

914,381.

Fig.1.

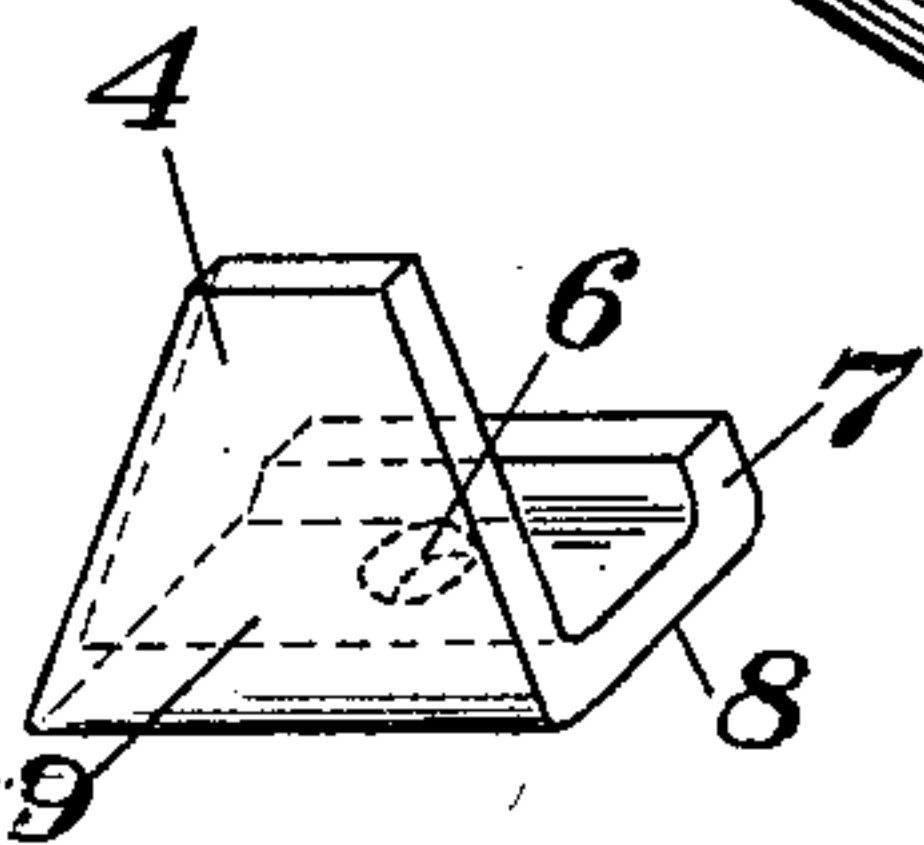


Fig. 5.

