

(No Model.)

J. A. CRANDALL.
COMBINED HUB CAP AND NUT.

No. 604,913.

Patented May 31, 1898.

Fig. 1.

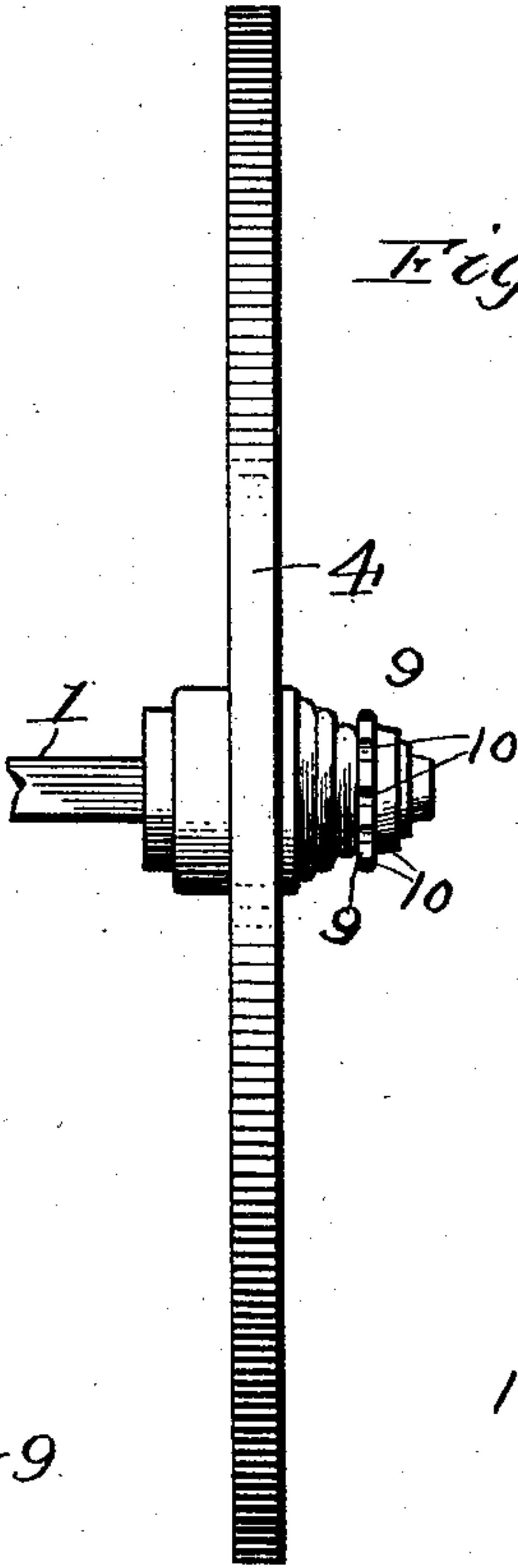


Fig. 3.

