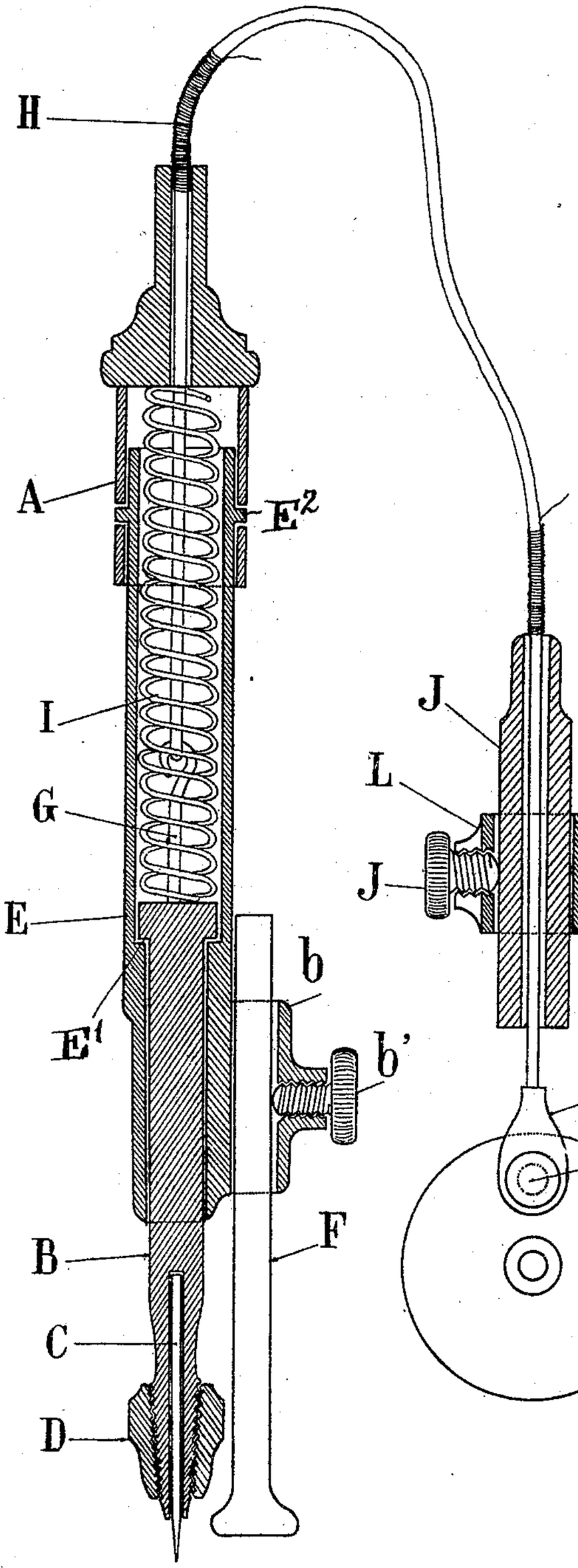
H. M. C. JAHNHOLTZ.

TRACING INSTRUMENT.

APPLICATION FILED APR. 6, 1908.

933,759. Patented Sept. 14, 1909.

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# UNITED STATES PATENT OFFICE.

HERMANN MARIE CAMILLE JAHNHOLTZ, OF BORDEAUX, FRANCE.

## TRACING INSTRUMENT.

933,759. Specification of Letters Patent. **Patented Sept. 14, 1909.**

Application filed April 6, 1908. Serial No. 425,548.

*To all whom it may concern:*

Be it known that I, HERMANN MARIE CAMILLE JAHNHOLTZ, a citizen of the French Republic, residing at Bordeaux, in France, have invented certain new and useful Improvements in Tracing Instruments, of which the following is a specification.

This invention relates to improvements in tracing instruments and the principal object is to provide an instrument for the purpose of tracing and copying drawings and the like by the well known process of "pricking".

The invention also provides a very simple and cheap apparatus for the said purpose.

The annexed drawing is a vertical section of the apparatus which comprises a hollow tube A in the lower part of which the needle holder B is slidably mounted. The needle C is secured in the holder by a screw-threaded ring D or other means for this purpose may be adopted. The needle holder B is reciprocatable in a hollow cylindrical guide E, its movement being limited by an annular shoulder $E^1$ in the said guide. The latter carries on its circumference another hollow guide *b* for the guide rod F which the draftsman holds in his hand to follow and prick the outlines of the drawing to be reproduced. The rod F is secured at the desired height in the guide *b* by means of a set screw $b^1$.

The needle holder B is provided at its upper end with a hook G adapted to engage a flexible wire or cord H. In the tube E is located a spring I which tends to thrust the holder B into its position of rest but has sufficient strength to allow of the needle piercing the drawing. The cord or wire H, which may have a sheath, passes into a second guide J′ carried by a bearing L in which it is secured by a set screw J′. To the end of said cord H is attached a metal disk M perforated for the passage of the threaded gudgeon $M^1$ of the eccentric N.

The action of the apparatus is as follows. The eccentric N actuated by a crank or sewing machine wheel or other means, exerts a rectilinear pull on the cord H at each revolution tending to lift the holder B inward whereupon the spring I thrusts the holder outward again; thus enabling a series of pricks to be produced. The hollow tube A is secured to the guide E by a bayonet fastening $E^2$ or otherwise.

The apparatus can be operated by hand or mechanically and may be used with apparatus coupled to the eccentric or to a rod, rocker, pump, etc., capable of transmitting movements and of regulating the speed, if necessary with variable gear.

The shape and dimensions of the parts can be varied as required and the cord or wire may be of any suitable kind.

What I claim as my invention and desire to secure by Letters Patent of the United States is:—

A tracing instrument comprising a hollow tubular body having an interior annular shoulder, an implement holder mounted to have rectilinear movement within said cylinder and limited in its outward movement by said annular shoulder, a flexible member connected at one end to said holder, and rotatable means connected to the opposite end of said flexible member adapted to exert intermittent tractive efforts on said flexible member to move same rectilinearly of the body and move the holder inward relatively thereto, and a spring within the body adapted to force said holder outward from the body between the aforesaid tractive efforts on the flexible member, substantially as described.

In witness whereof I have signed this specification in the presence of two witnesses.

HERMANN MARIE CAMILLE JAHNHOLTZ.

Witnesses:
A. PALTEAUX,
H. PHILLIPS.