

ALLEN & VALIQUETTE.

Car Bumper.

No. 88,600.

Patented April 6, 1869.

Fig: 1.

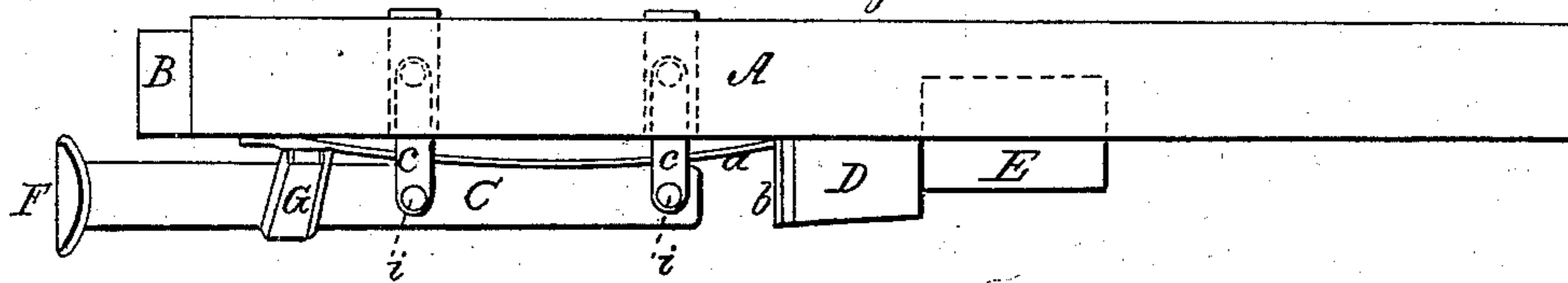


Fig: 2.

