

(No Model.)

G. H. ZANE.
CAR FENDER.

No. 551,521.

Patented Dec. 17, 1895.

Fig. 1.

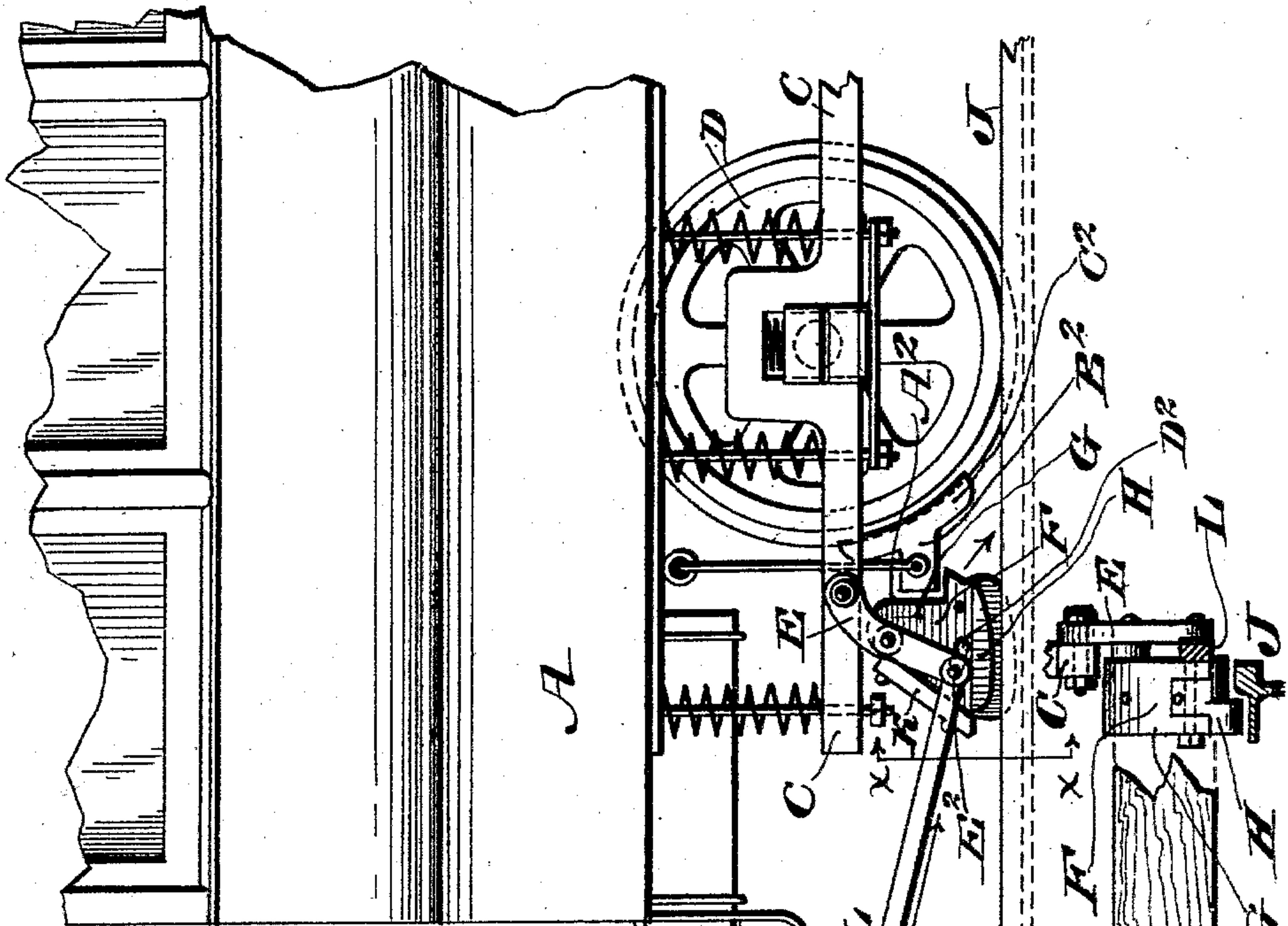


Fig. 2.

