

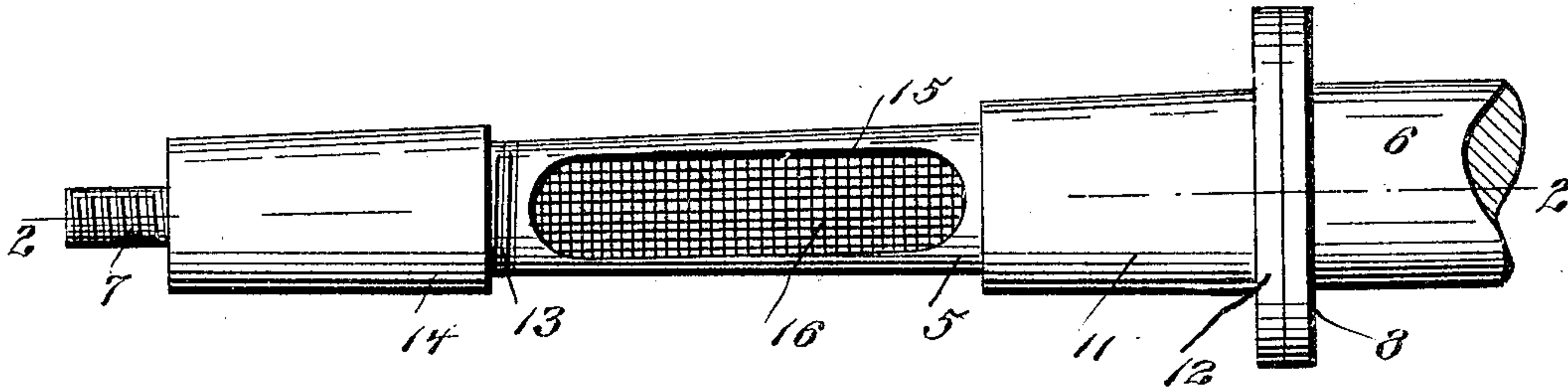
No. 822,298.

PATENTED JUNE 5, 1906.

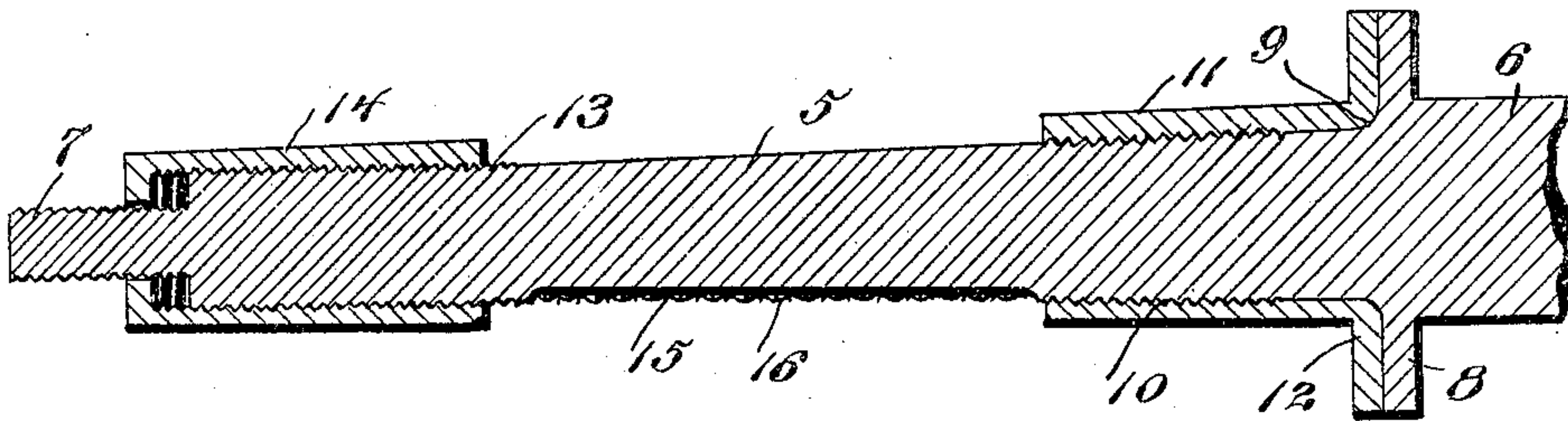
S. H. & A. V. NICKERSON.

