

No. 752,898.

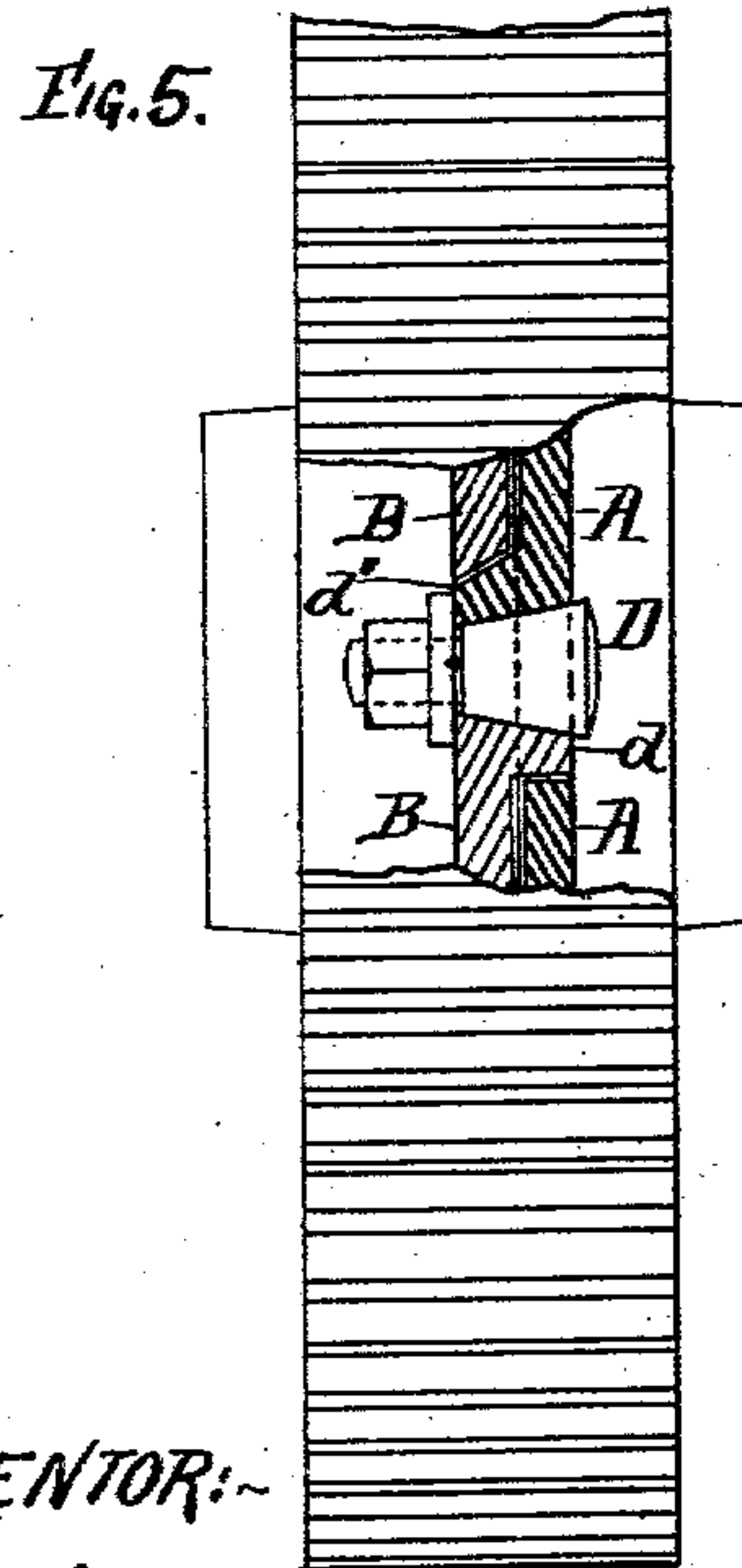
