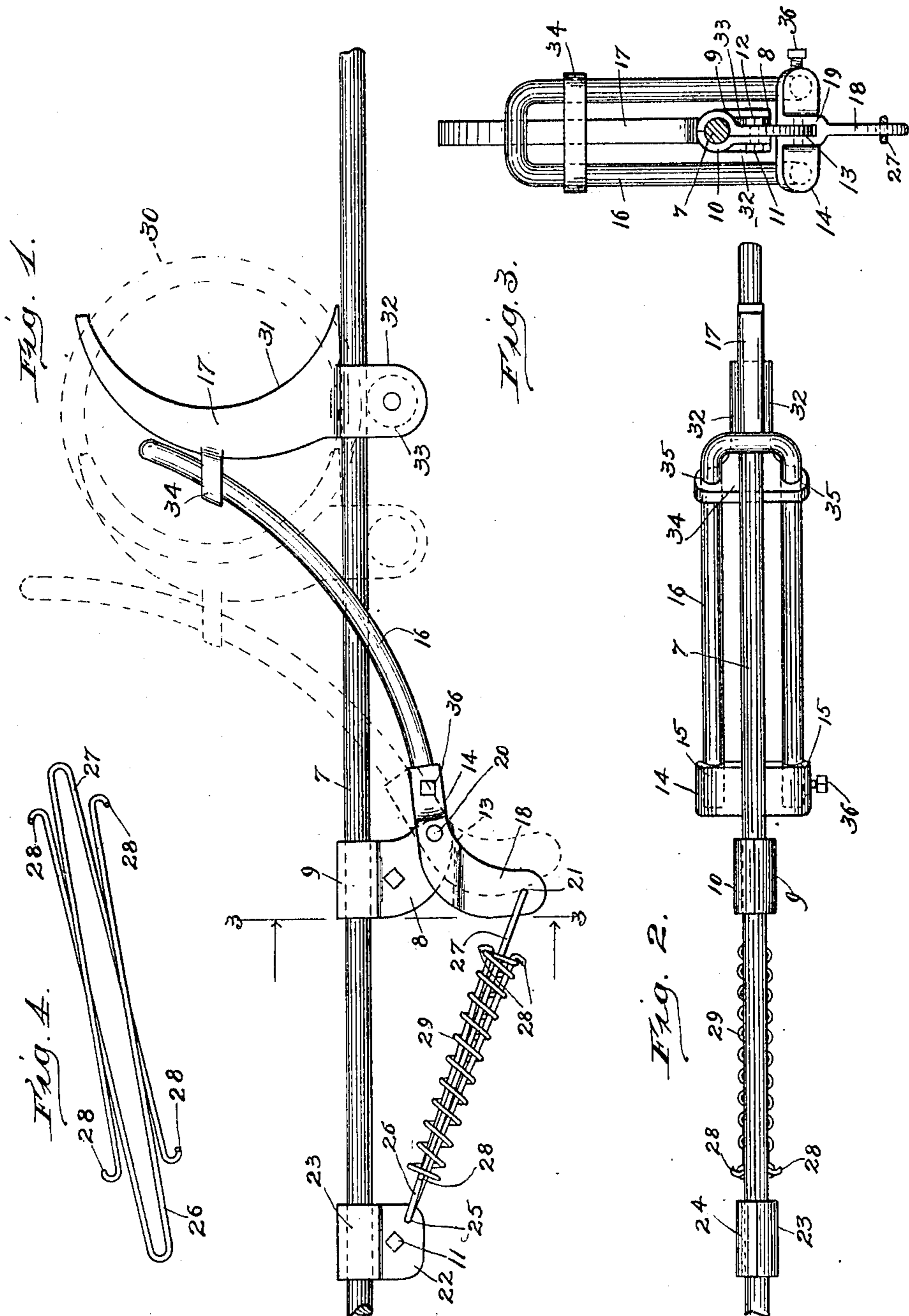


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STOP AND REBOUNDER FOR ELEVATED CARRIERS.
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UNITED STATES PATENT OFFICE.

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STOP AND REBOUNDER FOR ELEVATED CARRIERS.

970,031.

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To all whom it may concern:

Be it known that I, JEREMIAH C. FITZGERALD, a citizen of the United States, residing at De Kalb, in the county of Dekalb and State of Illinois, have invented certain new and useful Improvements in Stops and Rebounders for Elevated Carriers, of which the following is a specification.

