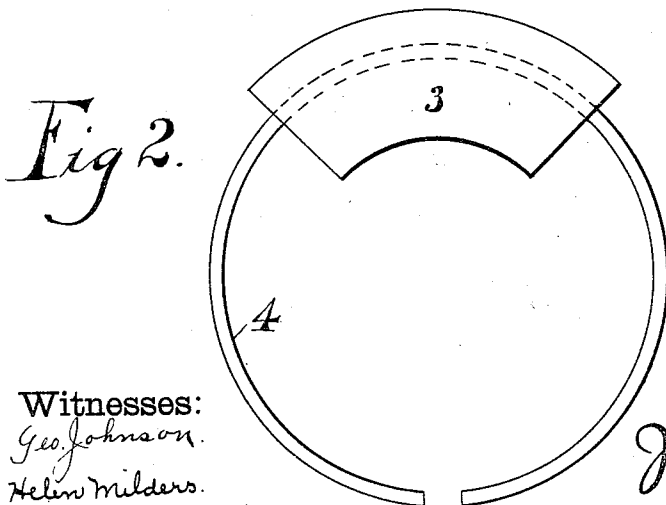
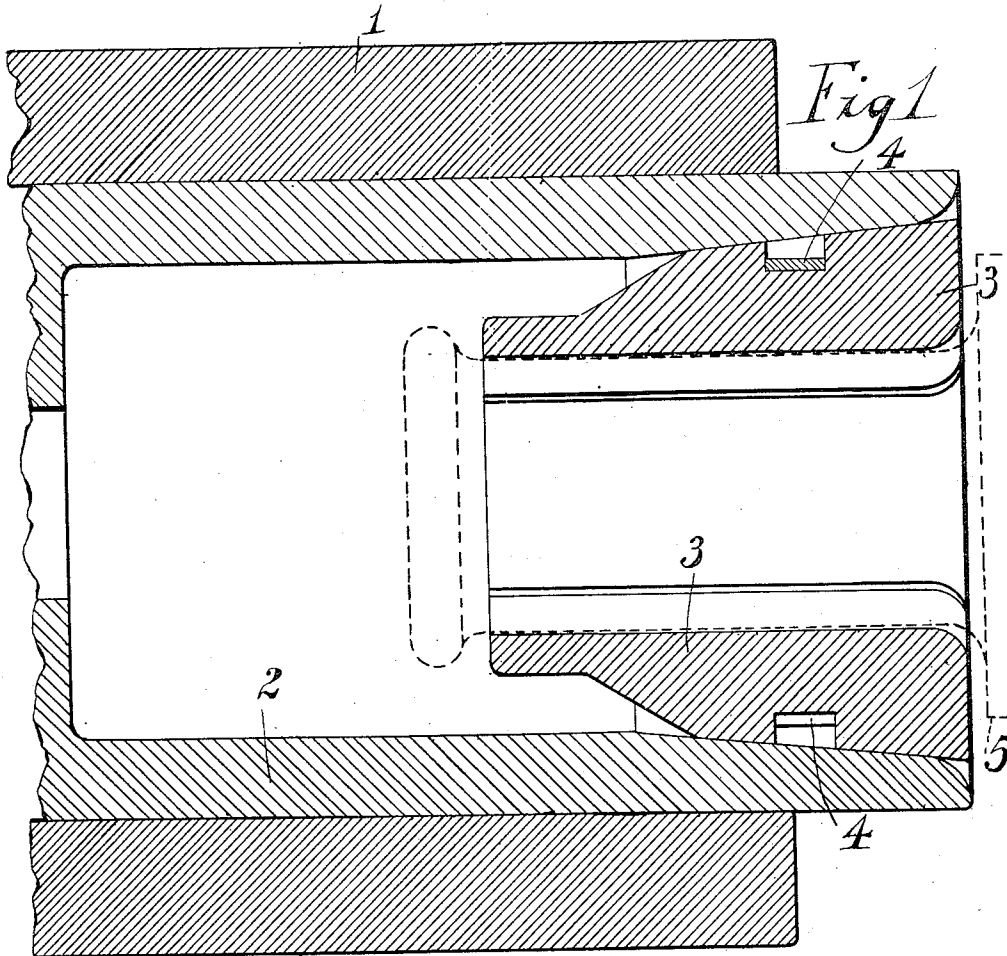


G. E. GREENLEAF & D. H. TEAS.
CENTERING CHUCK.

APPLICATION FILED AUG. 14, 1911.

