

No. 734,181.

PATENTED JULY 21, 1903.

F. R. KEITH.
CAR FENDER.

APPLICATION FILED MAR. 25, 1903.

NO MODEL.

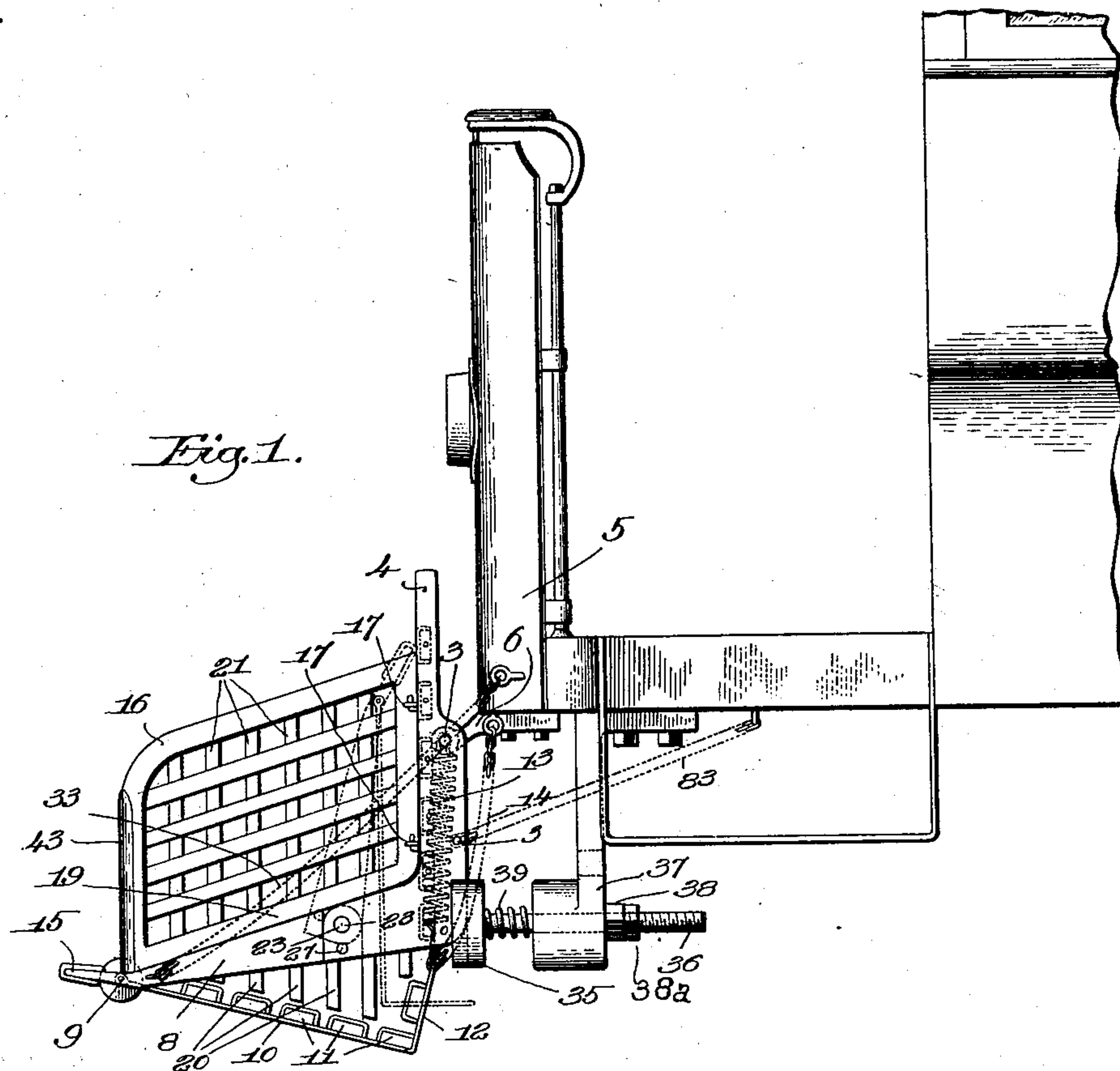


Fig. 2.

