

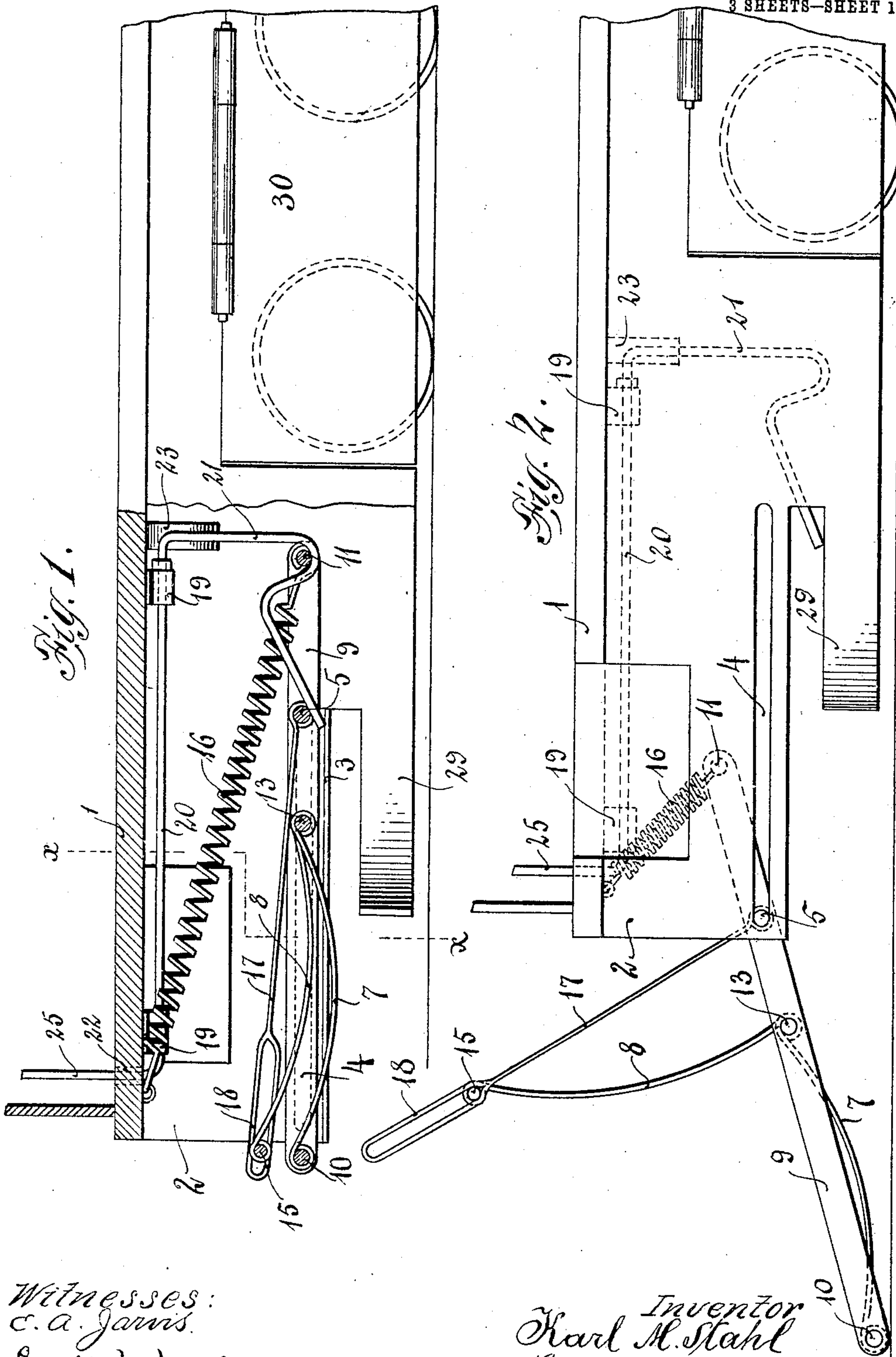
No. 835,571.

PATENTED NOV. 13, 1906.

K. M. STAHL.
CAR FENDER.

APPLICATION FILED DEC. 28, 1905.