AXLE.

APPLICATION FILED MAY 13, 1905.



*Fig. 1.*



*Fig. 2.*

Witnesses

*O. E. Murray*  
*M. Schmidt*

*Sherman H. Nickerson*  
*Alvinga V. Nickerson* Inventors

by  
*Milo B. Stevens* and Co. Attorneys.

# UNITED STATES PATENT OFFICE.

SHERMAN H. NICKERSON AND ALVINZA V. NICKERSON, OF CANTON,  
NEW YORK.

## AXLE.

No. 822,298.

Specification of Letters Patent.

Patented June 5, 1906.

Application filed May 13, 1905. Serial No. 260,358.

*To all whom it may concern:*

Be it known that we, SHERMAN H. NICKERSON and ALVINZA V. NICKERSON, citizens of the United States, residing at Canton, in the  
5 county of St. Lawrence and State of New York, have invented new and useful Improvements in Axles, of which the following is a specification.

Our invention relates to improvements in  
10 axles, and has for its object certain novel features of construction hereinafter described and claimed.

The invention consists in fitting the axle-spindle with bearing-sleeves, which are so  
15 constructed that the axle will not be weakened by their use and one of which sleeves can also be adjusted to take up wear.

In the accompanying drawings, Figure 1 is a bottom plan view of the invention. Fig. 2  
20 is a longitudinal section on the line 2 2 of Fig. 1.

Referring specifically to the drawings, 5 indicates the spindle of the axle 6. The outer end of the spindle has the usual threaded  
25 stem 7 to receive the axle-nut and at the inner end has a shoulder 8. In front of this shoulder the spindle is enlarged, as at 9, which adds to the strength of the spindle and lessens the liability of fracture, which usually takes  
30 place at this point.

The inner end of the spindle is threaded, as at 10, to receive a bearing-sleeve 11, having at one end a flange 12, which when the sleeve is in position abuts against the shoulder 8  
35 and forms the butting-ring for the wheel-hub. The threads 10 do not extend up to the shoulder 8, so that the portion of the spindle most susceptible to fracture is not weakened. The bore of the sleeve fitting on that portion

of the spindle which is not threaded is also 40 without threads and is shaped to fit snugly on the enlargement 9.

The outer end of the spindle is threaded, as at 13, to receive a second bearing-sleeve 14, which is made longer than the threaded 45 portion 13 and extends beyond the outer end of the spindle. This construction permits the sleeve to be adjusted lengthwise on the spindle to take up end wear. In the under side of the spindle, between the sleeves, a 50 lubricant-recess 15 is made in which a suitable lubricant-retainer 16 can be placed.

An axle constructed as herein described will be strong and durable and can be readily repaired, as the bearing-sleeves are removable 55 and can be replaced when worn. Wear of the flange 12 is readily taken up by screwing the sleeve 14 farther in.

Having thus described our invention, what is claimed as new, and desired to be secured 60 by Letters Patent, is—

An axle-spindle having a shoulder at its inner end and enlarged in front of said shoulder, said spindle being threaded and the threads ending at a distance from the en- 65 largement, and a bearing-sleeve screwed on the threaded portion of the spindle and extending over the said enlargement, and having a flange abutting against the aforesaid shoulder. 70

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

SHERMAN H. NICKERSON.

ALVINZA V. NICKERSON.

Witnesses:

GAYLON G. GRISWOLD,  
ETHEL ROCKWELL.