

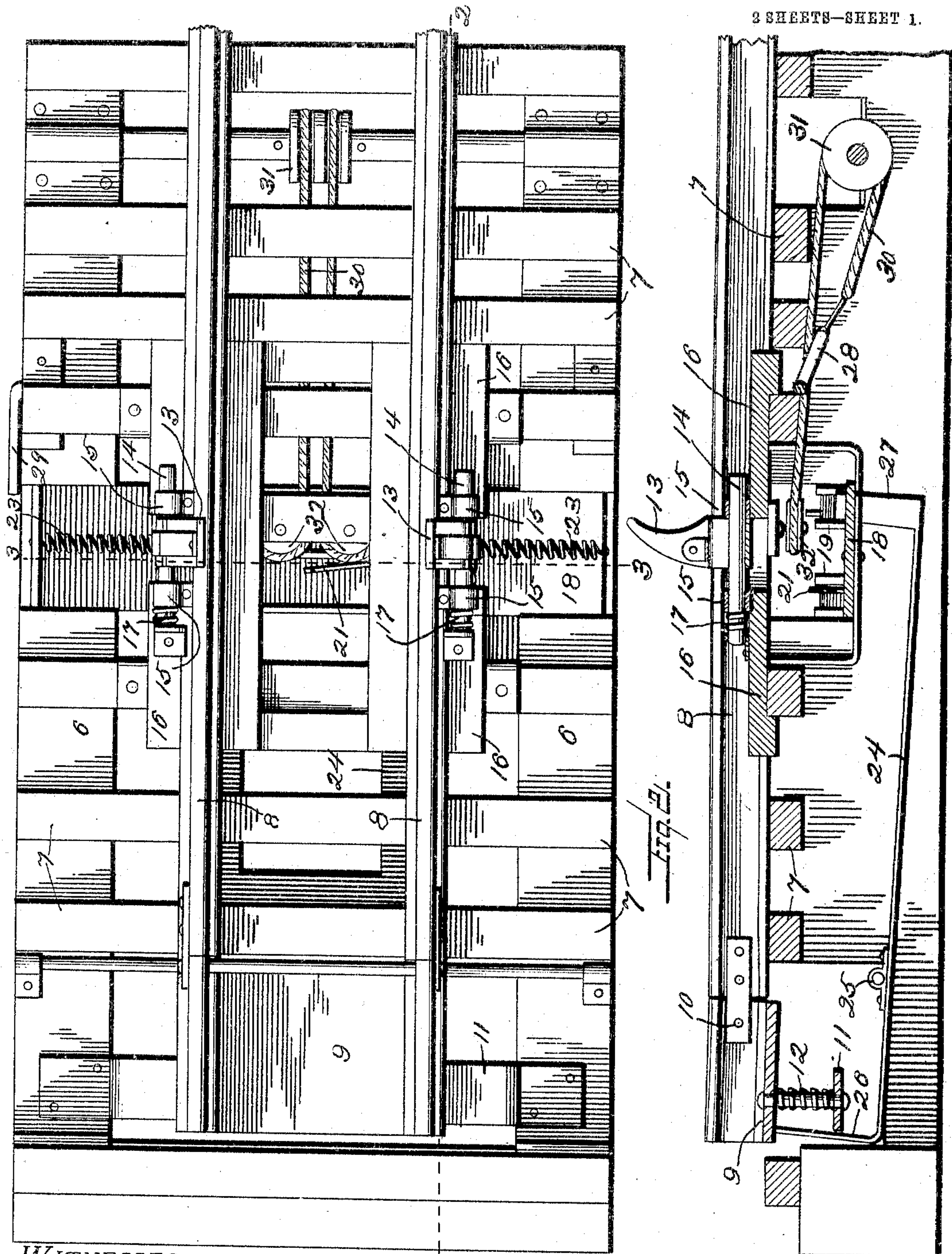
No. 780,035.

PATENTED JAN. 17, 1905.

G. W. HIXSON & A. KIGHTLINGER.  
CAR BUMPER.

APPLICATION FILED OCT. 17, 1904.

2 SHEETS—SHEET 1.



WITNESSES.

*W. F. Day.*

*Geo. E. Tew*

FIG. 1.