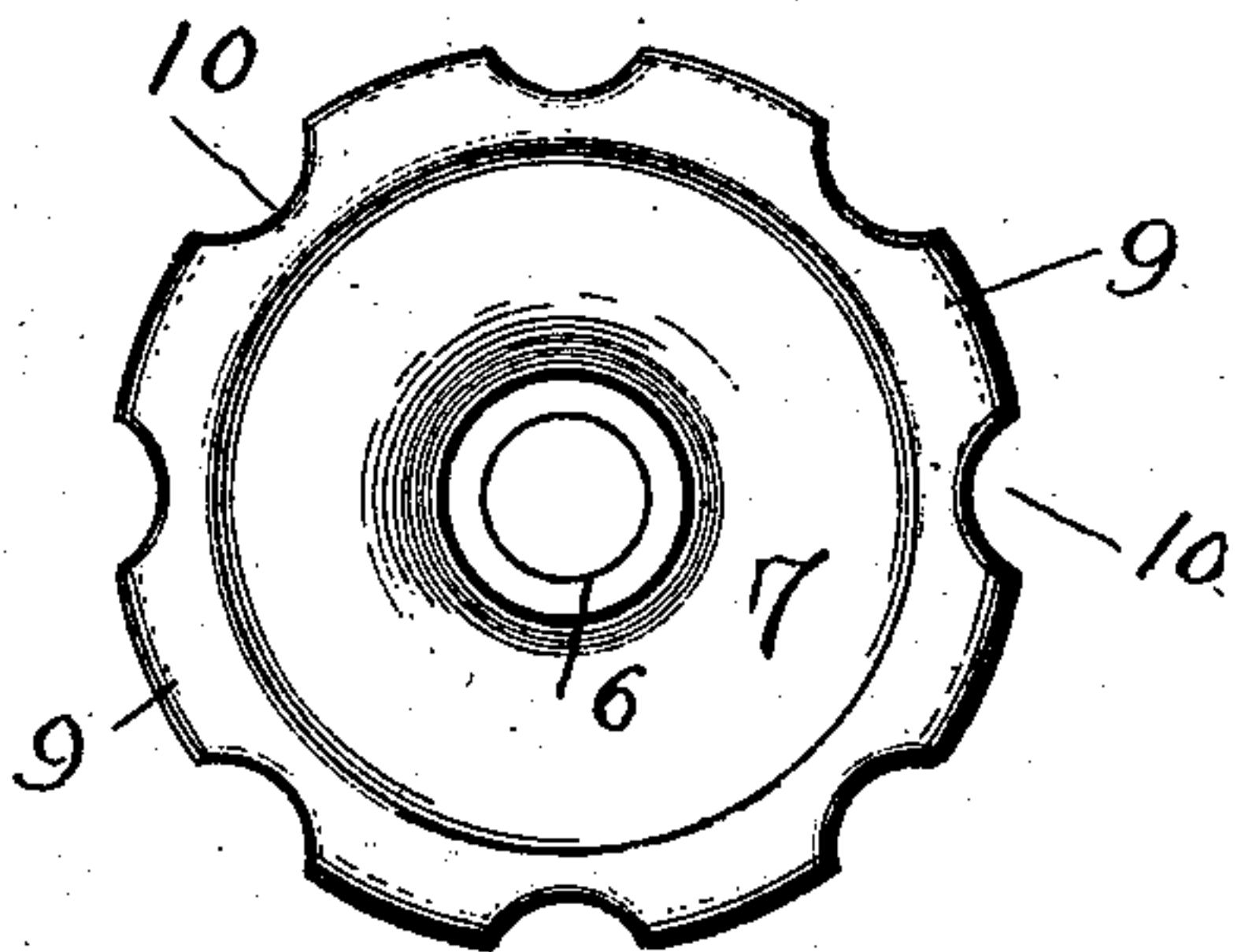


Fig. 4.

