

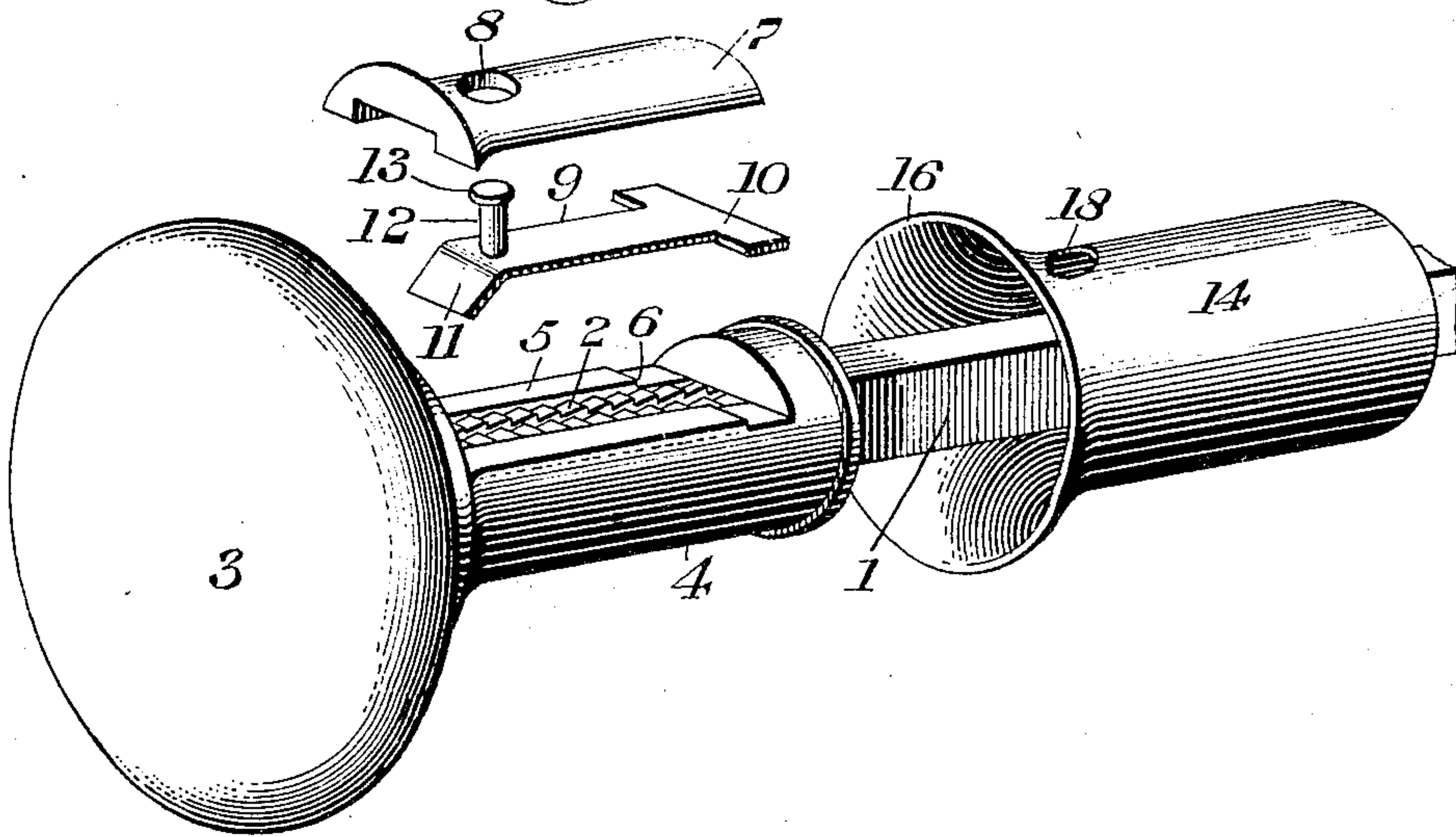
No. 768,952.

PATENTED AUG. 30, 1904.