3 SHEETS—SHEET 1.



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3 SHEETS—SHEET 2.

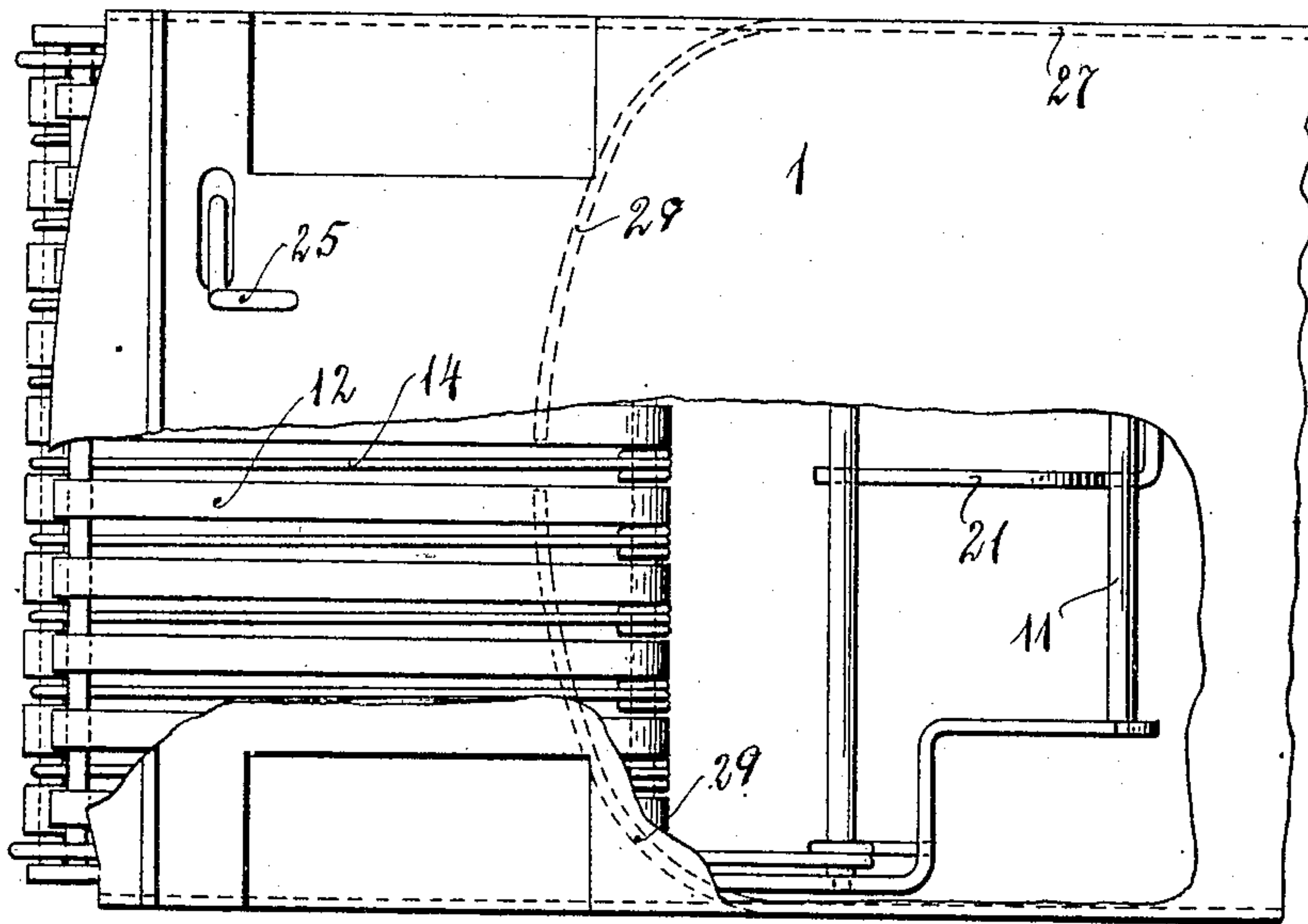
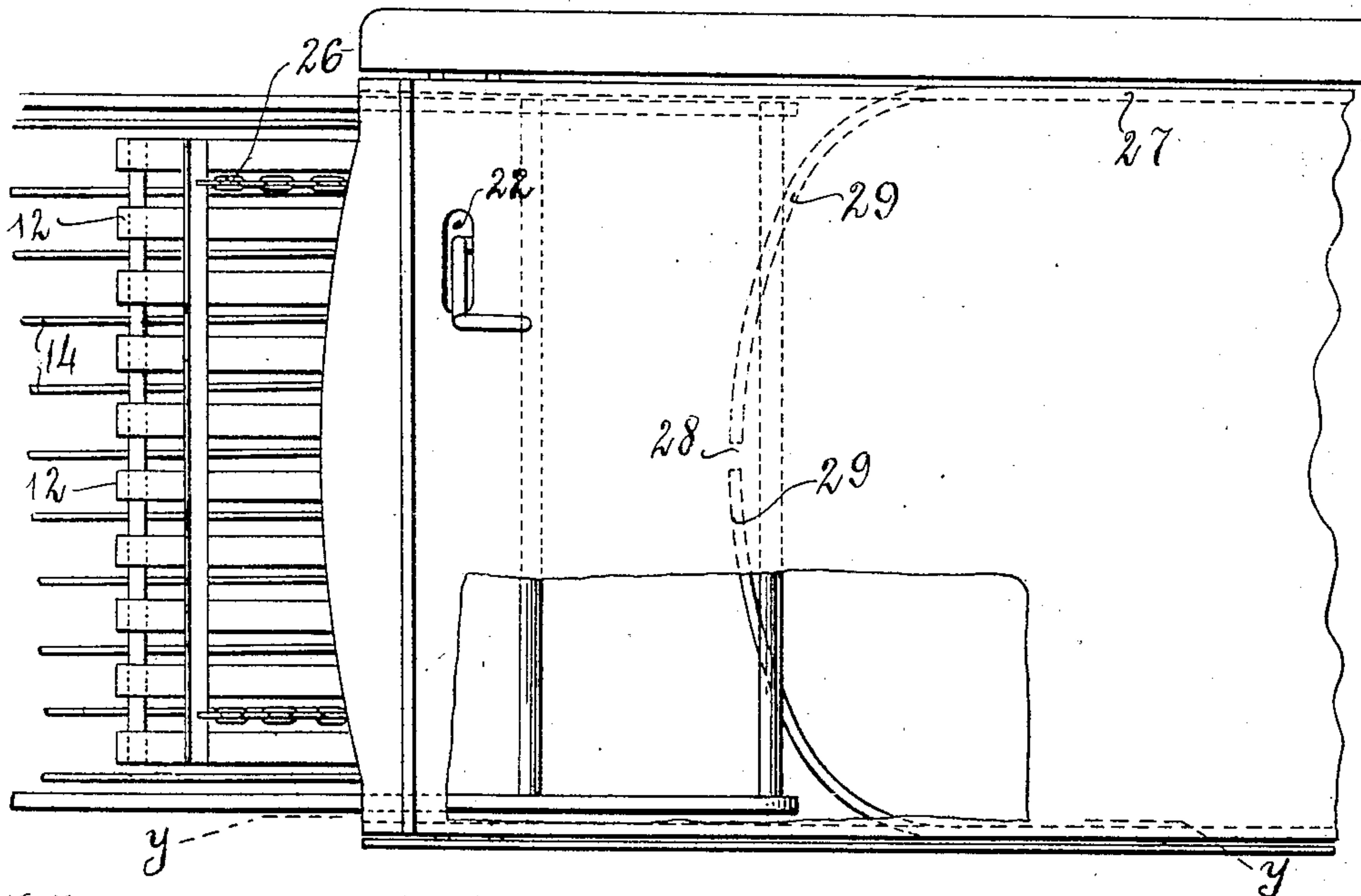