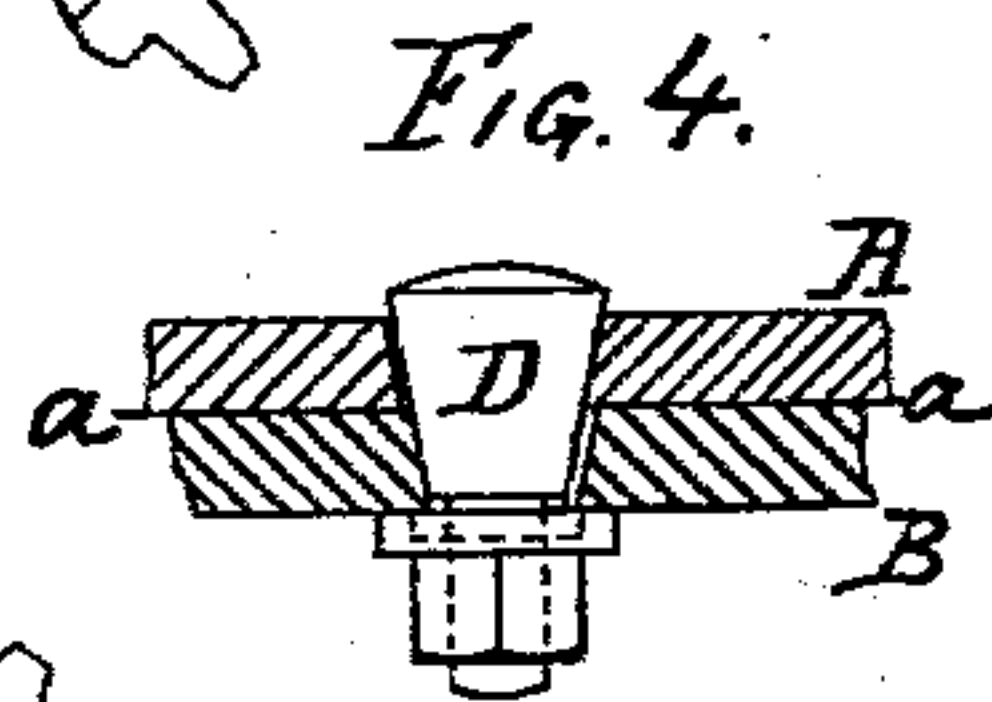
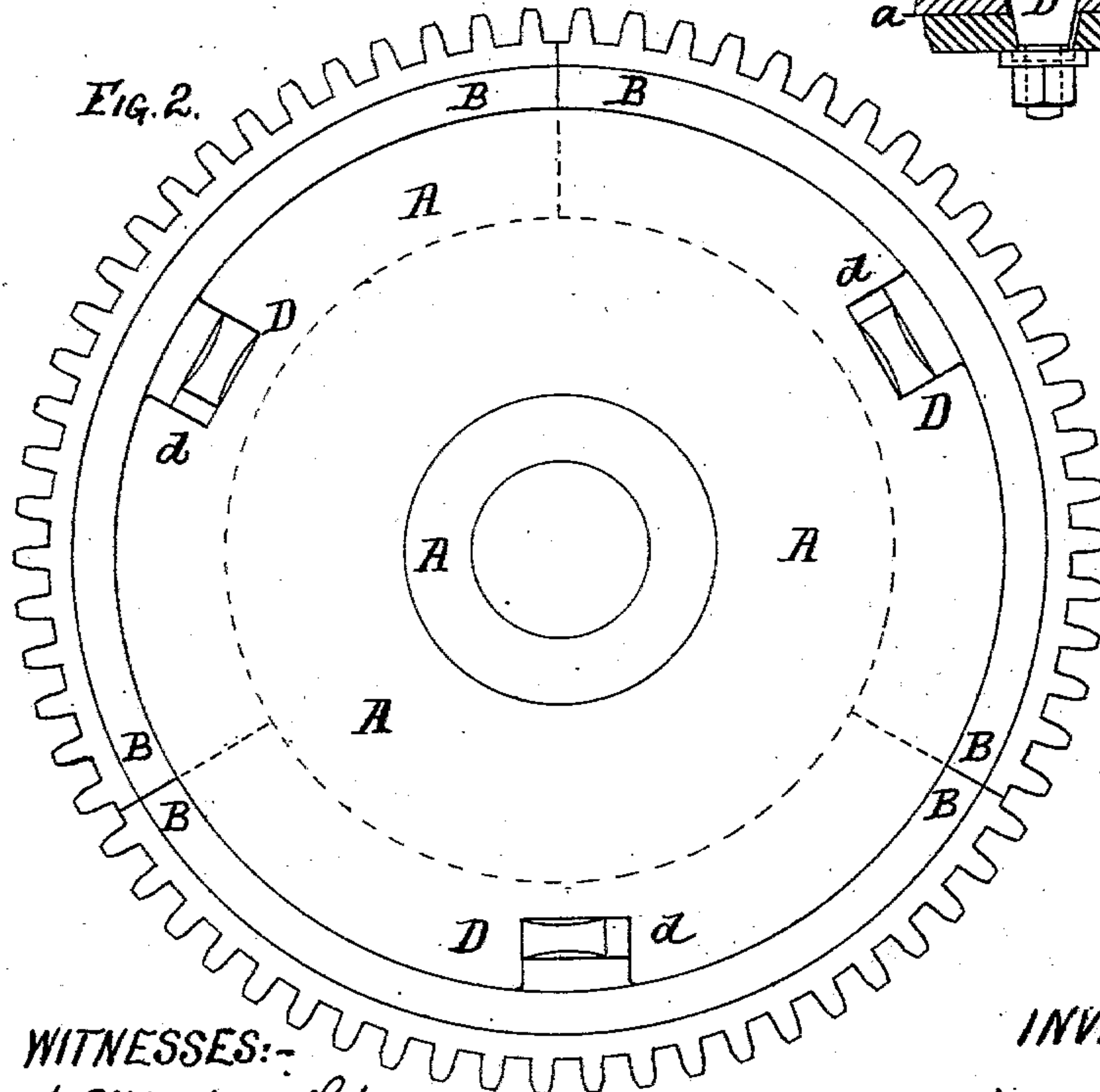