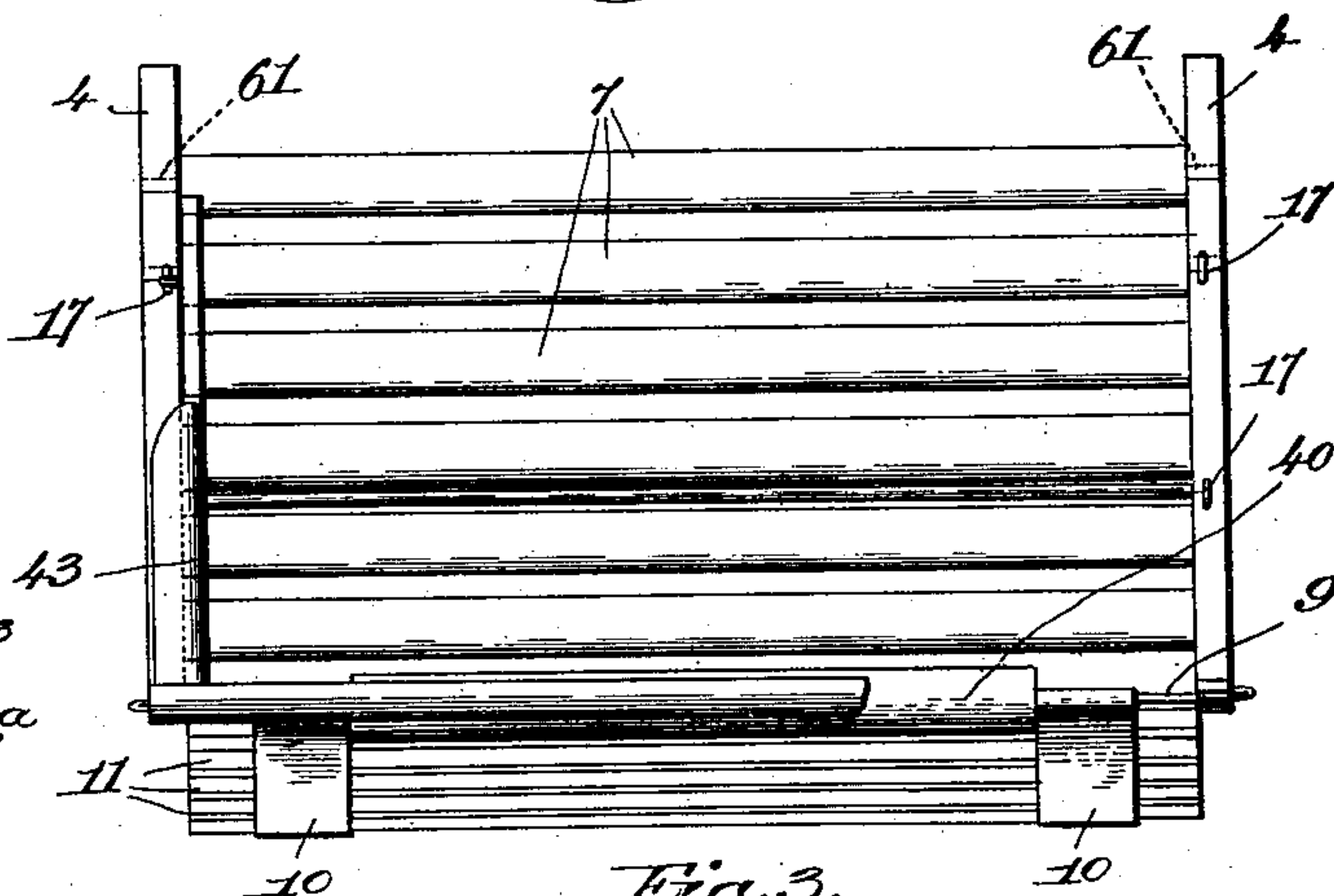


Fig. 4.