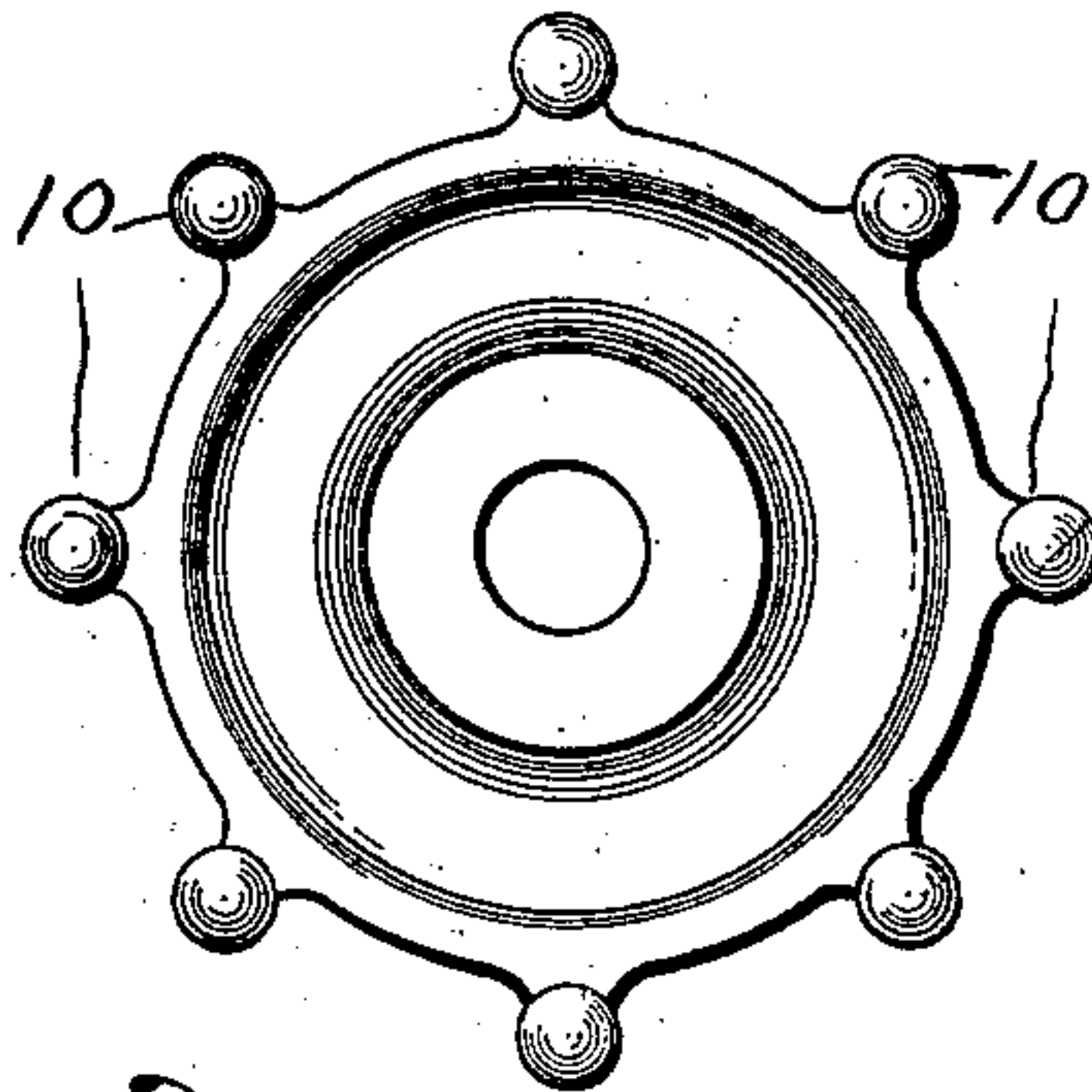
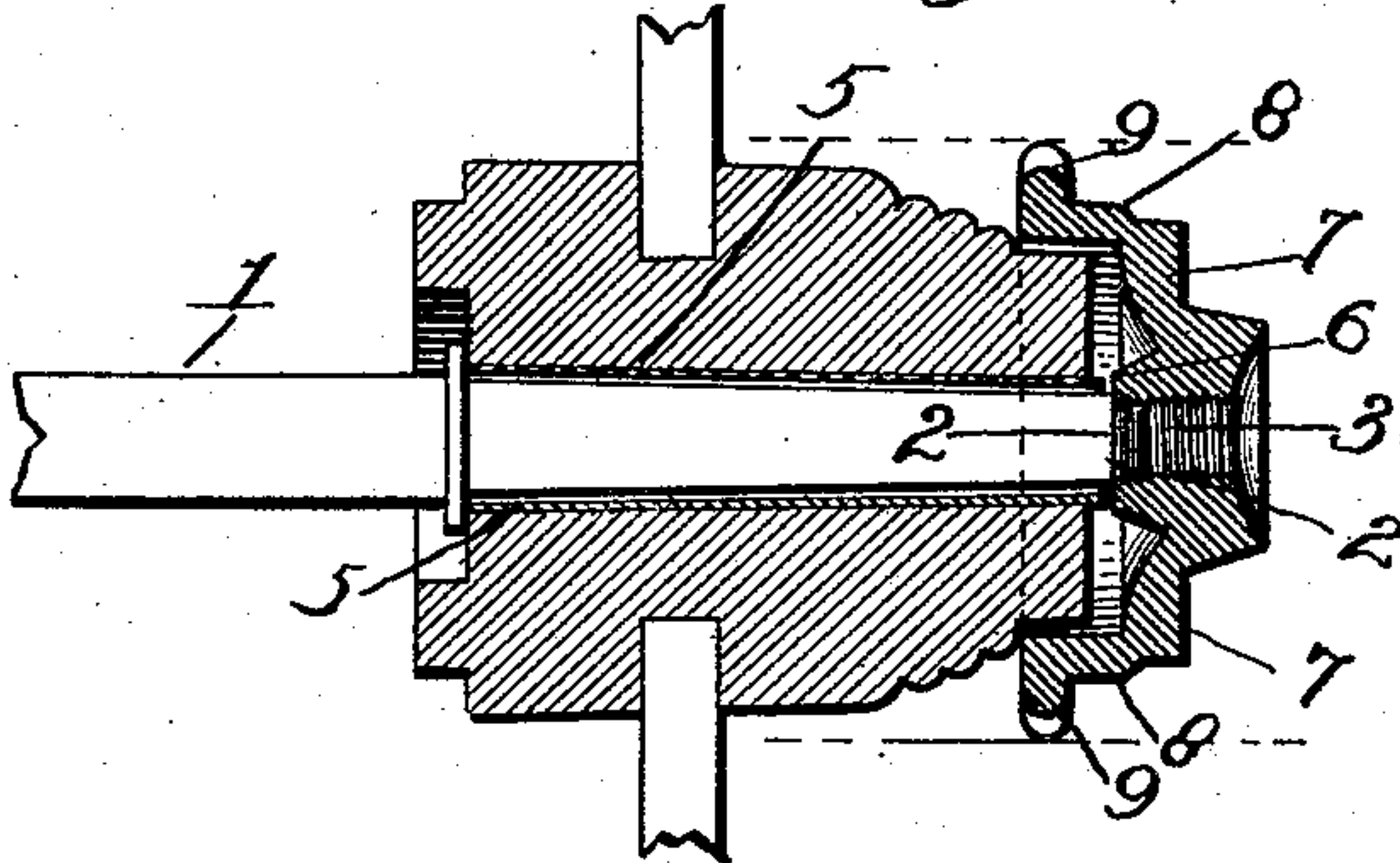


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

JESSE A. CRANDALL, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF
TO JOSEPH MOCS, OF SAME PLACE.

