

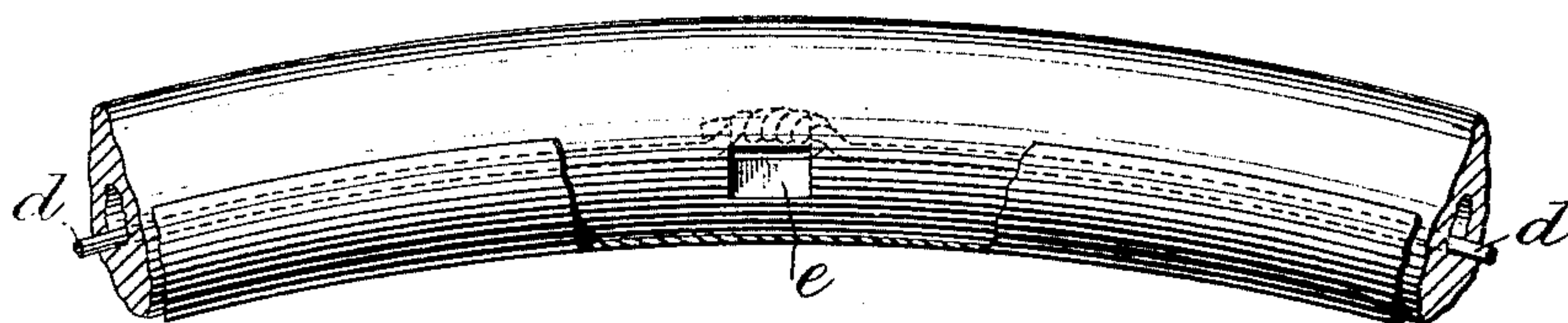
(No Model.)

E. G. HOFFMANN.  
WIRE TWISTING TOOL.

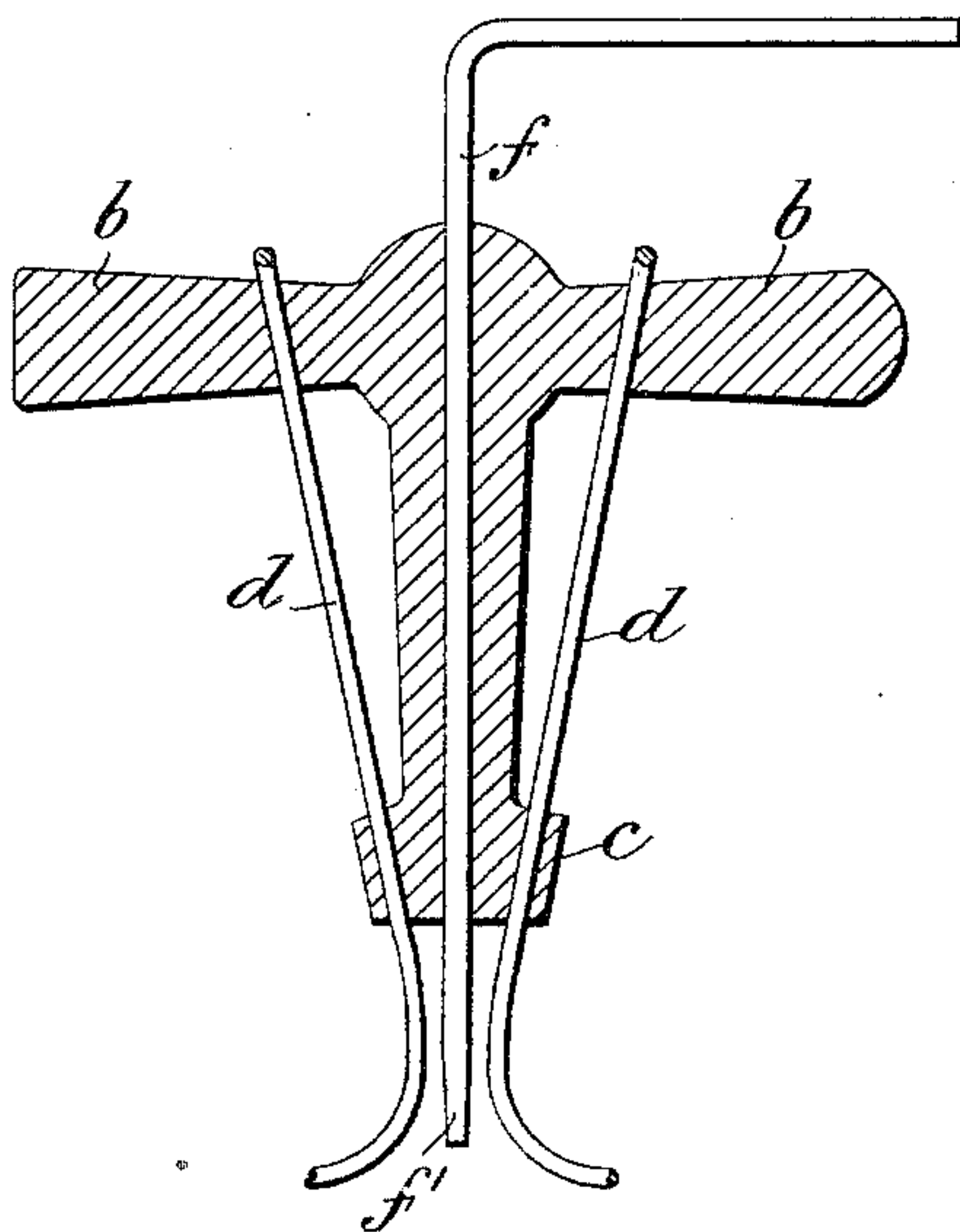
No. 450,671.