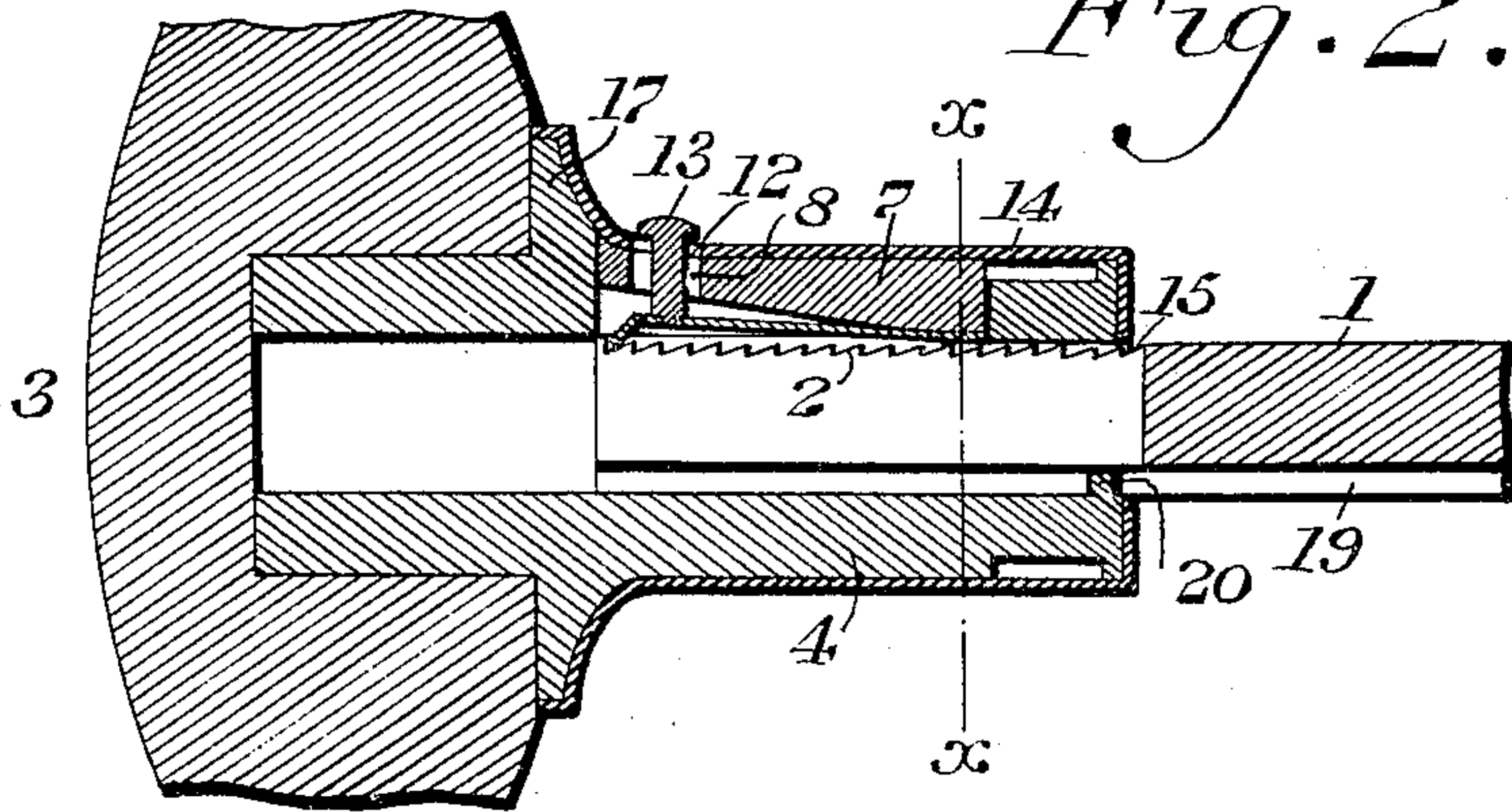
G. W. ROBERTS.  
KNOB FASTENING.  
APPLICATION FILED DEC. 3, 1903.

NO MODEL.

