

No. 780,846.

PATENTED JAN. 24, 1905.

A. N. WERTS.

HEADLIGHT FOR LOCOMOTIVES.

APPLICATION FILED DEC. 29, 1903. RENEWED OCT. 18, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

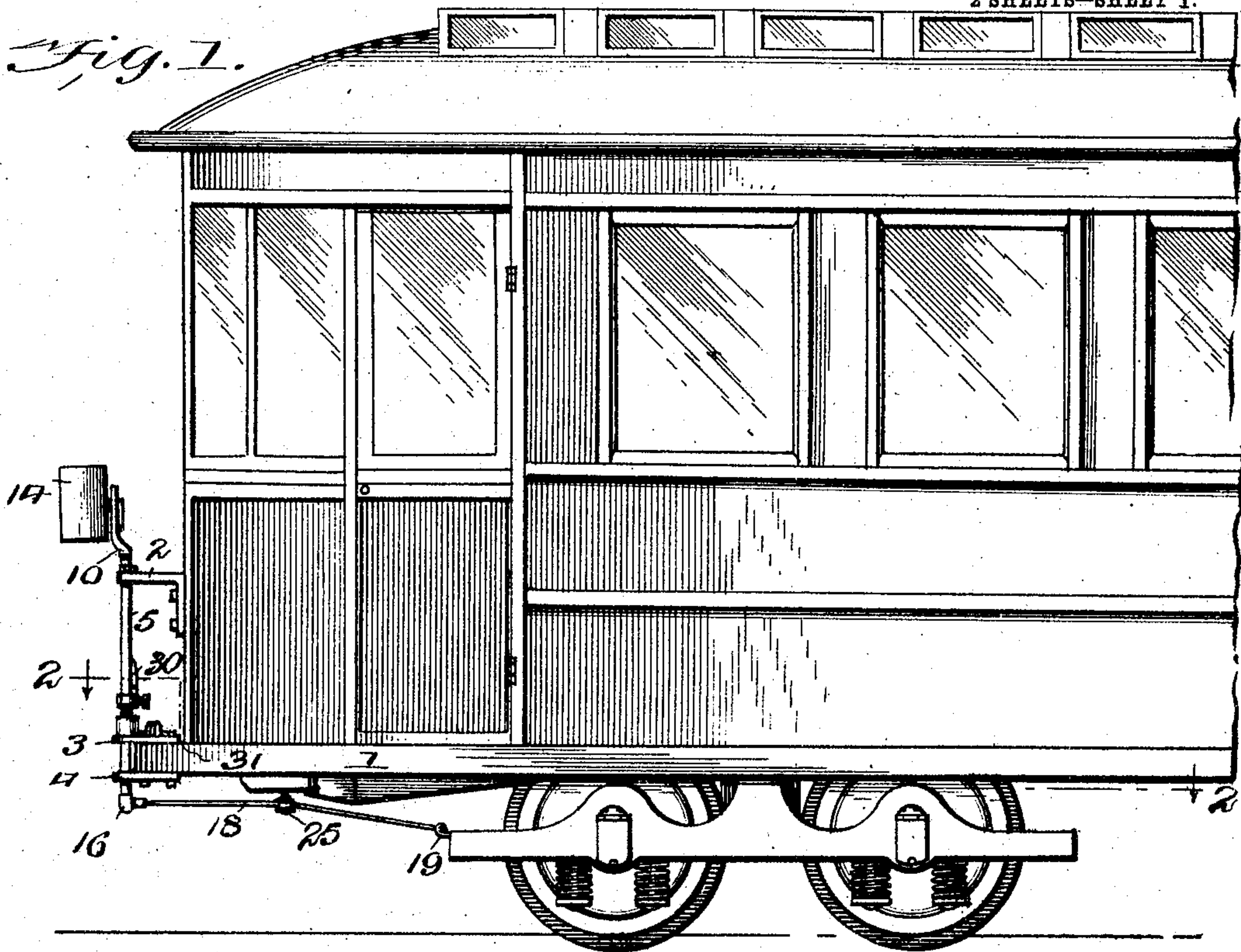
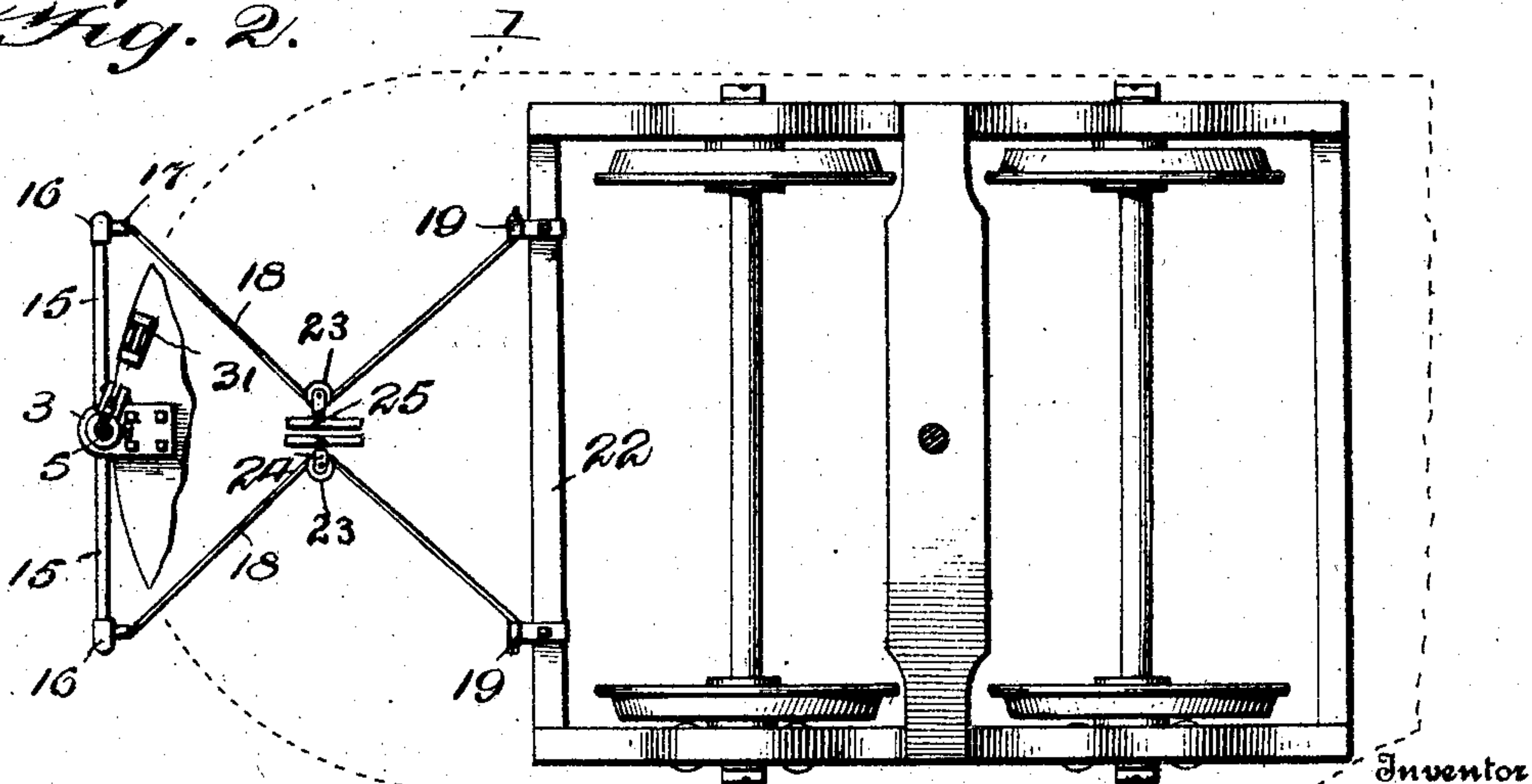