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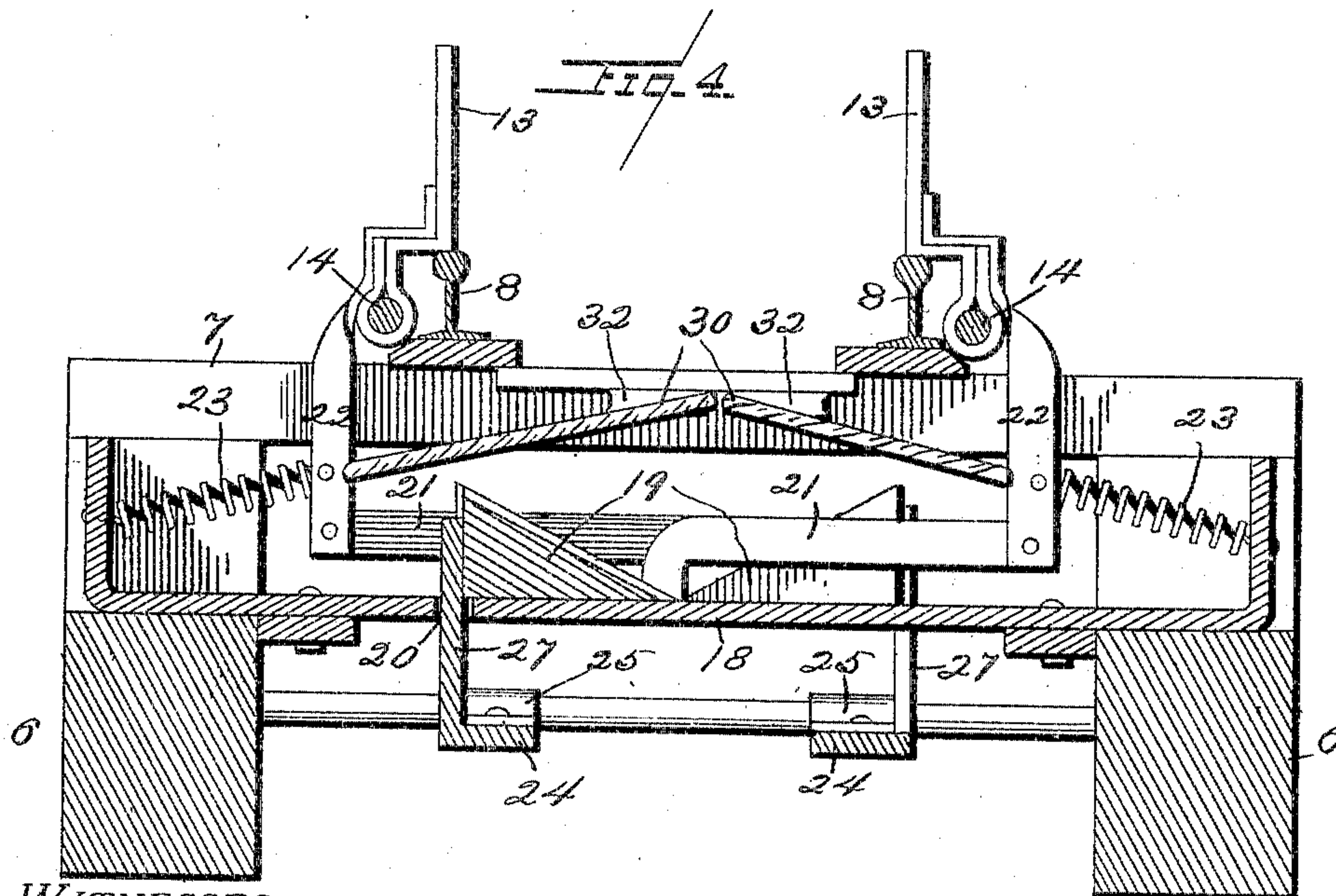
