

No. 688,962.

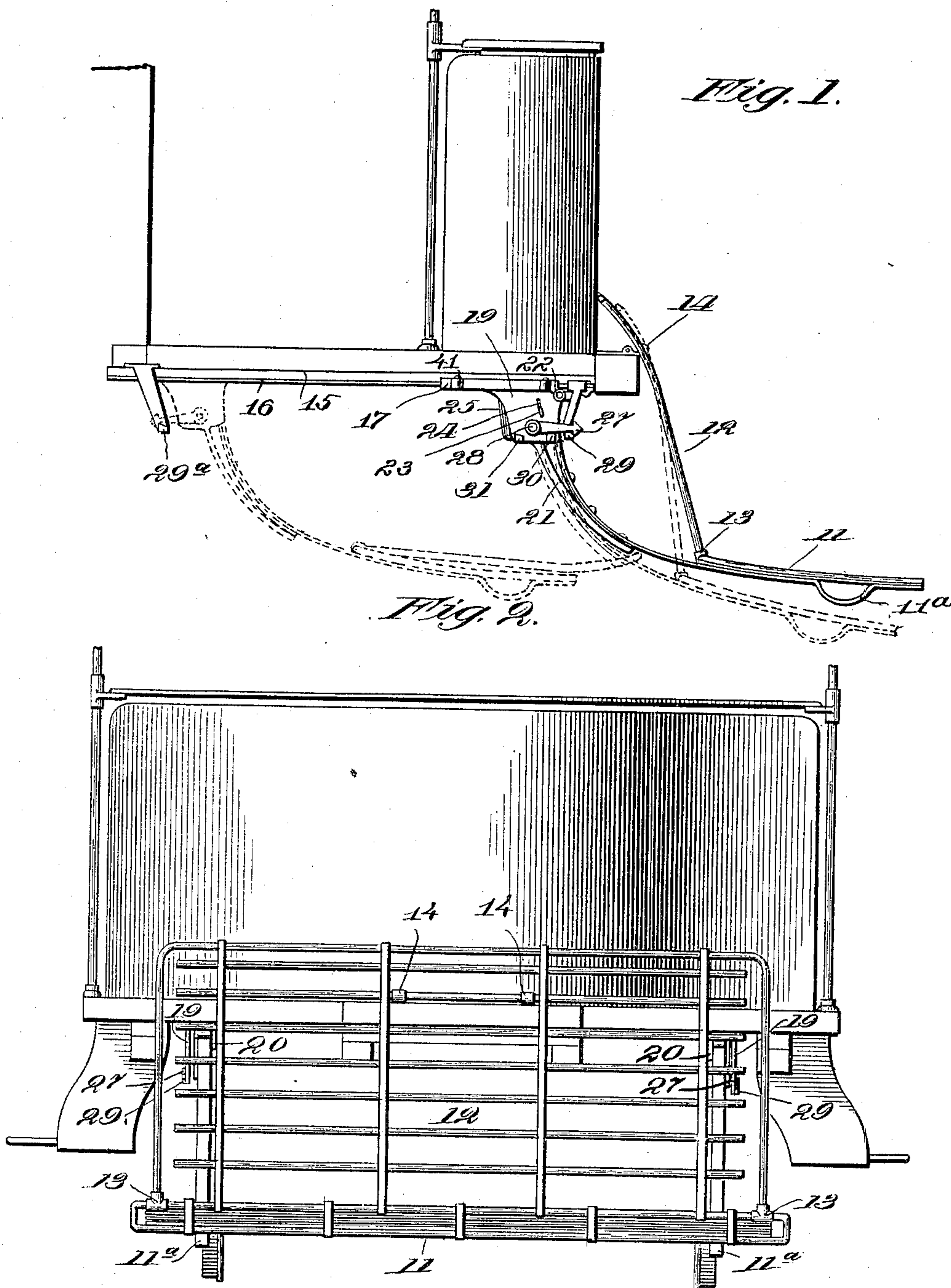
Patented Dec. 17, 1901.