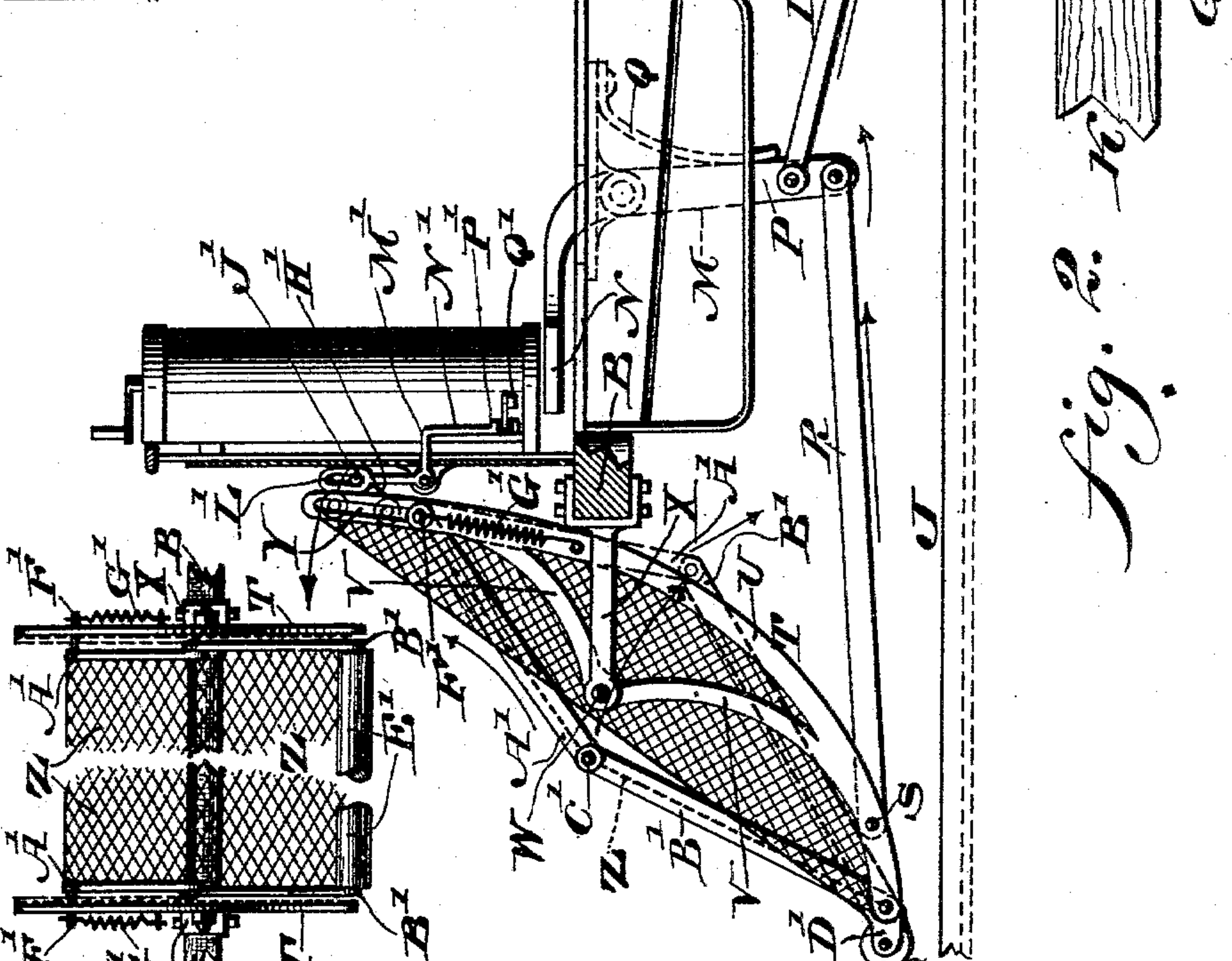
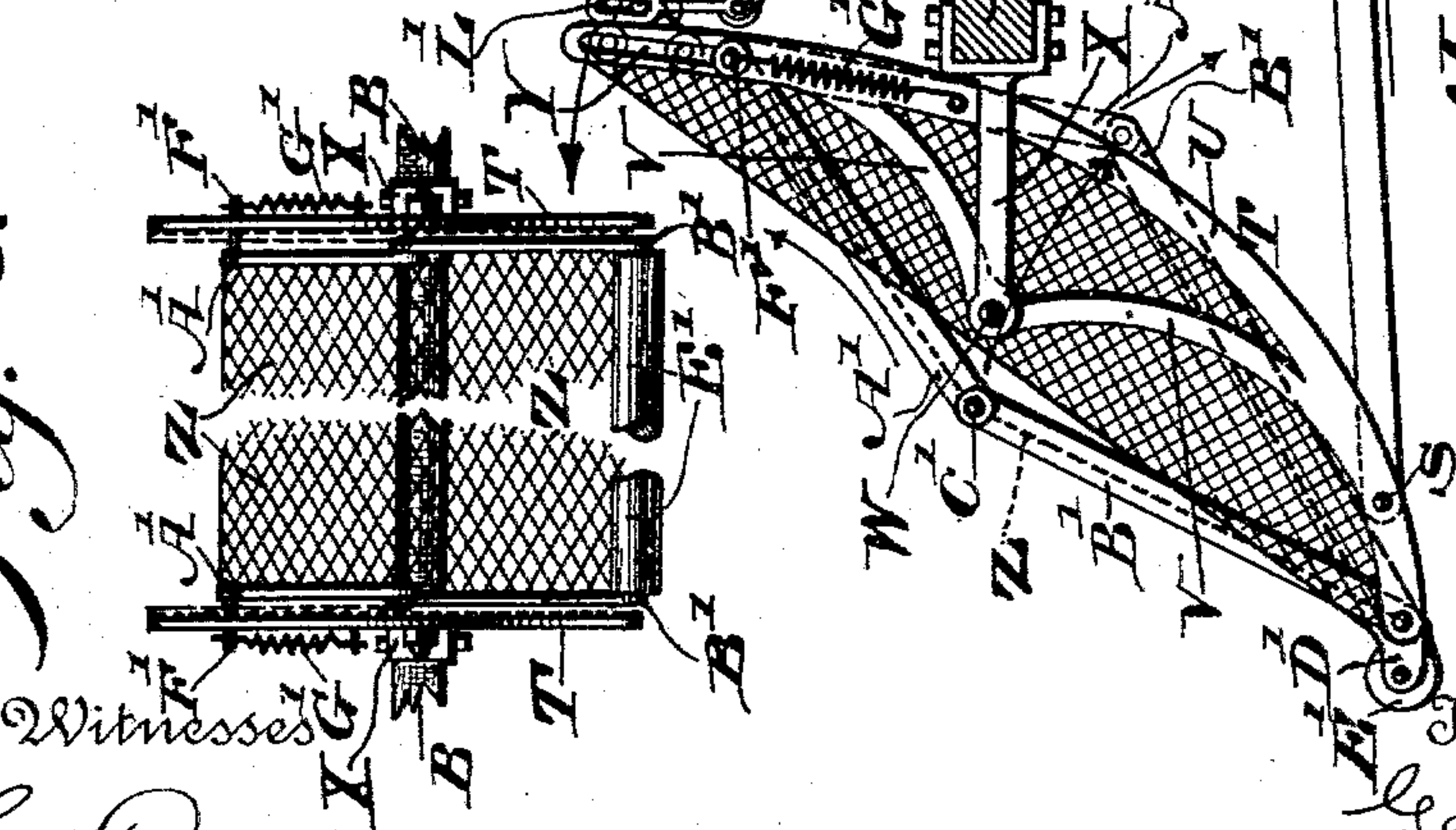