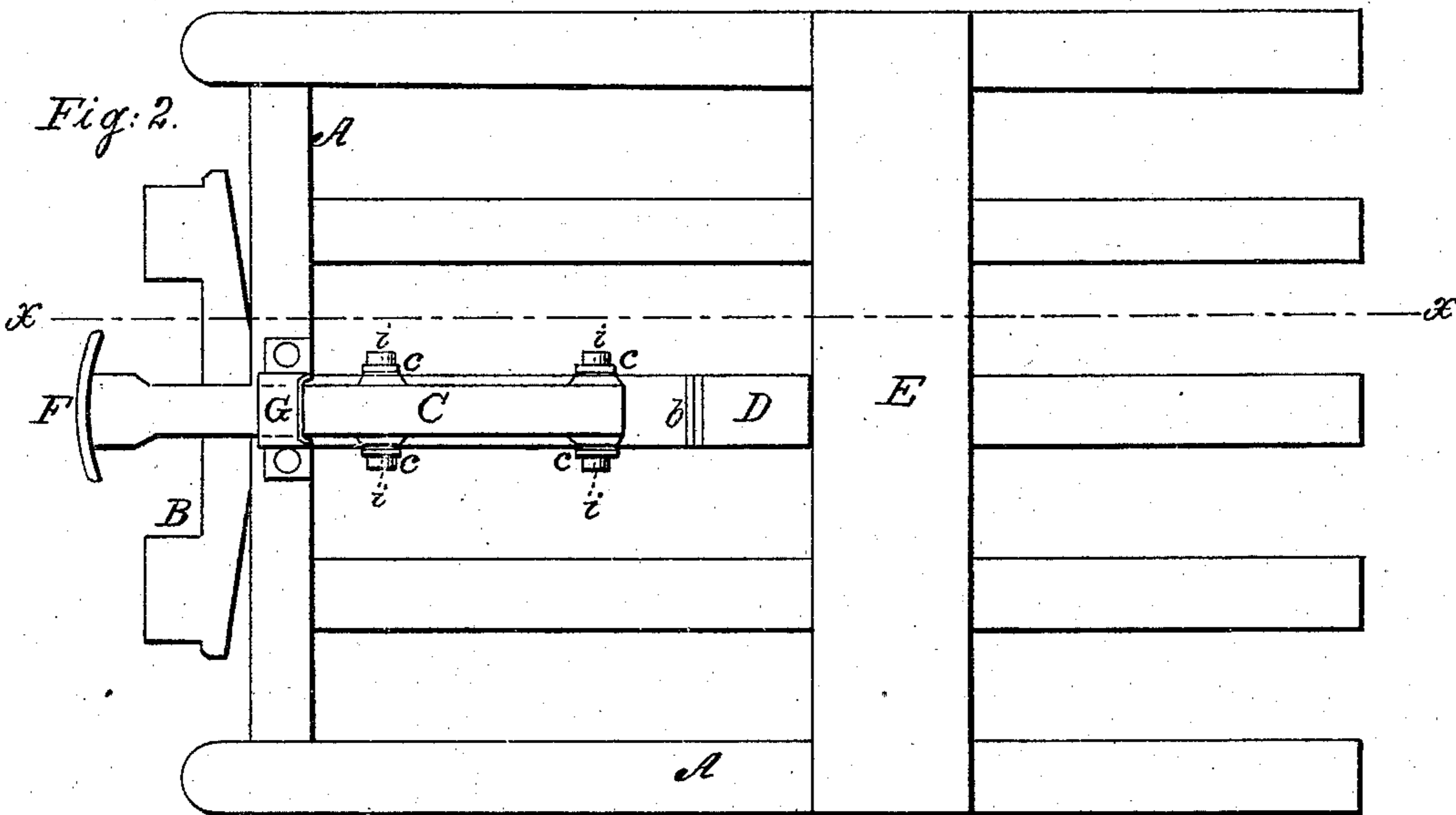


Fig: 3.

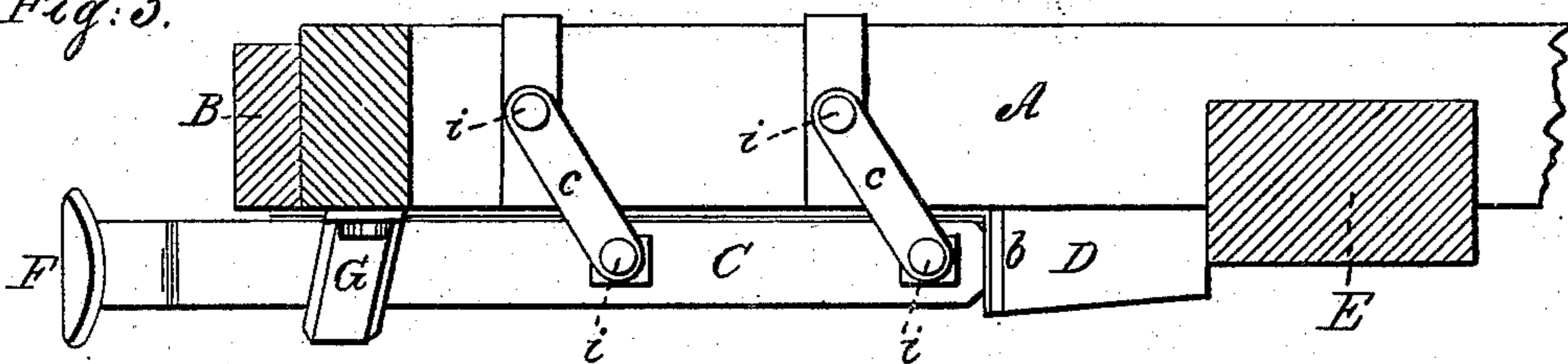
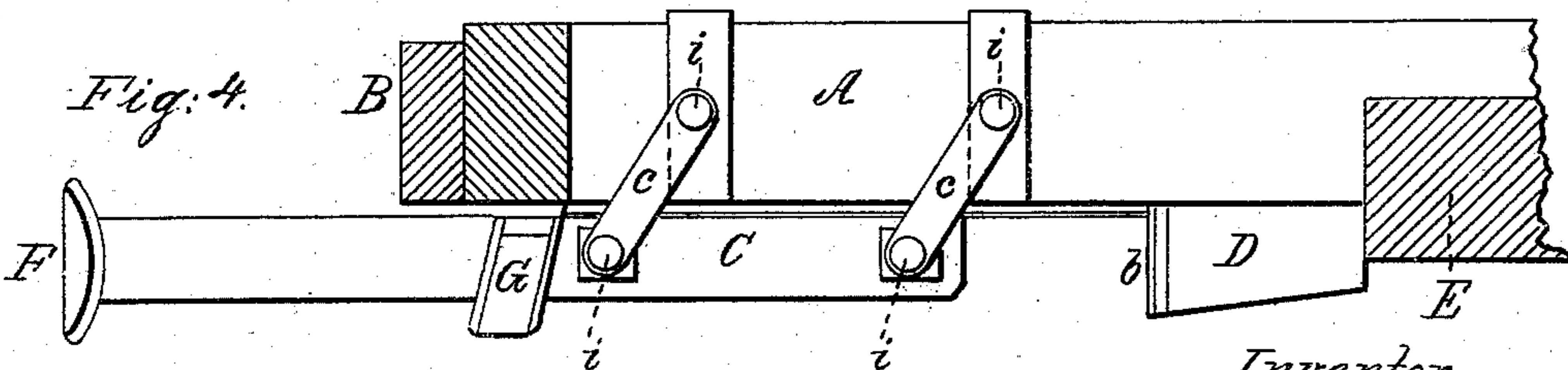


Fig: 4.



