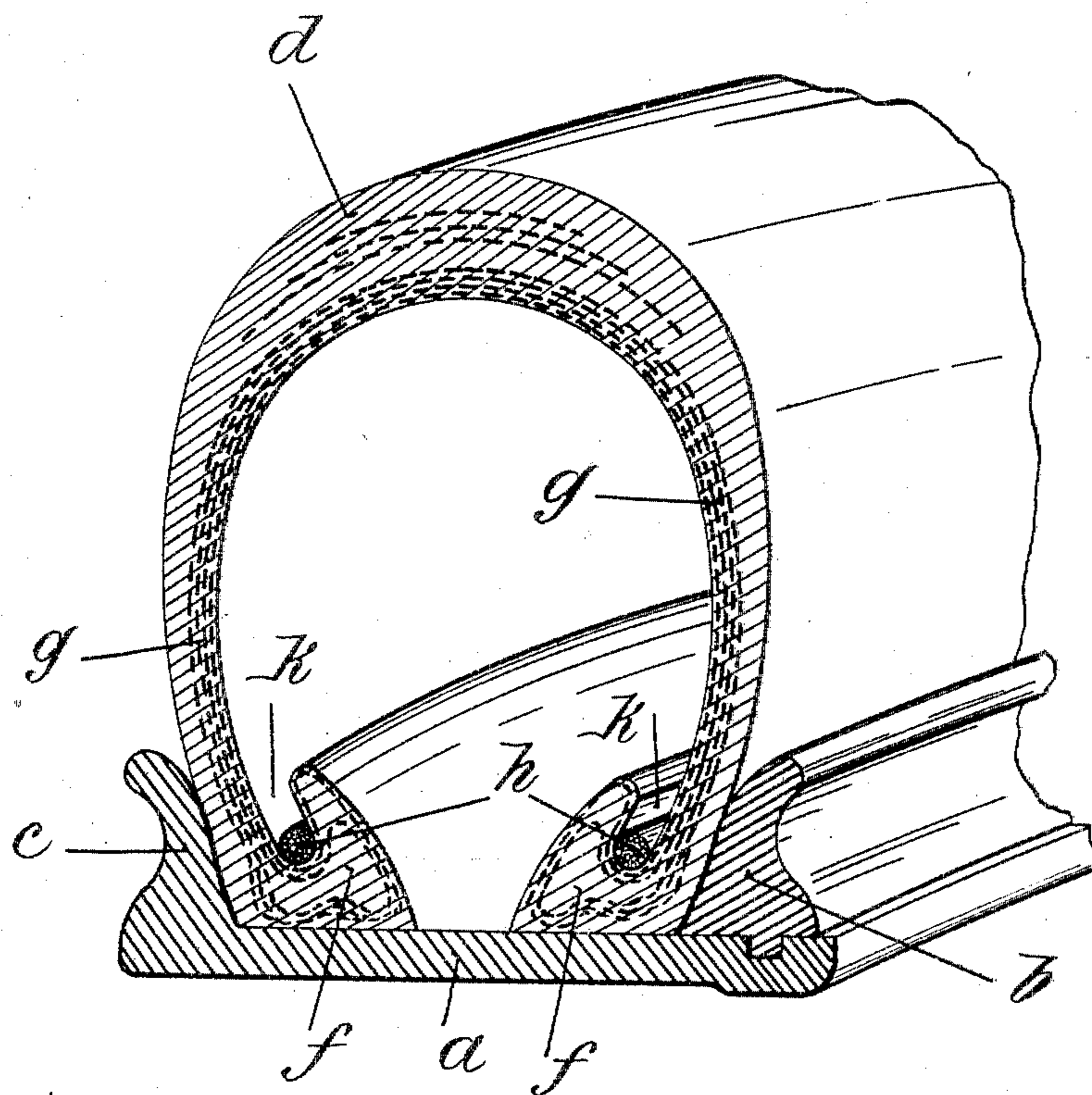


No. 780,209.

PATENTED JAN. 17, 1905.

