

No. 860,241.

PATENTED JULY 16, 1907.

A. PARKER-SMITH.  
SLACK ADJUSTER.

APPLICATION FILED NOV. 21, 1906.

Fig. 1.

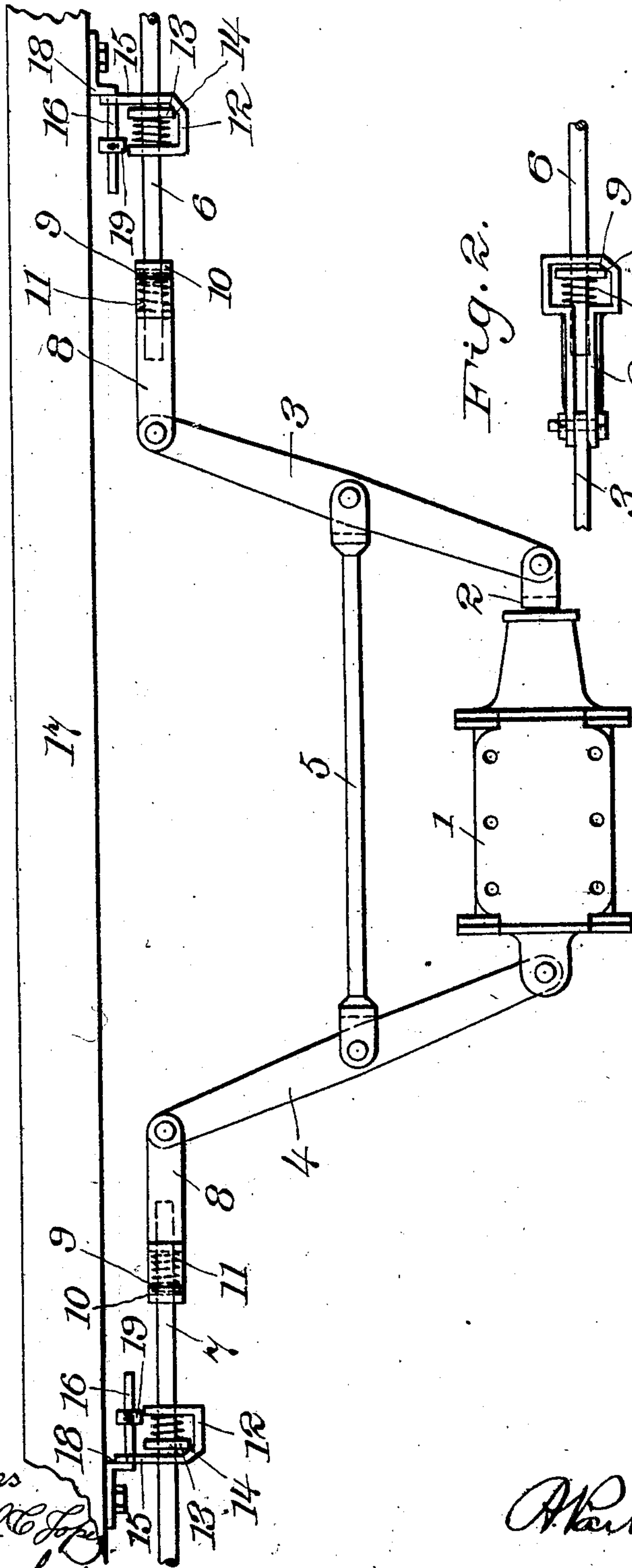
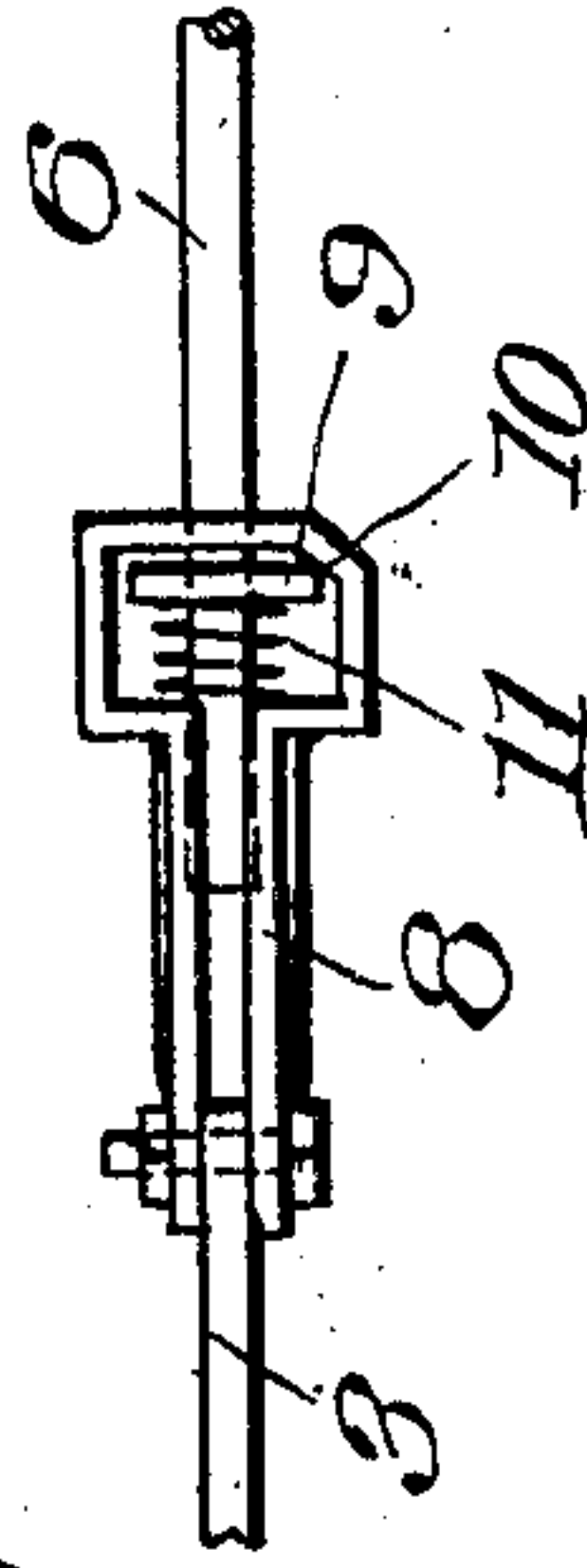


