

No. 721,350.

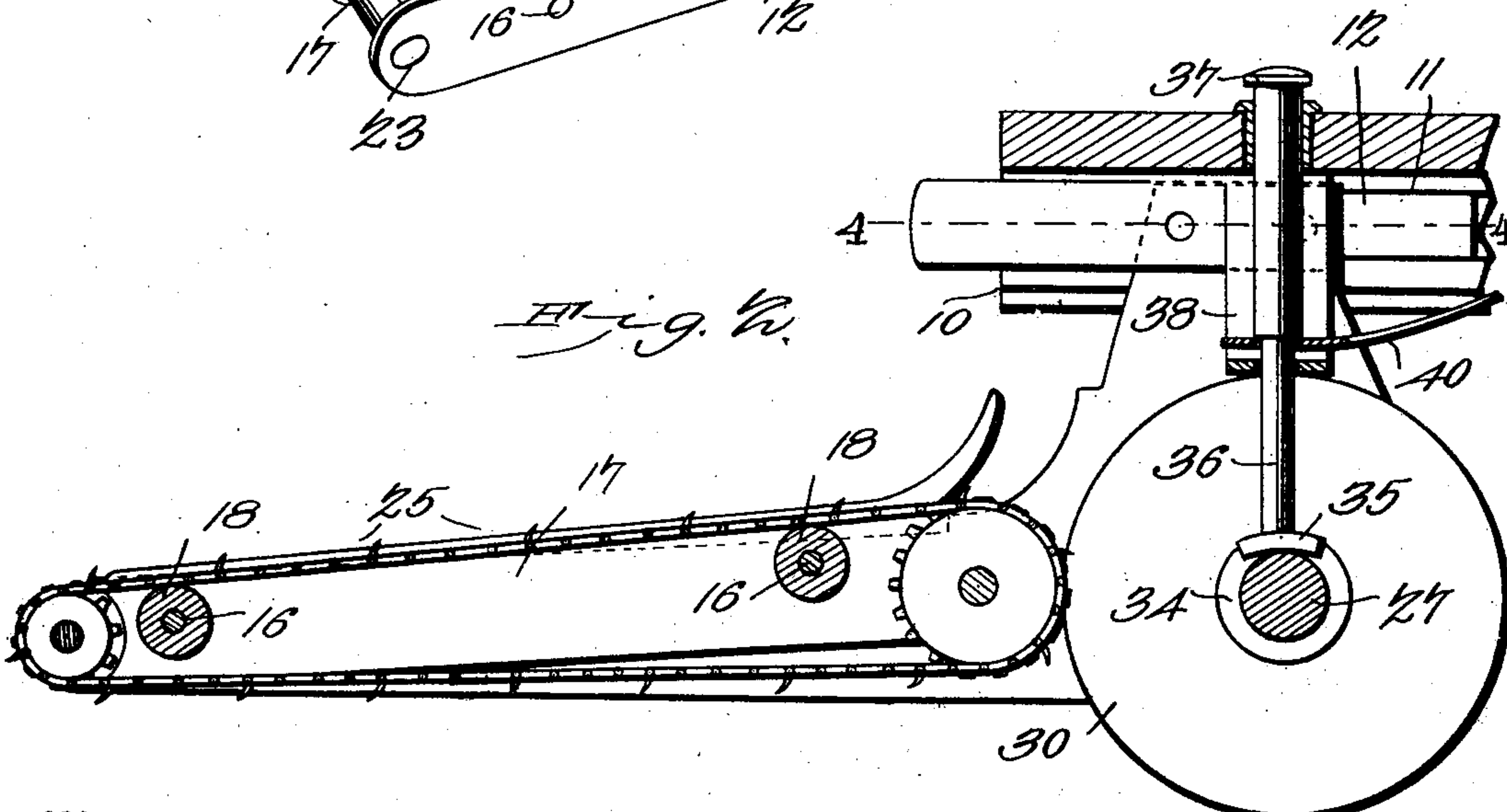
