

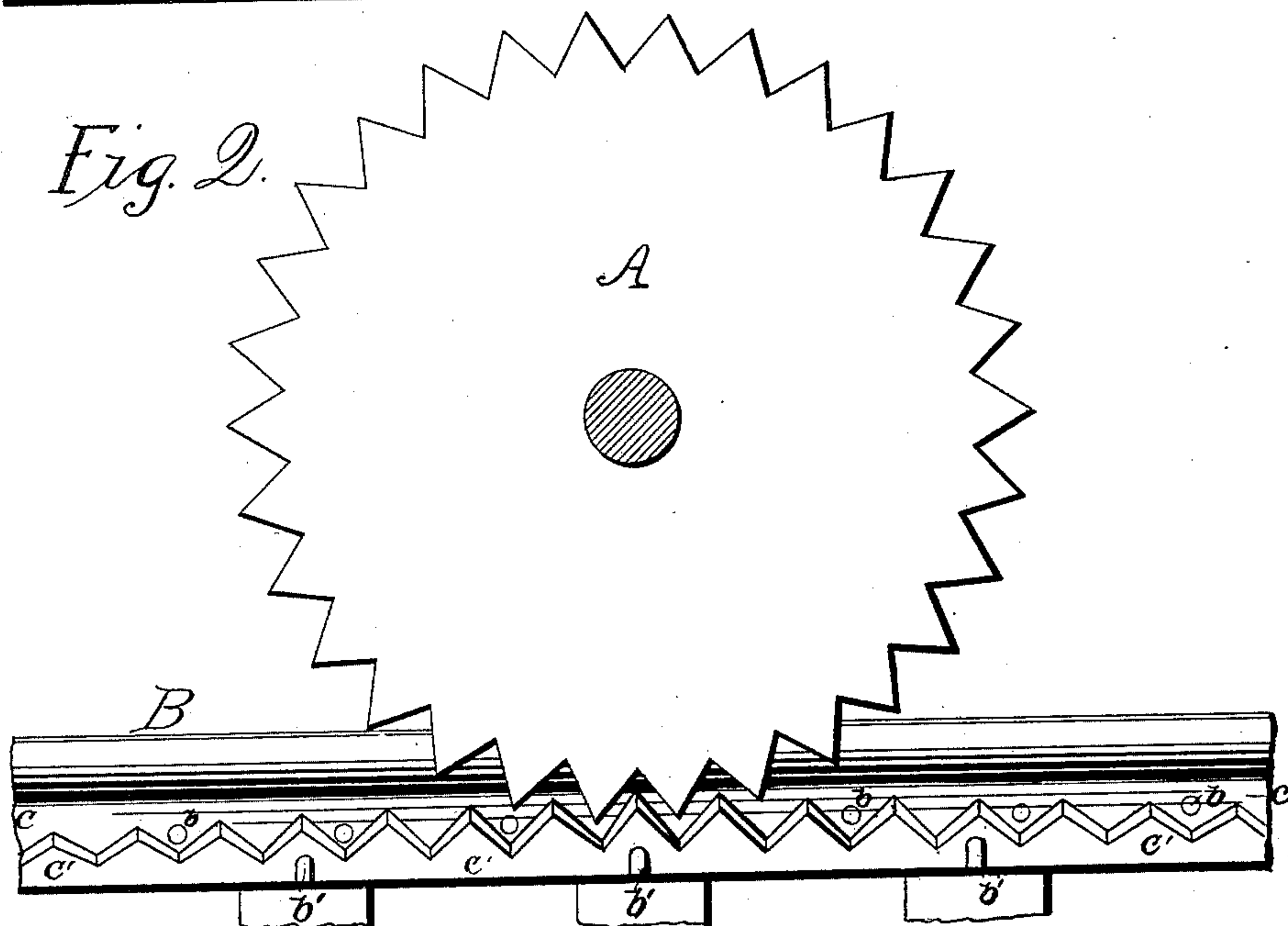