W. A. MCGUIRE.
FENDER FOR VEHICLES.

(Application filed Feb. 1, 1901.)

(No Model.)

3 Sheets—Sheet 1.



Witnesses:

G. A. Pauberschnitt.

H. S. Gaither.

Inventor:

William A. McGuire
By Bond, Tammes, Perkins & Jackson
His Attys.

No. 688,962.

Patented Dec. 17, 1901.

W. A. McGUIRE.
FENDER FOR VEHICLES.

(Application filed Feb. 1, 1901.)

(No Model.)

3-Sheets—Sheet 2.

Fig. 3.

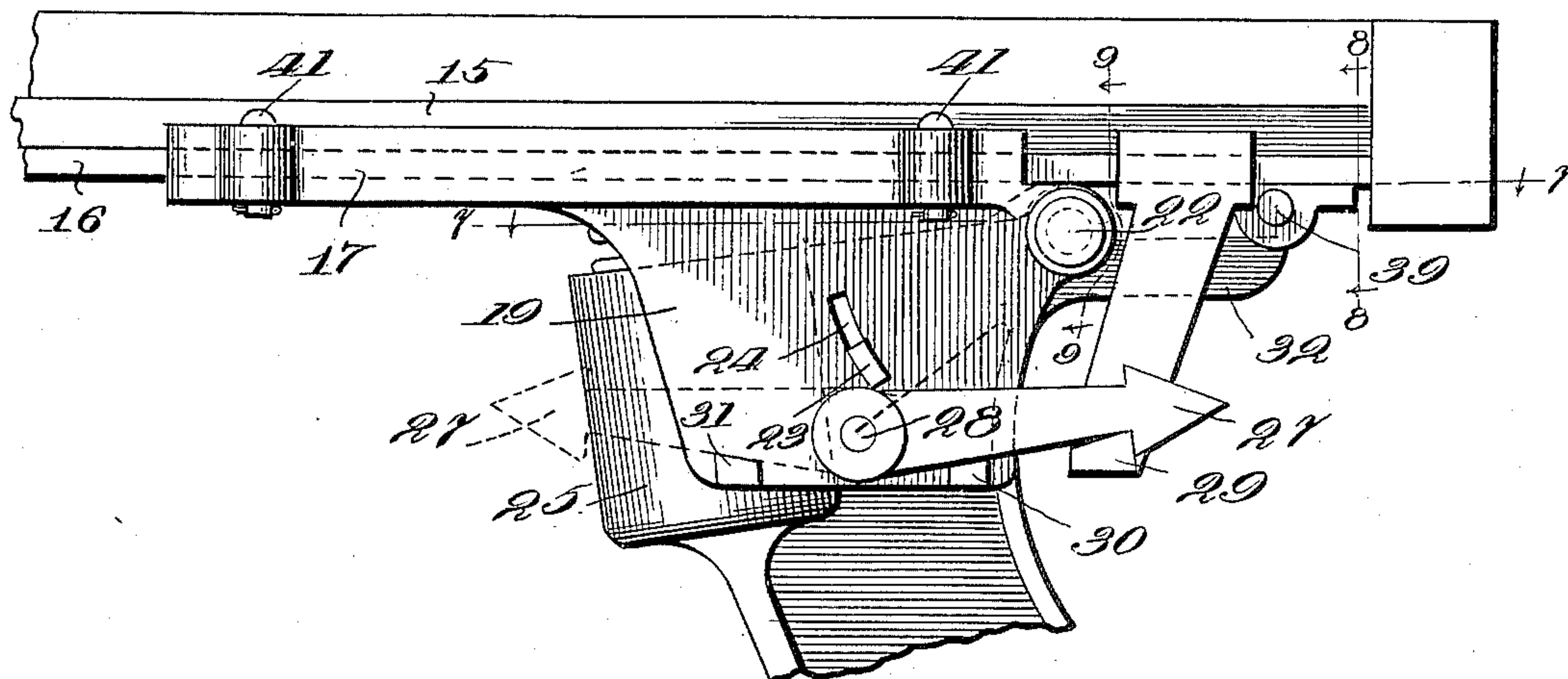
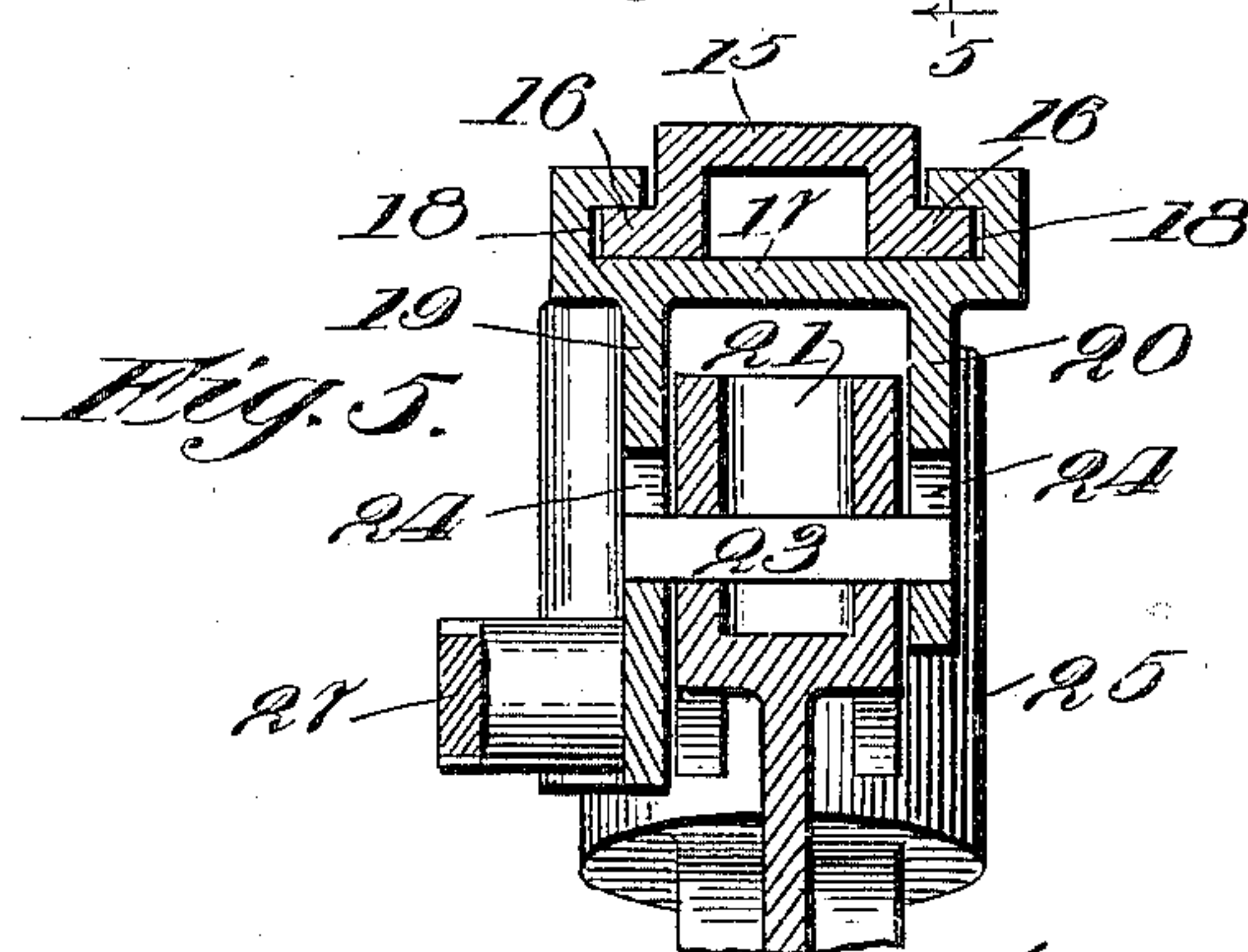
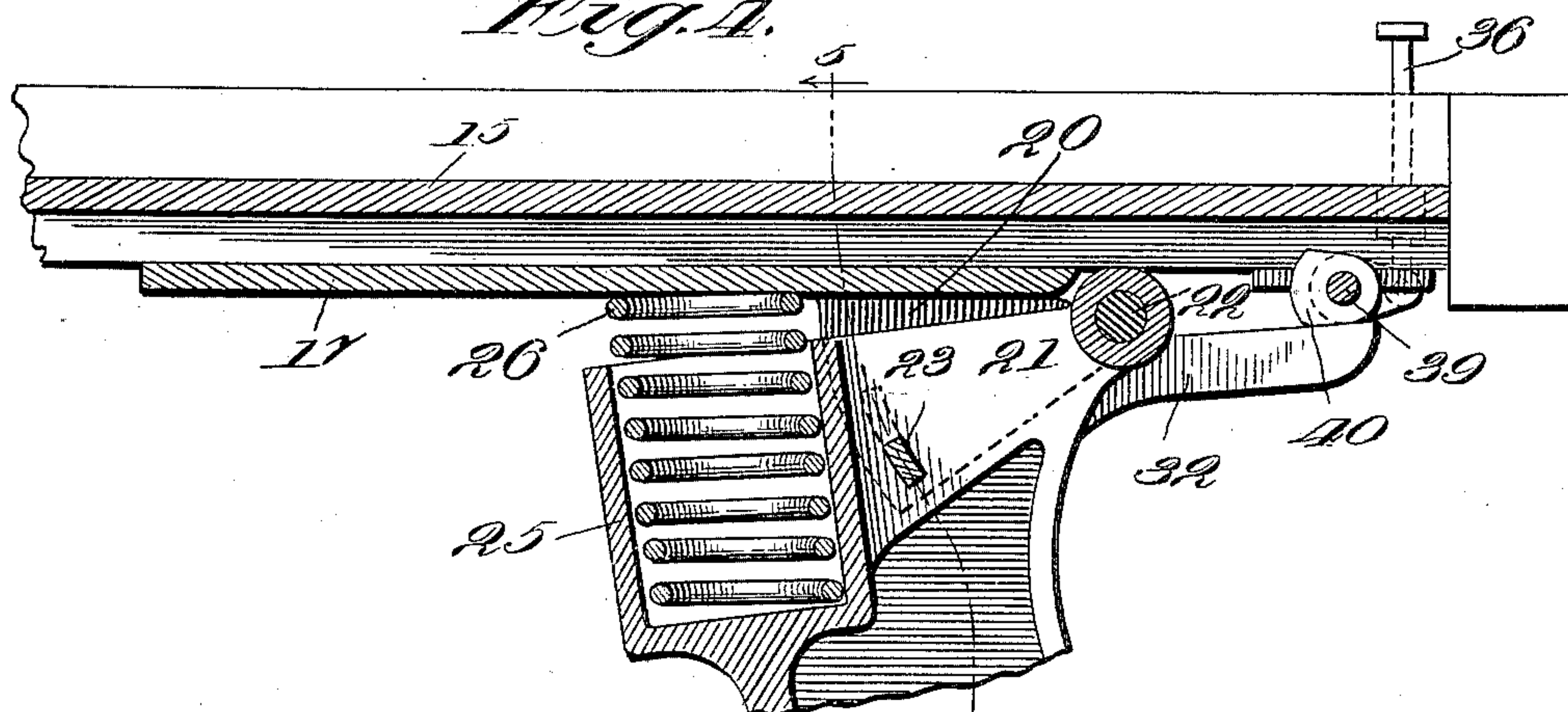