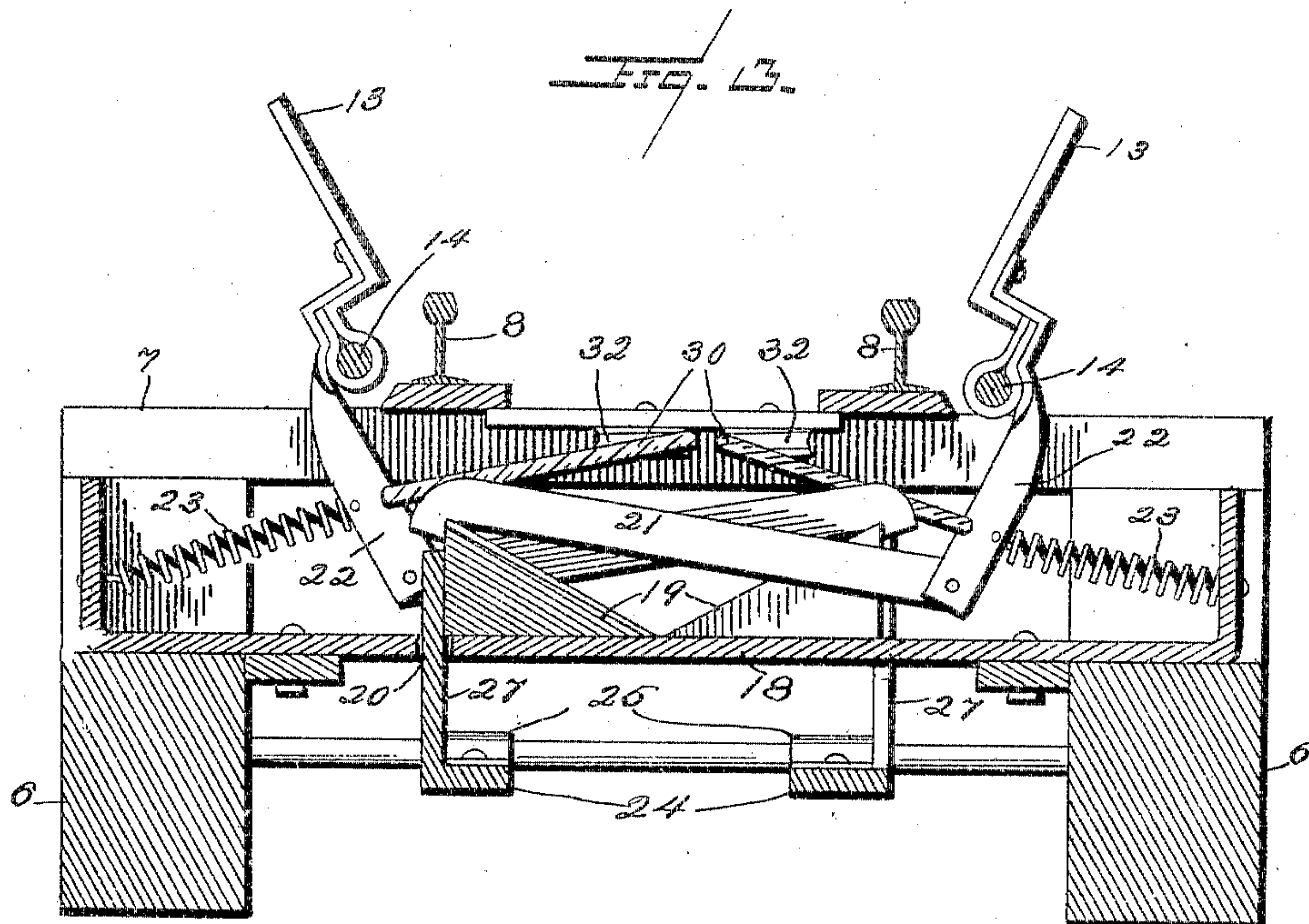
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# UNITED STATES PATENT OFFICE.

