

(No Model.)

G. W. AGIN.  
SCREW DRIVER.

No. 503,569.

Patented Aug. 22, 1893.

Fig. 1.

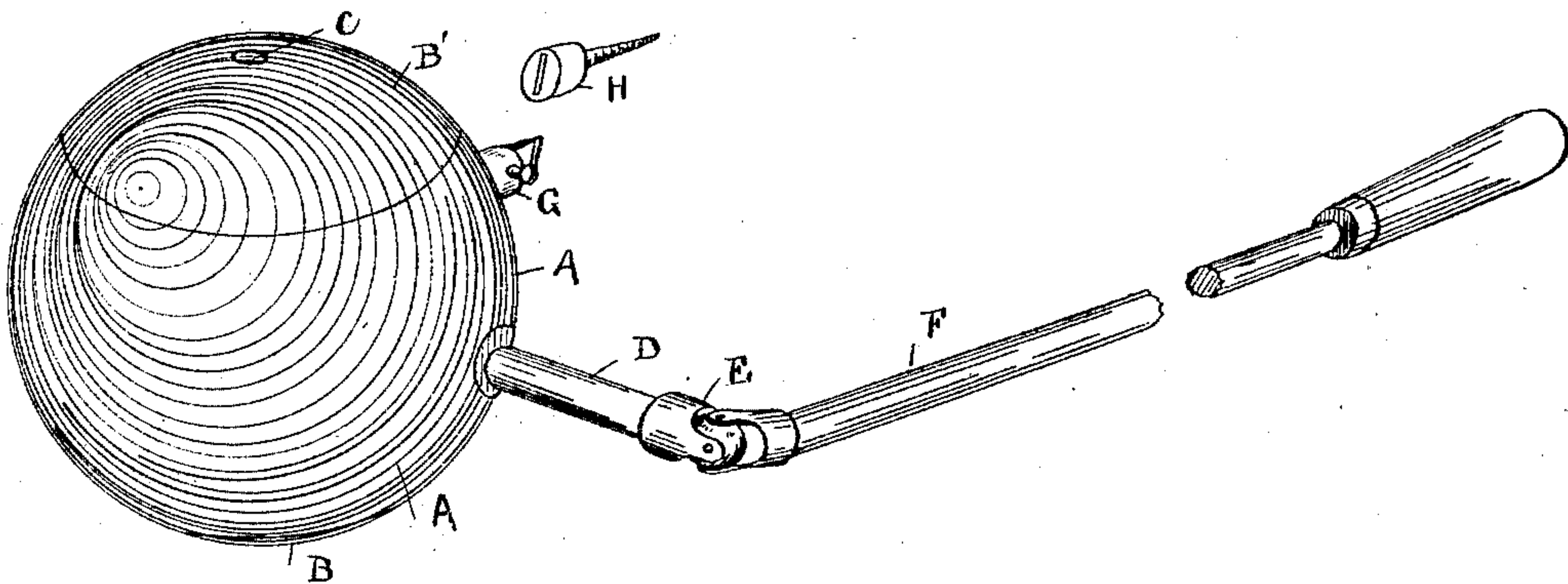


Fig. 2.