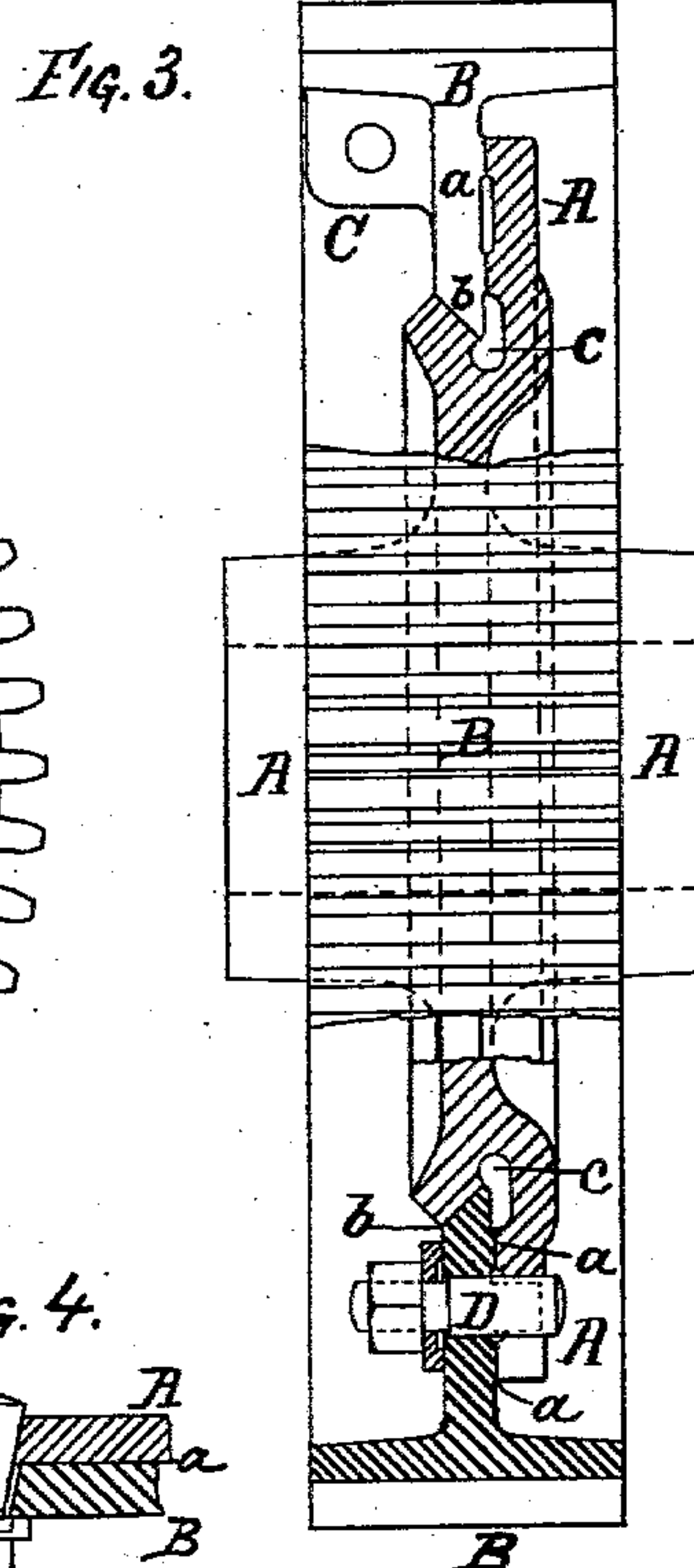
