

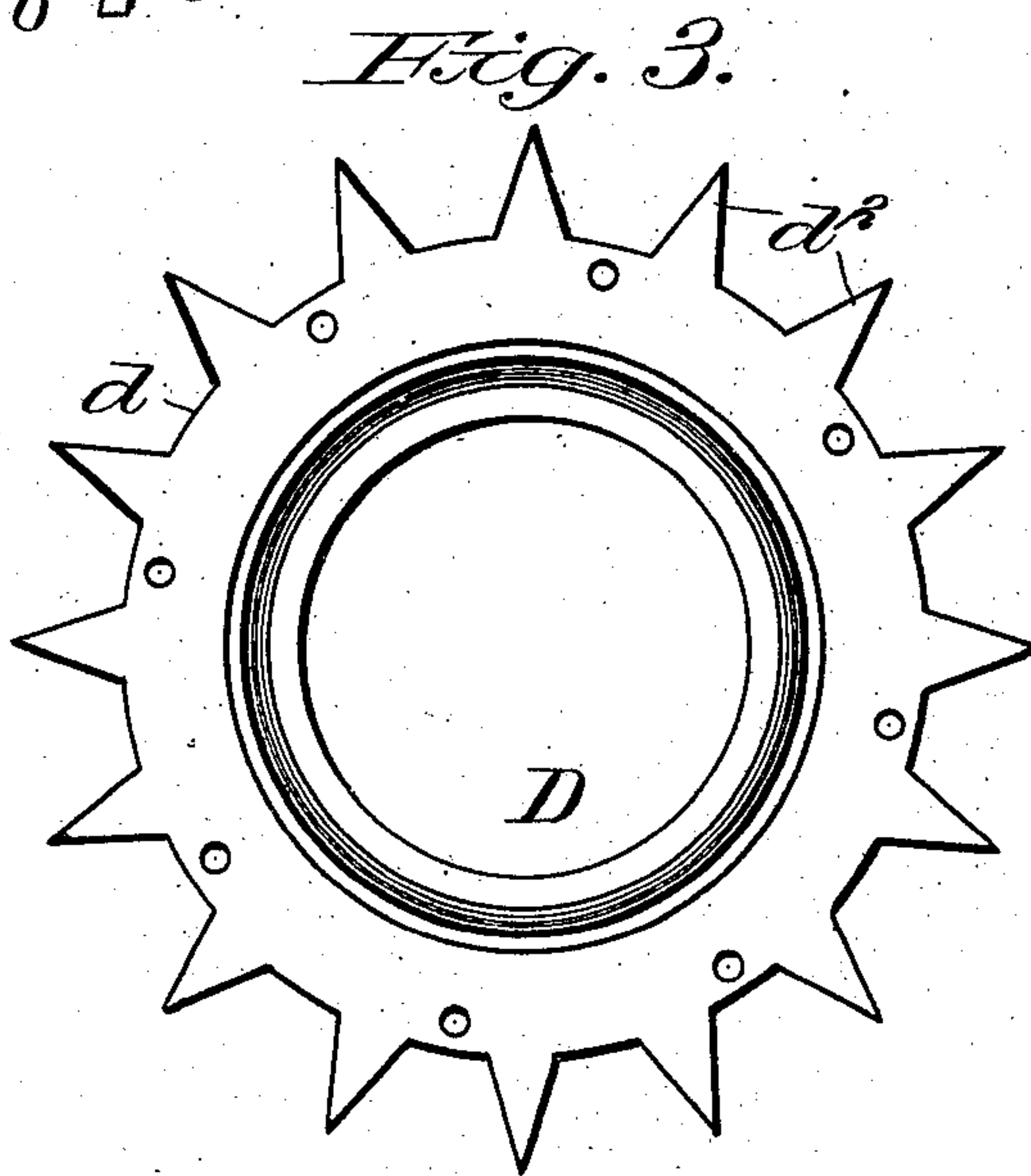
