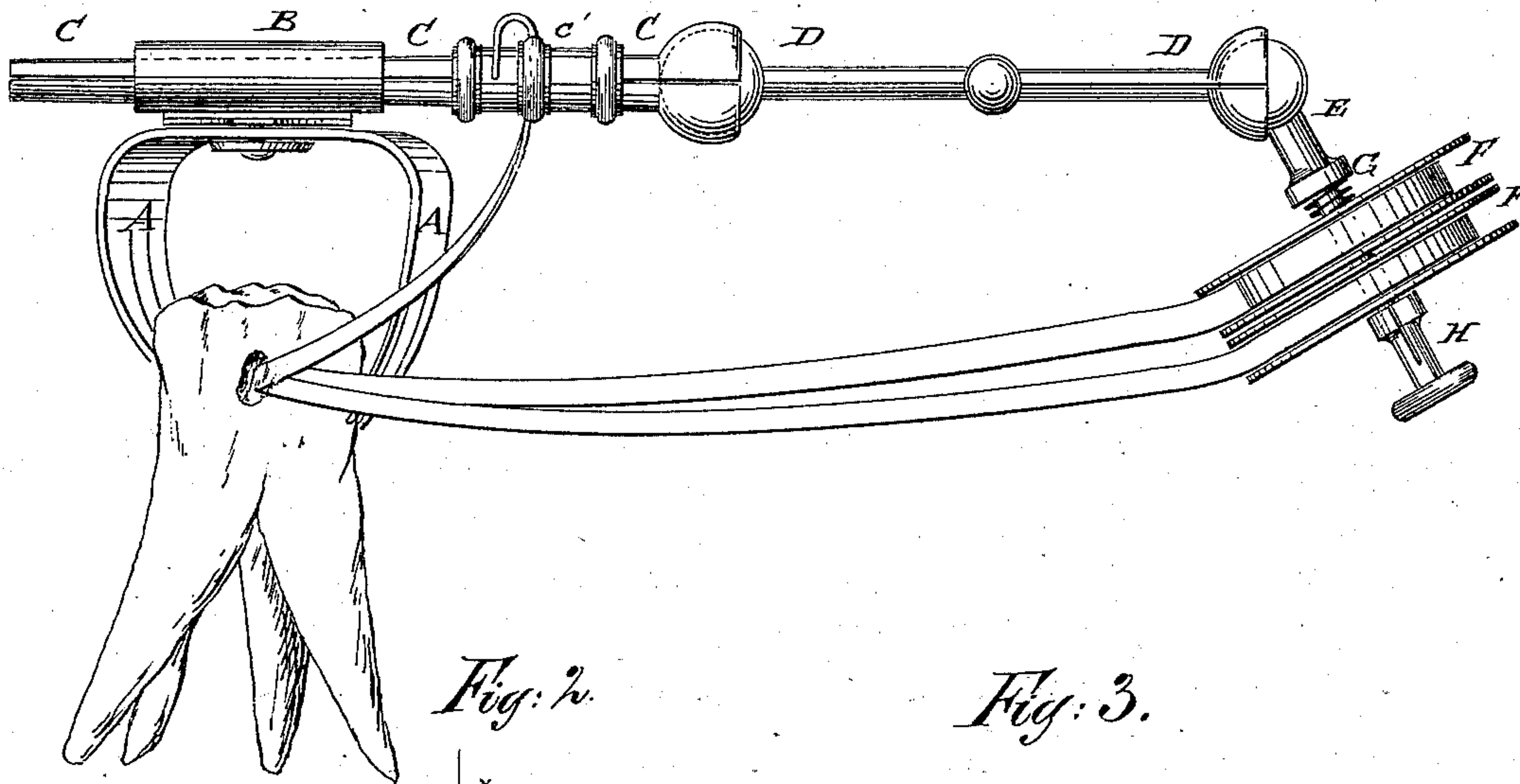


H. MORRISON.  
Ribbon Gold Spool for Dental Use.

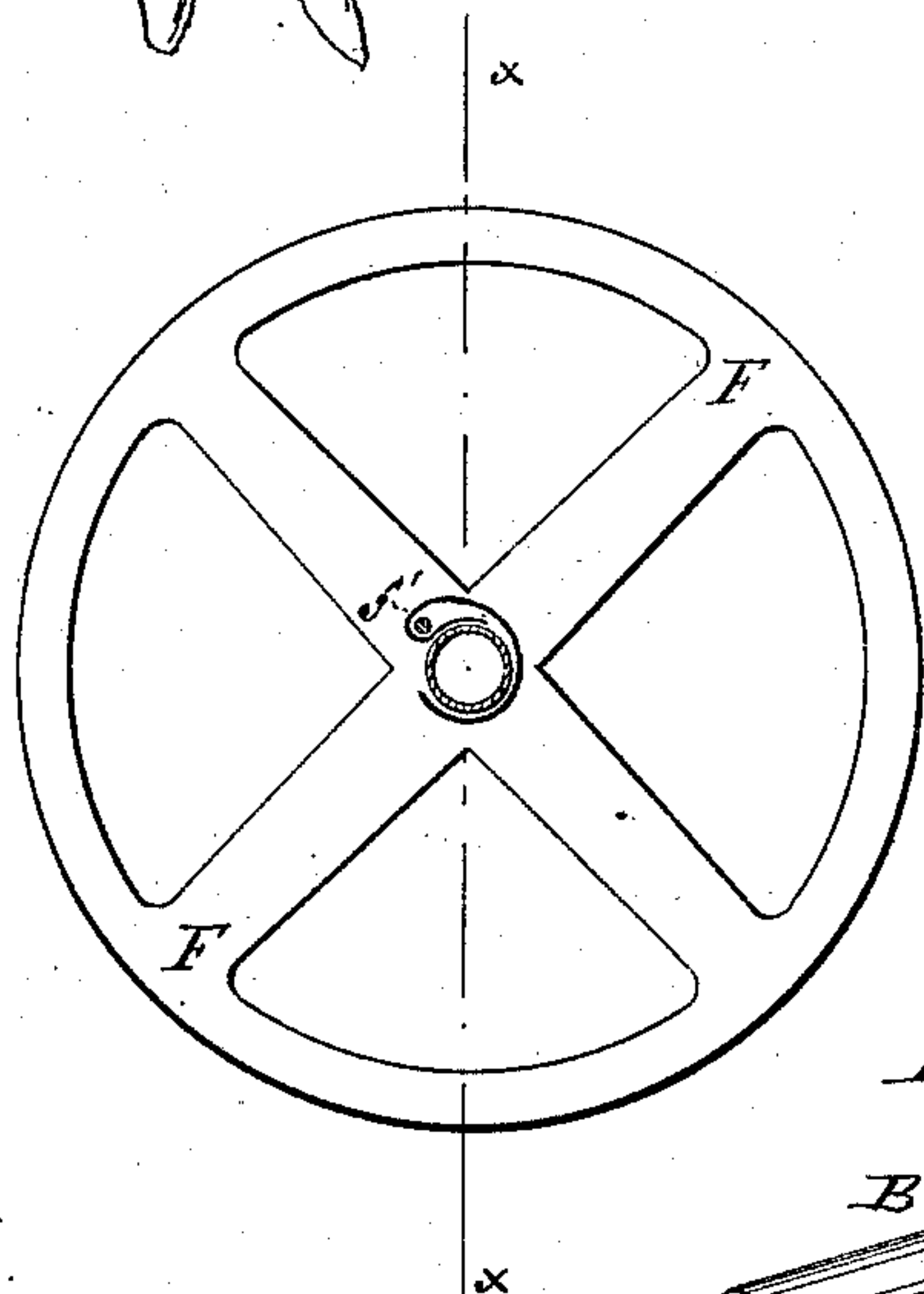
