

No. 650,240.

Patented May 22, 1900.

J. P. HAGAN.
CHAFING IRON FOR VEHICLES.

(Application filed Dec. 13, 1899.)

(No Model.)

Fig. 1.

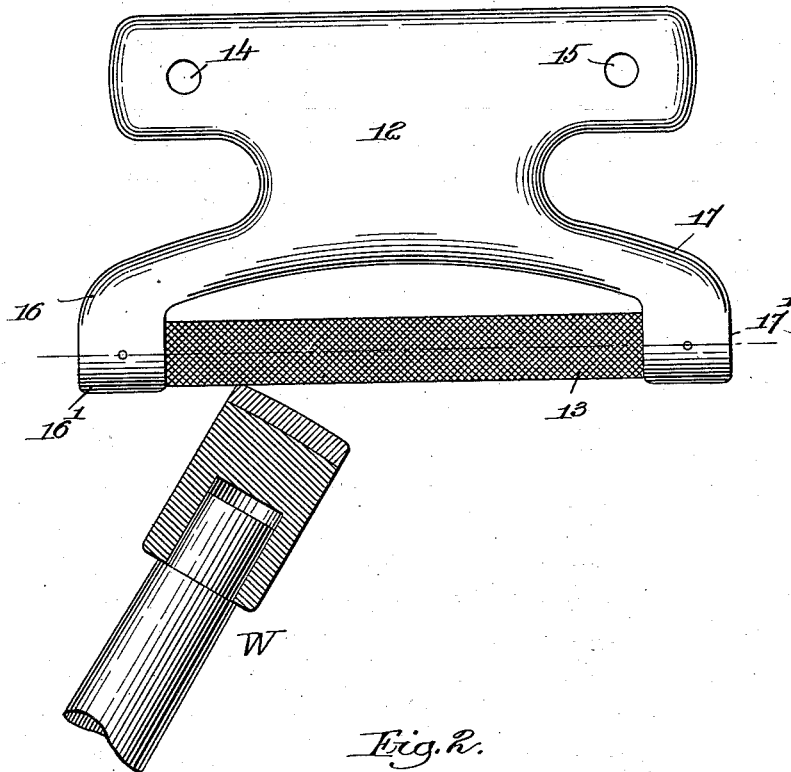


Fig. 2.

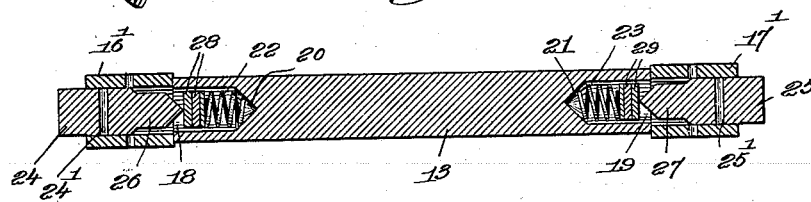


Fig. 3.

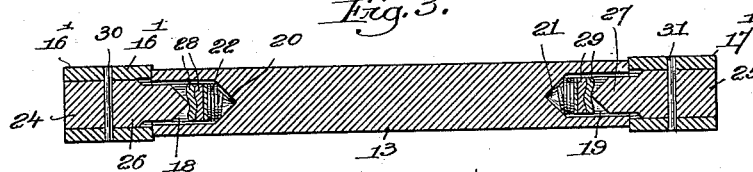
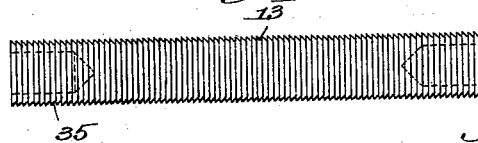


Fig. 4.



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UNITED STATES PATENT OFFICE.

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CHAFING-IRON FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 650,240, dated May 22, 1900.

Application filed December 13, 1899. Serial No. 740,154. (No model.)

To all whom it may concern:

Be it known that I, JOHN P. HAGAN, a citizen of the United States, and a resident of Medway, county of Norfolk, and State of Massachusetts, have invented an Improvement in Chafing-Irons, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

This invention relates to chafing-irons for vehicles; and the object of the invention is to provide a simple and efficient device of the character specified which can be quickly applied to a vehicle and which has a roll adapted to be engaged by the front wheel of a vehicle as the latter turns, so that the wheel cannot possibly injure the body, and the working portion or face of the roll is roughened, by reason of which construction the wheel cannot slip along said roll. In the case of a roll having a smooth surface the wheel in certain cases by sliding on the roll can exert such a leverage upon the same as to either pry the iron as a whole from place or break the casing or frame which sustains the same. In practice two of these irons are provided, and they are ordinarily secured in some simple manner to the body, each being adapted to coöperate with a wheel, and the construction of the improved device is such that the roll cannot possibly rattle or be subjected to end shake, for I provide means to positively prevent vibration or any motion of the roll other than rotary, and, further, the rotation of the roll takes place instantly after the contact with it of the tire.

In the drawings, showing the invention in a simple and convenient embodiment thereof, Figure 1 is a plan view of the iron, showing the roll thereof engaged by a wheel. Figs. 2 and 3 are longitudinal sectional views of the roll and the means for securing the same in place, the first-mentioned figure showing the pivots, hereinafter described, as being entered into their seats and the other figure showing said pivots assembled; and Fig. 4 is an elevation of a modified form of roll.