Fig. 4.



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3 SHEETS—SHEET 3.

Fig. 5.

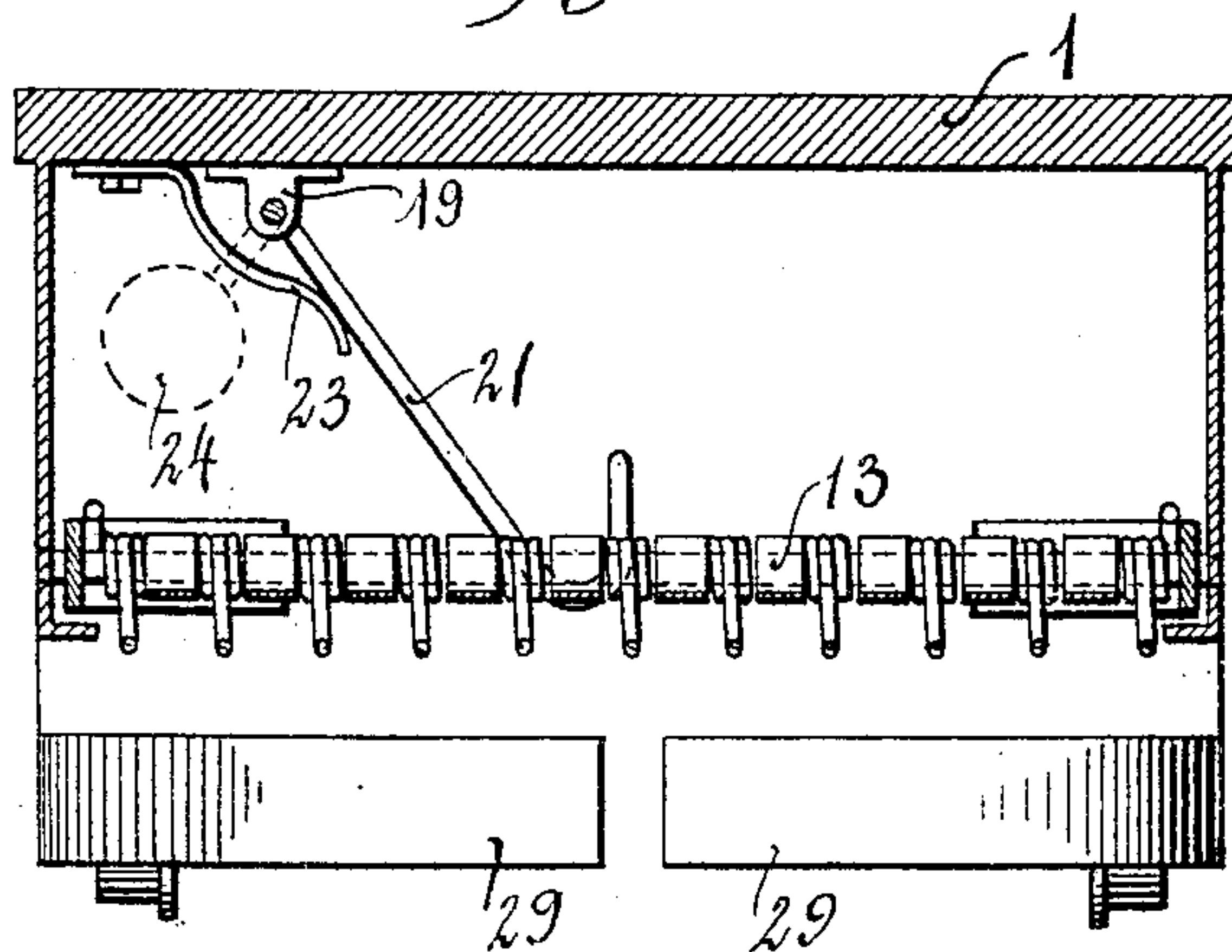
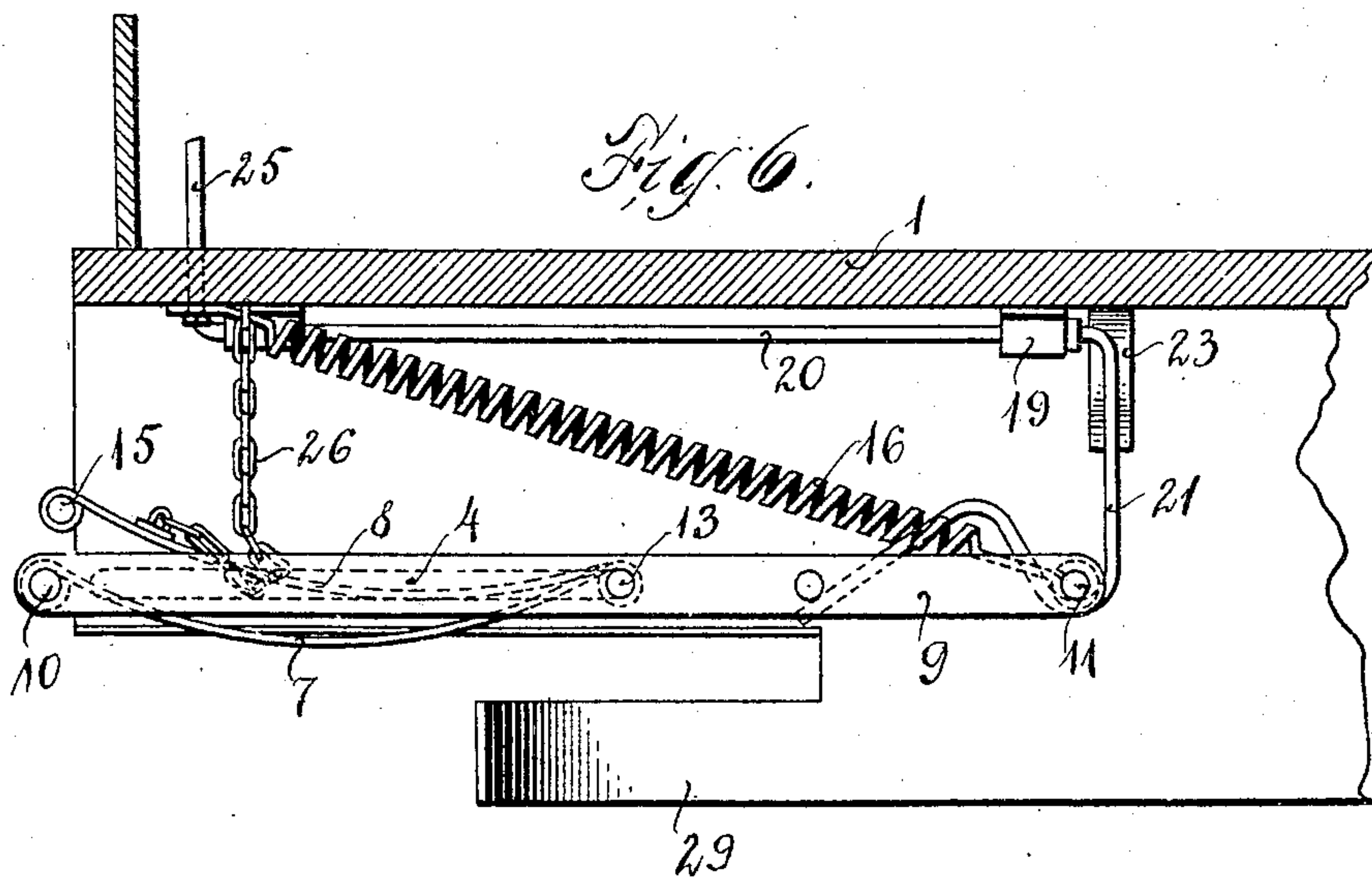