Fig. 4.



Witnesses:

G. A. Paulschmitt
H. S. Gaither.

Inventor:

 Invention of
William A. M. Guise
by Bour, Stevens, Pickard & Jackson
his Attys.

No. 688,962.

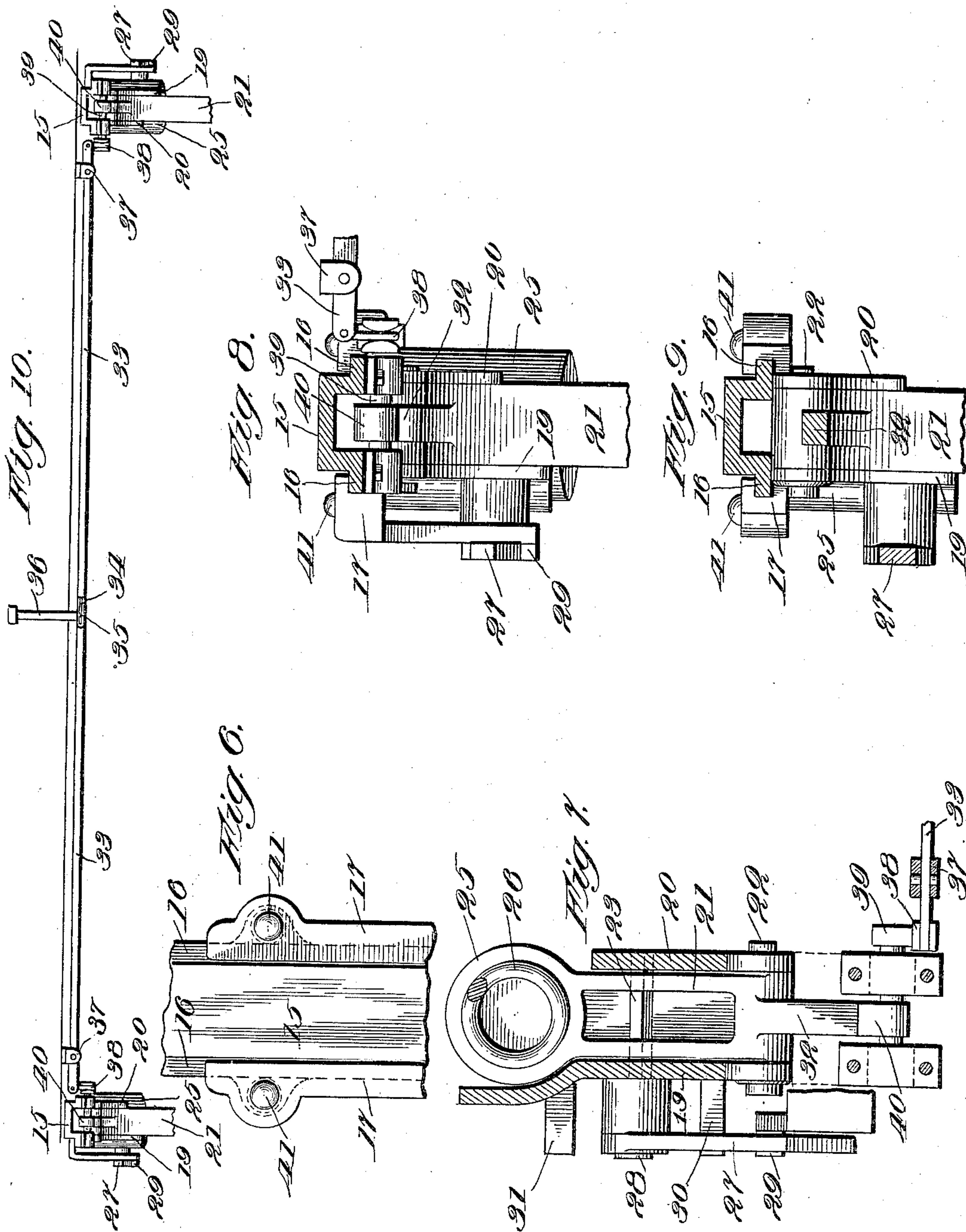
Patented Dec. 17, 1901.