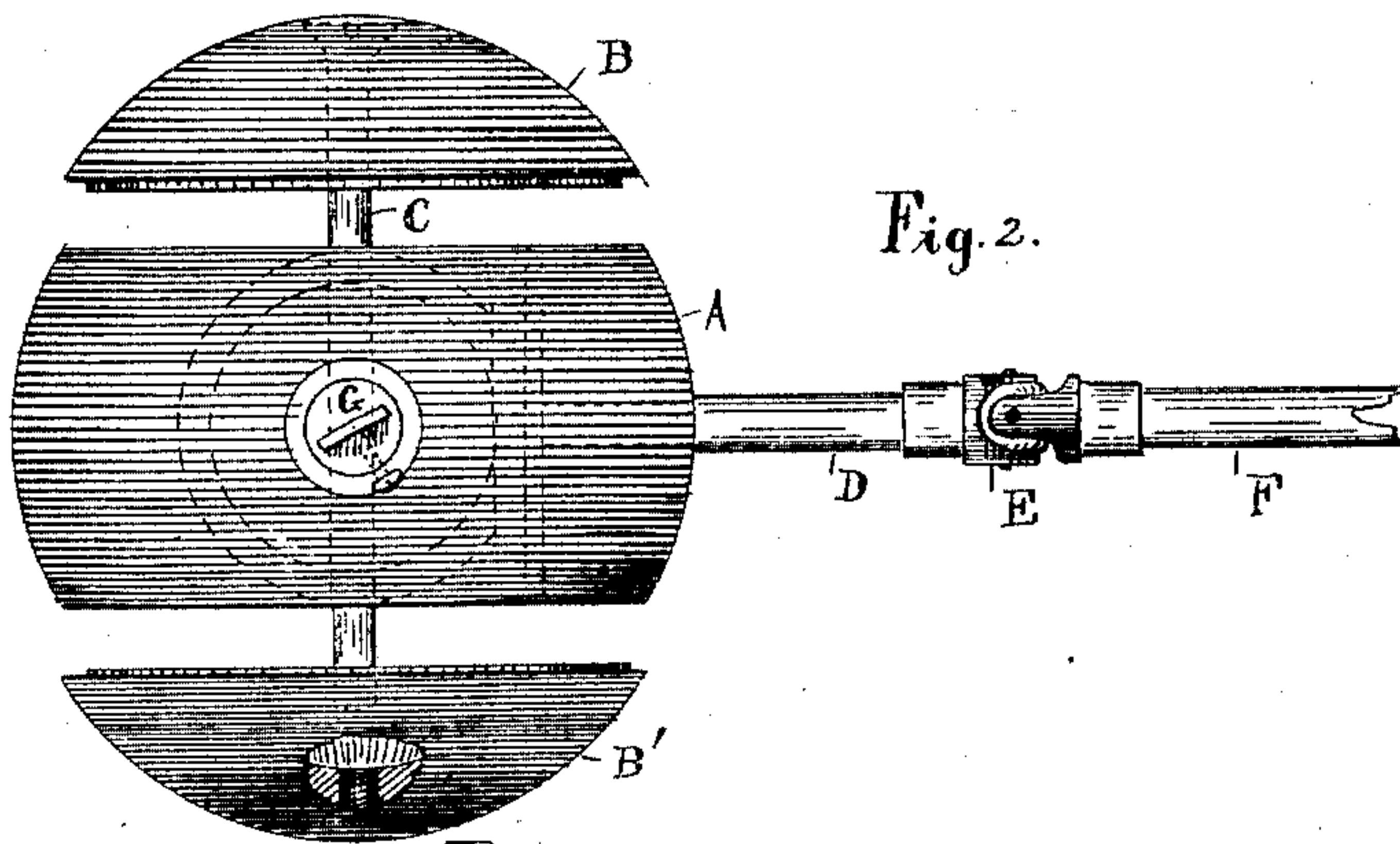


Fig. 3.