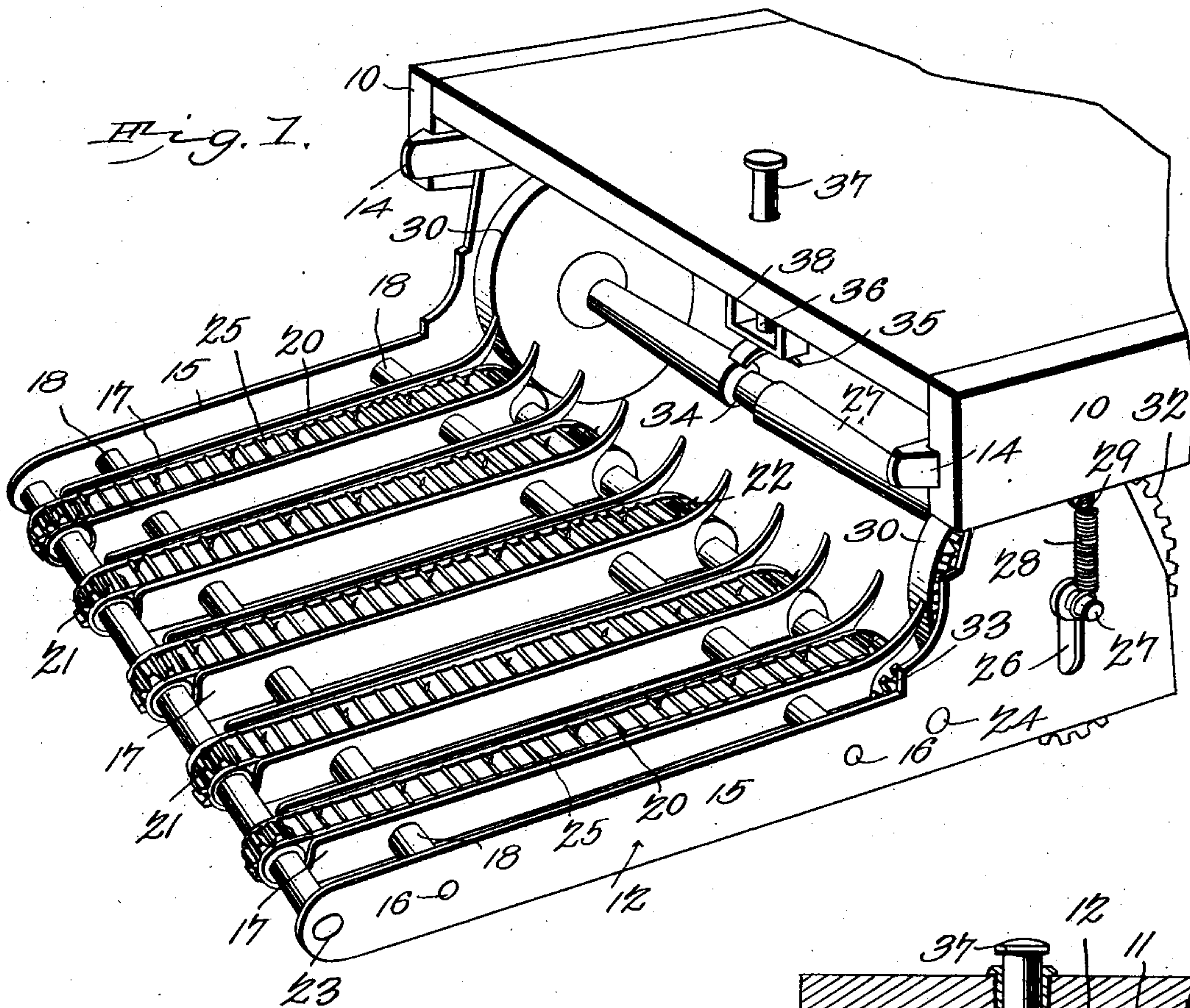
PATENTED FEB. 24, 1903.