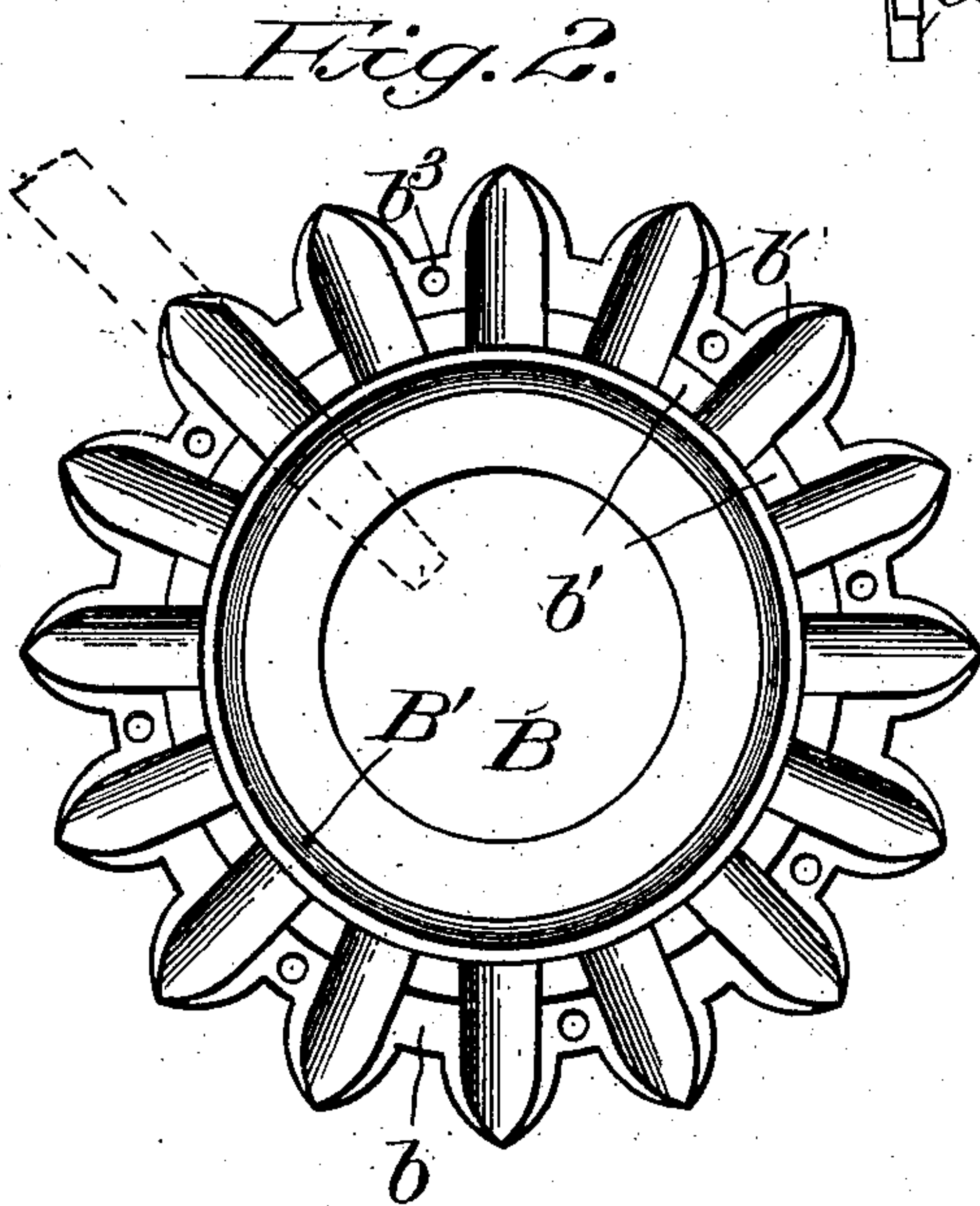