Fig. 3.



Witnesses

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CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 551,521, dated December 17, 1895.

Application filed May 31, 1895. Serial No. 551,261. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. ZANE, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Car-Fenders, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a novel construction of car-fender, in which provision is made, in case an object is struck, for catching the same, and thus preventing it from serious injury, means being also provided for interposing additional or auxiliary brake appliances upon the track, thereby assisting to stop the motion of the car, the contact of the fender with the object struck also serving to break the electric circuit, and thus cut off the supply of electricity to the motor.

It further consists of novel details of construction, all as will be hereinafter set forth.

Figure 1 represents a side elevation of a car-fender embodying my invention and a portion of a car to which the same is applicable. Fig. 2 represents a section on line xx , Fig. 1, showing especially the construction and application of the auxiliary braking device. Fig. 3 represents a front view of Fig. 1, partly broken away, showing the various parts in relative position to each other.

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

Referring to the drawings, A designates the body of the car, the same having a projecting portion B, and the wheels D, which are suitably mounted on the trucks C, the above parts being of the usual construction, and therefore requiring no further description.

E designates levers which are pivoted to each side of said trucks, and have at a point midway of their length brake-shoes F attached thereto, each of the same consisting of the upper portion G and the lower portion H, which latter portion is adapted to conform to the shape of the rail J, and to contact therewith, as will be understood from Fig. 2.

K designates a bar or board which extends transversely to the length of the car, and is adapted to be attached to said brake-shoes, as will be understood from Fig. 2.

L designates links which are pivotally connected to said levers E, and also attached to

the angular lever M, which is pivoted near its central portion to the body of the car, and has the upper portion N, which is adapted to be depressed by the foot of the motorman, while its lower end P is in connection with the said link L, as stated, said lever M being kept in its normal position by means of the spring Q or its equivalents.