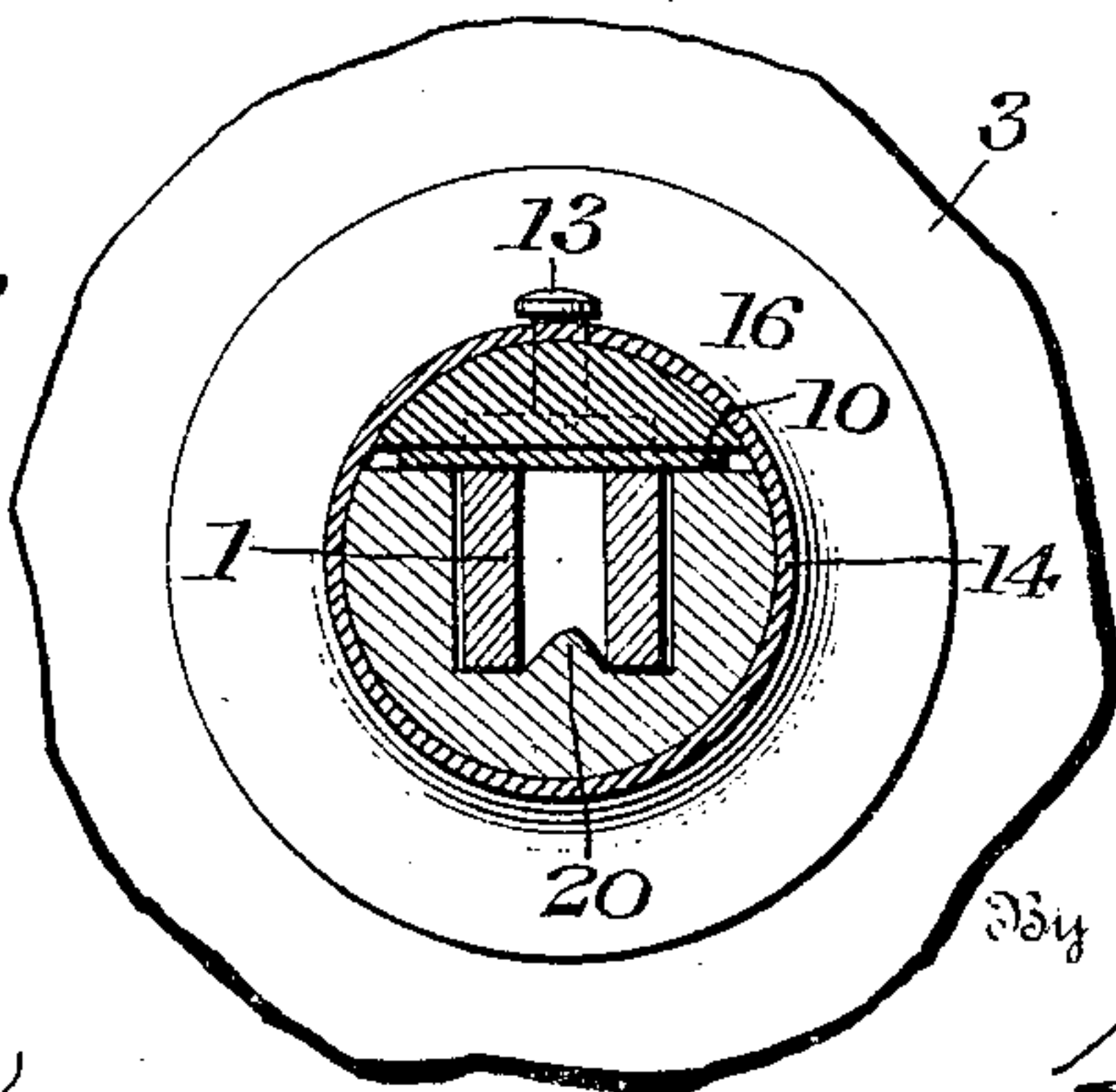
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses

P. H. Nagle.  
L. Houville.

Inventor

George W. Roberts.

Wiedersheim & Fairbanks  
Attorneys



# UNITED STATES PATENT OFFICE.

GEORGE W. ROBERTS, OF LAANNA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO WINFRED W. NUSS, OF PHILADELPHIA, PENNSYLVANIA.

## KNOB-FASTENING.

SPECIFICATION forming part of Letters Patent No. 768,952, dated August 30, 1904.

Application filed December 3, 1903. Serial No. 183,577. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. ROBERTS, a citizen of the United States, residing at Laanna, in the county of Pike, State of Pennsylvania, have invented a new and useful Improvement in Knob-Fastenings, of which the following is a specification.

My invention relates to knob-fastenings such as are used to attach door-knobs to the spindles.

It consists of a novel mode of connecting the knob-shank and the spindles without the use of screws.

It further consists of means for making a knob and shank readily detachable from a spindle when required, at the same time avoiding the possibility of accidental detachment.