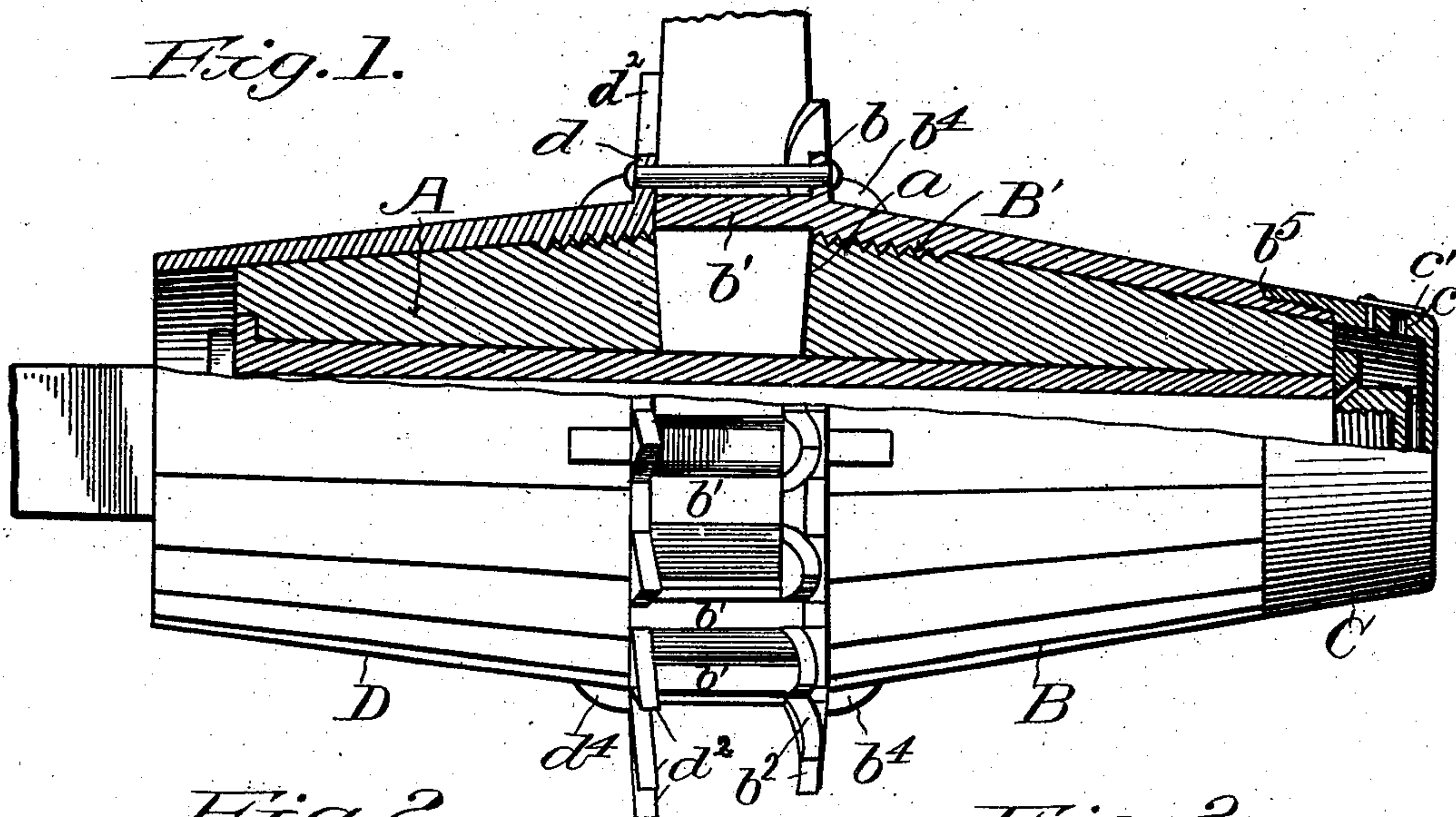
No. 721,612.

