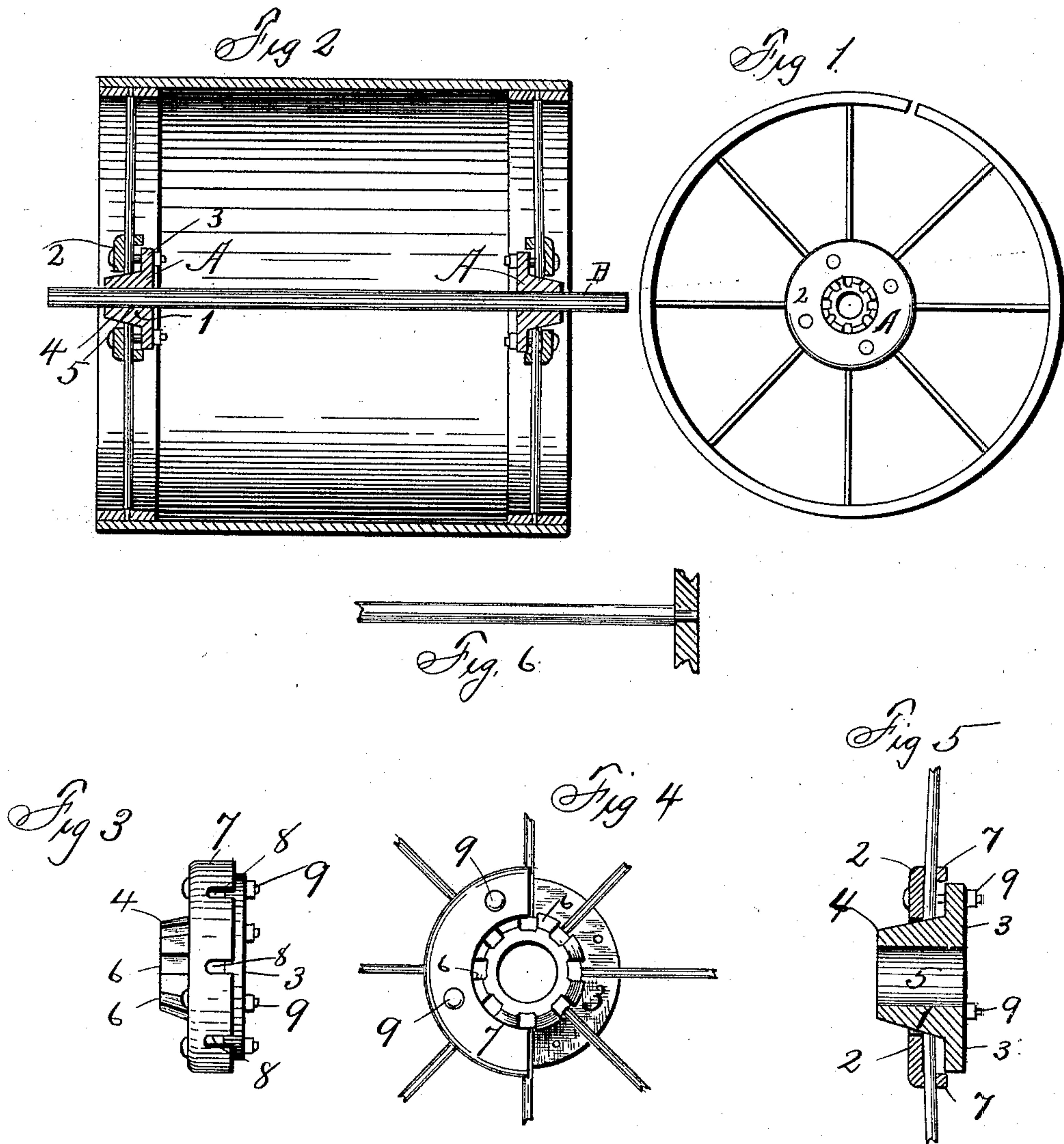


(No Model.)

G. R. THOMSON & H. T. COTTRELL.  
DEVICE FOR EXPANDING FELLIES.

No. 463,206.

Patented Nov. 17, 1891.



Witnesses.

Ella V. Mack.  
C. B. Kline.