Fig. 2.



Witnesses  
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# UNITED STATES PATENT OFFICE.

AUGUSTUS PARKER-SMITH, OF NEW YORK, N. Y., ASSIGNOR TO ATLAS SLACK ADJUSTER COMPANY, A CORPORATION OF NEW YORK.

## SLACK-ADJUSTER.

No. 860,241.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed November 21, 1906. Serial No. 344,434.

*To all whom it may concern:*

Be it known that I, AUGUSTUS PARKER-SMITH, a citizen of the United States of America, and a resident of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Slack-Adjusters, of which the following is a specification.

My invention relates to mechanism for automatically adjusting the brake rigging on a railway or other car so that a uniform maximum travel of the piston will be preserved as the brake shoes wear.

The best form of apparatus at present known to me embodying my invention is shown in the accompanying drawings in which:

Figure 1 is a plan view of a portion of the brake rigging and car body with my invention applied thereto, and Fig. 2 is a detail side elevation of the holding clutch or telescoping connection.

Throughout the drawings like reference figures indicate like parts.

1 is the compressed air cylinder, 2 the piston, 3 the right hand brake lever, 4 the left hand brake lever, 5 the tie-rod, 6 the right hand top rod, and 7 the left hand top rod, all of the usual construction except that the top rods are not pivoted direct to the brake levers, but pass through clutch stirrups 8, 8, respectively. Each clutch stirrup is pivoted to its corresponding brake lever and contains a perforated clutch dog 9, fulcrumed on the beveled corner 10 of the stirrup and held up to its work by the spiral spring 11, which is compressed between said clutch dog and the inner portion of the stirrup.