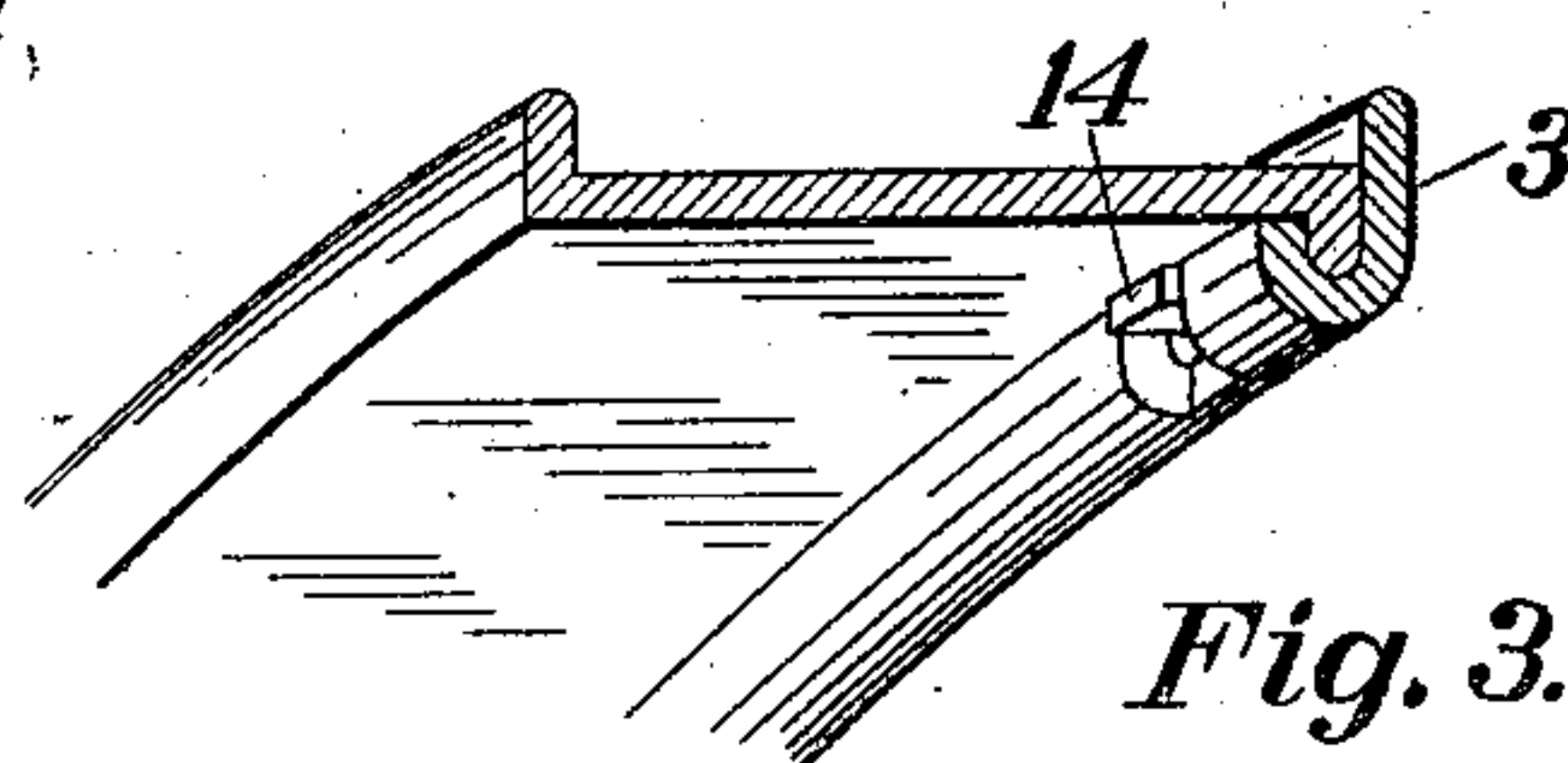


Fig. 3.

