

No. 770,885.

PATENTED SEPT. 27, 1904.

J. D. BARBER.
TELESCOPING CAR.

APPLICATION FILED FEB. 25, 1904.

NO MODEL.

FIG. 1.

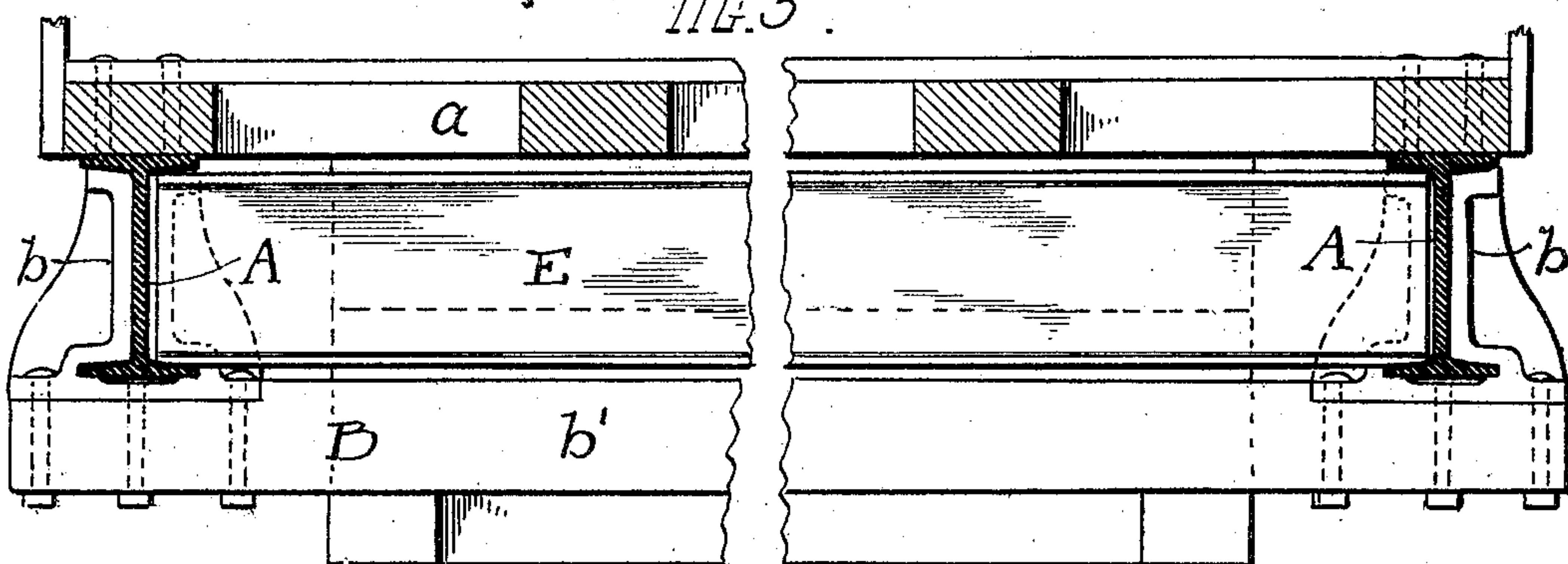
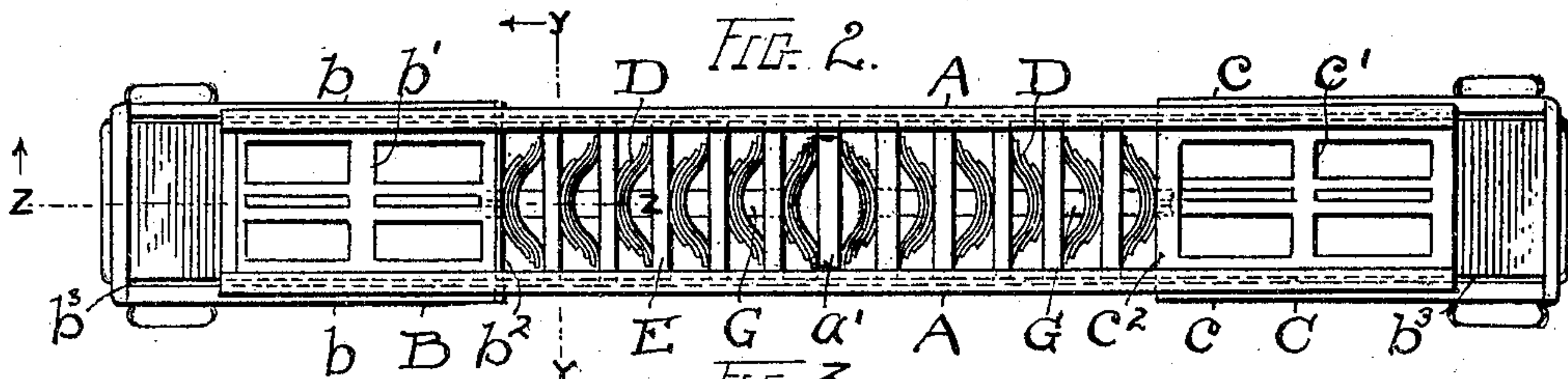
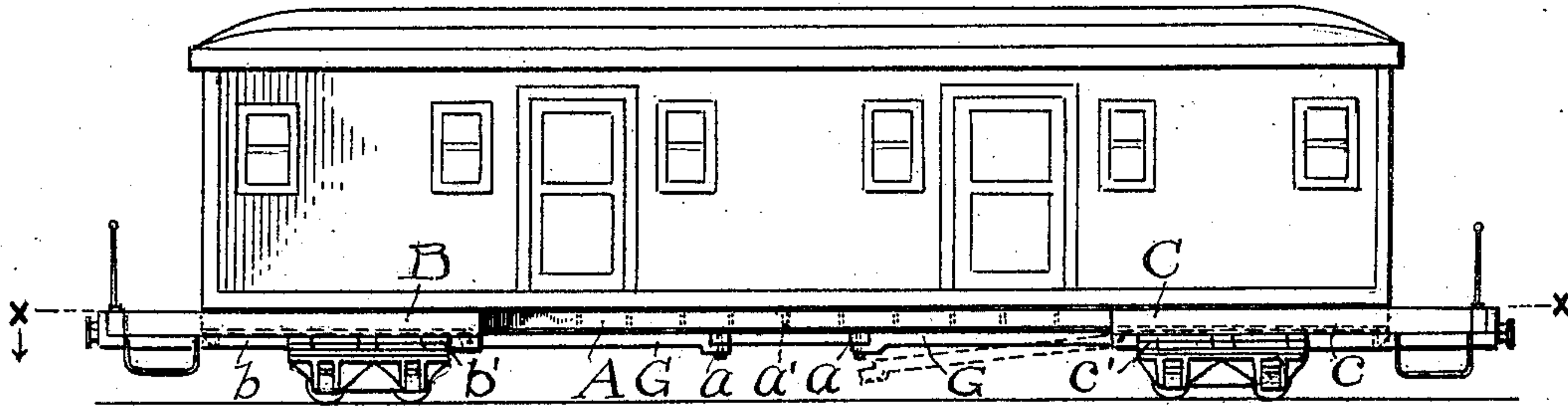
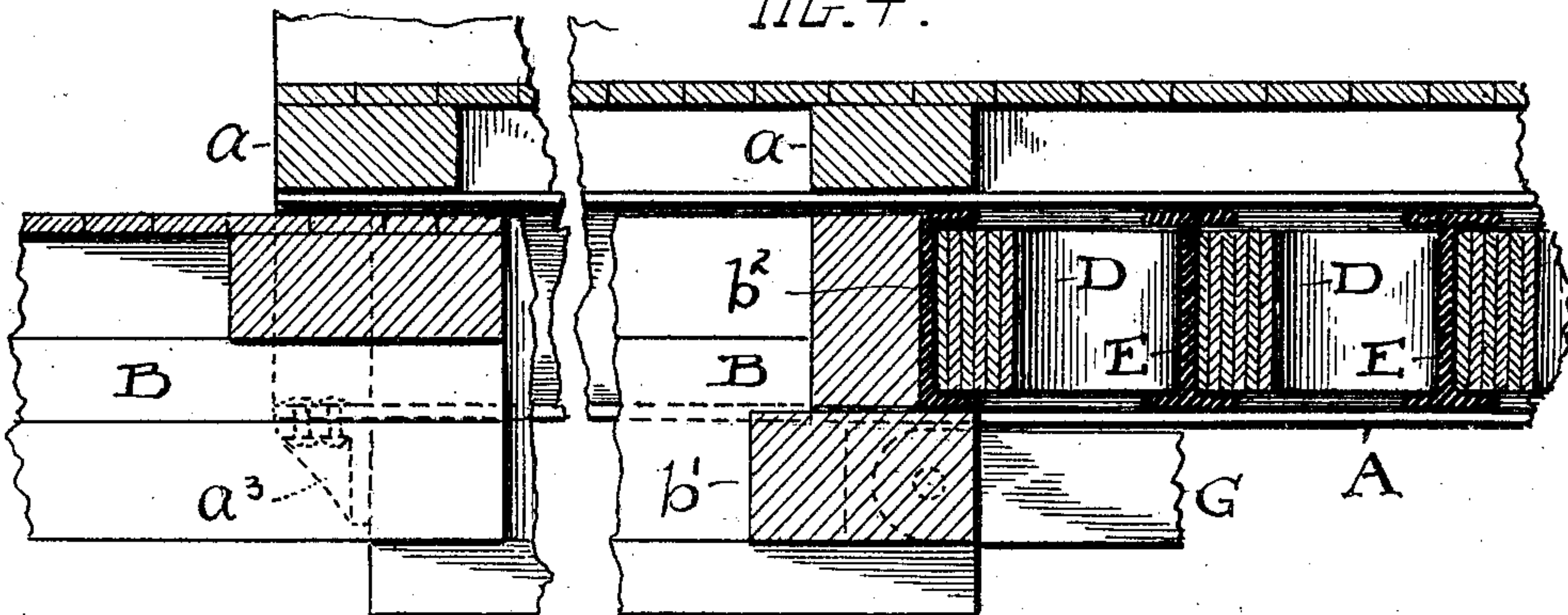