Patented Apr. 21, 1891.

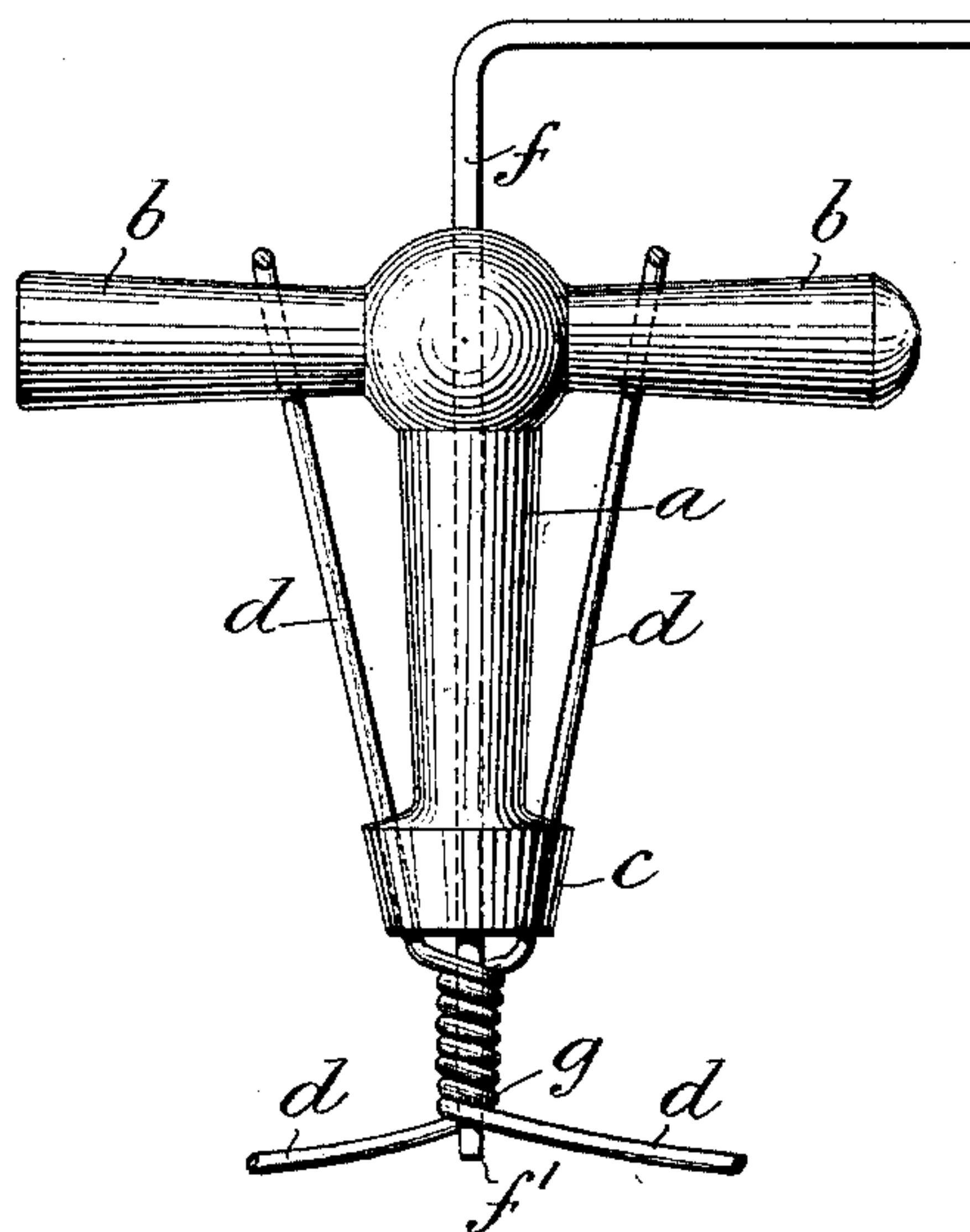
*Fig. 4.*



