(No Model.)

S. ELLIOTT.

TIRE FOR WHEELS.

No. 464,014. Patented Dec. 1, 1891.

Fig: 1.

Fig: 2.

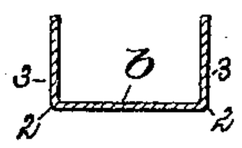


Fig: 3.

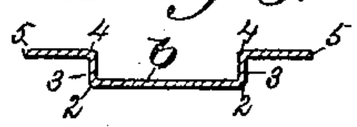


Fig: 4.

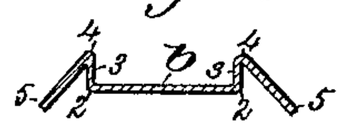


Fig: 5.

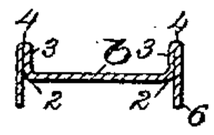
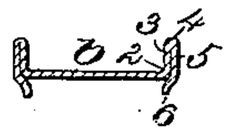


Fig: 6.



Witnesses.
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UNITED STATES PATENT OFFICE.

STERLING ELLIOTT, OF NEWTON, MASSACHUSETTS.

TIRE FOR WHEELS.

SPECIFICATION forming part of Letters Patent No. 464,014, dated December 1, 1891.

Application filed February 13, 1891. Serial No. 381,311. (No model.)

To all whom it may concern:

Be it known that I, STERLING ELLIOTT, of Newton, county of Middlesex, State of Massachusetts, have invented an Improvement in Tires for Wheels, 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 has for its object the production of an improved form of metallic tire-holder for wheels, having separate fellies, of wood or other material, provided with a substantially flat tread or bearing portion, as well as the method of making the same.

In accordance with this invention a flat strip of metal is subjected to the action of suitable dies or rolls several times in succession, each set being differently formed, whereby the side edges of the strip are first upturned at substantially right angles with relation to the central portion. Then the upturned edges are bent at a point near the central portion outwardly at substantially right angles or parallel with the central portion, then the parallel edges bent downwardly into a diagonal position with relation to the central portion, and thereafter bent outwardly at right angles with relation to the central portion and parallel with the upwardly-extended portions, and thereafter the edges are inturned slightly beneath the central portion. The strip will preferably be made of steel, and hence several successive operations are necessary to form it.

Figure 1 shows in cross-section a flat strip of steel or equivalent from which the herein-to-be-described tire-holder is made; Figs. 2 to 6, the same strip as it will appear after it has been operated upon by the successive sets of dies or rollers.

The flat strip *a*, of metal, is subjected to the successive action of suitable dies or rollers arranged differently in sets, each to give to the strip a different formation. The strip is first bent at 2 2, so that its side edges 3 3 lie substantially at right angles with relation to the central portion *b*. (See Fig. 2.) The side edges 3 3 are then bent at 4 4 outwardly, leaving portions 3 3 at substantially right angles with relation to the central portion and the portions 5 5 substantially parallel with the central portion *b*. (See Fig. 3.) Portions 5 5 are then bent downwardly into a diagonal position with relation to the central portion *b*, as represented in Fig. 4. The side portions 5 5 are then bent farther downwardly into a position substantially at right angles with relation to the central portion *b* and parallel with the portions 3 3, as shown in Fig. 5. The portions 5 5 are then bent inwardly toward each other beneath the central portion *b*, as at 6 6. (See Fig. 6.)

The tire-holder thus formed presents a flat central portion *b*, which bears on the substantially flat tread of the felly, a flange at each side of and above the central portion, which receive between them the rubber or other tire, and flanges at each side of and below the central portion to engage the felly of the wheel and thereby retain the tire-holder and tire carried thereby in place on the felly.

A tire-holder having side flanges above and side flanges below its central portion possesses great advantages over any tire-holder known to me, in that it cannot be readily removed from the felly after it has once been applied and the rubber tire held by it cannot be readily removed from its place after once applied.

It will be noticed that this tire-holder is in no sense a rim or felly, as it is entirely separate therefrom, nor is it a tire proper, but is an independent holder to connect the tire and felly throughout their circumference, being thereby distinguished from a rim and tire holder forming one and the same device.

I claim—

1. A tire-holder for wheels, consisting of a metallic strip bent at 2 2 to present a flat central portion *b* to rest upon the substantially flat tread of the felly and side portions 3 3 at right angles with relation thereto to retain and hold the tire, also bent at 4 4 to form side depending portions 5 5 to bear upon the sides of the felly and retain the tire-holder therefor substantially parallel with the side portions 3 3 and having the inturned portions 6 6, substantially as described.

2. The method herein described of making tire-holders, which consists in bending a metallic strip at 2 2 to present a central portion *b* and side portions 3 3, bending it again at 4 4 to present side portions 5 5 and depending portions 6 6, substantially as described.

3. The method herein described of making

tire-holders for wheels, which consists in bending a metallic strip at 2 2 to present a central portion *b* and side portions 3 3, bending it again at 4 4 to present the side portions 5 5, bending the side portions 5 5 downwardly into a diagonal position with relation to the central portion, bending said portions 5 5 farther down to a position substantially at right angles with relation to the central portion and parallel with the portions 3 3, and thereafter inturned on depending portions 6 6, substantially as described.

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

STERLING ELLIOTT.

Witnesses:
BERNICE J. NOYES,
EDWARD F. ALLEN.