FIG. 4.



WITNESSES:

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JOHN D. BARBER, OF CLEVELAND, OHIO.

TELESCOPING CAR.

SPECIFICATION forming part of Letters Patent No. 770,885, dated September 27, 1904.

Application filed February 25, 1904. Serial No. 195,316. (No model.)

To all whom it may concern:

Be it known that I, JOHN D. BARBER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have
5 invented certain new and useful Improvements in Telescoping Cars; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make
10 and use the same.

My invention relates to improvements in telescoping cars; and the object of the invention is to provide a car which will take up and absorb the shock of a collision, all substantially as shown and described, and particularly
15 pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a complete car which contains my improvement; and Fig. 2 is a horizontal plan view of the platform portion of the car, taken on line *x x*, Fig. 1. Fig. 3 is a cross-section of the said platform on line *y y*, Fig. 2, and broken out in the center and enlarged to more clearly disclose the construction.
20 Fig. 4 is a sectional elevation of a portion of the car-platform on a line corresponding to *z z*, Fig. 2.

As thus shown, the invention comprises a car which is especially built for the purpose of relieving a train of the shock and usual destruction which results from a head-end collision, and the idea is to so construct this car that by means of its springs and its telescoping framework, which permits the springs to act as a
30 cushion and absorbent of concussion, the severity of collision will be relieved and other cars in the train protected against destruction, as will more particularly appear in the further description herein.

In the building of a car of this character I employ a set of heavy I-beams A, which are located lengthwise at each side in the platform or bottom of the car and of less length than the body of the car relatively, as seen in Fig.
40 2. The remainder of the bottom or platform of the car is built to these I-beams, and the channels thereof are at the sides inside and out of each beam. The said beams are transversely connected, as may be needed, by suitable cross-bars *a* at intervals, so as to firmly
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and rigidly connect the same and make a base or framework for the entire structure.