This invention relates to improvements in a stop and rebounder to be used in connection with an elevated carrying apparatus, that is, an apparatus of that type in which a wheeled carrier equipped with and supporting a car or receptacle for the material to be transferred from one place to another, travels on an elevated track or cable, and it consists in certain peculiarities of the construction, novel arrangement and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The principal object of the invention is to provide a yielding stop and rebounder for elevated carriers, which shall be automatic and efficient in its operation, compact in form, simple and inexpensive in construction, strong and durable, and so made that it can be readily applied to the track at any desired point, or easily removed therefrom, and in such a manner as to apply the necessary resistant pressure for yieldingly stopping the carrier, as well as for rebounding or starting the same on its return trip, in a line with the center of the wheel or wheels of the carrier.

Another object is to furnish a stop and rebounder of such construction, that when applied to the track, it will equalize the longitudinal strain of the latter, incident to the stopping of the carrier thereon, by causing the force or power produced thereby, to be exerted inwardly from each end of the track, instead of, from one end thereof only, as is ordinarily the case.

A further object of the invention is to provide means for the adjustment of the parts of the device, so as to afford a less yielding stop and greater rebounding force, the latter of which is necessary when greater return speed is desired, or when an extremely long track is used, or when the outer portion of the track is not sufficiently elevated or inclined.

Still another object is to so construct the

device, that when in place on the track, the principal part of its weight will be under the same, and the parts so arranged with respect to one another, that the buffer will at all times be held, by reason of the gravity of the other parts, in a vertical plane above the track, and so that the resistant pressure will be applied in a horizontal line with the center of the wheel of the carrier, which comes in contact with the stop.

Other objects and advantages of the invention will be disclosed in the subjoined description and explanation.

In order to enable others skilled in the art to which my invention pertains, to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1, is a view in side elevation of a stop and rebounder for elevated carriers, embodying my invention; Fig. 2, is a plan view thereof; Fig. 3, is a view partly in elevation and partly in section, taken on line 3—3 of Fig. 1, looking in the direction indicated by the arrows; and Fig. 4, is a detached perspective view of the spring-supporting members.

Like numerals of reference, refer to corresponding parts throughout the different views of the drawing.

The reference numeral 7, designates a portion of an elevated track, which may be made of flexible material, such as a cable or wire, and may be supported in the ordinary or any well known manner. Mounted on the track 7, at a suitable point, but usually near one of its terminals, is a clamping bracket which is indicated as a whole by the reference numeral 8, and preferably consists of two members 9, and 10, each of which is provided on its upper inner surface with a curved recess to receive the track 7, on which said members may be securely held by means of a bolt 11, extended through said members below the recesses therein, and a nut 12, on one end of said bolt.

As is shown in Figs. 1, and 3, of the drawing, the member 8, is provided with an extension 13, which depends below the track 7, and preferably longitudinally therewith for a short distance. Pivotally mounted on the extension or arm 13, near its free end, is a yoke 14, or cross-bar, which is provided in its portion adjacent to the buffer with a

pair of sockets 15, to receive the free ends of a bow 16, which strides the track 7, and is connected to the buffer or stop 17, as will be presently explained. The front portion 5 of the yoke or that part thereof, opposite from the buffer 17, is provided with a forwardly extended and downturned arm 18, which preferably has in its upper portion a slot 19, to receive the extension 13, which is 10 secured in said slot by means of a pivot 20, extended through suitable openings in said extension and arm. The lower portion of the arm 18, is provided with a transverse opening 21, to receive one of the spring supporting members. Mounted on the track 7, at a suitable distance from the bracket 8, is another bracket, which is designated as a whole by the numeral 22, and preferably consists of two members 23, and 24, each 20 of which has on its upper inner portion a curved recess to receive the track 7, on which said members are clamped by means of a bolt 11, and nut, as in the former described bracket. The member 23, is provided in its 25 lower portion with an opening 25, through which one of the spring supporting members is extended.

As shown in Figs. 1, and 4, each of the spring-supporting members 26, and 27, consists of a wire loop, each having at the ends 30 of its prongs, hooks 28, to engage the ends of the spring 29, which is coiled around said members and is interposed between the hooked ends as well as the looped ends of 35 said members. By reference to Fig. 1, it will be seen and understood that the member 27, engages at its looped end, the arm 18, and at its hooked end the front end of the spring 29, while the member 26, engages 40 at its looped end the member 23, of the bracket 22, and at its hooked end the rear end of the spring 29, which as before stated, surrounds said members. The buffer or stop 17, has its rear surface or that surface thereof 45 adjacent to the wheel 30, of the carrier, formed with a curved or segmental recess 31, to fit the wheel or the groove therein, and has on its lower portion two downwardly extending prongs 32, which stride 50 the track.

Journalled between the prongs 32, of the buffer 17, is an anti-friction roller or wheel 33, which is adapted to contact with the lower surface of the track so as to prevent 55 the buffer being displaced therefrom. At a point to be in a horizontal plane with the center of the wheel 30, of the carrier, the buffer 17, is provided on its front surface or that surface thereof opposite the recess 31, with a forwardly extended arm 34, which is 60 provided with an opening on each side of the buffer and track for the reception and operation of the members or prongs of the bow 16, which as before stated are located 65 in the sockets 15, of the yoke, and may be

secured therein by means of a set screw 36, seated in one end of the yoke.

