

E. P. ROCHE.

Improvement in Chafe-Irons for Wheeled Vehicles.

No. 127,645.

Patented June 4, 1872.

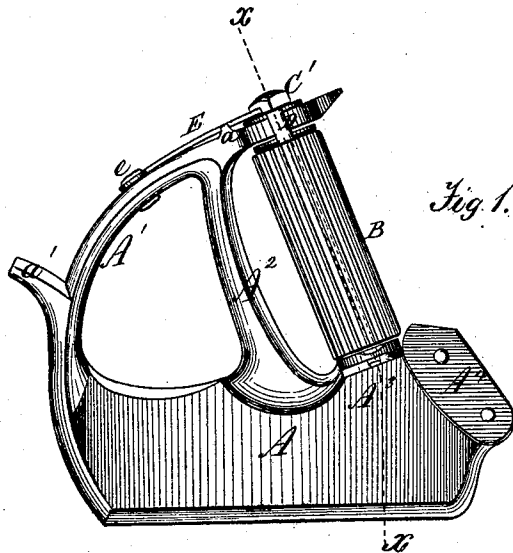


Fig. 1.

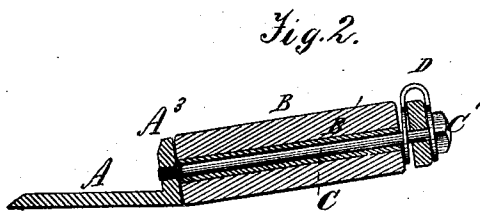


Fig. 2.

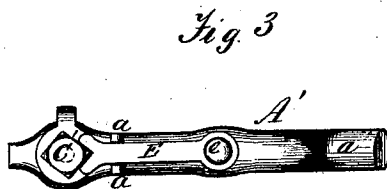
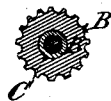


Fig. 3.

Fig. 4.



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UNITED STATES PATENT OFFICE.

EDWARD P. ROCHE, OF BATH, MAINE.

IMPROVEMENT IN CHAFE-IRONS FOR WHEELED VEHICLES.

Specification forming part of Letters Patent No. 127,645, dated June 4, 1872.

Specification describing certain Improvements in Chafe-Irons for Wheeled Vehicles, invented by EDWARD P. ROCHE, of Bath, in the county of Sagadahoc and State of Maine.

This invention relates to that class of devices which are used as guards on wheeled vehicles to prevent the front wheels, in turning curves, from chafing against the body thereof; and my improvement, having in view the greater perfection of that kind of these devices in which a roller serves as such a fender, consists, first, in the employment of a fluted roller, which possesses this important advantage over the smooth rollers now in use, that the receding portions—the principal ones—of its surface, when once galvanized or otherwise protected against corrosion, will remain thus coated, as the wheels grind off only the coating of the projecting edges; secondly, in the combination, with the roller and its pintle, of a horseshoe-spring, which, spanning one jaw of the supporting-frame, and carried by the pintle, presses with one of its legs, and with sufficient force, against one end of the roller to prevent the rattling of the latter against the frame by checking its endwise movements on the pintle; thirdly, in a projection formed on the outer jaw of the frame as an additional safeguard against chafing of the wagon-body by the wheel should it from some cause turn past the end of the roller and jaw of the frame; and, lastly, in combining with the roller-pintle, which is, at its inner end, screwed into the frame, a spring with a V-notch in its end, fitting the corners of the head of the pintle, for locking the latter when screwed home, which spring is pivoted to the frame, so that it may be swung out of the way of the head of the pintle; but, in being sprung over such head, enters between projections on the frame, which prevent its turning.

Figure 1 is a plan view of a chafe-iron embodying my improvements. Fig. 2 is a vertical section on line *xx* of Fig. 1. Fig. 3 is a side elevation. Fig. 4 is a transverse section of the fluted roller detached.

The same letters of reference are used in the designation of identical parts.

The chafe-irons are attached to the body of the vehicle in such a manner that the axes of their rollers shall be parallel, or nearly so, to

the axis of the wheels on the latter striking the surface of the rollers. The roller-frames, of which a right-handed one and a left-handed one are used on each vehicle, are composed of a plate, A, with a surface adapted to the form of the body of the particular style of wagon to which it is to be applied. From the rear end of this plate branches off a curved arm or jaw, A¹, which, being strengthened by the brace A², serves as a support for the outer end of the roller-pintle C, the inner end of which is screwed into a screw-threaded eye in the lug A³ of the frame. The forward end of the plate A is armed with a piece of steel, A⁴, to protect the softer metal of the plate against wear by the wheel and guide the latter toward the roller B. The surface of this roller is fluted, and intended to be galvanized or painted to guard against its corrosion and its consequent mean appearance. Were its surface made smooth this non-corrosive coat would soon be ground off by the wheel; whereas in a fluted roller like mine, such coating will only be ground off the projecting edges of the channels, and very little, comparatively, of the metal exposed to corrosion. The metal of the roller is case-hardened, and its eye is lined with a bush, B', of Babbitt or other non-corrosive and non-frictional metal. It is prevented from rattling against the frame by the spring D, which being of the curved form, best seen in Fig. 2, and held in place by the pintle C passing through perforations in its legs, straddles the jaw A¹, and bears with one of its legs against the outer end of the roller with sufficient tension to prevent the endwise movements of the latter when left to itself. The pintle C, when screwed home, is locked by the spring E, which is pivoted to the jaw A¹ at *e*, and constructed with a V-notch in its other end fitting a corner of the head C' of the pintle. This locking-spring is turned out of the way while the pintle is being inserted, after which it is sprung over the head C', entering at the same time between the projections *a a* on the jaw A¹, which prevent its turning of its own accord by the jarring of the vehicle. Another and longer projection, *a'*, is formed on the jaw A¹, which shall stop the wheel in case it turns toward the carriage-body outside of the said jaw.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A chafe-iron, combining in its construction a fluted roller, B, substantially as and for the purpose set forth.

2. In combination with the roller and its pintle, the curved spring D, arranged and operating substantially in the manner and for the purpose specified.

3. The projection *a'* on the roller-frame, substantially as and for the purpose specified.

4. The pivoted and V-notched locking-spring

E, in combination with cornered head of the pintle C and the projections *aa* on the jaw A¹, substantially as and for the purpose specified.

In testimony whereof I have signed my name to this specification this 27th day of November, A. D. 1871, in the presence of two attesting witnesses.

EDWD. P. ROCHE, M. D.

Witnesses:

WILLIAM H. FOGG,
J. I. WELCH.