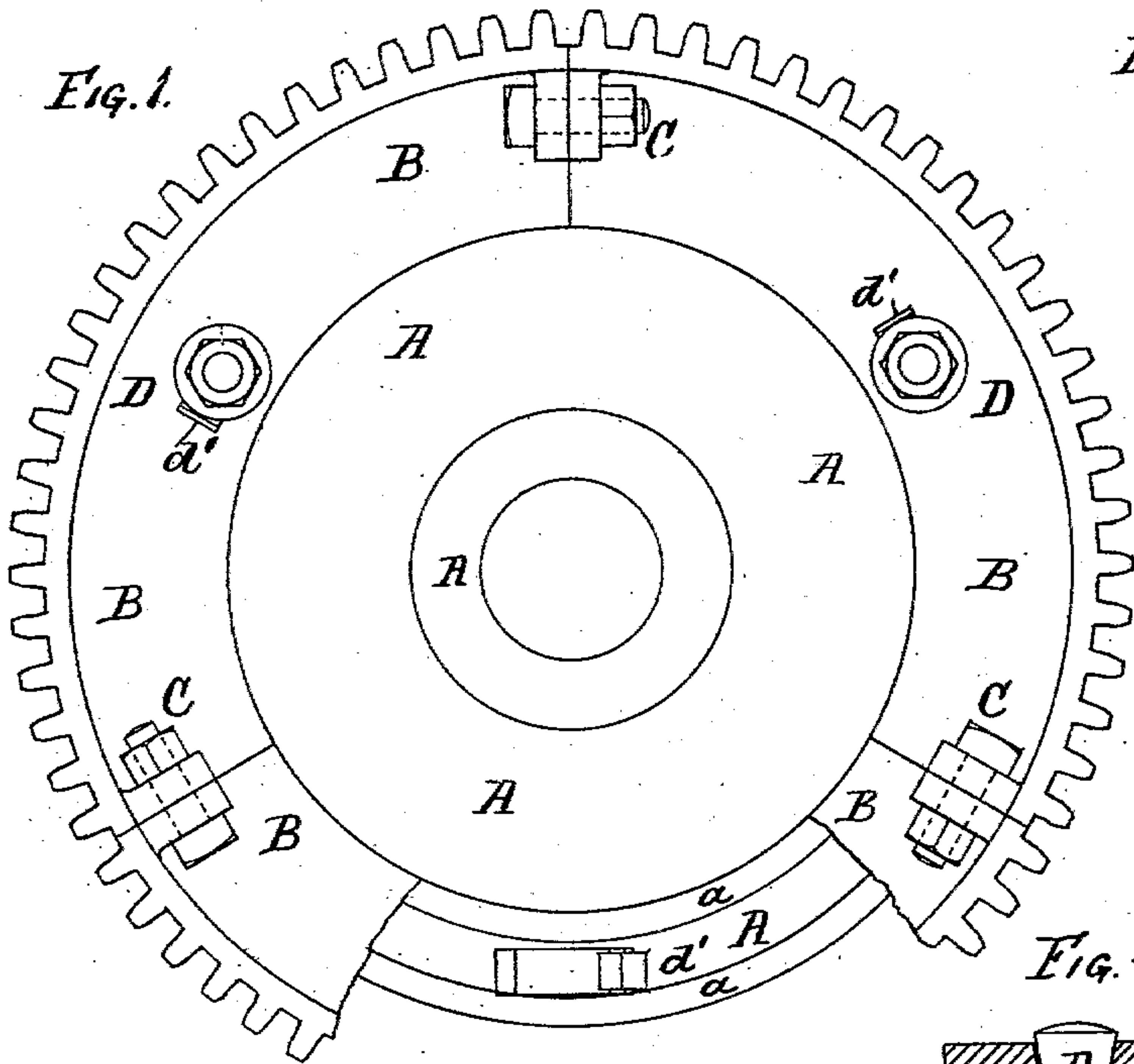
PATENTED FEB. 23, 1904.