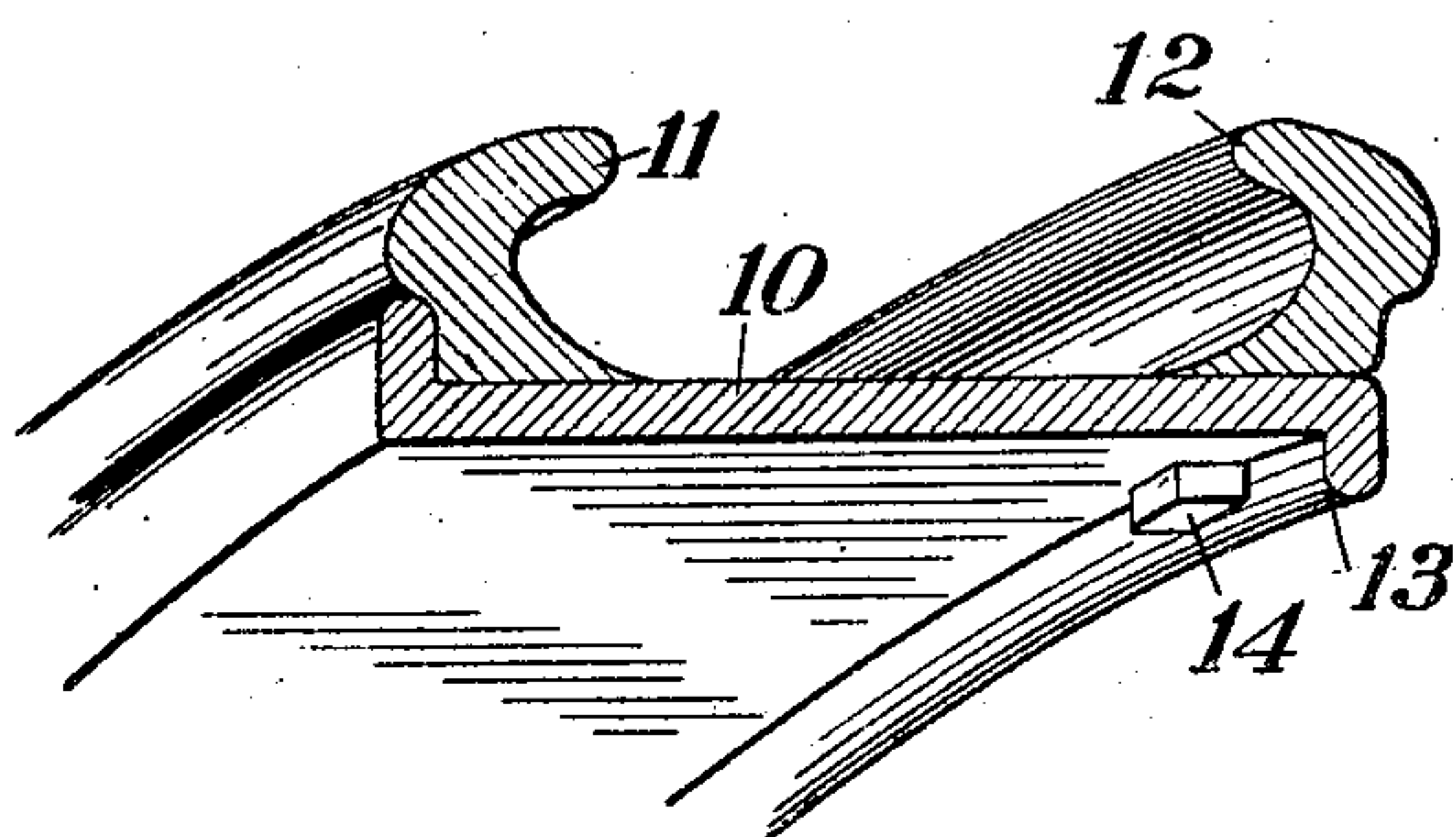


Fig. 2.

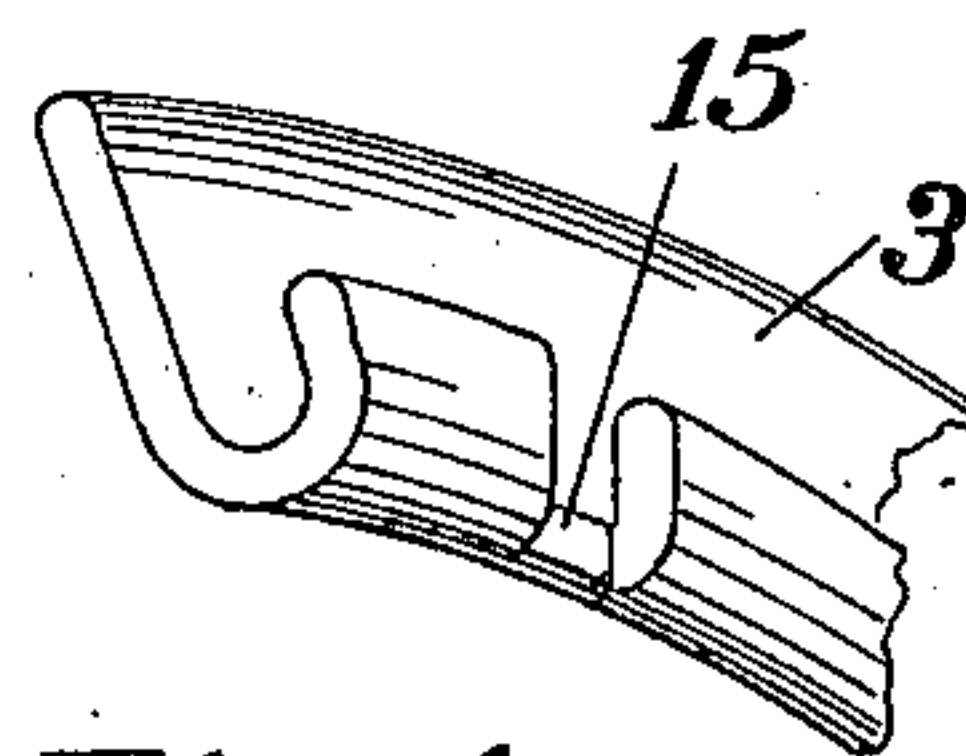


Fig. 4.

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UNITED STATES PATENT OFFICE.

RICHARD S. BRYANT, OF COLUMBUS, OHIO, ASSIGNOR TO THE BRYANT STEEL WHEEL AND RIM COMPANY, OF COLUMBUS, OHIO, A CORPORATION OF OHIO.

LOCKING-RING FOR WHEEL-RIMS.

No. 914,381.

Specification of Letters Patent.

Patented March 9, 1909.

Application filed April 6, 1907. Serial No. 366,746.

To all whom it may concern:

Be it known that I, RICHARD S. BRYANT, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Locking-Rings for Wheel-Rims, of which the following is a specification.

My invention relates to improvements in locking rings for wheel rims, especially rims provided with detachable flanges, held in place by an outward springing locking ring having a channel adapted to receive a downturned flange on the rim body, and adapted to prevent lateral displacement of the tire-retaining flanges, and relates especially to the inventions disclosed in my pending application, Serial No. 270,218 and my Patent No. 841,619.

My improvement comprises means for securing one end of the locking ring while the same is being positioned upon the rim, so that when the ring is in locking position, the locking device shown in the patent above mentioned may be positioned quickly and easily without separating or in any manner changing the position of the ends of the locking ring. Unless some means is provided for stationing one end of the locking ring, while it is being manipulated into proper locking position, it is in many cases necessary to slide the ring circumferentially until the lug upon which the locking device is positioned is brought midway of the opening between the ends of the ring.