Witnesses.

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PETER ALLEN AND BENJAMIN VALIQUETTE, OF RUTLAND, VERMONT.

Letters Patent No. 88,600, dated April 6, 1869.

RAILROAD-CAR BUFFER.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, PETER ALLEN and BENJAMIN VALIQUETTE, both of Rutland, in the county of Rutland, and State of Vermont, have invented a new and improved Railroad-Car Buffer; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view, showing our invention applied to one end of the railroad-car frame.

Figure 2 is a bottom view of the car-frame, having the buffer applied to it.

Figure 3 is a sectional view, showing the buffer when it is fully pressed back.

Figure 4 is a similar view of the same parts shown in fig. 3, representing the buffer drawn out to its fullest extent.

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

The nature of our invention consists in preventing injurious and unpleasant jars and concussions incident to the sudden stopping and starting of railroad-cars which are coupled together in a train, by suspending the draw-bar, or buffer from the car-frame, and interposing between it and said frame a suitable spring, so that as the buffer receives endwise movement forward or backward past a given point, it will also be caused to receive a vertical bodily movement, which will be more or less resisted, according to the amount of movement of the buffer, and the strength of said spring.

Also, in the employment, in combination with such contrivance, of a rear-spring abutment, which will operate, in conjunction with the spring above the buffer, when the latter has nearly attained its full backward stroke, to prevent shock, as will be hereinafter explained.

To enable others skilled in the art to understand our invention, we will describe the best means known to us for carrying it into effect.

The drawings represent our improvement applied beneath a car-frame, or bed, A, which may be constructed in the usual well-known manner.

C is a draw-bar, having a coupling-bar, F, on its front, or outer end, and working through a stirrup, G, which is secured beneath the end cross-beam of the frame A.

This draw-bar, or buffer is suspended beneath the central longitudinal beam of the frame A, by means of straps, *c c*, which are pivoted to this central beam, and also to the draw-bar at *i i*, so as to allow this bar to swing freely in a direction with the length of the car-frame.

The straps *c* are all of an equal length, and are so pivoted as to keep the draw-bar C always parallel, or nearly so, to the plane of the car-frame, but allow this bar to rise and descend as it swings either forward or backward of its position of rest, shown in fig. 1.

Between the draw-rod C, thus suspended, and the central longitudinal beam of the car-frame, a spring, *a*, is interposed, so as to press downward at all times upon the draw-rod, and thereby tend to resist its upward movement as it is swung forward or backward past the position of rest indicated in fig. 1, in which latter position the spring *a* acts upon it with the least resistance.

The spring *a* may be made of metal, of the semi-elliptic kind, or it may be constructed in any other suitable manner. It is arranged so as to impinge upon the draw-bar when at rest, at a central point between the front and rear suspension-straps, and it is also so constructed and arranged as to act with the greatest resistance when the said bar reaches the termination of either its backward stroke or thrust, as shown in fig. 3, or the termination of its forward stroke, as shown in fig. 4.

It is not intended that the spring *a* shall resist, alone, the full backward strokes of the draw-rod, but only to gradually mollify the shock, so that when the rear end of this bar reaches a spring, *b*, the violence of the shock will be considerably diminished.

This spring *b* may be made of metal or rubber, in any suitable manner. It is applied to the abutment D in front of the transverse bolster E, in the vertical plane of the draw-bar C, as shown in the drawings.

Having described our invention,

What we claim as new, and desire to secure by Letters Patent, is—

1. A draw-bar, C, which is suspended so as to receive a vertical bodily movement at the same time it receives an endwise movement, substantially as described.

2. A vertically-swinging draw-bar, in combination with a spring, *a*, arranged to operate substantially as described.

3. A rear elastic abutment, *b*, a vertically and endwise-movable draw-rod, C, and a vertically-yielding spring, *a*, combined and operating substantially as described.

his
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Witnesses:

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