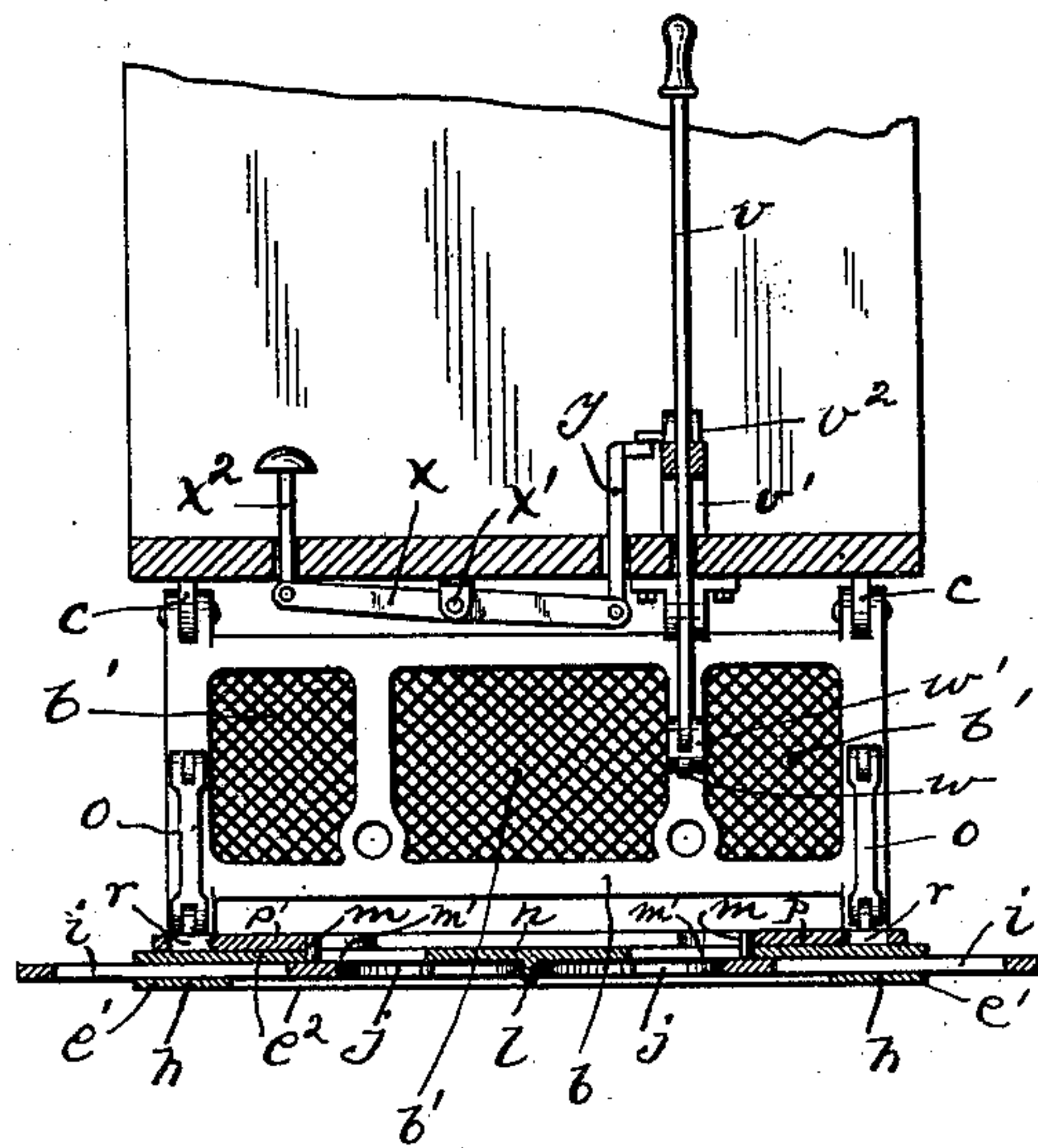


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

CYRUS SHIREY, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR OF ONE-HALF
TO JOHN K. STERRETT, OF SAME PLACE.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 578,528, dated March 9, 1897.

Application filed November 19, 1896. Serial No. 612,752. (No model.)

To all whom it may concern:

Be it known that I, CYRUS SHIREY, a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Car-Fenders; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to fenders or safety-guards for street-railway cars, its object being to provide a fender which can be readily thrown into operation and which will prevent the body of a person struck by the car from getting under the wheels of the same.

My invention comprises, generally stated, a fender suspended beneath the forward end of the car and mechanism for throwing the fender forward and at the same time releasing laterally-extensible wings at the sides of the fender, which extend out beyond the body of the fender when such fender is thrown forward, and mechanism for withdrawing the wings when the fender is brought back to its normal position.

To enable others skilled in the art to make and use my invention, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is a side elevation with the car in section, showing fender lowered. Fig. 2 is a like view with the fender raised, as when not in use. Fig. 3 is a plan view of the fender, supports, &c. Fig. 4 is a skeleton perspective view of fender, supports, &c.; and Fig. 5 is a cross-section on the line 5 5, Fig. 1.

Like letters of reference indicate like parts in each.