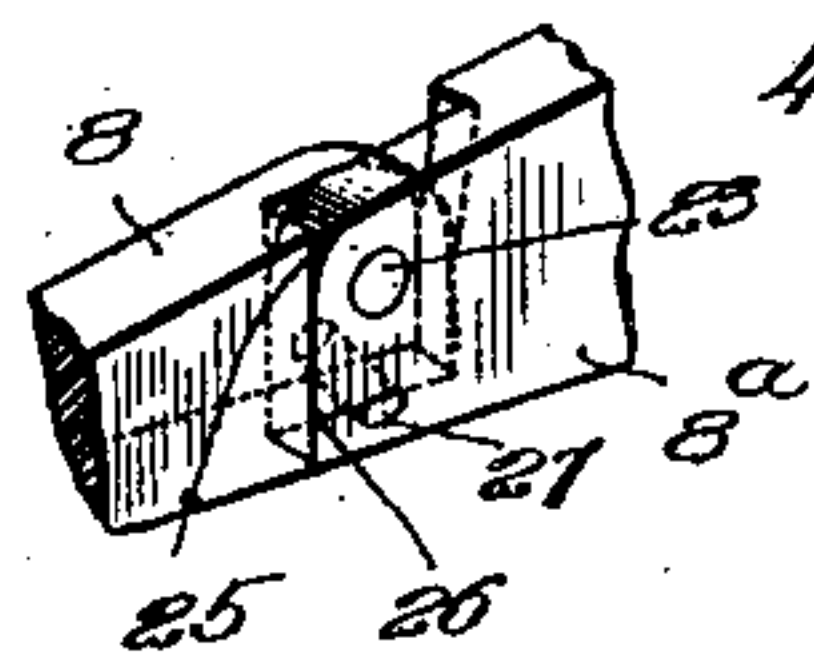
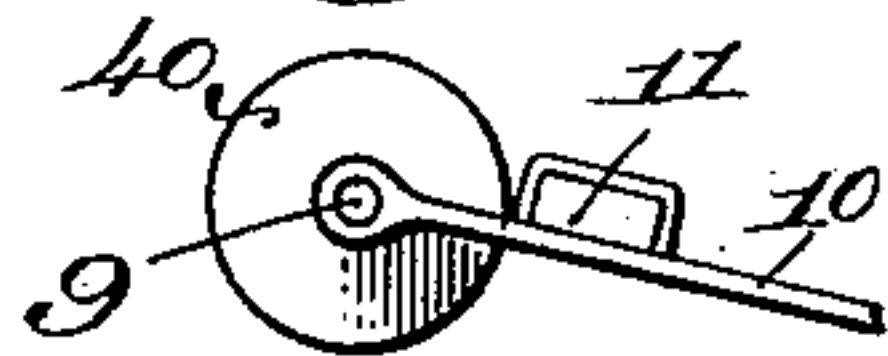


Fig. 3.



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UNITED STATES PATENT OFFICE.

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CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 734,181, dated July 21, 1903.

Application filed March 25, 1903. Serial No. 149,478. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK R. KEITH, a citizen of the United States, residing at Randolph, in the county of Norfolk and State of Massachusetts, have invented an Improvement in Car-Fenders, of which the following description, in connection with the accompanying drawings, is a specification, like numerals on the drawings representing like parts.

This invention relates to car-fenders, and has for its object to provide a novel construction of fender which is simple and inexpensive to manufacture and which is effective in operation.

The particular features wherein the novelty of my invention resides will be more particularly defined hereinafter and pointed out in the claims.

Figure 1 is a side view of the front portion of a car, showing my improved fender applied thereto. Fig. 2 is a front view of the fender. Figs. 3 and 4 are details.

