

F. L. SESSIONS.

RACK RAIL.

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1,027,076.

Patented May 21, 1912.

Fig. 1.

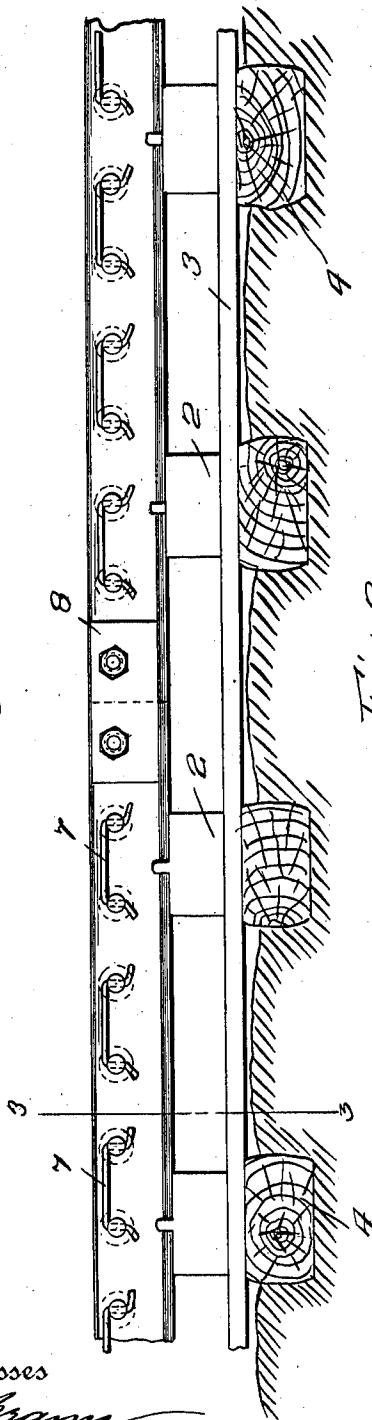


Fig. 2.

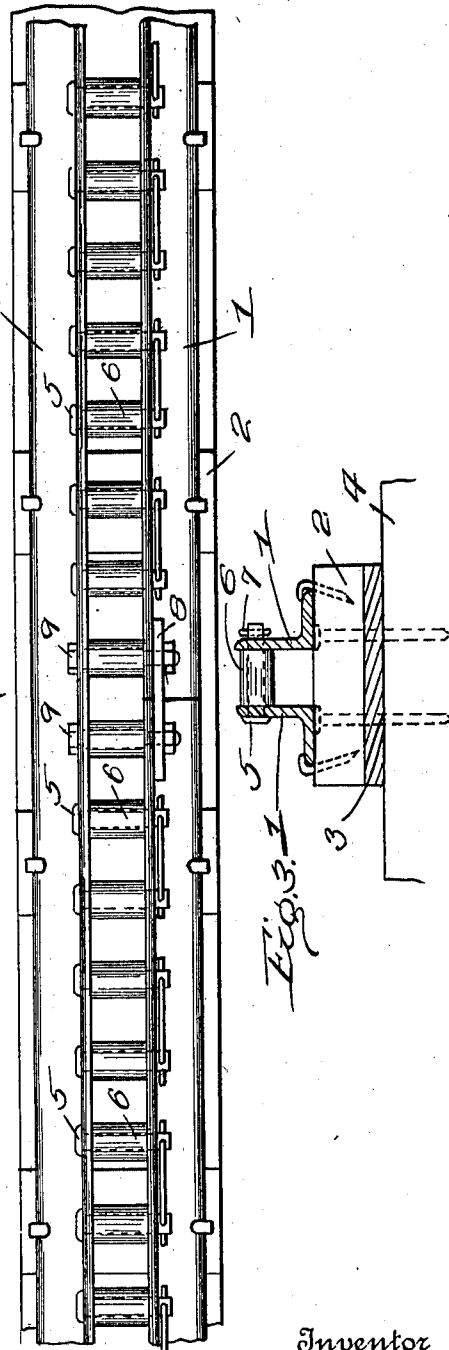
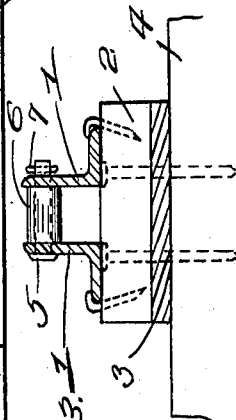


Fig. 3.