G. E. WRIGHT.
CAR FENDER.

APPLICATION FILED APR. 21, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses
E. H. Wright
John E. Parker

by *G. E. Wright.* Inventor
C. A. Snow & Co. Attorneys

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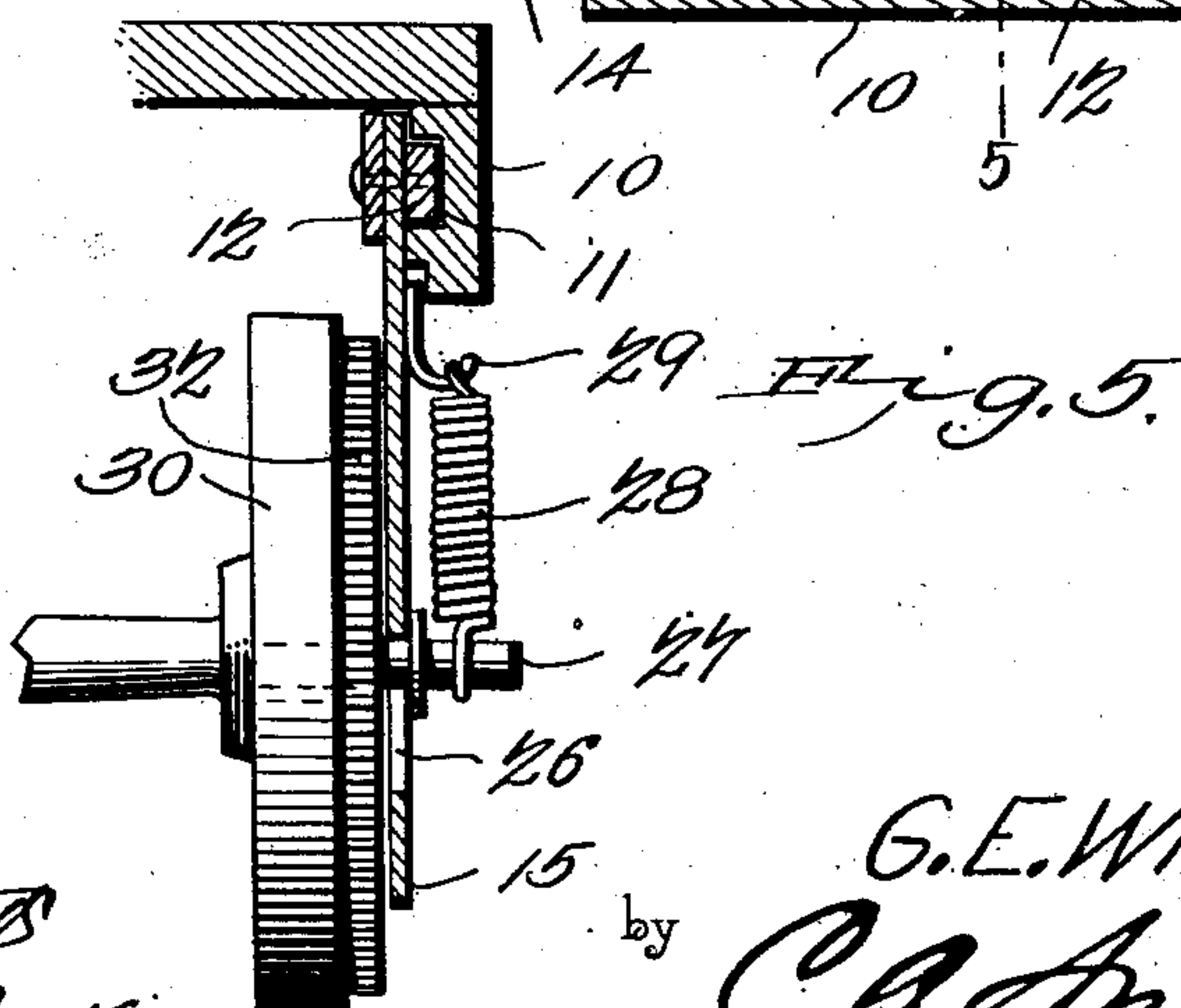
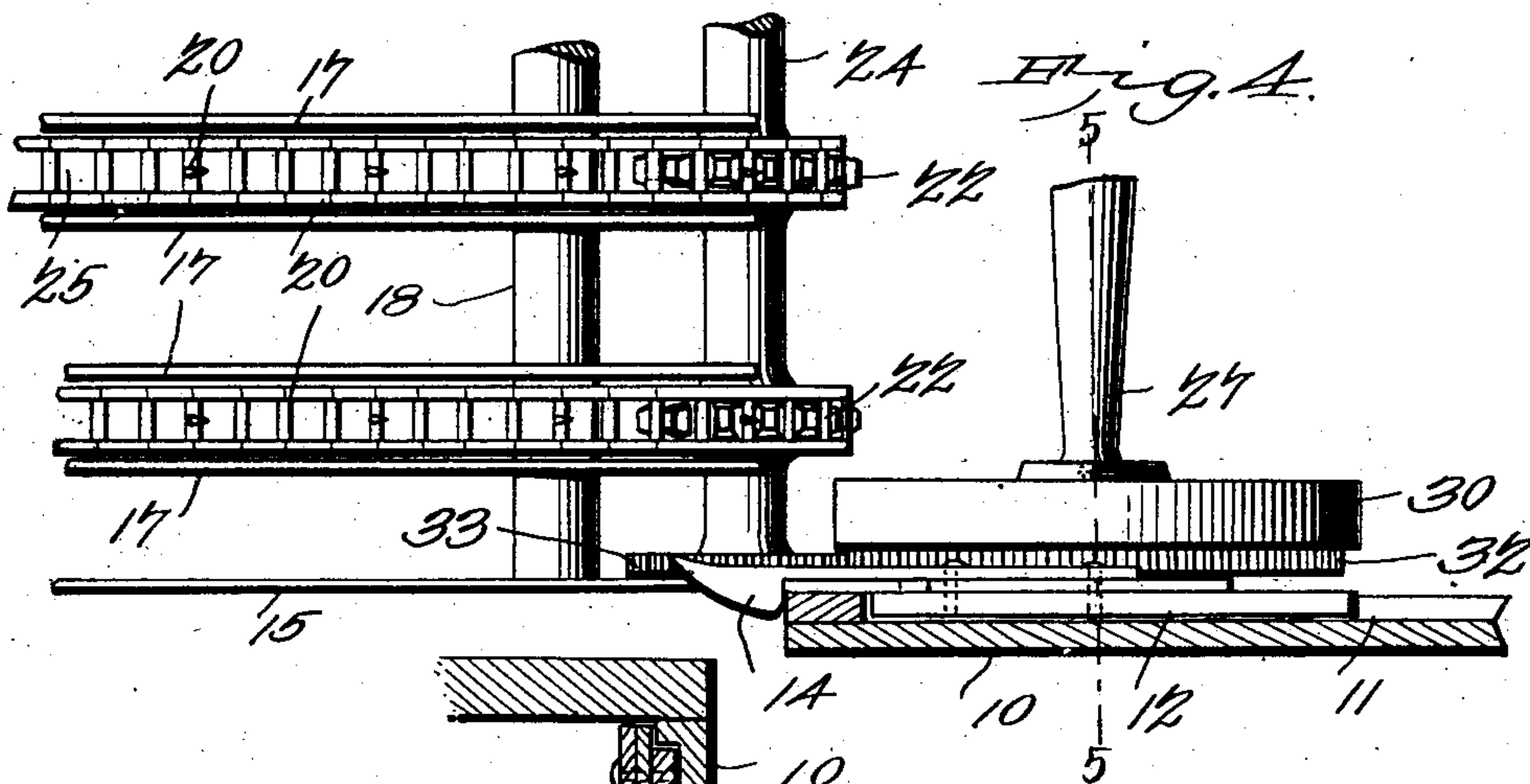
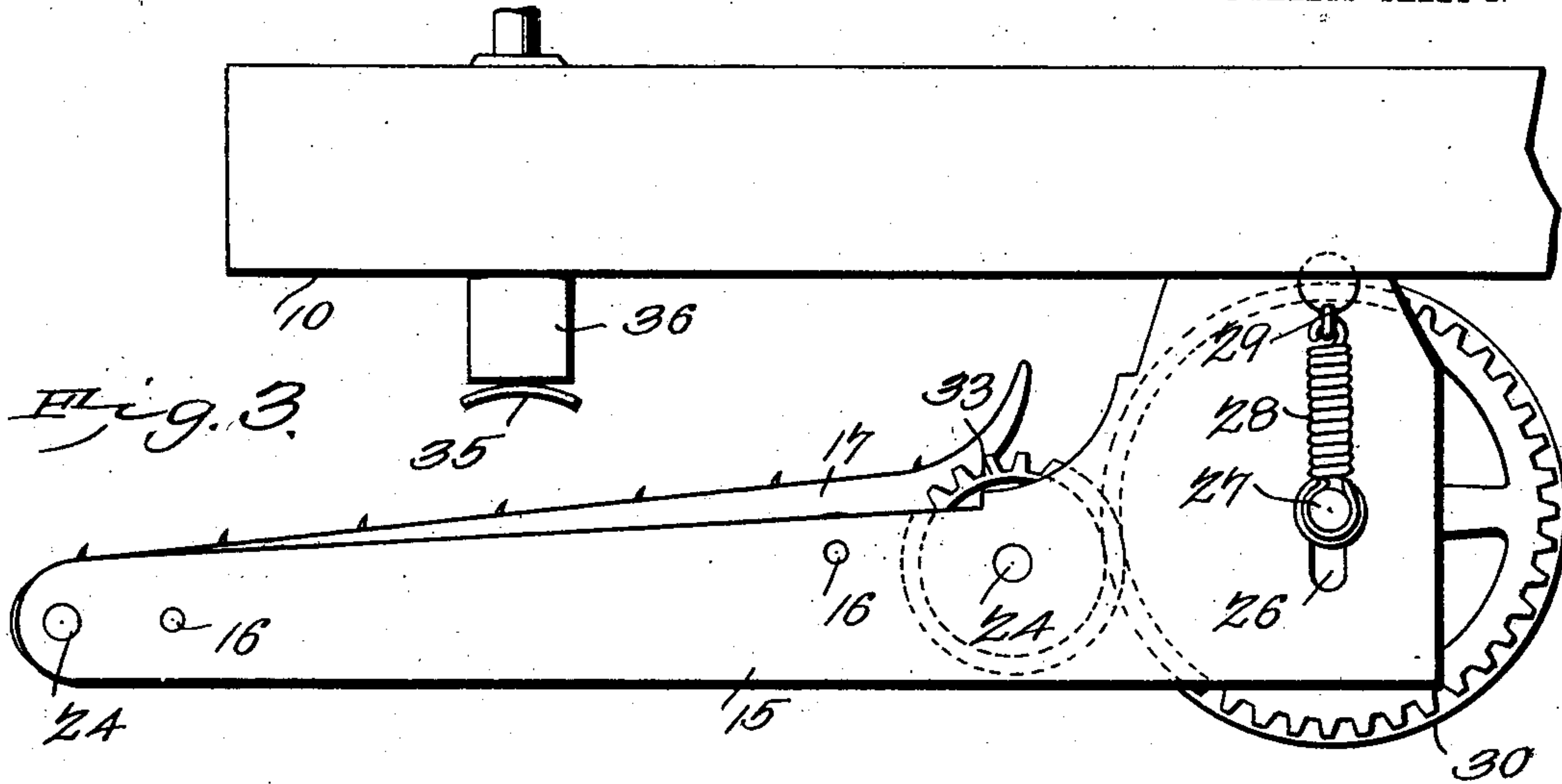
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Witnesses
E. J. Stevens
J. M. G. Porter