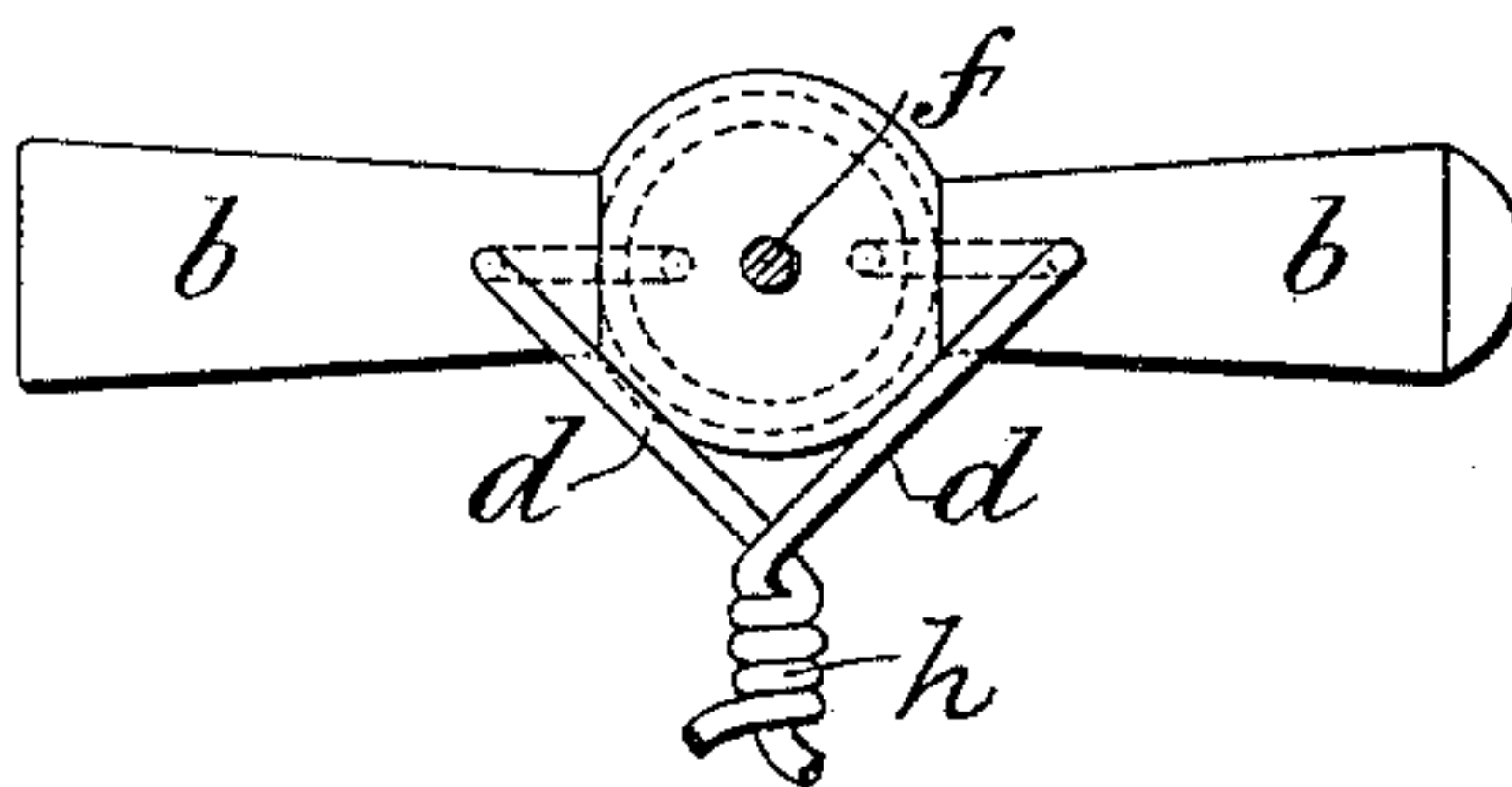
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Witnesses.*