R designates links which are pivoted to the lower end P of the lever M, and also pivotally attached at S to the frames T, the same being curved, as will be understood from Fig. 1, and having the body portions U, which are provided with the portions V, the same curving or projecting forwardly and meeting at the points W, at which they are pivotally connected to the brackets or arms X, which may be secured to the front portion B of the car. Each of the upper portions of said frames T is provided with a slot Y, in which work the pins F', which are attached to the upper ends respectively of the levers A', the lower ends of said levers being pivoted at C' to the levers B', the lower ends of which latter project upwardly, as at D', and have journaled therein a suitable roller or buffer E', it being understood that there are two sets of said levers A' and B', as will be seen in Fig. 3, the said pins F' having connected thereto the springs G', the latter being also connected with a suitable fixed point on the frames T, as seen in Figs. 1 and 3.

H' designates an ear which projects from a suitable portion of one of said frames T and has a pin J' attached thereto which projects into the slot L', the same being in the upper portion of the bell-crank levers M', the lower member N' of said lever having a foot P', which is adapted when in normal position to connect contact parts of an electric circuit designed for actuating a motor on the car.

The operation is as follows: When an object is struck, the rod C' which connects the pivotal point of the levers A' and B' will move to the rear in the direction indicated by the arrow, and the levers A' B' will assume the position shown in dotted lines, and the netting Z, which is carried by the said levers and rod C', will move therewith and form a cradle, the springs G' allowing said levers to straighten out, and then afterward drawing them into the positions seen dotted. The

weight of the object struck falling into the cradle formed of the netting Z will cause the lower end of the frames T to be depressed, thus moving the upper end of the said frames T away from the car, as shown by the arrows, and this movement will actuate the lever M in such a way as to break the contact, and thus shut off the flow of electricity to the motor simultaneously, the depression of the lower portion of the frames T causing the links R and L of the lever M to move rearwardly in the direction indicated, and will thereby cause the portion A² of the auxiliary brake-shoes F to contact with the projection B² of the brake-shoe C² of ordinary construction, and thereby force the same into contact with the wheels D, the two sets of brakes being thus applied when an object is struck, and the transversely-extending bar K preventing said object from getting under the wheels in any instance.

It will be seen that when an object is struck, a cradle is formed, which will receive the same, and the two sets of brake-shoes are applied, and at the same time the flow of electricity to the motor is cut off, it being further apparent that the device can be thrown into operation by the motorman pressing the treadle N, if he so desires.

In the preferred form of my shoes I have a slot D² therein, in which the pin E² rocks, which pivots the levers E and L to each other.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a car fender, swinging brake shoes adapted to contact with the wheels of a car, auxiliary brake shoes pivotally connected by levers with a truck of the car, and adapted to contact with the rails and said first mentioned brake shoe, levers pivoted to the body of said car, links connecting said auxiliary brake levers and the last mentioned levers, and a cross bar in front of and connecting said auxiliary brakes, said cross bar serving as a fender and thereby preventing any object from getting under the wheels, said parts being combined substantially as described.

2. In a car fender, frames suitably supported, levers connected with said frames and carrying a netting, means on said frames for controlling the flow of the electricity, and an auxiliary brake shoe suitably connected with said frames, and adapted to contact with the

rail and the ordinary brake shoe, substantially as described.

3. A car fender consisting of the frames T, suitably supported, slots in the upper portion of said frames T, the levers A', B', the former having pins passing through said slots, and the springs G' for throwing the device into operation, in combination with a suitable netting Z, substantially as described.

4. A car fender consisting of the frames T, having the forwardly projecting portions V, the sets of levers A' and B', the lower end of the latter projecting forwardly and having a suitable buffer E' common thereto, the pins F projecting therefrom, slots in said frames, the springs G', means for cutting off the flow of electricity when the fender is operated, the link R pivotally connected with a frame and connections therefrom to shoes attached to the car truck, and means for actuating said devices by the motorman, substantially as described.

5. In a device of the character described, the brake shoes composed of the parts G and H, the lever E, to which said brake shoes are attached, the bar K common to said brake shoes, the link L, the lever M to which said link is pivotally attached, in combination with a spring Q, one portion of said lever being adapted to act as a treadle for the motorman, substantially as described.

6. In a car fender, a swinging fender secured to a car, and a brake shoe connected by levers with said fender, so as to be operated by the movement of the same, and suitably supported from said car, said shoe having a slot in which is rocked a pin, which forms a connection of the support of said shoe, and one of the lever connections with said fender, said parts being combined substantially as described.

7. The lever E pivotally supported at its upper end, the brake shoe F having a brake shoe therein, a fender, the lever M connected by the link R with said fender, and the link L connecting said levers M and E, the pivotally connecting pin E² of said lever E and link L being in the slot of said shoe, said parts being combined substantially as described.

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Witnesses:

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