

No. 617,483.

Patented Jan. 10, 1899.

L. F. FALES.
CHAFE IRON.

(Application filed Nov. 18, 1898.)

(No Model.)

FIG. 1.

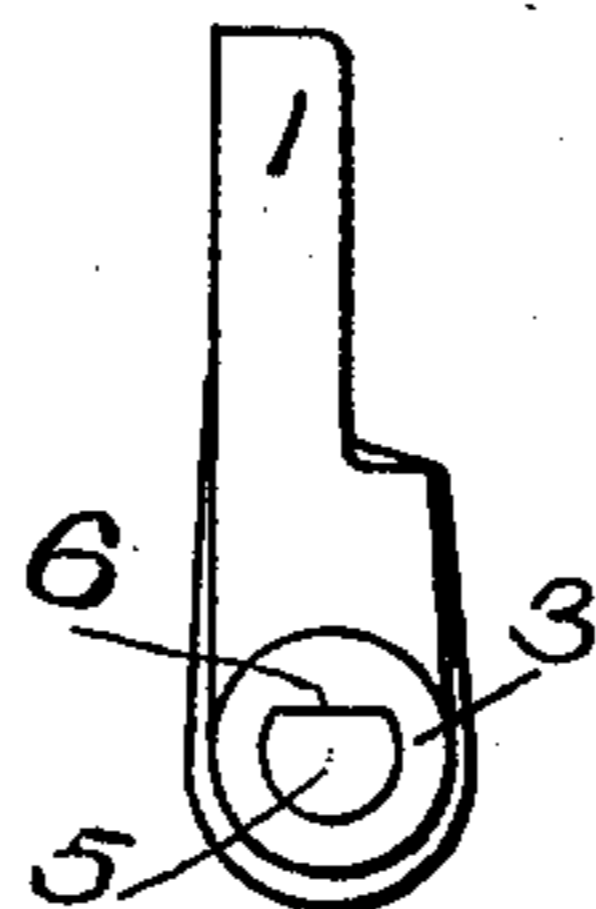
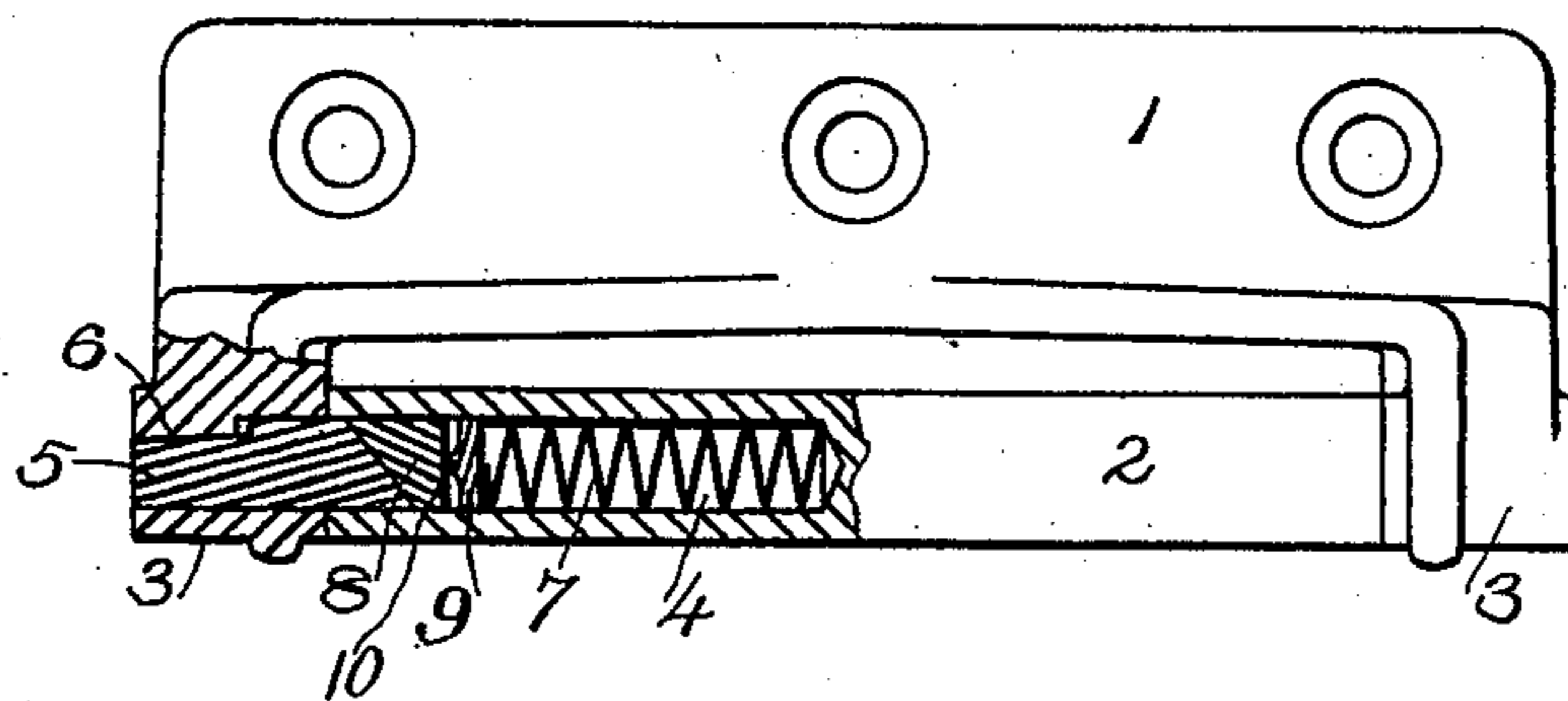


FIG. 2.