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*attys*

# UNITED STATES PATENT OFFICE.

ERNEST GUSTAV HOFFMANN, OF NEW SOUTHGATE, ENGLAND.

## WIRE-TWISTING TOOL.

SPECIFICATION forming part of Letters Patent No. 450,671, dated April 21, 1891.

Application filed January 7, 1891. Serial No. 376,987. (No model.)

*To all whom it may concern:*

Be it known that I, ERNEST GUSTAV HOFFMANN, a subject of the German Emperor, residing at New Southgate, in the county of Middlesex, England, have invented a certain new and useful Improved Wire-Twisting Device, of which the following is a specification.

My invention relates to an improved device or tool for twisting together the ends of wires desired to be secured to each other—such, for instance, as telegraph, telephone, bell, electric-light, and other wires. I have also found it to be the best means known to me for securing together the ends of the wires employed for fastening rubber tires to wheels, which rubber tire invention is the subject of an application for Letters Patent of the United States filed by me on the 9th day of October, 1890, Serial No. 367,575.

It is well known that in twisting two wires together by wire nippers or pinchers one wire will usually wrap round the other instead of the two twisting equally, and by reason of the short turns and strain on the metal so produced will frequently break in so doing. To obviate this I employ the tool represented in the accompanying drawings, in which—

Figure 1 is a view of the same in section, showing the wires about to be twisted. Fig. 2 is a view in elevation, showing two wires twisted together. Fig. 3 is a top plan view with the rod in section, while Fig. 4 shows a portion of a wheel-rim with the tire secured thereto by the means previously referred to.

The device or tool consists of a shank *a*, having handles *b b* at one end and a boss *c* at the other. This boss *c* has two holes therein, as shown, through which the two ends of the wire *d* are passed as they project from the opening *e* of the tire, while to temporarily secure them they are passed through two holes in the handles *b b* and tightly twisted together beyond the same, as shown at *h* in Fig. 3. The shank *a* has a central hole through which a hard steel rod *f* is passed, the point *f'* of which may be slightly tapered, its end being allowed to project a short distance through the boss *c*. When the tool is twisted, the ends of the wire *d* will be twisted

regularly around the rod *f* in even spirals or turns and the wire at the same time drawn tight. When the wire is drawn up sufficiently tight to hold the tire, the rod *f* is gradually withdrawn, so as to clear one or two of the spirals, and a partial turn is given to the tool to close up or lock tight the last spirals or coils at the point *g*, Fig. 2. The rod is then completely withdrawn and the remaining coils closed up by a turn or two of the tool, after which the ends of the wire may be nipped off and the tool removed.

Instead of the loose rod *f*, a fixed pin projecting from the boss *c* may be employed; but it is not preferable.

The foregoing has been described with reference to the twisting together of the two ends of a wire securing the tire on the wheel-rim shown; but it will be evident that it is adapted for the twisting together of two independent wires which require drawing up when securing, or if the tool has more holes formed in the boss *c* for the twisting together of two or more wires.

What I claim is—

1. The improved device for twisting together the ends of wires, consisting of a tool having a boss provided with holes for receiving the respective wires, a central loose rod or pin longitudinally adjustable therein, around which the wires are twisted, and a suitable handle, substantially as described.

2. The improved device for twisting together the ends of wires, consisting of a tool having a boss provided with holes for receiving the respective wires, a central loose rod longitudinally adjustable therein and having a tapered end around which the wires are twisted, and a suitable handle provided with means for securing the wire ends, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ERNEST GUSTAV HOFFMANN.

Witnesses:

ALBERT JONES,  
WILLIAM TRIMMER.