From the foregoing and by reference to the drawing, it will be readily understood and clearly seen, that when the parts are 70 assembled and occupy their normal positions as shown by continuous lines in Fig. 1, of the drawing, the recessed face or surface of the buffer 17, will be presented toward the carrier in its forward progress on the track, 75 and that when the wheel of the carrier strikes the buffer 17, the parts will be moved by reason of the momentum of the carrier, forwardly to about the positions shown by 80 dotted lines in Fig. 1, thus yieldingly stopping the carrier. As soon as the same comes to a stop, the spring 29, will exert itself and through the instrumentality of its connections with the buffer 17, will cause the same 85 to be moved rearwardly on the track against the wheel of the carrier, thereby rebounding or starting the same with the requisite amount of force to carry it back on its return trip.

In the foregoing operation it is apparent 90 that as the bow 16, is loosely connected to the buffer 17, at a point to be in a horizontal line or plane with the center of the wheel 30, of the carrier, the resistant pressure will be applied at said point, both for the purpose 95 of retarding and for rebounding or starting the carrier. If it is desired to increase or diminish the tension of the spring 29, this can be done by moving one of the brackets 8, or 22, from or toward the other, 100 and then fixing it in the desired place on the track, for it is evident that when the space between the said brackets is increased, the hooks 28, on the spring-supporting-members 26, and 27, engaging the ends of the spring 105 29, will compress the same, thus increasing the tension of the spring, and if the distance between the brackets is shortened, the tension of the spring will be diminished.

Having thus fully described my invention 110 what I claim as new and desire to secure by Letters-Patent is—

1. A stop and rebounder for elevated carriers, consisting of an elevated track, a buffer slidably mounted thereon, and equalized 115 resilient means applied at one end to the track and at its other end to the buffer directly in line with the center of the carrier wheel.

2. A stop and rebounder for elevated carriers, consisting of an elevated track, a buffer slidably mounted on and above the track, and equalized resilient means applied 120 at one of its ends to the track and at its other end to the buffer at a point thereon in 125 a line with the line of pressure exerted by the carrier.

3. A stop and rebounder for elevated carriers, consisting of an elevated track, a buffer slidably mounted thereon and having 130

its contacting face formed to fit the wheel of the carrier, and equalized resilient means applied at one of its ends to the track and at its other end to the buffer at a point thereon in line with the center of the contacting wheel of the carrier.

4. A stop and rebounder for elevated carriers, consisting of an elevated track, a buffer slidably mounted thereon, a bracket on the track near the buffer and having a depending extension, a yoke having a downturned arm and pivotally secured to said extension, a bow astride the track connected at one of its ends to the yoke and loosely connected near its other end to the buffer, and a spring applied at one of its ends to the arm on the yoke and at its other end to the track.

5. A stop and rebounder for elevated carriers, consisting of an elevated track, a buffer slidably mounted thereon, a bracket on the track near the buffer and having a depending extension, a yoke having an arm and pivotally secured to said extension, a connection secured at one of its ends to the yoke and loosely connected to the buffer, and a spring applied at one of its ends to the arm on the yoke and at its other end to the track.

6. A stop and rebounder for elevated carriers, consisting of an elevated track, a buffer slidably mounted thereon, a bracket on the track near the buffer, a yoke having an arm and pivotally secured to the bracket, a connection secured at one of its ends to the yoke and loosely connected to the buffer, a spring applied at one of its ends to the arm on the yoke and its other end to the

track, and means to regulate the tension of said spring.

7. A stop and rebounder for elevated carriers, consisting of an elevated track, a buffer slidably mounted thereon, a pair of spaced apart brackets mounted on the track, a yoke having an arm and pivotally secured to the bracket adjacent to the buffer, a connection secured at one of its ends to the yoke and loosely connected to the buffer, a pair of looped spring-supporting-members each having hooks at their free ends, one of said members engaging the arm on the yoke and the other of said members engaging the outer bracket, and a spring coiled around said members and interposed between the hooked ends thereof.

8. A stop and rebounder for elevated carriers, consisting of an elevated track, a buffer slidably mounted thereon, a pair of spaced apart brackets mounted on the track, a yoke pivotally secured to the bracket adjacent to the buffer, a bow striding the track and secured at one of its ends to the yoke and loosely connected to the buffer, a pair of looped supporting-members each having hooks at their free ends, one of said members connected to the bracket adjacent to the buffer and the other of said members connected to the other bracket, and a coiled spring surrounding said members and interposed between and engaging the hooked ends thereof.

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