WITNESSES

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CHAFE-IRON.

SPECIFICATION forming part of Letters Patent No. 617,483, dated January 10, 1899.

Application filed November 18, 1898. Serial No. 696,791. (No model.)

To all whom it may concern:

Be it known that I, LEWIS F. FALES, a citizen of the United States, residing at Walpole, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Chafe-Irons; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to chafe-irons for vehicles, and particularly to a roller chafe-iron.

The object of my invention is to produce a roller chafe-iron in which the roller shall be efficiently supported in the framework and by means which will prevent rattling of the same as a result of wearing of the parts in use.

To this end, therefore, my invention consists in a roller chafe-iron hereinafter to be described, and more particularly set forth in the claims.

In the drawings illustrating the preferred form of my invention, Figure 1 is a plan view of the iron with a portion cut away, showing the construction of the support for the roller; and Fig. 2 is an end view of the same.

Like reference characters refer to like parts throughout.

1 indicates the supporting-frame for the roller 2, which is mounted in bosses 3, provided on the ends of the frame. The body of the frame is adapted to be secured to the vehicle-body in any suitable manner.

The roller 2 is provided with cylindrical longitudinal holes 4 in its ends, centrally disposed with relation to the surface of the roller. These holes 4 are adapted to receive pins 5, which project into the holes from the bosses. In order to prevent the pins from rattling and rotating in the bosses, they are taperingly flattened on one side near their outer end, as at 6, and are received in a correspondingly-shaped hole in the boss. By means presently to be described the pins 5 are pressed outwardly, and as a result the tapered portion of the pin is pressed into the hole in the boss, so that play between the two is effectively prevented. The roller rotates on the pins, and any suitable means may be provided to press the pins outwardly. The preferred means for pressing the pins outwardly consists of a spiral spring 7 in the hole 4, which normally presses

outward toward the pin 5. In order to prevent a rattling of the pin 5 in the hole 4 of the roller, the inner end of the pin 5 is cut off on a diagonal plane, and a wedge 8, which consists of a short section of a cylinder cut off on its outer end on a diagonal plane corresponding to the inner end of the pin 5. The spring 7 presses the wedge 8 against the pin 5, and the two diagonally-cut ends of the pin 5 and the wedge 8 will slide on each other until together they fill the entire size of the hole 4, or, in other words, until the roller is pressed against the side of the pin, so that if the hole 4 in use gradually becomes enlarged by wear still the whole aperture will be filled by the parts and rattling will be prevented.

While the device described is an efficient chafe-iron and one which will not in the course of time rattle, I prefer to interpose between the spring 7 and the wedge 8 a washer 9, which by reason of the friction of the spring against it will be constrained to rotate with the roller. Thus the roller rotates on the pin 5 and wedge 8 without wearing off the end of the spring. To this end I preferably provide the outer side of the washer with a centrally-disposed projection 10, which tends to reduce the friction between the washer 9 and the wedge 8 to a smaller amount than that between the washer 9 and the spring 7. The spring will preferably have an outside diameter very closely approximating the diameter of the hole 4, so that the spring shall not rattle therein. In like manner the washer 9 will also correspond closely to the size of the hole 4 for the same reason.

In assembling the chafe-iron a spring is placed in the bottom of one of the holes, and upon it is placed the washer, followed in turn by the wedge and by the pin. Then holding the pin lightly in position with one hand the roller may be turned end for end and the corresponding parts placed in similar position in the other end of the chafe-iron. Then by pressing the pins into the holes against the pressures of the springs the roller and its pins may be inserted between the bosses 3, and when the pins register with the holes they will be pressed thereinto by the springs, and then a slight turning of the roller will bring the flattened sides or the pins into register with the corresponding portion of the holes,

and they will be pressed entirely out to the end, thus being brought to their operative positions. The device then is ready for application to the vehicle.

5 Among many advantages of this construction there may prominently be mentioned these: that the device will not rattle and that the roller may readily be removed from the frame during painting or if for any reason the
10 device should become clogged.

Having thus described my invention, I claim as new and desire to secure by Letters Patent of the United States—

15 1. In a chafe-iron, the combination with a frame, of a roller provided with holes in its ends, pins supported in the frame and projected into the holes in the ends of the roller, and means to press the roller against the sides of the pins, substantially as described.

20 2. In a chafe-iron, the combination with a frame provided with tapering holes, of a roller provided with holes in its ends, tapering pins supported in said tapering holes in the frame and projected into the holes in the roller, and
25 means to press the roller against the sides of the pins, substantially as described.

3. In a chafe-iron, the combination with a frame, of a roller provided with holes in its ends, of pins supported in the frame and pro-

jected into the holes in the roller, wedges to 30 press the roller against the sides of the pins and springs to press the wedges against the roller, substantially as described.

4. In a chafe-iron, the combination with a frame, of a roller provided with holes in its 35 ends, stationary pins supported in the frame and projected into the holes of the roller, means to press the roller against the sides of the pins, a spring to actuate said means and a washer interposed between the said spring 40 and the said means, substantially as described.

5. In a chafe-iron, the combination with a frame, of a roller provided with holes in its 45 ends, pins supported in the frame and projected into the holes in the roller, the inner ends of the said pins being cut on diagonal planes, correspondingly-shaped wedges to press the roller against the sides of the pins and means to press the wedges against the 50 roller, substantially as described.

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

LEWIS F. FALES.

Witnesses:

A. E. WHYTE,

HORACE VAN EVEREN.