On each top rod is a take-up clutch device preferably composed of a rectangular frame 12 having openings in its ends for the passage of the top rod and a perforated clutch dog 13, mounted in said frame on said rod and fulcrumed in any convenient manner, as on the beveled corner 14 of the frame. One end of the frame has an outward or upward extension 15, which is perforated for the passage of a stop rod 16, which is fastened to any convenient portion of the car body. In Fig. 1 it is shown fastened to the side of stringer or beam 17. Each stop rod has at its inner end or adjacent to its point of attachment to the car body, a shoulder or fixed stop 18, and near its outer end an adjustable stop 19, which between them limit the play of the take-up clutch frame relative to a fixed point on the car body.

The operation of my invention is as follows: The parts are so designed that, as shown in Fig. 1, when the brakes are released and the piston is in its innermost

position in the cylinder 1, the upward projections of the take-up clutches will be in contact with the shoulder on the inner end of the stop rods. When the brakes are applied and released, the clutch frames will vibrate between these two stops and no take-up action will occur, unless the travel of the piston exceeds the maximum amount determined on, in which case the clutch frames will strike the adjustable stops and be held while the top rods will be slightly pulled through them and through the dogs therein. On release of the brakes, the clutch frames will strike against the permanent stops afforded by the shoulders on the inner ends of the stop rods and hold the top rods during the last portion of the return movement of the brake levers, with the result that the top rods will be telescoped into the holding clutches on the ends of the brake levers a distance sufficient to take up the excess of travel which occurred on the previous application of the brakes.

It is evident of course that other forms of adjustable stop could be employed, but I have illustrated the foregoing as the most convenient arrangement at present known to me.

Having, therefore, described my invention, I claim:

1. In an automatic slack adjusting mechanism for railway brakes, the combination with the usual brake rigging of a stirrup pivoted to the outer end of each brake lever and having an opening for the passage of the top rod, a friction clutch mounted in the stirrup and engaging the top rod to prevent the withdrawal of the same, a take-up clutch device mounted on each top rod, and stops located on the car body limiting the movement of the take-up clutches.

2. In an automatic slack adjusting mechanism for railway brakes, the combination with the usual brake rigging of a stirrup pivoted to the outer end of each brake lever and having an opening for the passage of the top rod, a friction clutch mounted in the stirrup and engaging the top rod to prevent the withdrawal of the same, a take-up clutch device mounted on each top rod, and stops located on the car body limiting the movement of the take-up clutches, each of said take-up clutch devices comprising a rectangular frame having openings in its ends for the passage of the top rod, a perforated clutch dog mounted on said rod and fulcrumed in the frame, and a spiral spring encircling the rod and holding the dog in operative position.

3. In an automatic slack adjusting mechanism for railway brakes, the combination with the usual brake rigging of an adjustable gripping device connecting each top rod to the outer end of its corresponding brake lever, a take-up friction clutch mounted on each top rod and comprising a frame sliding on said rod and having an upwardly extending portion perforated for the passage of a stop rod, and a stop rod passing through said perforations and mounted on the car body.

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4. In an automatic slack adjusting mechanism for rail-  
way brakes, the combination with the usual brake rigging  
of an adjustable gripping device connecting each top rod to  
the outer end of its corresponding brake lever, a take-up  
5 friction clutch mounted on each top rod and comprising  
a frame sliding on said rod and having an upwardly ex-  
tending portion perforated for the passage of a stop rod,  
and a stop rod passing through said perforations and  
mounted on the car body, each stop rod having a fixed

shoulder at its inner end and an adjustable stop at its 10  
outer end by which the movements of the upwardly ex-  
tending portion of the take-up clutch frame are limited.

Signed at New York, N. Y. this 19th day of November,  
1906.

A. PARKER-SMITH.

Witnesses:

MANUEL C. LOPEZ,  
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