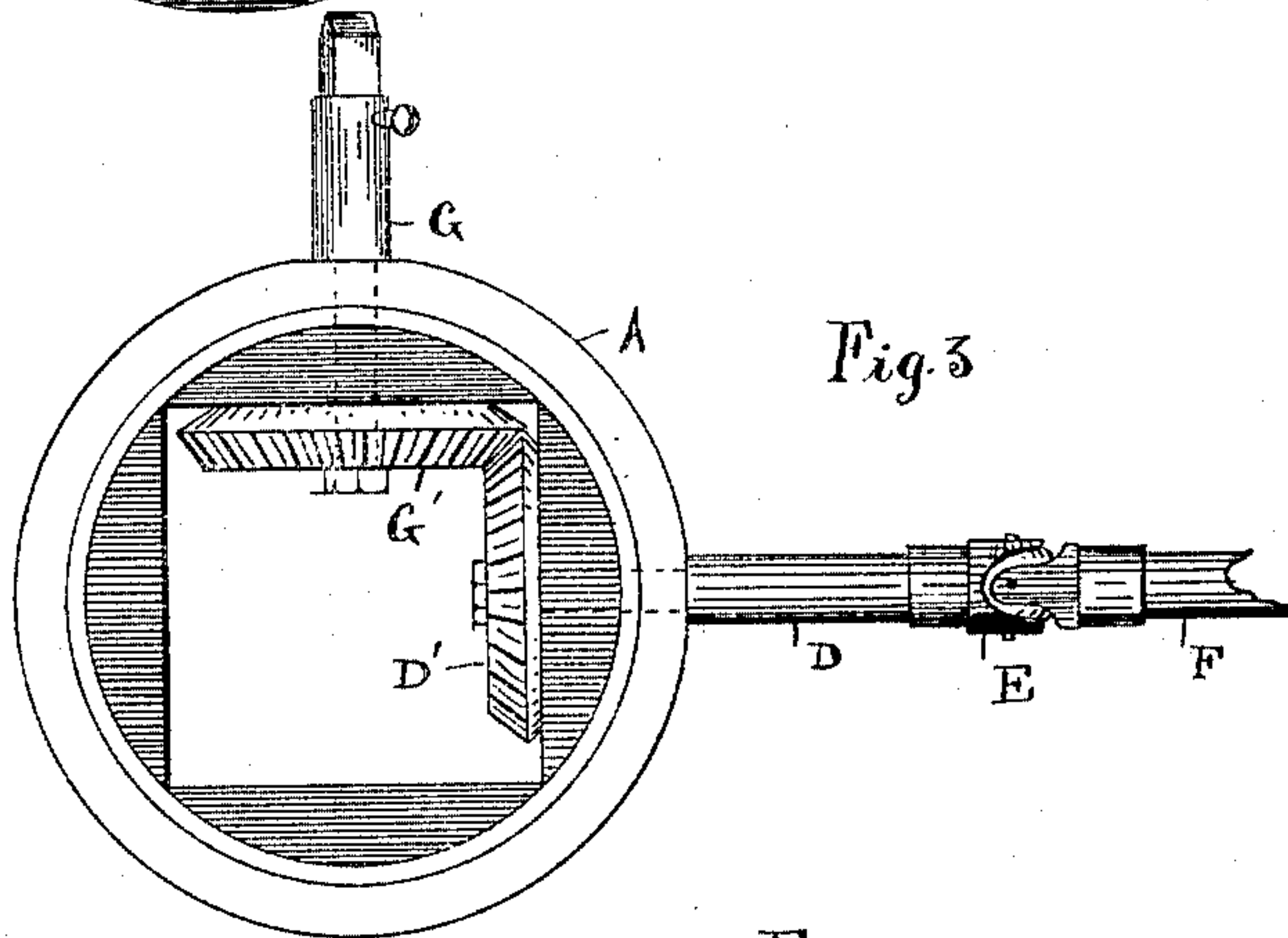
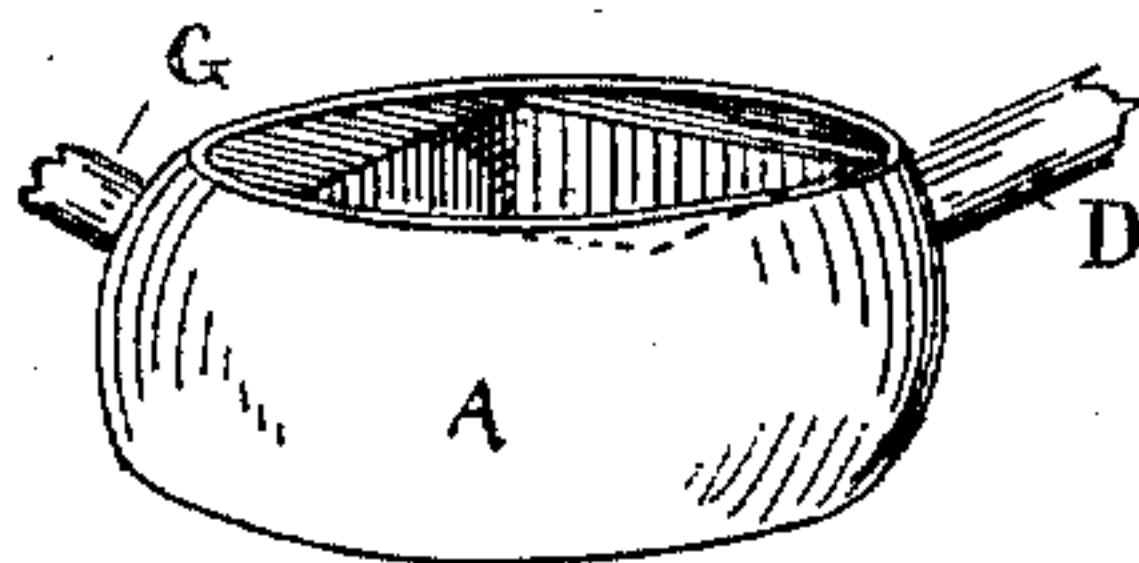