G. E. Wright, Inventor.
C. A. Snow & Co.
Attorneys

UNITED STATES PATENT OFFICE.

GEORGE ERNEST WRIGHT, OF EAST FAIRFIELD, VERMONT.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 721,350, dated February 24, 1903.

Application filed April 21, 1902. Serial No. 103,987. (No model.)

To all whom it may concern:

Be it known that I, GEORGE ERNEST WRIGHT, a citizen of the United States, residing at East Fairfield, in the county of Franklin and State of Vermont, have invented a new and useful Car-Fender, of which the following is a specification.

This invention relates to certain improvements in car-fenders, and has for its principal object to construct a fender for application to street-railway cars in which the upper surface or receiving-platform of the fender is adapted to travel rearwardly for the purpose of picking up and conveying to a place of safety a person or other object in the path of the traveling car.

A still further object of the invention is to provide the traveling platform with pins for engaging the clothing of a person and with means for effecting the disengagement of the pins from the clothing after the person has been removed to a position of safety on the fender.

A further object of the invention is to so arrange the fender and its operating mechanism that while the fender may be so adjusted as to remain in operative position in front of the car the traveling platform will not be moved until its operating mechanism is adjusted by the motorman or other attendant on the car, such operating mechanism being under the control of the motorman, so that he may readily start the platform into operation when the car approaches a person or other object and stop its movement when the person is resting on the fender.

A still further object of the invention is to so construct and arrange the fender-supports as to permit of the adjustment of the fender either in front of the car or to a position under the front end of the car when the latter is used as a trailer or is running in reverse direction.

