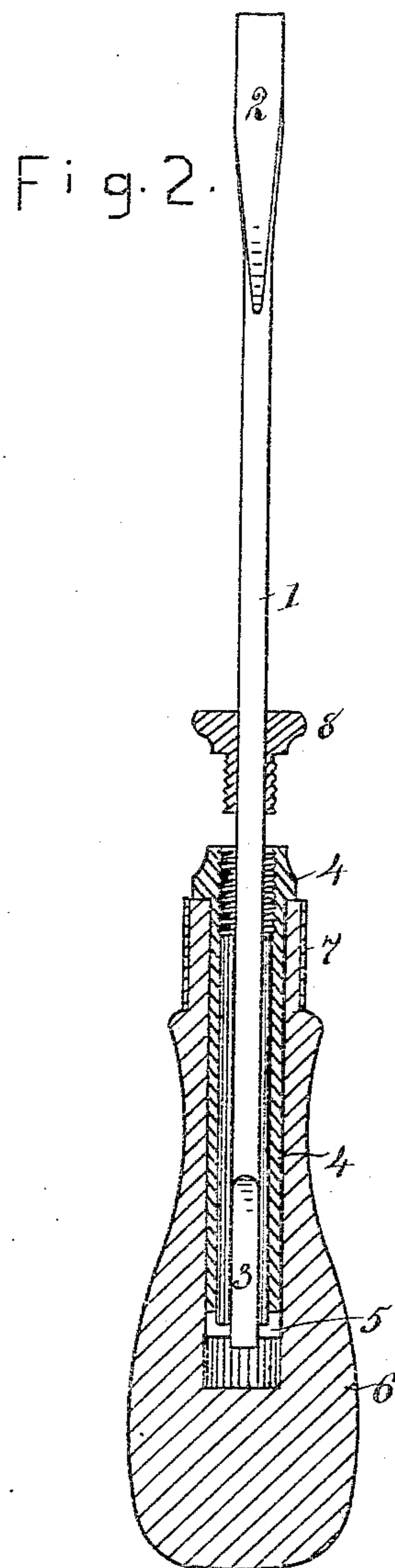
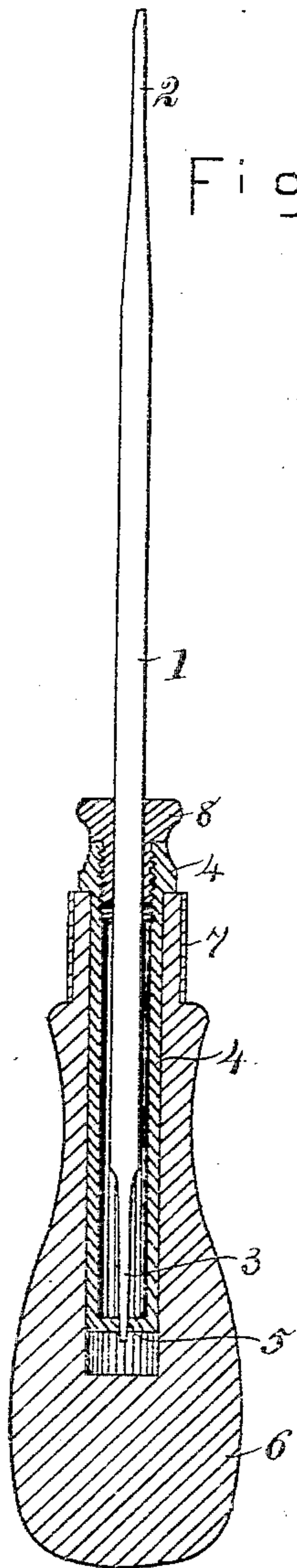


(No Model.)

A. SCHUERMANN.  
SCREW DRIVER.

No. 504,757.

Patented Sept. 12, 1893.



ATTEST  
*Lina Graham.*  
*Mora Graham.*

INVENTOR,  
ANTON SCHUERMANN.  
by his attorney  
L. P. Graham,

# UNITED STATES PATENT OFFICE.

ANTON SCHUERMANN, OF DECATUR, ILLINOIS.

## SCREW-DRIVER.

SPECIFICATION forming part of Letters Patent No. 504,757, dated September 12, 1893.

Application filed June 10, 1893. Serial No. 477,146. (No model.)

*To all whom it may concern:*

Be it known that I, ANTON SCHUERMANN, of Decatur, in the county of Macon and State of Illinois, have invented certain new and useful Improvements in Screw-Drivers, of which the following is a specification.

This invention relates to screw drivers in which the bit shank has a driving blade on each end, one wider than the other, and is interchangeable, end for end, in the handle. It is also applicable to handles for sets of interchangeable tools, or of one tool requiring occasional detachment from the handle, and it is embodied in the details of construction and combinations of parts hereinafter set forth and claimed.

In the drawings forming part of this specification Figure 1 is a central longitudinal section through a screw driver at right angles to the faces of the blades of the bit. Fig. 2 is a similar representation with the section parallel with the faces of the blades of the bit, and the lock-cap unscrewed from the bit chamber.

The bit shank 1 has a wide blade 2 on one end, and a narrow blade 3 on the other end, the latter being no wider than the diameter of the shank. The tubular chamber 4 is considerably larger in diameter than the shank of the bit, it is slotted at 5 to receive the bit blades, and is threaded at its outer end. It is secured in a handle, 6, in any desirable manner, and such handle may be provided with a ferrule as 7. The lock-cap 8 fits around the bit shank, and it is adapted to be screwed into the outer end of chamber 4. When the lock-cap is screwed into the chamber and a blade of the bit forced firmly into the slot it is practically impossible to remove the bit from the handle, but when the lock-cap is de-

tached, as indicated in Fig. 2, the bit may be "worked" from side to side until the friction of the slot is overcome. When this is accomplished the bit may be withdrawn, the lock-cap reversed, by passing it over the small blade, and the opposite blade may be secured in the handle in the manner described.

The invention is founded on the fact that the bit may be held by frictional contact with the sides of the slot, so long as oscillation of the outer end is prevented, and may be easily detached when oscillation is permitted. It is therefore essential to the handle that the slotted chamber shall be larger in diameter than the shank of the tool, and that the lock-cap shall fit the tool sufficiently close to prevent material vibration. It is also essential that one end of the tool shall not exceed in width the diameter of the shank, but apart from these features the device may be constructed in any desirable manner.

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

The combination of a tool having one end as narrow as the diameter of the shank, a chamber of greater diameter than the shank of the tool slotted across its inner end to receive an end of the tool, and a lock-cap fitting the shank of the tool and adapted to be detachably connected with the outer end of the chamber, substantially as set forth, and in connection with a handle encompassing the chamber.

In testimony whereof I sign my name in the presence of two subscribing witnesses.

ANTON SCHUERMANN.

Attest:

C. W. MONTGOMERY,  
L. P. GRAHAM.