The objects of my invention are, therefore, to provide means for positively holding one end of the locking ring while it is being manipulated into locking position, and also to assure its being positioned properly for the reception of the locking device between its ends, and upon the lug, without further manipulation of said ring after it has once been placed in locking position.

With these and other objects in view, which will be more fully described hereinafter, I refer to the accompanying drawings, which are hereby made a part of the specification, in which—

Figure 1 is a portion of a wheel containing my device, Fig. 2 is a transverse section of a rim with tire-retaining flanges in place, showing the lug used to accomplish the present purposes, Fig. 3 is a transverse sec-

tion of a rim having my improvements; Fig. 4 is a perspective of a portion of the locking ring having a notch therein; Fig. 5 is a perspective of the locking devices adapted to be positioned between the ends of the locking ring.

In the drawings, in which the same numerals indicate identical parts throughout, 1 is a wheel provided with the rim 10 having the oppositely turned flanges thereon, one indicated at 13, the tire-retaining flanges 11 and 12 adapted to be positioned upon the rim in the manner clearly set forth in my pending application No. 270,218. The tire 2 is adapted to be placed upon the rim in engagement with the tire-retaining flanges 11 and 12, whereupon the locking ring 3 is sprung into engagement with the rim body as shown in Fig. 3, the shorter arm of the ring engages with the downturned flanges on the rim and the longer arm being adapted to extend radially on the outer side of the rim to points above the upper surface of the same, and against which longer arm the flange 12, when the tire is in position, will normally engage, and be held thereby against lateral removal. The ends of the locking ring are beveled as shown in Fig. 1, and a clip 4 having preferably the triangular face 9, the channel 8, and the flange 7, and provided with the opening 6 therethrough to receive the lug 5 depending from the rim body, is adapted to occupy the space between the ends of the locking ring thereby compelling the same into a closer engagement with the rim.

On the under side of the rim body, adjacent the downturned flange thereon, and also adjacent the depending lug 5 thereon, is a lug 14 which may be of any desired size and shape, and is located upon the line of contact of the shorter arm of the locking ring with the under face of the rim body. Adjacent the end of the locking ring is provided a notch 15 to receive the lug 14 as shown in Fig. 3; it is apparent that so long as the lug is positioned in the notch, the locking ring cannot be removed circumferentially, but it may be sprung either inwardly or outwardly, or laterally. Therefore, if the end of the locking ring be positioned upon the lug, one hand of the operator may maintain the engagement with said lug, while the other hand may grasp the opposite end of the ring and manipulate

the same into engagement with the down-
turned flange throughout its circumference;
in order to position the ring properly it
may be necessary not only to spring the
same inwardly but also laterally. If the
lug and notch are properly located upon the
rim and ring respectively, it will be found
that when the ring is placed upon the down-
turned flange on the rim body, the clip 4
may be positioned upon the lug 5, and
pushed upwardly thereon into place between
the ends of the locking ring without further
positioning of said ends. I therefore make
the positioning of the locking ring a posi-
tive matter, render it much more easy to
position the same, and render unnecessary
any circumferential movement of said ring
in order to accommodate the locking device
which is secured in place upon a lug de-
pending from the rim body. When it be-
comes necessary to remove a tire in service,
it is requisite that the same be done quickly
and easily and with the type of locking ring
shown herein it is very desirable to provide
some means for making the positioning of
the same positive, so that when the manipu-
lation necessary to seat the ring is com-
pleted, nothing further remains to be done
except to insert the clip or locking device
between the ends, and secure the said de-
vice upon the rim body.

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

1. A positioning device for a split locking
ring for automobile tire-retaining flanges,

comprising a projection on the under face
of the wheel rim body, a notch in said lock-
ing ring adjacent an end thereof to engage
said projection to hold said ring against
circumferential movement while the latter
is being manipulated into proper locking
position upon the rim body.

2. A locking device for detachable tire-
retaining flanges for vehicle wheels compris-
ing a channeled split locking ring having
a recess therein adjacent one end thereof, a
projection on the wheel rim adapted to en-
gage in said recess to prevent circumferen-
tial movement of said ring, whereby said
ring is properly positioned for the appli-
cation of a clasp member to secure the same
upon the rim body.

3. A locking device for detachable tire-
retaining flanges for automobile wheels com-
prising a split expansible lock ring having a
recess adjacent one end thereof, a flange on
said rim body with which said ring is adapt-
ed to engage, a clasp member, a lug on the
rim body adapted to engage in said recess
to hold said ring against circumferential
movement while the same is being sprung
into position upon the rim body, whereby
the ends of said lock ring are located at the
point desired for the application of said
clasp member.

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

RICHARD S. BRYANT.

Witnesses:

GEO. W. RIGHTMIRE,
A. RAGER.