With these and other objects in view the invention consists in the novel construction and arrangement of parts hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a car-fender constructed in accordance with my invention, showing the same

adjusted to operative position in front of the car. Fig. 2 is a longitudinal sectional elevation of the same, illustrating a portion of the car in section and showing the fender-operating mechanism in position to actuate the fender. Fig. 3 is a side elevation of the fender, illustrating the same adjusted to a position under the car. Fig. 4 is a sectional plan view of the device on the line 4 4 of Fig. 2. Fig. 5 is a transverse sectional elevation of a portion of the fender on the line 5 5 of Fig. 4.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

The side beams 10 of the car are provided on their inner faces with horizontally-disposed slots 11 for the reception of the upper bars 12 of the fender-frame, said bars being adjustable to permit the movement of the fender-frame to a position in front of the car, as illustrated in Fig. 2, or to a position under the car-platform, as shown in Fig. 3. When the fender is in operative position and extending out in front of the car, it is held from movement by a pair of spring locking-dogs 14, carried by the bars 12 and engaging the front ends of the side beams of the car.

The fender-frame comprises a pair of side plates 15, depending from the bars 12, and two or more transversely-disposed connecting-bars 16. At suitable intervals in the width of the fender are arranged pairs of guide-plates 17, carried by the bars 16 and held in proper spaced relation by filling-blocks 18. The plates 17 are curved upwardly at their rear ends, and each pair of plates serves as a guide for a link-belt 20, passing over sprocket-wheels 21 and 22, mounted on shafts 23 and 24, respectively, at the front and rear portions of the fender-frame.

The link belts 20, of which there may be any desired number, are each provided with a plurality of comparatively short pins or teeth 25, adapted to engage in the clothing of a person and positively lift the person from the road-bed to the fender. As the person or other object is moved toward the rear end of the fender contact with the elevated portion of the guide-plates 17 will cause the disengagement of the pins or teeth 25 from the

clothing and allow the person to remain in a safe position until the car is stopped. The side plates may be elevated above the pins or teeth at some little distance in advance of the rear portion of the fender, or the inclination may be gradual in order to permit of the ready disengagement of the pins or teeth from the clothing.

Near the rear end of each of the side plates 15 is a vertically-disposed slot 26 for the reception of the end of a transversely-disposed shaft 27, said shaft being normally held at the top of the slots by tension-springs 28, extending between the shaft, and fixed hooks or supports 29 on the side plates of the fender-frame. On the shaft 27 are secured a pair of friction-wheels 30, so situated that when the shaft 27 is depressed they will come into contact with the traffic-rail and be revolved by frictional contact therewith. On one or on both ends of the shaft 27 is secured a gear-wheel 32, intermeshing with a pinion 33 on the shaft 24 and serving through the medium of said shaft and the sprocket-wheels 22 to set the link belts into operation.

At the center of the shaft 27 is an annular groove 34, adapted to receive a shoe 35, mounted on a vertically-guided bar 36, extending up through an opening in the front platform of the car and provided with an enlarged pin 37 within convenient reach of the foot of the motorman or other attendant. The lower portion of the rod is guided by a bracket 38, and said rod is normally held in elevated position by the spring 40.

Under ordinary conditions the fender-frame is held in front of the car, as illustrated in Fig. 2, the shaft 27 being elevated and the wheels 30 held out of operative contact with the traffic-rails. The fender, however, is in operative position and could operate in the usual way without any attention on the part of the motorman. On approaching a body or other object on the track the motorman depresses the rod 26 and forces the shoe 35 into the groove 34 of shaft 27. Further downward movement depresses the wheels 30 into contact with the traffic-rails and sets the link belts into motion, the teeth or hooks of such belts positively engaging and lifting the body from the track and carrying the same to a position of safety at the rear portion of the fender, the contact of the body with the elevated portion of the guiding-plates serving to automatically disengage the teeth from the clothing in the event of the neglect of the motorman to remove his weight from the knob 37. When pressure on the knob is released, the shaft 27 is moved to its elevated position by the springs 28.

When it is not desired to move the fender, it may be moved to the rear by disengaging the dogs 14 and sliding the bars 12 rearwardly in the guiding-slots 11, the fender being moved under the bottom of the car to the position illustrated in Fig. 3.