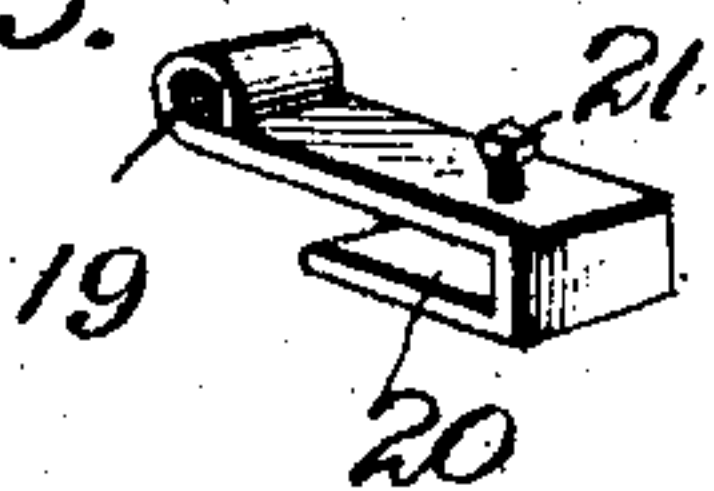
Fig. 2.



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Fig. 3.



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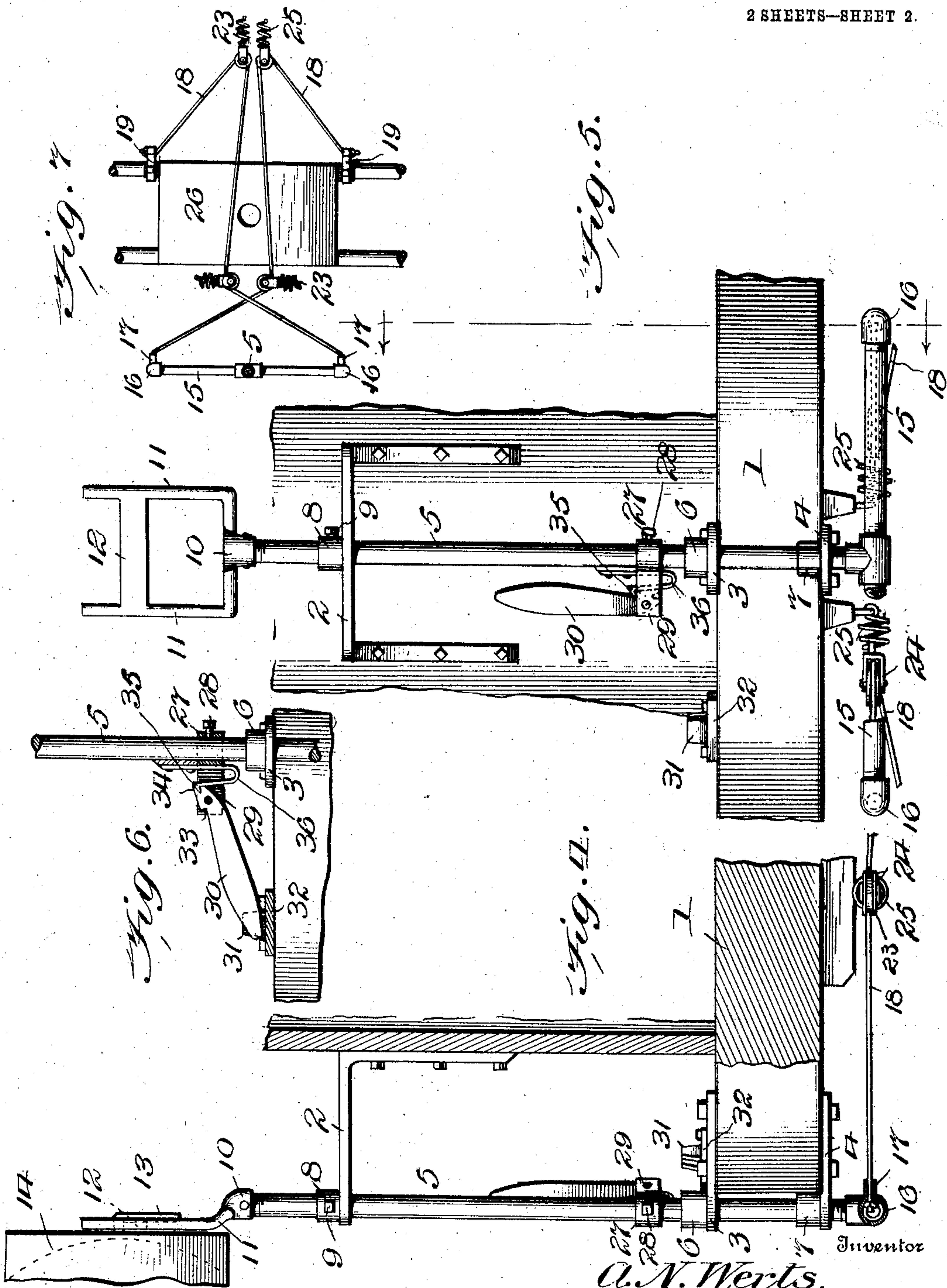
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UNITED STATES PATENT OFFICE.