PATENTED FEB. 24, 1903.

G. H. SMITH.
HUB FOR VEHICLE WHEELS.

APPLICATION FILED SEPT. 20, 1902.

NO MODEL.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE HENRISON SMITH, OF WEBSTER, WEST VIRGINIA.

HUB FOR VEHICLE-WHEELS.

SPECIFICATION forming part of Letters Patent No. 721,612, dated February 24, 1903.

Application filed September 20, 1902. Serial No. 124,172. (No model.)

To all whom it may concern:

Be it known that I, GEORGE HENRISON SMITH, a citizen of the United States, residing at Webster, in the county of Taylor and State of West Virginia, have invented new and useful Improvements in Hubs for Vehicle-Wheels, of which the following is a specification.

This invention relates to improvements in hubs for the wheels of vehicles, the object of the invention being to provide a casing of improved construction for an inner wooden hub, the casing being made in parts, which parts are connected to the hub and are provided with flanges and projecting portions which engage the spokes, means also being provided for connecting the casings or shells to each other, as will be hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a side elevation, partly in section, of a hub and the casings therefor made in accord with my invention. Fig. 2 is an end elevation of the inner section of the casing for the hub, and Fig. 3 is a similar view of the outer section of the casing.

The hub A is of wood and has the usual mortises for the reception of the tenons on the ends of the spokes, and when casings made in accord with my invention are used the entire wooden hub is covered thereby. The largest diameter of the hub is adjacent to the mortises *a*. The outer section B of the casing has on its inner end a circumferential flange *b*, from which projects, so as to be at right angles thereto, bars *b'*, which overlie that part of the hub between the mortises, such bars in practice lying between the spokes adjacent to the shoulders of the tenons. From the periphery of the flange *b* there project embracing members *b²*, which are concave on their inner sides, the lower inner ends thereof being united or integral with the bars *b'*, and slightly beyond the bars between the embracing members *b²* the flange *b* has perforations or holes *b³* for the reception of bolts, which engage the flange on the inner section of the hub-casing.

A hub made in accordance with my invention is usually constructed to receive sixteen spokes, and a casing for such a hub will have exteriorly sixteen faces or sides, and at in-

tervals there may be lugs or webs *b⁴*, which serve as braces for the flange *b*, and also provide projecting portions which afford a grip for a wrench or other tool in applying the casing to the hub.

The outer end of the casing B is reduced in diameter to provide a shoulder *b⁵*, and beyond the shoulder the projecting portion is threaded to receive a cap C, having internal threads for engagement with the outer threads beyond the shoulder *b⁵*. The cap may have an oil-hole *c*, which is covered by a resilient plug *c'*, which is pivoted to the cap. The cap when in place gives a finish to the front of the hub, covers the axle-nuts, and provides an oil-chamber from which oil may find its way through perforations through the flange of the nut to the spindle.

The metallic casing B is provided on its inner side, adjacent to its larger and inner end, with screw-threads *B'*, which are of such configuration that when the casing is turned and the hub is held against movement the threads will cut into the wood, and thus attach the casing to the hub, so that it cannot be removed except by a reverse rotary movement.

The inner casing D is internally shaped to fit snugly over the inner portion of the hub, and the same is provided on its inner end with screw-threads which are pitched at opposing angles to those on the other casing, the threads on one of the casings being right-handed and on the other one left-handed. The casing D has integral therewith a flange *d*, perforated at intervals to receive bolts or rivets, which also engage a similar flange *b* on the outer casing B. When the casings B and D are attached to the wooden inner section of the hub, the perforations will be in alinement and the rivets will be above the projections or bars *b'*, which are integral with one of the casings. From the periphery of the flange *d* of the inner casing there project spoke-engaging members *d²*, which bear against the inner sides of the spokes, the outer casing carrying spoke-engaging members *b²*, which embrace the outer side of the spokes. The casings B and D have at intervals lugs *b⁴* and *d⁴*, which not only serve as braces for the flanges, but also provide projections with which a wrench or other implement may engage in turning the casings. The

flange *d* at a point opposite the projections or bars *b'* may be recessed to receive the ends of such bars.

The outer configuration of the casings may be varied; but in every instance the larger portion is adjacent to the mortises in the hub, and the inner casing will extend considerably beyond the inner end of the hub.

In assembling the parts one of the casings or shells is held rigid, the hub is placed therein, and the other casing screwed upon the hub, and as the casings have right and left hand threads they will be drawn together and will be securely attached to the hub against longitudinal displacement. After the casings have been properly attached to the hub the spokes are inserted. The spokes will prevent the outer casing being turned, as the bars *b'* will lie between the spokes, and when the bolts or rivets are inserted above the bars the inner casing or shell will be held against turning.

Having thus described my invention, I do not wish to be limited to the precise construction or configuration of the parts as illustrated, as the configuration will be changed as well as the proportions to meet the requirements of different classes of vehicles.

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

1. The combination with a wooden hub, of metallic casings or shells therefor one of the shells or casings having at its inner end right-hand threads and the other left-hand threads which engage the hub adjacent to the mor-

tises for the spokes, flanges which project outward from the internally-threaded ends of the casings, and spoke-engaging members which project beyond the flanges of the casings, substantially as shown.

2. The combination with a wooden hub having mortises for the spokes, of casings for the hub, one of the casings having a flange which carries bars which project from its inner face, concave braces connected to the flange and to the bars, a casing for the opposite side of the hub having a flange against which the bars impinge and means for connecting the flanges beyond the bars, substantially as shown.

3. The combination with an inner section of a hub which is made of wood and is provided with mortises for the spokes, of shell-casings the larger ends being threaded to engage the wooden inner section adjacent to the mortises, external flanges on the casings, spoke-engaging members which project beyond the flanges to engage opposite sides of the spokes and means for connecting the casings such connecting means being passed through the flanges, substantially as shown.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

GEORGE HENRISON SMITH.

Witnesses:

J. W. SAYRE,
A. T. YATES.