Fig. 6.



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UNITED STATES PATENT OFFICE.

KARL M. STAHL, OF NEW YORK, N. Y.

CAR-FENDER.

No. 835,571.

Specification of Letters Patent.

Patented Nov. 13, 1906.

Application filed December 28, 1905. Serial No. 293,550.

To all whom it may concern:

Be it known that I, KARL M. STAHL, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Car-Fenders, of which the following is a specification.

The present invention pertains to improvements in car-fenders, and particularly to that class thereof as described in my application Serial No. 120,788, filed August 23, 1902, and allowed February 2, 1903.

The object of this invention is to provide an effective device which will be normally supported and concealed below the car-platform to receive and support the body obstructing the track.

Another object of my invention is to arrange a guard-frame all around the bottom of the car, inclosing the wheels and other operative parts of the latter so as to prevent a body that lies on the track from coming underneath the wheels of the fender when by negligence of the driver or some other reason the fender has not been projected at the right moment to raise the body.

With these and other objects in view my invention consists in the arrangement, combination, and construction of parts, as illustrated in the accompanying drawings, in which similar reference-numerals denote corresponding parts and in which—

Figure 1 is a longitudinal section of the car and of the fender in inoperative position; Fig. 2, a side elevation of the same, showing the fender projected and in operation. Fig. 3 is a plan view of the platform of the car, a part thereof being broken out to show the location and arrangement of the fender in inoperative position. Fig. 4 is a similar plan view showing the fender projected. Fig. 5 is a cross-section on the broken line *xx* of Fig. 1, and Fig. 6 a longitudinal section on line *yy* of Fig. 4.

With reference to the drawings, 1 is the platform of a car. Projecting vertically downward from the bottom of the platform at each side thereof are brackets or guide-plates 2 2, the lower longitudinal edges 3 3 of which are bent inward at right angles. Parallel with said edges within the brackets are longitudinal slots or guideways 4 4, which extend nearly throughout the length of the brackets. In said slots the extremities 5 5 of the shaft 6 of the fender are loosely borne,

so as to be capable of sliding therein to and fro.

The fender proper is of ordinary shape and construction and comprises the main member 7 and the bumper-guard 8. The member 7 is adapted when in operative position to occupy a projected outwardly and downwardly inclined position with relation to the car, and the bumper-guard 8 is adapted when in operative position to occupy a projected outwardly and upwardly inclined position, as shown in Fig. 2.

The main frame 7 comprises parallel side bars 9 9, connected at their forward ends by a cross-bar 10 and at their rear ends by the shaft 5. The side bars 9 are rearwardly extended and connected at their inner extremities by an auxiliary cross-bar 11. The supporting-surface of the fender is formed in well-known manner by wires or rods 12, Figs. 3, 4, the forward ends of which are suitably attached to the front cross-bar 10 and the rearward ends of which are suitably attached to a cross-bar 13. The shaft 13 also serves as a support for the lower ends of the rods or wires 14 of which the bumper-guard or member 8 is constructed, said rods 14 being looped around the shaft 13, alternating with the rear ends of the rods or wires 12 of the main fender 7.

At their upper ends the parallel rods or wires 14 of the bumper-guard 8 are connected by a cross-bar 15.

16 is a coil-spring, of which two are employed, one at each side of the center of the fender. The front ends of these springs are secured to the under surface of the platform at the front end thereof, and the rear ends of said springs are attached to the cross-bar 11, connecting the side bars 9 of the main fender.

The outer cross-bar 15 of the bumper-guard 8 has a spring connection with the cross-bar 6 of the main frame, the spring connection being formed by wire-arms 17 17, which at their inner extremities are coiled around the cross bar or shaft 6 of the main fender and suitably secured thereto and at their upper extremities are formed to loops 18, engaging the cross-bar 15 of the bumper-guard 8. The spring-arms 17 17 tend to raise the bumper-guard 8 when the fender is projected forward and hold the same in its upper position, as shown in Fig. 2.

Extending longitudinally of the car and loosely borne in the brackets 19 19, secured

to the under surface of the platform of the car, is a rod 20, the rear end of which is bent to form a locking-arm 21, which will normally engage the cross-bar 11 of the main frame and secure the fender in its inward position. The front extremity of the rod 20 is bent upward and passes through a slot 22 in the platform of the car and is formed either as a handle or pedal 25 to allow the operation of the locking-lever by hand or foot. The locking-arm 21 may be acted upon by a plate-spring 23, attached to the under surface of the platform, or may carry a counterweight 24, as shown by the dotted lines in Fig. 5, which spring or weight will cause the lever to return into initial position after it has been turned to unlock the fender.

The utility and operation of the improved fender will be readily understood. Normally the two members—the main fender and the bumper-guard—are folded together and forced rearward under the car-platform, as shown in Figs. 1, 3, and 6. When it is necessary to use the fender, the foot or handle 25 of the rod 20 is depressed, whereby the latter is turned, with its locking-arm 21, to unlock the main fender and allow the members to be projected forward by the springs 16. As soon as the upper member or bumper-guard is clear of the front edge of the platform it is thrown upward by the spring-arms 17 into the position shown in Fig. 2.