George R. Thomson Inventors  
Henry T. Cottrell  
By their Attorneys  
Smith & Denison



# UNITED STATES PATENT OFFICE.

GEORGE R. THOMSON AND HARVEY T. COTTRELL, OF GOUVERNEUR, NEW YORK, ASSIGNORS OF ONE-THIRD TO W. P. STACY, OF SAME PLACE.

## DEVICE FOR EXPANDING FELLIES.

SPECIFICATION forming part of Letters Patent No. 463,206, dated November 17, 1891.

Application filed February 12, 1891. Serial No. 381,134. (No model.)

*To all whom it may concern:*

Be it known that we, GEORGE R. THOMSON and HARVEY T. COTTRELL, of Gouverneur, in the county of St. Lawrence, in the State of New York, have invented new and useful Improvements in Devices for Expanding Fellies, of which the following, taken in connection with the accompanying drawings, is a full clear, and exact description.

Our invention relates to devices for expanding fellies or rims of wheels.

Our object is to produce an easy and convenient device whereby the length of the spokes between joints may be increased, thereby expanding the fellies or rims thereon.

Our invention consists in the several novel features of construction and operation hereinafter described, and which are specifically set forth in the claims hereto annexed.

It is constructed as follows, reference being had to the accompanying drawings, in which—

Figure 1 is an end view of a land-roller in which the expander is used. Fig. 2 is a longitudinal section thereof through the center, showing an axle upon which the same is mounted. Fig. 3 is an end view of the expanding hub with the spokes removed. Fig. 4 is a side view thereof, with a part of the outer casing cut away, showing the spokes resting in the slotways upon the inner head of the hub. Fig. 5 is a section thereof on line X X, Fig. 4. Fig. 6 is a view of the outer end of one of the spokes, showing the tenon entering the rim or felly.

Similar letters of reference indicate the corresponding parts.

A is a hub consisting of two parts 1 and 2. The part 1 consists of a base 3 and a frusto-conical head 4, erected thereon and having a central opening 5, through which an axle B passes. The outer periphery of this frusto-conical head 4 is provided with any desired number of slotways or recesses 6, for the purpose hereinafter set forth. The part 2 of the hub consists of a disk having a central opening, through which the head 4 may pass, an annular flange 7, in which are slotways 8 or holes corresponding with the slotways 6 in the head 4. Through the slotways 8 or holes and into the slotways or recesses 6 we insert

the inner ends of the spokes of the wheel, as shown in Fig. 4 of the drawings, and these two parts 1 and 2 of the hub are secured together by bolts 9. The outer ends of the spokes enter and are secured to the rim in any ordinary and well-known manner.

It will be observed that the lengths of the spokes between joints may be varied by adjusting the two parts of the hubs 1 and 2 with respect to each other, which causes the inner ends of the spokes to traverse the slotways in the frusto-conical head 4.

It will thus be seen that if we desire to expand the rim of the wheel it will simply be necessary to tighten up the nuts upon the bolts 9, which will force the inner ends of the spokes up the slotways in the frusto-conical head. It will further be observed that with variations to suit the device the same principle may be applied to any kind of a wheel where it is desired to expand the rim.

It will be seen that the base 3 of the male section will enter under the flange 7, and that this flange will thus perform the function of a dust-band and keep the dust and dirt, as well as a large part of moisture, out of the hub, and that this is a very important function.

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

1. A device for expanding the rims of a wheel, consisting of a hub constructed in two sections, one of which has a base and a frusto-conical head, said head having vertical slotways, the other section of which has a disk with a central opening and provided with an annular flange, said flange having openings or slotways adapted to fit over the aforesaid section, means for securing the said section together adjustably, spokes passing through the openings in the flange and resting in the slotways upon the aforesaid head, as set forth.

2. The combination, in a land-roller, of a wheel consisting of a hub constructed in two sections, one of which has a base and a frusto-conical head, the other section of which has a disk with a central opening and provided with an annular flange, said flange having openings or slotways and adapted to

fit over the aforesaid section, means for securing the said section together adjustably, spokes passing through the openings in the flange and resting in the slotways upon the  
5 aforesaid head, a rim upon the outer end of said spokes, said rim fitting within the outer periphery of the land-roller, and the axle B, as set forth.

In witness whereof we have hereunto set our hands on this 22d day of January, 1891.

GEORGE R. THOMSON.  
HARVEY T. COTTRELL.

In presence of—

FRED. H. NORTON,  
EDITH NORTON,  
H. P. DENISON.