W. A. McGUIRE.
FENDER FOR VEHICLES.

(Application filed Feb. 1, 1901.)

(No Model.)

3 Sheets—Sheet 3.



Witnesses:
J. A. Pauberschmidt,
H. S. Gaither.

Inventor:
William A. McGuire
By Bond Adams, Richard Jackson
his attys.

UNITED STATES PATENT OFFICE.

WILLIAM A. MCGUIRE, OF CHICAGO, ILLINOIS.

FENDER FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 688,962, dated December 17, 1901.

Application filed February 1, 1901. Serial No. 45,589. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. MCGUIRE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Fenders for Vehicles, of which the following is a specification, reference being had to the accompanying drawings.

10 My invention relates to improvements in fenders to be attached to vehicles, and is designed more particularly for use in connection with street-cars.

15 It has for its objects to provide a construction that will permit the fender to give or yield backward to some extent when it is driven against a person or other object, and thereby lessen the shock and also lessen the liability of damage to the object struck, as well as to the fender itself, to provide improved means for permitting the fender to be readily and quickly forced down from its normal position to its lowermost position, so as to more effectively and certainly pick up 25 a person or other object in the way of the car, to provide means for supporting the fender beneath the floor of the vehicle when it is not desired to use the same, to provide simple and effective locking means for holding the fender securely in place in both its operative position in front of the vehicle and its inoperative position beneath the floor, and to improve generally the construction and operation of devices of this character, 35 all of which objects I accomplish, as illustrated in the accompanying drawings and hereinafter described.

40 In the drawings, Figure 1 is a side elevation showing the fender attached to one end of a car. Fig. 2 is a front elevation. Fig. 3 is a detail, being a side elevation of the means employed for attaching the fender as a whole to the car-body. Fig. 4 is a longitudinal section taken through the parts 45 shown in Fig. 3. Fig. 5 is a cross-section taken at line 5 5 of Fig. 4. Fig. 6 is a detail, being a top view of a portion of one of the rails and the slide that is supported thereby and moves thereon. Fig. 7 is a horizontal 50 section at line 7 7 of Fig. 3. Fig. 8 is a vertical section at line 8 8 of Fig. 3. Fig. 9 is a vertical section at line 9 9 of Fig. 3, and Fig.

10 is a front elevation of the fender-operating devices.

Referring to the drawings, 11 12 indicate a fender, the two parts being suitably hinged together, so that the part 12 may be folded over onto the part 11, in order that the fender as a whole may be moved beneath the car out of operative position, as hereinafter 60 described. Each part of the fender is preferably composed of rods or bars suitably curved and connected together, substantially as shown. The part 11 is the forwardly-projecting portion that is adapted to strike 65 against and receive upon it a person or other object that may be in the line of travel of the car. It is provided with shoes 11^a, that come in contact with the car-track or the roadway when the fender is forced into its lowest position. The part 12 is hinged to the part 11 at 13 and inclines backward against the front of the car, to which it is removably secured by a suitable catch or catches 14. 70

At the end of the car, at each side thereof, 75 there is secured to the underside a longitudinally-arranged track 15, upon which a suitable slide is adapted to be moved back and forth. In the form of construction shown the track referred to is formed with oppositely-projecting lateral flanges 16, and the slide 17, adapted for use with this form of track, extends across the under face of the track, and in its upwardly-extending side walls has formed grooves 18, into which project the 85 flanges 16 of the track 15. From the lower face of each slide 17 depends a bracket formed of two oppositely-located walls 19 and 20, between which is a head 21, to which the rear portion of the part 11 of the fender is rigidly 90 secured, this head, in effect, thus forming a portion of the fender. This head 21 is pivotally connected to the slide 17, near the forward end thereof, by a pin 22 and has a limited vertical play between the walls 19 and 95 20, the amount of such play being controlled by a cross-piece 23, secured in such head, with its ends projecting into curved slots 24 in the walls 19 and 20. 25 indicates a socket formed at the rear of the head, in which socket is a 100 coiled spring 26, that bears against the slide 17, the effect being to hold the part 11 of the fender raised properly above the surface of the ground.