1,017,968.

Patented Feb. 20, 1912.



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UNITED STATES PATENT OFFICE.

GEORGE EDWARD GREENLEAF, OF PLAINFIELD, NEW JERSEY, AND DANIEL HENRY TEAS, OF NEW HAVEN, CONNECTICUT, ASSIGNORS TO NILES-BEMENT-POND COMPANY, OF JERSEY CITY, NEW JERSEY.

CENTERING-CHUCK.

1,017,968.

Specification of Letters Patent.

Patented Feb. 20, 1912.

Application filed August 14, 1911. Serial No. 643,861.

To all whom it may concern:

Be it known that we, GEORGE EDWARD GREENLEAF, a citizen of the United States, residing at Plainfield, Union county, New Jersey, and DANIEL HENRY TEAS, a citizen of the United States, residing at New Haven, New Haven county, Connecticut, have invented certain new and useful Improvements in Centering-Chucks, of which the following is a specification.

This invention pertains to centering chucks employed in that class of car wheel lathes in which the wheels are turned while on their axle, the axle journals being centered in rotary spindles in tailstocks while the driving power is applied to the wheel-and-axle structure by mechanism disposed around the axle between the wheels.

Our invention is applicable, however, to any type of car wheel lathe in which a wheel-and-axle structure is to be centered by chucking devices engaged in the axle journal.

Our invention will be readily understood from the following description, taken in connection with the accompanying drawing, in which:—

Figure 1 is a vertical longitudinal section of a portion of a tailstock fitted with our improved centering chuck; and Fig. 2 is an end view of one of the centering jaws shown in conjunction with the spring ring holding the jaws in association.

In the drawing:—1, indicates the bearing of the tailstock; 2, the hollow tailstock spindle arranged to be rotated and longitudinally adjusted in the bearing, as usual, the outer end of this spindle having its bore provided with a tapering flare, as usual; 3, segmental jaws having the outer portions of their peripheries tapered to fit the taper of the spindle, the bore of the associated jaws being adapted to fit the axle journal; 4, a light open spring ring surrounding the series of jaws, being seated in a peripheral groove in the tapering portions of the jaws; and 5, the car axle with its journal engaged by the bore of the associated jaws.

As thus far described the structure does not constitute a substantial departure from long practice. The spring ring is flexible

enough to permit the associated jaws to be opened up, sufficiently, when out of the lathe, to permit the jaws to be expanded and slipped over the collar on the end of the axle journal, after which the jaws are allowed to contract upon the journal. Then, when the structure is placed in the lathe and the spindle moved endwise the jaws become forcibly contracted upon the journal, centering the journal in the spindle and binding the journal to the spindle. These wheel-and-axle structures are rather heavy affairs, and, with usual constructions of centering chucks, a somewhat-awkward job is presented when entering the jaw-provided ends of the axle into the spindle, several shoulders presenting themselves to interfere with the ready endwise entrance into the spindles.

In the present case the jaws have a length almost equal to that of the journal of the axle so that as the spindle is forced endwise in contracting the jaws there can be but little movement of the jaws endwise of the journal, which movement would be liable to mar the journal. The outer end of the tapering flared bore of the spindle is belled out, as seen in the drawing, and the inner ends of the segmental jaws are much reduced in diameter being hardly more than the diameter of the axle collar. The outer portions of the segmental jaws are tapered to fit the tapering bore of the spindle, and the exterior of the jaws between their reduced inner end portions and the tapering portion fitting the taper of the spindle join through the medium of an easy taper. By reason of this construction if, in putting the wheel and axle structure into the lathe, the inwardly moving spindle starts over the axle collar at all, the spindle may then be moved readily to ultimate position, the axle collar and the segmental jaws riding smoothly and interruptedly into the spindle without being interfered with by any interfering shoulder put on either the bore of the spindle or the exterior of the structure received within the bore of the spindle.

We claim:—

A centering chuck comprising a hollow spindle having in the end of its bore a ta-

pering flare belled at its outer end, a circular series of segmental jaws having a bore adapted to fit an axle journal and having a tapered end adapted to fit said tapering
5 flare and provided with a peripheral groove, said series of jaws being of reduced diameter at its inner end and gradually enlarging in diameter from such reduction to the tapered portion engaging the spindle,
10 and a spring ring seated in a peripheral

groove in said series, of jaws combined substantially as set forth.

GEORGE EDWARD GREENLEAF.

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