The chafing-iron illustrated in the accompanying drawings includes in its construction a frame or body portion and a roll, and these parts may be of any suitable character or ma-

terial. The body, however, preferably consists of a cast plate, while the roll is preferably in the form of a longitudinal steel cylinder, as this metal is best adapted to resist the grinding effects of the wheel, and it has a roughened surface or periphery, so that the wheel cannot slip along the same, as is the case where the periphery of the roll is smooth.

In Fig. 1 I have represented the article complete, the frame or body being denoted by 12 and the roll by 13. As previously stated, two of these chafing-irons are ordinarily employed, they being secured to a part of the carriage in suitable manner. The frame or plate 13 is shown as having suitable openings 14 and 15 to receive bolts, rivets, screws, or other convenient fastening devices. The forward side of the plate is bifurcated to present arms or branches 16 and 17, the roll 13 being rotatively supported between said arms and adapted to turn either forward or backward when the tire of the wheel contacts with said roll. The roll shown in said figure is milled or knurled in crisscross or transverse fashion, this form being especially adapted to wheels having rubber tires, as this type of milling cannot possibly injure the tire, although it positively stops slipping of the wheel over the roll. This milling or roughening may be produced in any convenient manner.

Referring to Figs. 2 and 3, it will be seen that the opposite ends of the roll 13 are bored or socketed, as at 18 and 19, to receive coiled springs 22 and 23, respectively, the springs being for the major part of their lengths of less diameter than the main portions of the bores in which they are disposed, the inner ends of the springs being reduced somewhat and fitting the bottoms of sockets 18 and 19. The outer ends of the arms 16 and 17 have bearings 16' and 17' to receive the pivots or studs 24 and 25, the inner ends of said pivots being of reduced diameter, as at 26 and 27, respectively, and each terminating in points adapted to bear against the inner one of a series of washers. The washers contained in one end of the roll are marked 28, while those at the other end are marked 29. The outermost washers in each series are ordinarily made of leather, while the innermost washers are of metal, the latter bearing directly

against the coiled springs previously referred to. Any convenient means may be employed for holding the pivots 24 in place, as pins 30 and 31, which in their effective position, Fig. 3, pass through alined openings in the bearings 16' and 17', respectively. The pivots or studs 24 and 25 are to be pressed inwardly toward each other to bring the transverse openings 24' and 25' therein in alinement with corresponding openings in the bearings 16' and 17' to permit of the introduction of the two holding-pins 30 and 31, the inner ends of the pins being adapted to bear against the outermost washers 28. When the pivots are fully seated and the holding-pins are in place, the inner reduced ends of said pivots will be disposed within the main portion of the bores or sockets 18 and 19; but it will be seen that such reduced portions are of less diameter than the bores, from which it will be understood that the roll does not turn upon the pins, but is free or clear of the same.

In Fig. 3, where the parts are shown assembled for use, the two springs are held under their maximum compression by the pivots 24 and 25, which bear against the outermost leather washers. This construction serves to hold the roller rotatively in place and against vibration or end shake, although said roll may freely turn as the wheel W, engaging the same, rotates.

In Fig. 4 I have shown a different kind of roll, the same being denoted by 13' and having a plurality of circumferential grooves 35, and the grooves are of such form as to produce peripheral teeth straight upon their outer faces and angular or beveled upon their inner ones, and this form of milling or nurling is especially adapted to metal-tired wheels, as the teeth are sharpened or beveled, and they are engaged by the corner of the tire in such manner that the wheel cannot slide over the roll. The chafing-roll has in its periphery a multiplicity of closely-arranged transversely-disposed grooves, the grooves in Fig. 1 being shown as crossing each other while those in Fig. 4 do not, the latter being arranged in parallelism. This construction

serves positively to prevent the slippage of the wheel along the periphery of the roll at whatever point the latter may be engaged.

The invention is not limited to the construction previously described, for this may be considerably modified within the scope of the appended claims.

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

1. A chafing-iron adapted to be secured to a vehicle, comprising a frame, a roll having bores in its opposite ends, detachably-mounted pivots upon the frame fitted in said bores, and yieldable bearings in the bores to receive said pivots.

2. A chafing-iron adapted to be attached to a vehicle, comprising a frame, a rotary roll having bores at its opposite ends, two pivots carried by the frame, springs in said bores, and means acting against the springs and adapted to receive said pivots.

3. A chafing-iron adapted to be secured to a vehicle, comprising a frame, a rotary roll having bores in its opposite ends, pivots carried by the frame, the inner ends of the pivots being fitted in the bores of less diameter than said bores, springs disposed in said bores, and means acting against the springs and adapted to receive said pivots.

4. A chafing-iron adapted to be secured to a vehicle, comprising a bifurcated frame, a roll rotative between the branches of the bifurcation and having bores in its opposite ends, springs seated in said bores, pointed pivots carried by the branches of the bifurcation and having inner reduced ends fitted in said bores and of less diameter than said bores, springs in the latter, and means acting against the springs and adapted to receive the points of the pivots.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN P. HAGAN.

Witnesses:

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