27 indicates a latch pivoted at 28 on the outer face of the wall 19. The acting faces of the latch at its end are inclined, as shown, to adapt it to automatically engage a catch 5 having also an inclined face whenever the slide is moved to the limit of its travel in either direction. Two of such catches are to be provided, one to hold the slide and its attached parts so as to present the fender in 10 an operative position and one to hold it beneath the car when the slide is pushed back. The forward catch is indicated by 29 and is the one for holding the parts so as to present the fender in operative position. It is fastened to the frame of the car and depends so 15 that as the slide is pushed forward the latch 27 will engage it, as will be readily understood. The latch is held in position for effecting such engagement by a stop 30. When 20 the slide is to be pushed back, so as to carry the fender beneath the car, the latch 27 is to be turned by hand on its pivot 28. It will when so turned strike against another and similar stop, (indicated by 31,) and, as indicated in dotted lines in Fig. 3, be there held 25 in position to engage another catch 29^a (see Fig. 1) when the slide has been pushed in to the limit of its rearward movement.

32 indicates an arm formed with or connected to the head 21 and extending forward therefrom, upon which arm pressure is to be applied, by the means about to be described, for overcoming the pressure of the spring 26 30 and lowering the forward end of the part 11 of the fender.

33 indicates a pair of rods extending across the end of the car and beneath the floor thereof. The inner ends of these rods 33 overlap (see Fig. 10) and are provided with slots, 40 through which a bolt 35 enters, to which is connected an upright footpiece 36. Each rod 33 near its outer end is pivoted to a depending ear 37 and has at its outer end a link 38, that is connected to a crank-shaft 39, which 45 is suitably journaled beneath the track 15. On this crank-shaft directly over the arm 32 is secured a cam 40.

To enable the slides to move with less friction, I provide rollers at suitable intervals, 50 adapted to bear against the sides of the flanges 16 of the track 15. Such rollers are journaled on vertical pins 41, the rollers themselves being indicated by dotted lines in Fig. 6.

In use the parts will be in the position shown 55 in Figs. 1 and 2, the forward part 11 of the fender being raised above the surface of the road a short distance, as usual, so as to insure it from striking against small objects or against the ground as the car sways in rapid 60 motion. It is effectually held in this its normal position by the action of the coiled spring 26. When, however, a person or other object is observed in a position liable to be struck by the car, the operator presses down upon 65 the footpiece 36 and through the action of the rods 33 and their attached links 38 and crank-shafts 39 forces the cams 40 against

their respective arms 32. This causes the heads 21 to turn on their pivots 22, compressing the coiled springs 26 and, as will be readily understood, forcing down the forward end 70 of the part 11 of the fender, so as to insure such part being close to the ground, and hence adapted to pick up with the least damage the person or object struck. The rear part 12 of 75 the fender acts to prevent the person or object struck from being injured by coming in contact with the car, and the effect of the coiled spring 26 is to greatly lessen the force of the shock when a person or other object is 80 struck and picked up by the fender, and thus decreasing the liability to injury to the person or other object struck, as well as to the fender itself.

When it is desired to remove the fender 85 from use, the part 12 is to be folded down upon the part 11 and the latch 27 turned on its pivot 28 until it contacts the stop 31. The fender as a whole is then pushed back beneath the car, the slides 17 moving on their 90 tracks 15. When the limit of backward movement is reached, the latch 27, which is held in proper position by its stop 31, will automatically engage the catch 29^a and firmly hold the device in place. Upon turning the 95 latch forward again the fender is again in condition to be pulled out in position for use, and when so pulled out it will be firmly held by the automatic engagement of the latch 100 with the forward catch 29.