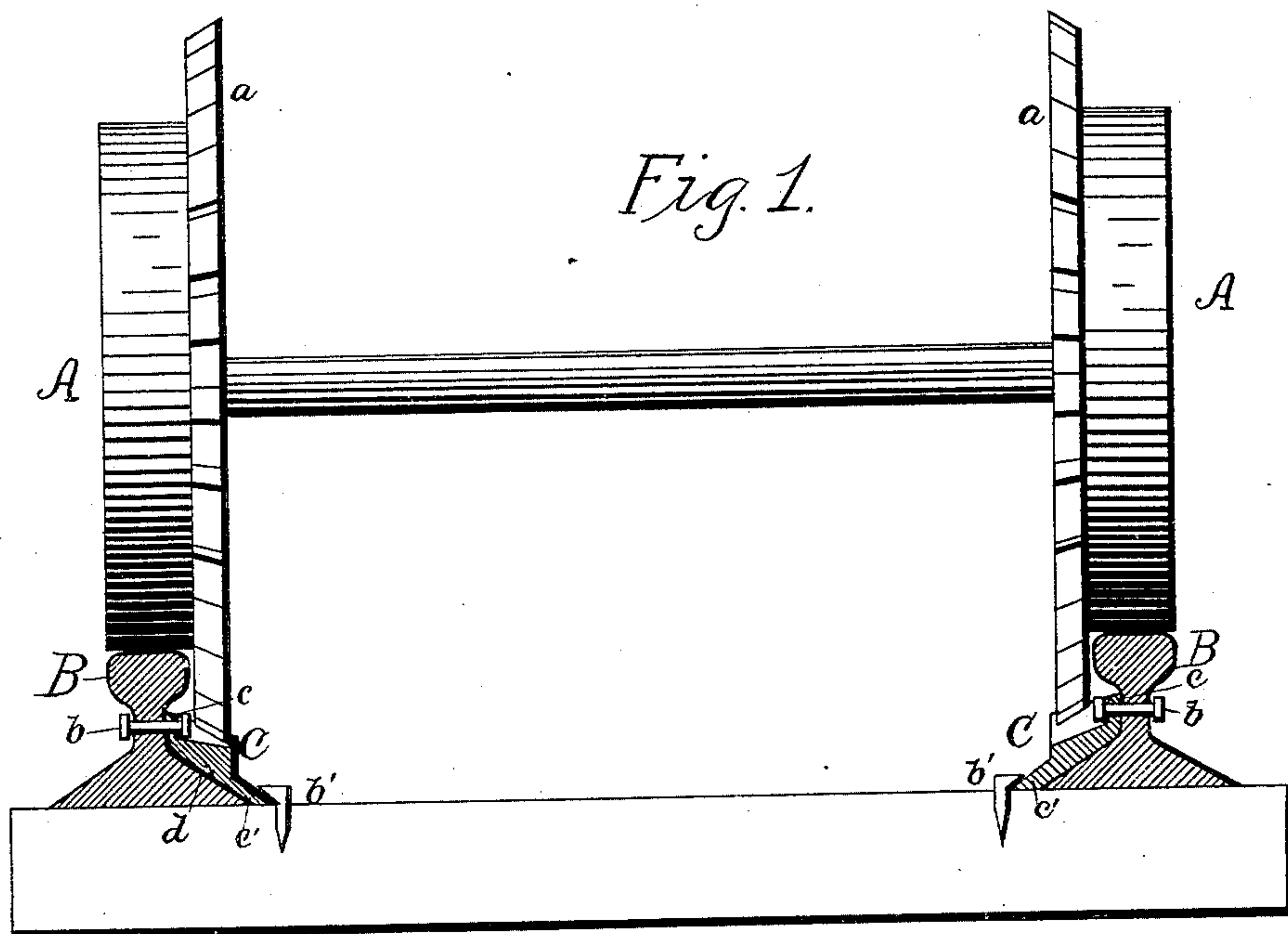
(No Model.)