A fender constructed in accordance with

this invention will last for a considerable length of time owing to the fact that there is no wear on any of the parts except when the fender is actually engaging with a person or other object, and at the same time the position of the fender is such that it will act as an ordinary fender should the motorman neglect to set the link belts into operation.

While the construction herein described, and illustrated in the accompanying drawings, is the preferred form of the device, it is obvious that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described my invention, what I claim is—

1. The combination in a car-fender, of the supporting-frame, movable belts carried by said frame and provided with teeth, and guide-plates having portions disposed in a plane above said teeth.

2. The combination in a car-fender, of the fender-frame, shafts carried thereby, sprocket-wheels mounted on said shafts, link belts on said sprocket-wheels, pins or teeth carried by said link belts, and guide-plates having their rear ends extending upwardly in a plane above the plane of the teeth.

3. The combination in a car-fender, of the supporting-frame, shafts carried thereby, sprocket-wheels carried by said shafts, link belts guided on said sprocket-wheels at intervals throughout the width of the fender, pins or teeth carried by the link belts, guiding-plates disposed in pairs, and arranged on each side of the link belts, said plates having their rear ends extending upwardly in a plane above the plane of the pins or teeth, and means for actuating said link belts.

4. The combination in a car-fender, of the side plates, transversely-disposed rods connecting the same, a series of pairs of supporting-plates carried by said rods, spacing-blocks arranged on the rods between said plates, shafts mounted in bearings on said plates, sprocket-wheels carried by said shafts, link belts mounted on said sprocket-wheels and guided between the pairs of plates, and teeth or pins carried by said link belts.

5. The combination in a car-fender, of the vertically fixed and slotted supporting-frame, a series of movable belts carried by said frame and normally held in operative position, movable friction-wheels having a shaft guided in the slotted frame, said wheels being adapted for contact with the traffic-rail and means under the control of the motorman for depressing the shaft and wheels, and gearing connections between said shaft and the movable belts.

6. In a device of the class specified, a fender normally held in operative position and having a surface movable in an approximately horizontal plane and adapted for the reception of a body or other object, a pair of

friction-wheels adapted for contact with the traffic-rails and normally held from contact therewith, means for transmitting the movement of the friction-wheels to the fender, and means under the control of the motorman for depressing the friction-wheels into contact with the rails and thereby effecting the operation of said movable surface without altering the position of the fender.

7. The combination in a car-fender, of the frame having vertically-disposed slots, a shaft guided therein, friction-wheels carried by said shaft, a gear-wheel carried by said shaft and serving to impart motion to an operative portion of the fender, means for normally holding the shaft in elevated position, and means for depressing said shaft to force the friction-wheels into contact with the traffic-rails.

8. The combination in a car-fender, of the slotted side plates, sprocket-wheel shafts carried by the frame, link belts mounted on said sprocket-wheels, a shaft mounted in the slots of the side plates, springs normally holding said shaft in elevated position, friction-wheels carried by said shaft, a gear-wheel mounted on the shaft, a pinion on one of the sprocket-wheel shafts intermeshing with said gear-wheel, a vertically-movable rod having a lower portion adapted to engage the shaft, the upper portion of said rod being guided through an opening in the car-platform, and a spring for holding said rod in elevated position.

9. The combination in a car-fender, of the slotted side plates, sprocket-wheel shafts carried thereby, link belts on said sprocket-wheels, a vertically-movable shaft adapted to the slots of the side plates and provided with a centrally-disposed annular groove, springs normally holding said shaft in elevated position, a gear-wheel mounted on said shaft and intermeshing with a pinion on one of the sprocket-wheel shafts, a bracket carried by the car-frame above the shaft, a rod guided by the bracket and having an enlarged head extending up through an opening in the car-platform, a shaft-engaging shoe disposed on the lower ends of said rods, and a spring acting to hold the rod in elevated position.

10. The combination of the car having side sills provided with longitudinal grooves terminating in abrupt shoulders near the front ends of the sills, a fender-frame having side bars engaging in said grooves and limited in forward movement by engagement with said shoulders, and locking-dogs carried by the fender-frame for holding the latter in adjusted position.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEORGE ERNEST WRIGHT.

Witnesses:

WILLIAM S. SOULE,
HOMER B. STURTEVANT.