A. VON LÜDE.
FASTENING FOR WHEEL TIRES.
APPLICATION FILED APR. 21, 1904.



Witnesses:-
Henry Thiele
J. George Barry.

Inventor.
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UNITED STATES PATENT OFFICE.

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TO THE FIRM OF MITTELDEUTSCHE GUMMIWAREN-FABRIK LOUIS
PETER, OF FRANKFORT-ON-THE-MAIN, GERMANY.

FASTENING FOR WHEEL-TIRES.

SPECIFICATION forming part of Letters Patent No. 780,209, dated January 17, 1905.

Application filed April 21, 1904. Serial No. 204,149.

To all whom it may concern:

Be it known that I, ARTHUR VON LÜDE, engineer, residing at 45 Schumannstrasse, Frankfort-on-the-Main, Germany, have invented
5 new and useful Improvements in Fastenings for Motor-Wheel Tires, of which the following is a specification.

This invention relates more particularly to those tires in which there is laid within the
10 foot of the tire or tire-case a complete closed and non-expansive ring—such, for example, as a ring of wire or wire rope. Heretofore such tires, though they have been used on
15 bicycle-wheels, have not been used on motor-wheels, owing to the difficulty of getting them over the flanges of the tires. The purpose of this invention is to facilitate the application of these tires to motor-wheels.

In carrying out my invention I make the
20 wheel-felly with an exterior circumference of plain cylindrical form and with a detachable flange—such, for example, as is shown in United States Patent No. 742,486—and form the tire-foot to fit close to this felly and as
25 stiff as practicable; but instead of making the flanges of the felly with an inward curvature I prefer to make them with an outward flare, or at least without any curvature inward; but most important features of my invention are
30 the formation of an inwardly-open channel in the foot of the tire-case, into which channel the non-expansive ring is placed, and a thickening of the inner edge of the tire-case, so that the said edge may not slip through be-
35 tween said ring and the felly, but that the foot of the case may be held to the felly by the pressure of the inner air-inflated tire.

While it is most advantageous to use a non-expansive ring of wire or wire rope, which se-
40 curely presses the tire-foot close to the felly, yet a very useful result may be attained by the insertion into the channel of the tire-case of a ring which if sufficiently stiff need not be non-expansive. For instance, if cane is in-
45 serted this will give the foot of the tire-case an important hold, such as can hardly be attained by the insertion therein of a reinforcement of fibrous material, and thereby

prevent the case from springing out of the felly.

According to this invention the felly-flanges
50 may be made higher than formerly to better prevent the springing out of the edges of the tire-case, and they may have an outward flare, so that the tire-case when it turns over to the
55 side presses lightly against them and does not suffer.

The accompanying drawing represents a transverse section of a wheel-felly and a tire-
60 case illustrating my invention.

a is the principal part of the felly; *b*, the removable flange; *c*, the fixed flange.

d is the case for an air-tire, which is provided with the two thickenings *f*, reinforced by a lining or insertion of fibrous material *g*.
65 The thickenings *f* are so formed that their inner diameter corresponds exactly to the outer diameter of the felly *a*. In the channel *h*, open inwardly or toward the interior of the case, there lies the wire ring *h*. The thick-
70 enings *f* must in every case be considerably greater than the distance of this ring from the felly.

Now what I claim, and desire to secure by Letters Patent, is the following:

1. The combination with a motor-wheel the felly of which has an externally-cylindrical part and a removable flange, of a tire-casing having its foot fitted to said felly and formed with an inwardly-open channel, and a non-ex-
80 pansive or stiff ring inserted into said channel, substantially as herein described.

2. The combination with a motor-wheel, the felly of which has a removable flange, of a tire-casing having an inextensible inwardly-pro-
85 truding foot which is fitted to said felly and has an inwardly-open channel, and a closed metal ring inserted into the said channel.

In testimony whereof I have signed my name to this specification in the presence of two sub-
90 scribing witnesses.

ARTHUR VON LÜDE.

Witnesses:

JEAN GRUND,
CARL GRUND.