The frame of the fender comprises the two substantially L-shaped side pieces 4, which support the back, sides, and bottom of the fender. The back of the fender is shown as being composed of slats or bars 7, extending from the vertical portion of one side piece to that of the other, and the slats are shown as each having at its ends the tenons 61, which are received by apertures in the side pieces. Suitable tie-rods 3 serve to tie the vertical portions of the side pieces together, and thus hold the slats in place. The slats thus act as struts and with the tie-rods go to make up a very rigid structure. One of the tie-rods 3 passes through eyes in the ends of arms 6, projecting from the car-body 5, thus pivotally connecting the fender to the car-body. Any other suitable way of pivotally mounting the fender may be employed, however, without departing from my invention. The nose or front portion 8 of the side pieces are connected together by a cross-bar 15 at the front or nose of the fender.

The fender-bottom is formed by slats 11, which are secured to longitudinally-extending supports or pieces 10, the latter being pivoted at their front ends on the rod 9, which extends across the fender at the nose ends of the side pieces. The rear portions 12 of the

members 10 are bent upwardly, as best seen in Fig. 1, to form a portion of the back of the fender. The back end of the bottom is yieldingly sustained by means of suitable springs 13, which are connected at their upper ends to some suitable fixed points—as, for instance, the arms 6—and at the lower ends to the upturned ends 12 of the members 10.

I prefer to provide some suitable means for limiting the downward movement of the back end of the fender, such means being herein shown as chains or cords 14, fast at their upper ends to some suitable fixed support and at the lower ends to the members 10.

The sides of the fenders are designated by 16 and may be made in any suitable way. I prefer, however, to make them detachable for a purpose hereinafter described, and accordingly I have illustrated each of them as having the eyes 17, which set over supporting-pins 18 on the corresponding side piece 4.

When in position, the lower portion or rail 19 of each fender side rests upon the nose-piece 8 of the corresponding side piece of the fender, and said fender sides are held against lateral displacement outwardly by the engagement of the projecting portions 20 of the vertical slats 21 with the inner side of the nose-pieces 8 of the correspondingside pieces. Any suitable device may be employed to hold the fender sides against inward lateral movement.

The side pieces 4 are each jointed, as at 23, so that the nose portions 8 can be swung upward into dotted-line position, Fig. 1, when it is desired to fold up the fender. The joint that I preferably use is a knuckle-joint—that is, the nose portion 8 has the shoulder 25, which engages a shoulder 26 on the fixed portion of the side piece 4 when the parts are in their operative position, as best seen in Fig. 4, the engagement of the shoulders limiting the downward swinging movement of the nose-piece.

To lock each nose-piece 8 in its horizontal position, I have illustrated a locking-pin 27, which is adapted to extend through aligned apertures in the overlapping portion of the nose-piece 8 and shank 8^a.

When it is desired to fold up the fender, the fender sides 16 are removed bodily and the pins 27 taken out, when the nose-pieces

may be swung into the dotted-line position, Fig. 1. After the fender is folded the sides 16 may be carried between the fender-back and the folded-up bottom, and the latter may be held in its folded position by any suitable means.

The nose of the fender is normally held the proper distance above the tracks by means of yielding supports which engage the lower end of each side piece 4. As herein shown, each support comprises a head 35, of suitable yielding material, carried by a rod 36, slidably mounted in a suitable bumper 37, depending from the car-body. A spring 39, surrounding each rod, tends normally to hold the head in its forward position, and an adjusting-nut 38 on each rod 36 limits its forward movement. By changing the position of the adjusting-nuts 38 on the rods 36 the nose-bar 15 of the fender may be elevated or depressed, so as to bring it to the proper elevation for most efficient action. I prefer to employ a check-nut 38^a to lock the adjusting-nut 38 in place. Whenever the fender strikes an obstruction on the track, the springs 39 yield and permit the fender to swing about the pivot 3, to thus carry its nose downward toward the track and in position to scoop up the obstacle. I have shown each of the heads 35 as being recessed to receive the corresponding side bar 4.