Fig. 4.



Witnesses:  
A. Keithley  
C. Johnson.

Inventor  
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By I. M. Thurston Att'y.

# UNITED STATES PATENT OFFICE.

GEORGE W. AGIN, OF PEKIN, ILLINOIS.

## SCREW-DRIVER.

SPECIFICATION forming part of Letters Patent No. 503,569, dated August 22, 1893.

Application filed December 14, 1892. Serial No. 455,109. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. AGIN, a citizen of the United States, residing at Pekin, in the county of Tazewell and State of Illinois, have invented certain new and useful Improvements in Screw-Drivers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in screw drivers.

The object of the invention is to provide a screw driver of such special construction as to allow of said driver being used in corners and in all close quarters where an ordinary tool of this class can not be used.

In the drawings forming a part of this application, Figure 1 represents a perspective view of the exterior portion of the screw driver. Fig. 2 is a front view of the screw driver, showing parts separated. Fig. 3 is a plan view of the screw driver with parts removed to show internal construction. Fig. 4 is a perspective view of the body of the screw driver showing construction.

A represents a ball of metal of convenient size and weight, which is hollowed out, leaving a square opening as shown in Figs. 3 and 4 and within said space are journaled two beveled gear wheels G' and D' which mesh with each other. The gear wheel G' is mounted on a shaft G. Said shaft carries in its outer free end the bit, and the inner end of said shaft within the ball is smaller than the outer portion and thus a shoulder is left to bear against the ball when pressure is imposed upon it. The gear wheel D' is also mounted on a shouldered shaft D and the handle and its shaft F has its connection with shaft D by a knuckle joint E.

In the several figures, the ball is shown cut into three pieces, leaving the central body A and the caps B and B' for closing the inner

space of the portion A. The caps with the body A form a perfectly round ball and said caps are held in place by a bolt C passing through the caps and through the space in the portion A.

A bit or awl mounted in a slotted nib H is placed on the screw driver bit to first make an opening to start the screw after which said awl is removed and the screw driver bit is engaged with the screw.

The device can be used with other tools as well as with the screw driver so that a very handy tool is the result.

In using the device, the ball A is placed in the palm of the hand and by this means a good steady pressure may be had and with the other hand the device may be driven by means of the handle and shaft F.

I claim—

1. In a screw driver, the portion A having its interior hollowed out and provided with the gear wheels G' and D' mounted on the shafts G and D respectively, the tool holder at the outer end of said shaft G, and means for rotating said shaft D, and the caps B and B' secured to the said portion A forming a ball for the purposes herein set forth and described.

2. In a screw driver, the portion A having its interior hollowed out and provided with the beveled gear wheels G' and D' said gear wheel G' mounted on a shaft G journaled in said portion A, said shaft carrying the working tool, the gear wheel D' mounted on a shaft D provided with the knuckle joint E, shaft F and a handle to furnish means for driving said shaft F substantially as set forth and described.

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

GEORGE W. AGIN.

Witnesses:

OTTO KOCH,  
W. A. BOLEY.