J. H. FOGARTY.

SECTIONAL WHEEL FOR POWER TRANSMISSION.

APPLICATION FILED DEC. 5, 1903.

NO MODEL.



WITNESSES:-

Wm. A. Weightman  
E. J. Martin

INVENTOR:-

James H. Fogarty



# UNITED STATES PATENT OFFICE.

JAMES HENRY FOGARTY, OF NEW YORK, N. Y.

## SECTIONAL WHEEL FOR POWER TRANSMISSION.

SPECIFICATION forming part of Letters Patent No. 752,898, dated February 23, 1904.

Application filed December 5, 1903. Serial No. 183,914. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES HENRY FOGARTY, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Sectional Wheels for Power Transmission, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to an improvement in sectional wheels, particularly those of the gear type, and has for its object the production of a wheel specially economical in construction, durable and reliable in operation, and the rim or face of which is readily and quickly renewable without disturbing the hub-body in its position upon the power axle or shaft.

Certain of my improvements consist in providing the hub-body of the wheel with a circumferential receptacle for a sectional rim consisting of a vertical flange-face, an angular flange-face, and a clearance groove or pocket between said faces to permit of a free inward movement of the mating flange-faces of the sectional rim and a close contact of the faces.

Other improvements consist in providing one or more wedge-bolts and adapting them as a means for drawing the flange-faces of the rim and hub-body to a close contact as well as for receiving and transmitting the thrust in either direction from the rim to hub-body without slip, slide, or jar when starting, stopping, or reversing under severe loads and conditions.

In the accompanying drawings, Figures 1 and 2 represent elevations of opposite sides of a gear-wheel embodying my improvements, Fig. 1 having a portion of one of the rim-sections cut away. Fig. 3 represents a face view of the wheel, partially in section, to show the construction in detail. Fig. 4 represents a sectional view and simpler application of the wedge-bolts for the transmission of the power thrust on the wheel. Fig. 5 represents a second face view showing in section the detailed construction of the wedge-bolts and projecting face-lugs.