ALBERT N. WERTS, OF MENDON, OHIO.

HEADLIGHT FOR LOCOMOTIVES.

SPECIFICATION forming part of Letters Patent No. 780,846, dated January 24, 1905.

Application filed December 29, 1903. Renewed October 18, 1904. Serial No. 229,027.

To all whom it may concern:

Be it known that I, ALBERT N. WERTS, a citizen of the United States, residing at Mendon, in the county of Mercer and State of Ohio, have invented certain new and useful Improvements in Headlights for Locomotives, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to headlights for locomotives, street-cars, and other vehicles; and it consists of certain novel features of combination and construction of parts, the preferred form whereof will be hereinafter clearly set forth, and pointed out in the claims.

The prime object of my invention, among others, is to provide a reliably-efficient attachment for locomotives and the like and proper connections extending to the headlight carried on the front portion of the locomotive or railway-car whereby the position of the headlight will be changed to conform to any curvature in the trackway, thereby enabling the engineer or motorman to observe the trackway for a considerable distance ahead of him, and thus avoid running into any obstruction, and at the same time enable the attendant upon an approaching train or a person walking upon the trackway to clearly see the light, and thereby avoid the danger.

Other objects and advantages will be hereinafter clearly set forth, reference being had to the accompanying drawings, which are made a part of this application, and in which—

Figure 1 shows a side elevation of a portion of a railway-car provided with my improved headlight and controlling appliance therefor. Fig. 2 shows a top plan view, partly in section, illustrating the car body and platform removed from the carrying-trucks. Fig. 3 is a perspective detail of the anchoring means employed to connect the headlight-controlling appliance to the frame of the car-truck. Fig. 4 is a side view of the headlight and a contiguous portion of the car in section. Fig. 5 is a front view of the part illustrated in Fig. 4. Fig. 6 is a detail view showing means for

locking the headlight-supporting shaft against movement. Fig. 7 shows a varied form of arrangement adapting my appliance for use upon locomotives.

The various details of my invention and accessories deemed necessary to illustrate a practical application thereof to use will for convenience be referred to by numerals, the same numeral applying to a corresponding part throughout the several views.

Referring to the numerals on the drawings, 1 indicates a portion of the front platform of a railway-car, while 2, 3, and 4 designate brackets whereby the headlight-supporting shaft 5 may be rotatably supported, suitable collars 6, 7, and 8 being provided to prevent longitudinal movement of said shaft, said collars being rigidly secured to the shaft or connected thereto by a set-screw 9, if preferred.

I prefer to provide the headlight-supporting shaft 5 with a suitable form of headlight-holder rigidly secured to the upper end thereof. In the present instance I have shown a headlight-holder comprising the socket 10, designed to receive the upper end of the shaft 5, said socket having the outwardly and upwardly directed arms 11 and the cross-bar 12, the latter being designed to engage the hook-like anchoring member 13, carried by the rear side of the headlight 14, and it is therefore obvious that the headlight may be very quickly removed from its position by lifting the bracket 13 out of engagement with the cross-bar 12. It is further obvious that other suitable means may be employed for enabling the headlight to be connected with the shaft 5, whereby it will be turned with said shaft, as will be hereinafter set forth.

To the lower end of the shaft 5, as will be more clearly seen in Fig. 5, I rigidly connect the cross-head 15, provided at each end with a suitable terminal 16, having an apertured ear or clip 17, whereby the cable 18 may be connected thereto, said cable being extended rearwardly under the platform of the car and connected to the clip 19, which is preferably formed as illustrated in Fig. 3, so as to have the anchoring-lip 20 and a set-screw 21, whereby it may be reliably connected to a portion

of the frame 22 of the car-truck. The cables 18 pass into engagement with the pulley-wheels 23, which are provided with the holding-bracket 24, as is common, said holding-bracket being provided with the cushioning-spring 25, the free end of which is attached in any preferred way to a contiguous part of the car or to a depending bracket carried by the under side of the platform or car section.

The object of the springs 25 is to always keep the ropes or cables 18 in a taut condition and also to compensate for a rocking movement of the car incident to passing over any rough portion of the road.