40 designates a suitable roll mounted on the tie-rod 9 and which has for its object to assist in carrying the person or obstacle struck by the fender to the rear portion thereof.

The front portions of the fender sides will preferably be provided with a yielding surface—such as rubber, felt, or other similar material—as shown at 43, and each of the slats forming the structure will also be padded with rubber or some other yielding material.

The construction of the fender is such and it is so mounted and supported that whenever an obstruction is encountered the fender is swung about the pivot 3 against the yielding supports, and in doing so the nose or front rail 15 is brought close to the ground. This operation is highly important, since it insures that the fender will be carried immediately into position to scoop up or pass under the obstacle instead of being lifted by the obstacle and tending to crowd the latter against the track, as so many fenders do. The roll 40 assists the person or other obstacle struck by the fender to roll to the back side of the fender. By yieldingly supporting the bottom of the fender upon the springs 13 the jar or shock with which a person who happens to be caught by the fender is received is greatly reduced.

83 designates a chain or other flexible connection, which is attached at one end to one of the tie-rods 3 and at the other end to the car-body. The purpose of this chain is to prevent the car-fender from swinging so far

forward as to become disengaged from the heads 35.

While I have herein described one structure in which my invention may be embodied, I do not wish to be limited to the exact construction shown, as the latter may be varied in many ways without departing from my invention as expressed in the appended claims.

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

1. In a car-fender, two connected side pieces pivoted near their upper ends to the car-body, yielding means engaging the lower ends of the side pieces and normally holding the nose of the fender slightly elevated, a fender-bottom pivoted at its front edge to the nose portion of the side pieces, and yielding means to sustain the rear portion of said bottom.

2. A car-fender having a back, sides and a bottom, said bottom being pivoted at its front edge, means to yieldingly sustain its rear edge, means to pivotally connect the upper portion of the fender to the car-body, and a yielding support to engage the fender-back at its lower portion.

3. In a car-fender, two substantially L-shaped side pieces, slats connecting the vertical portions of said side pieces and forming the back of the fender, a fender-bottom pivoted to the nose of the side pieces, and springs to sustain the rear portion of said bottom.

4. In a car-fender, a frame comprising two substantially L-shaped side pieces, slats interposed between the vertical portions of said side pieces and forming the back of the fender, tie members connecting said side pieces, a fender-bottom pivoted to the front of the side pieces, springs to sustain the rear side of the bottom, and removable fender sides.

5. In a car-fender, two side pieces each having a vertical portion and a nose portion pivoted thereto, a fender-back carried by the vertical portions, a fender-bottom pivoted to the ends of the nose portions, and springs to sustain the rear portion of the said bottom.

6. In a car-fender, two side pieces each having a vertical portion and a nose portion pivoted thereto, a fender-back carried by the vertical portions, a fender-bottom pivoted to the ends of the nose portions, and springs to sustain the rear portion of the said bottom, means to pivot the fender at its upper portion to a car-body, and yielding means to engage the lower part of each side piece.

7. In a car-fender, two side pieces each having a vertical portion and a nose portion pivoted thereto, a fender-back carried by the vertical portions, a fender-bottom pivoted to the ends of the nose portions, springs to sustain the rear portion of the said bottom, and stops to limit the swinging movement of the nose portions.

8. A car-fender pivoted at its upper end to

the car-body, a bumper depending from the car-body, rods slidably mounted in said bumper and engaging the lower portion of the fender, and springs surrounding the rods and tending normally to hold the nose of the fender raised above the track.

9. A car-fender pivoted at its upper end to the car-body, a bumper depending from the car-body, rods slidably mounted in said bumper and engaging the lower portion of the fender, springs surrounding the rods and tending normally to hold the nose of the fen-

der raised above the track, and means to adjust said rods in said bumpers whereby the normal distance of the nose of the fender above the track may be regulated.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FREDERICK R. KEITH.

Witnesses:

EDWARD J. DOHERTY,
EDWARD J. MEIGHAN.