COMBINED HUB CAP AND NUT.

SPECIFICATION forming part of Letters Patent No. 604,913, dated May 31, 1898.

Application filed February 4, 1897. Serial No. 622,026. (No model.)

To all whom it may concern:

Be it known that I, JESSE A. CRANDALL, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in a Combined Hub Cap and Nut, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

10 Figure 1 is a side elevation of a wheel provided with my hub cap and nut. Fig. 2 is a vertical sectional view thereof. Fig. 3 is an end elevation, and Fig. 4 is a similar view of a modified form.

15 This invention relates to a new and improved hub cap and nut; and it has for its objects to provide a device which may be readily screwed on or taken off the axle without the use of a wrench and which when in position will effectually protect the outer half of the hub and render the use of the ordinary hub-cap unnecessary.

20 The invention consists of the novel combination and construction of the parts, as hereinafter described, and particularly pointed out in the claim appended.

Referring to the various parts by numerals, 1 designates a portion of an axle which may be of any suitable construction, and near its outer end it is formed with an annular shoulder 2, and beyond this shoulder it is screw-threaded, as at 3. Upon the axle is placed the wheel 4, whose hub is provided with the central wearing-sleeve 5, whose outer end projects slightly beyond the outer face of the hub, said sleeve terminating a little short of the shoulder 2 when the wheel is in position on the axle. Screwed upon the axle is the improved nut and cap, which consists of the central internally-threaded portion 6, a radial portion 7, which extends outwardly from the center of the portion 6, a flaring portion 8, which extends inwardly from the outer end of the portion 7, and a radial flange 9, which extends outwardly from the inner end of the flaring portion 8. It will thus be seen that the inner half of the portion 6, the radial portion 7, and the flaring portion 8 form a cavity wherein the outer end of the hub 2 fits and is thoroughly protected. The outer edge of the

radial flange 9 is formed into finger-holds 10, which may be recesses, as shown in Fig. 3, or slight projections formed thereon, as shown in Fig. 4.

When this cap is screwed on the axle, the inner end of the portion 6 abuts against the shoulder 2 on the axle, and the wearing-sleeve is confined between it and the collar at the inner portion of the axle. The outer end of this sleeve is projected slightly beyond the outer end of the hub in order to prevent the hub proper from contacting with the hub-cap, the projecting end of the sleeve being the only portion of the wheel which will at any time contact with the hub-cap, and this will not be in constant contact, as the sleeve is shorter than the axle, as before set forth. In this manner there will be slight friction between the revolving wheel and the nut, and displacement will be avoided.

It will thus be seen that I provide a nut and cap which may be readily screwed in place and will effectually protect the end of the hub and which will not be accidentally displaced under ordinary conditions of usage.

The radial flange 9 may be formed slightly larger than the main part of the hub in order to protect it. This flange 9 is provided with a series of projections, by means of which the nut and cap can be operated by hand for the purpose of removing or replacing the same, and these projections perform a further important function in that they provide a point of contact which may be engaged by a rod or bar placed between the spokes of the wheel to act as a lever in loosening or tightening the cap. It is obvious that it is desirable to tightly hold the cap in place, and by placing the inner end of a stick or bar between the spokes and engaging the outer portion of the same against one of the projections the stick or bar will act as a lever to force the cap into position to prevent rattling of the hub or any accidental displacement of the cap. It will be further seen that the aperture portion 6 permits the application of the cap to any form of spindle having an extended threaded end, which could not occur were the cap closed at its outer end.

Having thus fully described my invention,

what I claim, and desire to secure by Letters Patent, is—

A combined cap and nut comprising an ap-
ertured threaded central portion 6 having the
5 lateral flange 7, an inwardly-extending pe-
ripheral flange 8 terminating in an outwardly-
projecting flange 9 adapted to lie over the
outer edge of a hub and recessed to form a
series of handhold projections upon the in-

ner edge of the cap portion; substantially as 10
and for the purposes set forth.

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

JESSE A. CRANDALL.

Witnesses:

NOAH TEBBETTS,
WM. II. CUNNINGHAM.