It further consists of novel features of construction, all as will be hereinafter fully set forth.

Figure 1 is an elevation of the parts of my device somewhat detached from each other. Fig. 2 is a vertical section of the device, showing the parts in their assembled position. Fig. 3 is a section through the line *xx*, Fig. 2, looking toward the left of the drawings.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings, 1 designates a spindle provided with notches or ratchet-teeth 2 in one face adjacent its ends. It will be noted that the inclined face of each tooth is toward the end of the spindle.

3 designates a knob having a shank 4 and a segment 5, which is cut away to expose the bore of the shank. At the rear end of the lateral opening 5 is a recess 6, the function of which will hereinafter appear. A segmental portion 7, having an aperture 8, is adapted to fit upon the cut-away portion 5 and complete the cylindrical portion of the spindle 4. A T-shaped spring-catch 9, having a head 10, a downwardly-extending tongue 11, and an upwardly-projecting pin 12, provided with a head 13 adjacent the tongue 11, is adapted to fit between the walls of the shank 4 where the segmental portion 5 has been removed. The head 11 is adapted to fit into the recessed por-

tion 6, the tongue 11 projecting into the bore of the spindle.

14 designates a sleeve having a squared aperture 15 at one end adapted to pass the spindle 1 and at its other a flared portion 16, adapted to embrace the shoulder 17 of the shank 4 and to bear against the rear side of the knob 3. The sleeve 14 is also provided with an aperture 18, the function of which will appear.

As shown, the spindle 1 has a longitudinal slot at its forward end between the teeth portion 2. It also has a groove 19 at one side, in which engages a lug 20 on the inner side of the spindle 4. It is obvious that this forms no part of my invention and that the ordinary square spindle if provided with teeth 2 is adapted to my purpose.

The operation is as follows: The catch 9, the segmental portion 7, and the sleeve 14 being assembled in proper relation to the knob-shank 4, as shown in Fig. 2, it is obvious that the catch 9 will be held so that its tongue portion 11 projects into the bore of the spindle and that the head 13 of the pin 12 will project out through the apertures 8 and 18 in the portion 7 and sleeve 14, respectively. If then the knob 3 and shank 4, with these parts connected therewith, be slipped over the spindle, the tongue 11 will engage successively in the teeth 2 as the knob is advanced. It is also apparent that it will be impossible to withdraw the knob 3 from the spindle 1 unless the finger-nail or some small instrument be engaged under the head 13 of the pin 12, whereby the tongue 11 may be lifted out of the path of the teeth 2. It will also be seen that when the rear end of the sleeve 14 abuts against the face of the door or a rosette thereon the parts cannot be dislodged or disunited.

It is evident that this device is applicable to both ends of a spindle or that one end of the spindle may be secured in the shank of the knob in any well-known or desired manner.

It is further evident that various changes may be made by those skilled in the art which will come within the scope of my invention,



and I do not, therefore, desire to be limited in every instance to the exact construction herein shown and described.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A knob-fastening comprising a spindle having ratchet-teeth, a knob and a shank having a lateral opening exposing its bore, a catch adapted to engage in said opening and having a tongue projecting into said bore, a detachable portion adapted to hold said catch in position and a sleeve adapted to engage over said shank and said detachable portion and to bear against the door whereby said catch and said detachable portion are retained in place on said shank when said knob is in its operative position.

2. A knob-fastening comprising a spindle having ratchet-teeth, a knob and a shank having a lateral opening exposing its bore, a spring-catch having a tongue adapted to engage with said teeth, a detachable portion

adapted to hold said catch in position and a sleeve adapted to surround said shank and said detachable portion, said catch having a headed pin secured thereto, said detachable portion and said sleeve having apertures adapted to pass said pin.

3. A knob-fastening comprising a spindle having ratchet-teeth, a knob and a shank having a lateral opening exposing its bore, a spring-catch having a tongue adapted to engage with said teeth, a detachable portion adapted to hold said catch in position and a flared sleeve adapted to surround said shank and said detachable portion and to be engaged between the rear side of said knob and the door and means on said catch passing through said detachable portion and said sleeve whereby said catch may be raised from operative engagement with said teeth.

GEORGE W. ROBERTS.

Witnesses:

WM. C. GREW,

FRED W. CASSIDY, Jr.