B and C are the respective telescoping or sliding ends of the platform and are alike in their construction and arrangement and may
55 be interchanged end for end. The said end or end sections of the platform are each provided at their sides with supporting-pieces *b* and *c*, respectively, adapted to slide in the channels of the beams A, and the sides of the
60 said end sections are transversely connected across their bottom by cross-pieces *b'* and *c'*, respectively, which extend across the bottom of the I-beam and engage with the outer channel members *b* and *c* of the end sections, thus
65 making a sliding framework for the end sections which work telescopically in the said I-beams. The limit of movement of each particular end section in the case of a crash or collision is determined by the space occupied
70 by the series of leaf-springs D behind each section. Each spring has a cross-bar E, and the said cross-bars are engaged at their ends in the channels of the I-beams and free to slide therein, and each cross-piece has a spring
75 D attached thereto or confined at its middle and adapted to bear against the next succeeding cross-piece. At the middle the cross connection *a'* of the frame A serves as a stop for the adjacent springs upon the opposite sides.
80 The last spring at each end of the series is fixed to the cross-pieces *b''* and *c''*, respectively, of the end sections B and C, and the said springs D are fashioned substantially after the manner of buggy-springs, but necessarily
85 much heavier, and are adapted in their accumulative operation to practically absorb the severity of the concussion or sudden stopping of a train.

Ordinarily and when the car is in use it has
90 the appearance of an ordinary car and is built to carry express, mail, or other matter and serve all the purposes of an ordinary car for these purposes in the service of a train; but in the case of a collision it is expected that this car
95 will be at least the first and probably the only one in this line to yield and telescope and that by reason of its construction it will take up and relieve the severity of the collision, thus preserving other cars and preventing the
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usual crushing of passengers in the weaker cars of the train. For this reason also the end sections B and C are built up with front and rear platforms, as usual, and the trucks are disposed beneath these sections and carry the same. In the event of collision the said sections simply run together inward, but against the powerful resistance of the heavy springs D, and when strain or pressure of collision is relieved the springs D will exert their normal pressure outward and force the end sections back again to their proper place at the ends of the car. The limit of movement of the end sections inward is the crowding together of springs D and bars E, and there are stops a^3 also for the outward movement secured upon the ends of I-beams and engaging the outer cross-bars of the end sections. It is not, however, planned that the car shall collapse or telescope except as accident requires, and to this end I plan to keep the car extended at its ends and to lock the same in such extension by means of braces G, which are pivotally secured at one end of the bottom of each end section and notched at their other end, as herein shown, to engage upon one of the cross-pieces a of the I-beam frame. Springs or bolts answer for keeping the said braces G up in working position; but when collision is imminent the said braces G are designed to be thrown down out of engagement with the cross-pieces a , when the car is in condition to telescope. I may of course make these braces of such a character that they will resist the ordinary bumping of the car in the train, but so it will yield under collision, and I do not limit myself to the braces for this purpose, but consider myself at liberty to use any equivalent construction. However, the braces serve my purpose, and they can be caused to drop by any suitable mechanism connecting therewith and adapted to be hand-controlled from a locomotive or from the car

itself. The line of spring and sliding members is in a direct or straight line with the bumpers, and the car when telescoping will take up the shock without danger of leaving the track.

What I claim is—

1. A telescoping car constructed with a central rigid frame having I-beams at its sides, end sections engaged to slide in said beams, and a series of leaf-springs behind each end section, substantially as described. 50
2. A telescoping car having a middle portion with I-beams at its sides, end sections telescopically engaged in said beams and a series of springs behind each of said sections and slidably supported in the sides of said beams, substantially as described. 55 60
3. A telescoping car having a central frame with I-beams along its sides, end sections telescopically engaged in said beams on both sides thereof, cross-pieces and springs thereon behind said end sections in said beams, and means to lock said end sections in extended position, substantially as described. 65
4. The main central frame in the platform of the car, end sections telescopically supported on said frame and springs behind each section to take up the shock of collision, and a lock for each section to keep it in extended position, substantially as described. 70
5. The car constructed to telescope and provided with sliding end sections, springs behind each section to absorb a shock, and braces to keep said end sections extended pivoted at one end and provided with engaging shoulders at the other end, substantially as described. 75 80

In testimony whereof I sign this specification in the presence of two witnesses.

JOHN D. BARBER.

Witnesses:

R. B. MOSER,
C. A. SELL.