A. P. TALLMADGE.

DEVICE FOR DRIVE WHEELS OF LOCOMOTIVE ENGINES AND  
RAILROAD RAILS.

No. 424,627.

Patented Apr. 1, 1890.



Witnesses

F. K. Holmes.

W. L. Webb.

Inventor

A. P. Tallmadge

By his Attorney

J. M. Tallmadge



# UNITED STATES PATENT OFFICE.

ANDREW PARKS TALLMADGE, OF WASHINGTON, DISTRICT OF COLUMBIA.

DEVICE FOR DRIVE-WHEELS OF LOCOMOTIVE-ENGINES AND RAILROAD-RAILS.

SPECIFICATION forming part of Letters Patent No. 424,627, dated April 1, 1890.

Application filed December 23, 1889. Serial No. 334,772. (No model.)

*To all whom it may concern:*

Be it known that I, ANDREW PARKS TALLMADGE, a citizen of the United States, residing at Washington, District of Columbia, have invented a new and useful Drive-Wheel of Locomotive-Engines and Railroad-Rails, of which the following is a specification.

My invention is a device for preventing the slipping of the drive-wheels of locomotive-engines when starting the train or when ascending steep grades; and my said invention consists in forming the flange of the said drive-wheels of locomotive-engines with teeth and arranging adjacent the rails a rack that is engaged by the toothed flange of the drive-wheels, said rack and toothed flange of the drive-wheels being of novel construction, as and for the purposes as will be hereinafter more fully described, and pointed out in the annexed claims.

Referring to the accompanying drawings, forming a part hereof, for a better understanding of the details of construction of my invention, Figure 1 is a view in front elevation of the two drive-wheels of a locomotive-engine, having a toothed flange that engages a rack laid adjacent the rails according to my invention; and Fig. 2 is a side elevation of the same.

The letters A A indicate the drive-wheels, which are of the usual construction, except that the periphery of the flange *a* thereof is formed into teeth, as shown in Fig. 2, and B B are the rails.

C C designate the racks that are secured adjacent the rails B B by nails that enter cross-ties and by bolts that pass through the top edge of the racks and through the web of the rails, as shown in Fig. 1.

The flange *a* of the drive-wheels A is, as shown in Fig. 1, made beveled, and the teeth of the racks C are also inclined, so that the lodgment of stones, dirt, &c., in the track is prevented. In addition to making the teeth of the rack inclined and the teeth of the flange of the drive-wheels to correspond, the said rack is also made tapering at each end, as shown in Fig. 2, the ends of the racks being of less height than at the middle, so that the teeth of the drive-wheels when running upon the rack will be directed upon the rack gradually, so that liability of injury to the

teeth of the rack or drive-wheels by coming against the ends of the rack is prevented. It is proposed that these racks be laid at the stations in such positions as is usually occupied by the engine, and at steep grades, so that the teeth of the drive-wheels thereof will engage the racks. Consequently when the train is started and when going over steep grades there can be no slipping of the drive-wheels of the engine upon the track; but said wheels will be securely locked to the track.

If desired or found necessary, a cushion or springs may be placed beneath the rack, as at *d* on the left of Fig. 1, so that the rack will give should unusual weight be applied upon the same, and said rack will at all times be held up to the wheels; and the rack is made to fit the side of the rail and with a top flange *c* to receive bolts *b*, that pass through the web of the rail, and with a lower flange *c'*, that rests upon and is secured to the cross-ties by spike *b'*. The rack and rail may also be formed integral.

I claim as new and of my invention—

1. In a device of the nature described, the combination, with the drive-wheels of a locomotive-engine, having the periphery of the flange thereof beveled and formed into teeth, of a rack secured adjacent to the inside of the rail to be engaged by said teeth of the drive-wheel, having beveled ends, and with tapered or inclined teeth, substantially as described and shown, for the purposes specified.

2. In a device of the nature described, in combination with the drive-wheel A, having the beveled flange *a*, formed into teeth, the rack C, tapered at each end, with inclined teeth, and formed with a top flange *c* and lower flange *c'*, substantially as shown and described, for the purposes specified.

3. The combination, with the drive-wheel A, having a toothed flange *a*, and rack C, tapered at each end and with inclined teeth, of the cushion or elastic support *d*, substantially as and for the purposes specified.

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

ANDREW PARKS TALLMADGE.

Witnesses:

SIMON LYON,

RAYMOND S. DONALDSON.