The letter *a* designates a car of any suitable construction. Suspended from said car and adapted to swing back and forth is the rear section *b* of the fender *B*, composed of the wire-netting *b'*. This section *b* is suspended from the hangers *c* on the bottom of the car, the lower end of said section *b* being secured to the lugs *d* on the forwardly-projecting section *b²* of the fender. Rods *f* are pivoted to suitable supports *f'* on the car-body, said rods passing through suitable openings in the rear section *b*. Springs *f²* surround the rods *f*, being interposed between the supports *f'* and the rear face of said section *b*,

said springs acting to force said section normally forward.

The forwardly-projecting section *b²* of the fender is made up of the upper and lower side and end plates *e' e²*. The open space in between the upper end and side plates is covered with suitable wire meshing *g*. Between the upper and lower side plates are the seats or recesses *h*, adapted to receive the wings *i*. These wings *i* are acted on by the springs *j*, which are interposed between the lug *l* on the cross-rib *n* and the said wings. These wings have the studs or pins *m* formed thereon, said studs or pins passing up through and working in suitable slots *m'*, formed in the central cross-rib *n* of the top plate. In this manner the wings are held in position and guided back and forth.

Pivoted to the rear section *b* are the arms *o*, the forward end of said arms being pivoted to the wedge-blocks *p p'*, said wedge-blocks having the inclined edges *p³*, adapted to engage with the studs *m* on the wings *i*. These wedge-blocks *p p'* have the slots *r* formed therein, and pivoted to the lugs *s* on the upper plate of the fender are the arms *t*, the upper ends of said arms being pivoted to hangers *u* on the car-body.

Pivoted to the lug *w* on the rear section *b* is the arm *w'*, the forward end of said arm being pivoted to the lower end of the operating-lever *v*, said lever extending up through the floor of the car on the front platform and running up through the guide *v'*. This lever *v* has the pawls *v²*, adapted to engage with teeth *v³* in the guide *v'*.

In order to be able to operate the device by foot-power, I have the rocking lever *x* pivoted at *x'* to the bottom of the car, one end of said lever *x* having the treadle-arm *x²* projecting up to the opening in the car in a position to be operated by the motorman, the opposite end of said arm having the trigger *y* pivoted thereto. The trigger *y* is adapted, when thrown up by pressing the treadle, to release the pawls on the operating-lever from the teeth and allow the spring *f²* to throw said operating-lever back and operate the fender.

The operation of my improved fender is as follows: When the fender is in its normal po-

sition it will be in the position shown in Fig. 2. If the car is running along and the motorman sees any one on the track liable to be run down by the car before he can stop the same, he releases the lever v , which permits the springs f^2 on the rods f to force the rear section b of the fender forward to the position shown in Fig. 1. As the fender advances the wedge-blocks $p p'$ will be withdrawn, permitting the springs j to force the wings k out to the position shown in Figs. 3 and 4. The fender is thus lowered into position to prevent the body of the person struck from getting under the car, while the wings k , spreading out beyond the body of the fender, further tend to prevent liability of the body getting beneath the wheels. The brush y' at the forward end of the fender is brought down into contact with the track and prevents liability of any of the limbs of the person struck from getting under the fender. In case the motorman does not have opportunity to operate the fender by the hand-lever v he can, by placing his foot quickly upon the treadle x^2 , release the hand-lever v and the fender will be operated in the manner above set forth. When it is desired to bring the fender back to its normal position, it is only necessary to throw forward the hand-lever v , whereupon the rear section b of the fender will be withdrawn, forcing forward the wedge-blocks $p p'$, which, having their inclined faces p^3 moving in contact with the studs m , will overcome the action of the springs j and the said wings will be withdrawn out of the way until it is desired to operate the fender.

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

1. In a car-fender, the combination with a car, of a fender supported thereby, laterally-extensible wings on said fender, springs for

throwing out said wings, and wedge-blocks engaging said wings and adapted to withdraw the same, substantially as set forth.

2. In a car-fender, the combination with a car, of a fender supported thereby, laterally-extensible wings adapted to extend out beyond the body of the fender, springs for normally forcing said wings outwardly, studs on said wings, wedge-blocks engaging said studs and adapted to draw in said wings, substantially as set forth.

3. In a car-fender, the combination with a car, of a rear section suspended therefrom and adapted to swing back and forth, of a forwardly-extending section secured to said rear section, laterally-extensible wings on said forward section, connections between said rear section and an operating-lever, springs for forcing out said wings, and connections between said rear section and said wings, whereby said wings are drawn in as said rear section is drawn back, substantially as set forth.

4. In a car-fender, the combination with a car, of a rear section suspended therefrom and adapted to swing back and forth, a forwardly-extending section secured to said rear section, laterally-extensible wings on said forward section, connections between said rear section and an operating-lever, springs for forcing out said wings, studs on said wings, wedge-blocks engaging said studs, and connections between said rear section and said wedge-blocks, substantially as set forth.

In testimony whereof I, the said CYRUS SHIREY, have hereunto set my hand.

CYRUS SHIREY.

Witnesses:

ROBERT C. TOTTEN,
ROBT. D. TOTTEN.