GEORGE W. HIXSON AND ABERHAM KIGHTLINGER, OF CAMBRIDGE, OHIO.

## CAR-BUMPER.

SPECIFICATION forming part of Letters Patent No. 780,035, dated January 17, 1905.

Application filed October 17, 1904. Serial No. 228,862.

*To all whom it may concern:*

Be it known that we, GEORGE W. HIXSON and ABERHAM KIGHTLINGER, citizens of the United States, residing at Cambridge, in the county of Guernsey and State of Ohio, have invented new and useful Improvements in Car-Bumpers, of which the following is a specification.

This invention is an automatic car-bumper designed particularly for use in coal-mines to block or trip cars which are operated on an inclined track to prevent them from running beyond the end of the track into the shaft, and in general to afford means for stopping a car whenever desired. The device can also be used on a tippie or other dump to prevent cars from running into the screen.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a plan view. Fig. 2 is a longitudinal section on the line 2 2 of Fig. 1. Figs. 3 and 4 are cross-sections on the line 3 3 of Fig. 1 with the parts in different positions.

Referring specifically to the drawings, the operating mechanism is supported upon side stringers or beams 6, which are heavy timbers and which also support the cross-ties 7. The rails are shown at 8, and at the end thereof is a tilting section 9, pivotally connected, as at 10, with the fish-plates at the ends of the fixed rails. The free end of this tilting section is supported upon a cross-beam 11, springs 12 being interposed to permit the section to lower under the weight of a car and to raise the section when the car is removed.

At 13 are indicated the bumper horns or abutments. These are carried upon rock-shafts 14 and swing laterally thereon, as indicated in Figs. 3 and 4, to bring the horns in or out of line with the rails. The rock-shafts are held in boxes 15, supported by base-plates 16, which bridge the space between two of the ties. The rock-shafts 14 are slidable lengthwise in their supports and are pressed behind by springs 17, which serve to cushion the impact of the car against the horns.

At 18 is indicated a supporting-plate which rests at its ends upon the beams 6 and extends across between said beams under the track. This plate supports two oppositely-

presented inclines 19, at the higher ends of which are openings 20 through the plate 18. Upon these inclines 19 ride the hooked or downturned ends of gravity-latches 21, which are pivotally connected to arms 22, which project downwardly from the horns 13. Springs 23, connected in tension between said arms and the upturned ends of the plate 18, tend to normally throw the horns in above the rails in line with the car-wheels.

At 24 is indicated a lever, fulcrumed at 25 and having at one end upturned portions 26 in contact against the under side of the tilting track-section 9. At the other end the lever has projections 27, which work through the openings 20 in the cross-plate 18 and are adapted to strike the ends of the gravity-latches 21 and lift the same above the upper or square ends of the inclines 19.

At 28 is indicated a lever for setting the horns, operated by a handle 29 at the side of the track. This lever is connected by ropes 30, which pass through pulleys 31 and around guide-pulleys 32 to the arms 22.

In operation the parts may be arranged according to the use desired, either to let cars pass one at a time along a continuous track or to stop single cars at the end of a track. The horns are set or thrown out of line with the track by swinging the lever 28, which throws the arms 22 inwardly and spreads or opens the horns 13, so that the wheels of a car will pass along the track therebetween. When the horns are so swung open, the gravity-latches 21 ride up the inclines 19 and drop over the ends thereof, thereby holding the parts as set with the track clear. When a car passes, it rides upon the tilting portion 9 and depresses the same, depressing the end 26 of the lever 24, the other end of which lifts and trips the gravity-latches 21, and the springs 23 by their pull on the arms 22 immediately throw the horns in above the rails in position to block the wheels of the car. As stated above, the parts may be so arranged that the horns will catch the rear wheels of a car, the front wheels of which operate the trip, or the parts may be so arranged that the horns will let one car pass and catch a succeeding one, the arrangement depending entirely upon the



distance of the tilting section from the horns. Successive operations simply involve the repetition of the operation above described.

If and when desired, the action of the horns  
5 can be prevented and a clear track left by swinging them open and then holding or fastening the lever 29 in any suitable manner.

What we claim as new, and desire to secure by Letters Patent, is—

10 1. In a car-bumper, abutments pivoted beside the track, means to swing the same over the track, and a tilting track-section connected to, and controlling the operation of, said means.

15 2. In a car-bumper, in combination, swinging abutments located beside the track-rails, means to swing the same over the rails, latches connected to the abutments and holding the same from the rails, a tilting track-section,  
20 and a trip between the section and the latches, actuated by the former to release the latter.

3. In a car-bumper, in combination, abutments pivoted beside the rails and tending to swing thereover, latches connected to the  
25 abutments and holding the same from the rails, means to set the abutments and latches, and car-actuated means to trip the latches and release the abutments.

4. In a car-bumper, the combination with

the track having a tilting section, of abut- 30  
ments pivoted beside the track-rails and constructed to swing to or from the same, springs behind said pivots, to cushion the abutments, springs connected to the abutments and tend-  
ing to swing the same over the rails, latches 35  
connected to the abutments and constructed to prevent the said action, and means operated by the tilting track-section to release said latches.

5. In a car-bumper, the combination with 40  
the track having a tilting section, of abutments pivoted beside the track-rails and having depending arms, latches connected to said arms and arranged to engage fixtures under the track, a hand-lever connected to said 45  
arms, for swinging the abutments from the rails and engaging the latches, and a trip between the said track-section and the latches, actuated by the former to release the latter.

In testimony whereof we have signed our 50  
names to this specification in the presence of two subscribing witnesses.

GEORGE W. HIXSON.  
ABERHAM KIGHTLINGER.

Witnesses:

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W. W. STEUART.