Similar letters of reference designate like parts, portions, or details in all the figures.

A designates the central hub-body, designed, preferably, to be forced on by hydraulic pressure or keyed to the shaft after the usual methods.

B designates a plurality of sections or segments forming the rim of a gear-wheel embodying my improvements. The ready and prompt removal and replacing of the wheel-rim without disturbing the hub-body is at all times desirable and necessary without disturbing the alinement of the hub-body or its shaft or axle. It is therefore made in a plurality of sections or segments to be banded or secured about the hub-body.

C designates bolts and lugs by means of which the plurality of rim-sections are brought together and tightened to a snug fit and grasp about the hub-body. As shown in the drawings, the wheel-rim is divided into three sections or segments of one hundred and twenty degrees each. Any number of sections may be used of equal or unequal length to suit the facilities for applying the same or the number of teeth on the wheel-face.

The hub-body and combined rim-sections are provided with mating joint or flange faces *a* and *b*, so located with reference to each other that as the rim-sections are drawn together inwardly to surround, clamp, and grasp the faces of the hub-body they move inwardly over the perpendicular face *a* and are forced to a contact and pressure by the wedge action of the angular joint-face *b*, readily effecting a close fit and snug contact between the hub-body and rim portions of the wheel.

As a special means for securing a free and ready movement of the rim-sections to a close contact with the hub portion or body, a pocket *c*, extending circumferentially about the whole circle of rim-joint, is located between and at the apex of the angle formed by the perpendicular and angular faces *a* and *b*, Fig. 3, of the joint. Without this pocket *c* the turning and facing of the joint-faces is troublesome and expensive and a secure and properly-closed jointing of the faces is almost impracticable; but with it, even if the angular faces are not quite the true fit that they should be, the pull of the bolts will readily bring the perpendicular faces to a close fit, the free



movement of the rim-flange toward and into pocket *c* overcoming the slight disadvantages of a chance misfit of the joint.

To secure a prompt and reliable transmission without check or jar, the rim sections or segments are provided with wedge-bolts D, tapered to effect a pressure by one side against the rim metal and by the other side against the hub metal, thus jamming the joint to a complete fixture, whereby any pressure acting on the rim-sections is promptly transmitted without slip, slide, or jar to the hub-body and its shaft. (See Fig. 5.) To secure a best possible usefulness of the wedge-bolts and a greater and more efficient contact between the faces of the wedge-bolts D and those of the rim and hub, a tongue-lug *d* is projected from the metal of the rim-face through the metal of the hub-face, and a second tongue-lug *d'* is projected from the metal of the hub-face through the metal of the rim-face, as detailed in Figs. 3 and 4. The screwing up and tightening of the wedge-bolts D effects a pressure through their tapered sides in opposite circumferential directions against the metals of both rim and hub-body, rendering the whole combination solid, stiff, and strong, as well as drawing the two perpendicular faces together to a still closer contact. The wedge-bolts being brought to a tight jam the bolts at C may

be screwed up to a final jam for a complete setting of the wheel and rim as a whole. By locating the wedge-bolts D at each end of the rim-sections instead of one at the center, as shown, bolts and lugs C may be omitted; but the method shown is the more economical as requiring less fitting and adjustment.

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

1. A sectional wheel comprising a sectional rim and a hub-body, each of which is provided with perpendicular and oblique contact-faces, and one of which is provided with a clearance-pocket located at the apex of the angle formed by the said contact-faces, substantially as set forth.

2. A sectional wheel comprising a sectional rim and a hub-body, each of which is provided with perpendicular and oblique contact-faces and one of which is provided with a clearance-pocket located at the apex of the angle formed by the said contact-faces, and a plurality of wedge-bolts tapered to press in opposite circular directions against the metals of both rim and hub-body, substantially as set forth.

JAMES HENRY FOGARTY.

Witnesses:

WM. H. WEIGHTMAN,  
HENRY J. WEHLE.