By reference to Fig. 1 the position occupied by the fender when weighted down by a person or other object struck by the fender and deposited thereon is represented in dotted lines. From such dotted representation it 105 will be seen that the head 21 of the fender turns on its pivot 22 and that the rear part 12 of the fender turns at the same time slightly on its catch or catches 14, so that such part 12 approaches more nearly a vertical position 110 than assumed by it under normal conditions. This rear part 12 forms a support for the part 11, and a portion of the strain caused by a person or object falling onto the part 11 comes upon such rear part 12. The result of this construction is that the spring 26, carried by the 115 head 21, is compressed gradually by the backward and upward movement of the part 11 when a weighty object is deposited thereon, and in consequence less damage is liable to 120 be done both to the object deposited on the fender and to the fender itself and the parts connected therewith.

The position assumed by the fender when pushed back beneath the car is also represented in dotted lines in Fig. 1, and from such representation it will be observed that a considerable space is left between the under side 125 of the car and the fender, which is quite important, as it permits the attachment of the fender to a car without disturbing or contacting with any of the ordinary and usual 130 appliances that are necessarily connected to the under side of a car. This lowered posi-

tion of the fender when beneath the car is due to the fact that its part 11 is rigidly secured to the downwardly - extending and curved head portion 21, which has but a very limited movement on its pivot 22, and that movement is restrained by the spring 26, which acts to hold the fender in position as well when it is beneath the car as when it is extended in position for use.

10 That which I claim as my invention, and desire to secure by Letters Patent, is—

15 1. The combination with a vehicle, of a track attached thereto, a slide adapted to move on said track, a fender having a head portion pivotally attached to the slide, a socket in said head portion in rear of the said pivotal connection, and a coiled spring in said socket adapted to bear against the said slide, substantially as and for the purpose specified.

20 2. The combination with a vehicle, of a track attached thereto, a slide movable on said track, a fender having a head portion pivotally attached to the slide, a socket in said head portion, a coiled spring in said socket adapted to hold the forward end of the fender up from the ground, and a stop for limiting the movement of said head portion, substantially as and for the purpose specified.

25 3. The combination with a vehicle, of a track attached thereto, a slide movable on said track, a fender having a head portion pivotally attached to the slide, a spring located in rear of said pivotal connection and bearing against said head portion and said slide, and a stop for limiting the movement of said head portion, substantially as specified.

30 4. The combination with a vehicle, of a track attached thereto, a slide movable on said track, a bracket formed of two walls depending from said slide, a fender having a head portion located between said walls and pivotally connected with said slide, a spring carried by said head portion and adapted to turn said head portion on its pivot to cause the forward end

of said fender to be raised from the ground, and a stop formed in or carried by said bracket to limit the movement of said head portion, substantially as and for the purpose specified. 45

5. The combination with a vehicle, of a track attached thereto, a slide movable on said track and carrying a depending bracket, a fender having a pivotal connection with said slide, a locking-latch pivoted to the said bracket, and a fixed catch arranged to be engaged by the locking-latch, substantially as and for the purpose specified. 50 55

6. The combination with a vehicle of a track carried thereby, a slide movable on said track, a fender having a pivotal connection with said slide, a reversible pivoted locking-latch carried by said slide, and a fixed catch near each end of the track with which the locking-latch is adapted to engage, to hold the fender locked in either its operative or inoperative position, substantially as and for the purpose specified. 60 65

7. The combination with a vehicle, of a fender having a head portion, a pivotal connection between said fender and vehicle, a coiled spring carried by said head portion and adapted to bear against the under side of the vehicle, a forwardly-projecting arm on said head portion, and means adapted to be forced against said arm to turn said fender, substantially as and for the purpose specified. 70

8. The combination with a vehicle, of a fender having a head portion, a pivotal connection between said fender and vehicle, an arm on said head portion projecting forward of said pivotal connection, a crank-shaft arranged to bear upon said forwardly-projecting arm to depress the latter and throw the fender into its lowermost position, and means for turning said crank-shaft, substantially as described. 75 80

WILLIAM A. MCGUIRE.

Witnesses:

JULIA M. BRISTOL,
A. H. ADAMS.