The improved fender can be attached likewise to closed cars having steps at the front and rear ends of the car, as shown in Fig. 3, or to open cars which have step-boards extending throughout the length of the car, as shown in Fig. 4.

Instead of the spring-arms 17 chains 26 26 may be arranged, one at each side of the bumper-guard, which chains may be attached at the inner ends to the under surface of the platform and at their outer ends to the ends of the chains being so measured that when the fender is projected the chains in stretching will hold the bumper-guard in raised position. (See Fig. 5.)

In connection with the improved fender I prefer to arrange a guard-frame 27 underneath the car to conceal the running-wheels and all other operative parts of the driving mechanism of the car. At both ends of the car just below the brackets or guide-plates 2 2 for the fender the guard-frame is arc-shaped and cut out in the center, as at 28, whereby elastic wings 29 29 are formed, which will gently repulse a body against which they will strike when the driver has failed to throw the fender forward at the right moment. To allow an access to the bearing-boxes of the axles of the car-wheels, the guard-frame 27 may be provided with hinge-doors 30 30 opposite the bearing-boxes.

I do not wish to restrict myself to the de-

tails of construction and arrangement as herein described and illustrated, as it is evident that various modifications may be made in the features of construction and arrangement in the adaptation of the device to various conditions of use without departing from the spirit of my invention. I therefore reserve the right to all such variations and modifications as properly fall within the scope of the invention of the following claims.

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

1. The combination with brackets or guide-plates attached to the platform of a car and formed with guideways, of a fender comprising a lower member suitably supported in said guideways, an upper member or bumper-guard, pivotally secured to the lower member, springs for projecting said lower member into operative position, and rods rotatively borne in brackets attached to the platform, locking-arms at the rear ends of said rods, said arms being adapted to retain the fender below the platform and means adapted to raise the bumper-guard when the fender is projected forward, substantially and for the purpose as specified.

2. The combination with brackets or guide-plates attached to the platform of a car and formed with guideways, of a fender comprising a lower member slidably supported in said guideways, an upper member or bumper-guard, pivotally secured to the lower member, springs for projecting said lower member into operative position, and rods rotatively borne in brackets attached to the platform, locking-arms at the rear ends of said rods, said locking-arms being adapted to retain the fender below the platform, spring-arms attached to the lower member and engaging the bumper-guard, said spring-arms being adapted to raise the bumper-guard when the fender is projected forward, substantially and for the purpose as specified.

3. The combination with brackets or guide-plates attached to the platform of a car and formed with guideways, of a fender comprising a lower member slidably supported in said guideways, an upper member or bumper-guard, pivotally secured to the lower member, springs for projecting said lower member into operative position, rods rotatively borne in brackets attached to the platform, locking-arms at the rear ends of said rods, said locking-arms being adapted to retain the fender below the platform, spring-arms, the inner ends of which are formed as coils and attached to the lower member, and the outer ends are formed to loops engaging the bumper-guard, said spring-arms being adapted to raise the bumper-guard, when the fender is projected forward, substantially and for the purpose as specified.

4. The combination with brackets or guide-
plates attached to the platform of a car and
formed with guideways, of a fender compris-
ing a lower member slidably supported in
5 said guideways an upper member or bumper-
guard, pivotally secured to the lower mem-
ber, springs for projecting said lower member
into operative position, and rods rotatively
borne in brackets attached to the platform,
10 locking-arms at the rear ends of said rods,
said locking-arms being adapted to retain the
fender below the platform, means for return-
ing the locking-arms into initial position af-

ter the same have been released, spring-arms
attached to the lower member and engaging 15
the bumper-guard, said spring-arms being
adapted to raise the bumper-guard when the
fender is projected forward, substantially
and for the purpose as specified.

In testimony whereof I affix my signature 20
in presence of two witnesses.

KARL M. STAHL.

Witnesses:

WM. E. COOK,
MAX E. ORDMANN.