It will thus be seen that I have placed the headlight-supporting shaft 5 in direct communication with the forward trucks of the car, and it therefore follows that any movement of the truck in following the curvature of the track will cause the shaft 5 to be instantaneously acted upon and partially rotated, thereby insuring that the headlight supported by said shaft will be instantly turned at the first movement of the trucks in following a curve. The result will be that the headlight will automatically move so as to direct the light upon the trackway ahead of the car, so that the light will always be substantially in the same position as it would be turned if held manually by the person who wished to look for any obstruction and consequent danger.

In Fig. 7 I have illustrated how my headlight automatic controlling appliance may be adapted for use upon a locomotive, wherein it will be observed that the numeral 26 designates the forward or movable truck of a locomotive, suitable clips 19 being provided for connecting the ends of the cable 18 thereto. The cables 18 are thence directed rearwardly through the pulleys 23, attached to a contiguous part of the locomotive, and thence extended forwardly through similar pulleys also connected to a contiguous part of the locomotive, and the forward ends thereof are attached to the apertured ears 17, carried upon each end of the controlling-bar 15, said bar, as herein described, being rigidly connected to the lower end of the controlling-shaft 5, which extends forward to a suitable point and carries on its upper end the headlight.

If for any reason it should be desirable to lock the shaft 5 against rotation, as would be desirable if one of the cables 18 should become broken or disconnected, I have provided means for securely and instantly locking said shaft in such position as will result in holding the headlight directed forward in the same plane extending through the car-body. Such means consists of the collar 27, secured rigidly to the shaft 5, as by the set-screw 28, and having apertured ears 29, between which I pivotally secure the end of the detent 30, the free end of which is designed to move downward between the ears 31, car-

ried by the anchoring-plate 32, said plate being bolted to the floor of the platform at a proper point, as will be readily understood. The pivoted end of the detent or locking-lever 30 is provided with two recesses, as indicated by the numerals 33 and 34, the recess 33 being designed to engage the tooth 35 upon the end of the locking-spring 36 when the lever is elevated. When, however, the lever or locking-detent 30 is lowered so that the free end thereof will rest between the ears 31, the tooth 35 will enter the recess 34, as is fully illustrated in Fig. 6. Obviously the spring 36 will yield and permit the lever to be forced upward, when the detent will ride out of the recess 34 and drop into the recess 33, thereby holding the lever elevated and out of the way of the motorman, and thereby leave the shaft 5 under the full control of the movements of the forward truck of the car and insuring that the headlight will be automatically directed to follow any curvature of the trackway.

It is thought that the construction and manner of using my improved automatic controller for headlights have thus been made fully apparent, and further description is therefore deemed unnecessary.

While I have described the preferred combination and construction of parts, I desire to comprehend such equivalents and substitutes as may be regarded as fairly falling within the scope of my invention.

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

1. In an automatic controller for headlights, the combination with a car-body and trucks therefor of a rotating shaft having a headlight-holder at the upper end thereof and a cross-head 15 at its lower end, suitable brackets to secure said shaft to the front end of the car-body, means to hold said shaft stationary when desired, a terminal 16 at each end of said cross-head, apertured ears 17 formed integral therewith, cables 18 having one of their ends secured to said ears, clips 19 having anchoring-lips 20 and set-screws 21 adapted to secure said clips to a portion of the car-truck, the opposite ends of said cables being secured to said clips, pulley-wheels 23 located midway between said truck and cross-head, around which said cables take and coiled springs 25 attached to and adapted to yieldingly secure said pulleys to a contiguous part of the car-body, whereby the truck may freely turn when the shaft is held stationary, as set forth.

2. In a controller for headlights, the combination with a rotatable supporting-shaft, of a collar 27 rigidly secured to said shaft, said collar having ears 29, a detent pivotally secured between said ears, an anchoring-plate 32 having suitable ears adapted to receive the free end of said detent, and a locking-spring

having a tooth adapted to engage recesses in the locking-lever 30 and hold said lever into or out of engagement with the ears upon the anchoring-plate 32, whereby the supporting-
5 shaft will be held stationary or left free to rotate, as set forth.

In testimony whereof I have signed my name

to this specification in the presence of two subscribing witnesses.

ALBERT N. WERTS.

Witnesses:

L. C. ANDERSON,
G. W. SHREVE.