Witnesses
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RACK-RAIL.

1,027,076.

Specification of Letters Patent.

Patented May 21, 1912.

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To all whom it may concern:

Be it known that I, FRANK L. SESSIONS, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Rack-Rails, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to rack rails and has for its object to provide a strong and simple construction adapted to be engaged by the rack wheel of a locomotive with a minimum of friction.

Figure 1, is a side elevation of a section of the rack rail embodying my invention. Fig. 2, is a plan view. Fig. 3, is a cross sectional elevation along the line 3—3 of Fig. 1.

Referring to the drawings, 1, 1, are two parallel angle bars. These face each other and are supported by the spacing blocks 2, 2. The blocks 2, 2, rest upon the stringers 3 which in turn rest upon the ordinary railroad cross ties 4, 4.

The vertical flanges of each of the two angle bars are provided with a series of equally spaced apertures. Through these apertures are passed the pins 5, 5, and on the pins are mounted the rollers 6, 6. These rollers are free on the pins so that they may readily rotate. Holes are drilled in the projecting ends of the pins and through these holes are passed the ends of the U-shaped keys 7, 7 each key engaging two pins. The lower ends of the keys are bent slightly to prevent their ready removal from the pins.

At each joint between two angle bars I provide a splice plate 8, suitably apertured to receive the ends of the bolts 9, 9. The holes in the angle bars for these bolts are equally spaced with the holes for the pins, and rollers are mounted on the bolts in the same manner as on the pins. The outer ends of the bolts, which pass through the ends of the angle bars and the joint plates, are slightly reduced in diameter to form a shoulder which makes it possible to draw the plate firmly against the angle bars without causing tension throughout the length of the bolt, which tension would cause the two angle bars to spring and bind the rollers.

The rotatable mounting of the rollers permits them to engage the rack wheel with very little friction and consequently results

not only in the saving of power but also reduces the wear of the rack wheel. It will be noted that the pins are locked against rotation and consequently wear between the pins and the angle bars is prevented. If it is desired to replace any rollers that have become worn, this may be done by straightening and removing the keys and then removing the pins.

What I claim is:

1. In a rack rail, the combination of two parallel bars, a series of equally spaced pins extending transversely from one of the two bars to the other, rollers rotatable on the said pins, and means additional to the said bars for positively locking the said pins against rotation, substantially as set forth.

2. In a rack rail, the combination of two parallel angle bars having vertical flanges the said vertical flanges being adjacent one another, a series of equally spaced pins extending transversely through opposite apertures in the said flanges, and a plurality of keys, each engaging two pins to prevent their rotation, substantially as set forth.

3. In a rack rail, the combination of two parallel bars, a series of equally spaced pins extending transversely from one of the bars to the other, rollers rotatable on the said pins, and a plurality of keys each engaging two pins to prevent their rotation, substantially as set forth.

4. In a rack rail, the combination of two parallel bars, a series of equally spaced pins extending transversely through suitable aligned apertures in the bars, rollers rotatable on the pins, and means for preventing the rotation of the pins comprising a plurality of U-shaped keys, each end of each of which extends through a diametrical aperture in the end of the pin, substantially as set forth.

5. In a rack rail, the combination of two parallel bars, a series of equally spaced pins extending transversely through suitable apertures in the bars, rollers rotatable on the pins, and means locking the pins against rotation comprising an element which extends through suitable diametrical apertures near the ends of a plurality of pins, substantially as set forth.

6. In a rack rail, the combination of two parallel bars, a series of equally spaced pins extending transversely from one of the two bars to the other, rollers rotatable on the

said pins, and means for locking each pin against rotation comprising a key connected to the pin at one point and to another element of the rack rail at another point, substantially as set forth.

7. In a rack rail, the combination of two parallel bars, one of which comprises two adjacent sections, a series of equally spaced transverse pins extending through suitable apertures in the bars, rollers rotatably mounted upon the said pins, the pins at the ends of the said adjacent sections consisting

of bolts having one end reduced to form a shoulder with which the said sections engage, a splice plate apertured to receive the reduced ends of the bolts, and nuts threaded on the said reduced ends and engaging the splice plate, substantially as set forth.

In testimony whereof I affix my signature, in presence of two witnesses.

FRANK L. SESSIONS.

Witnesses:

E. P. SNIVELY,

DUDLEY T. FISHER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