No. 219,293.

Patented Sept. 2, 1879.

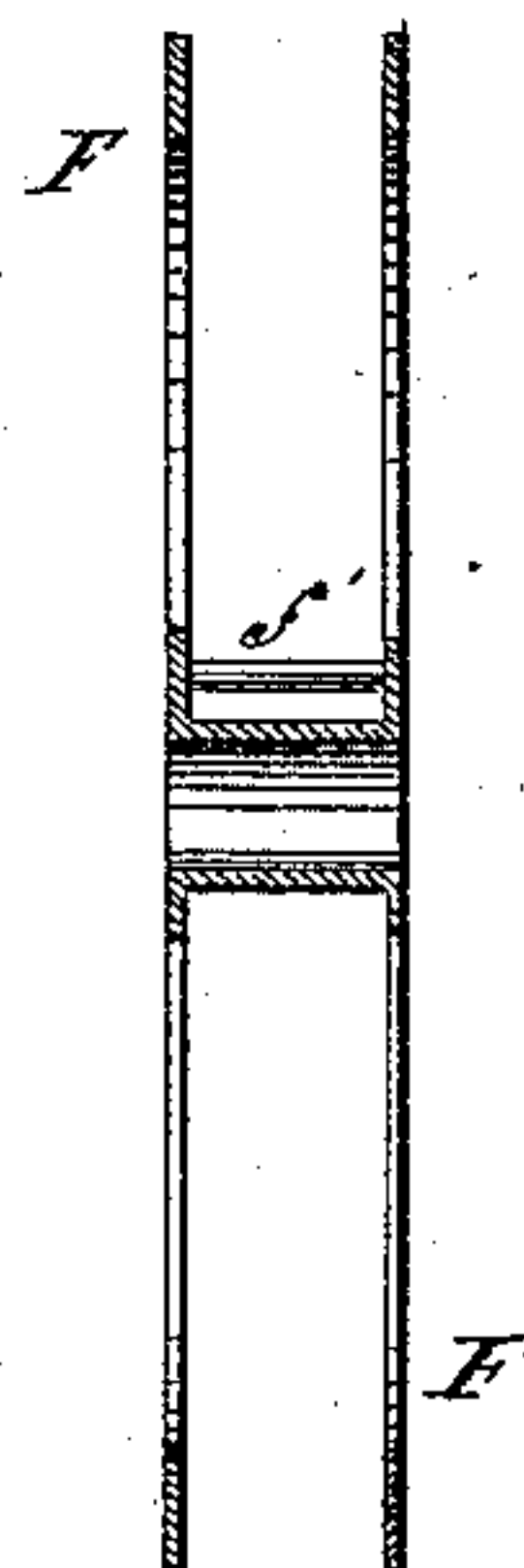
*Fig: 1.*



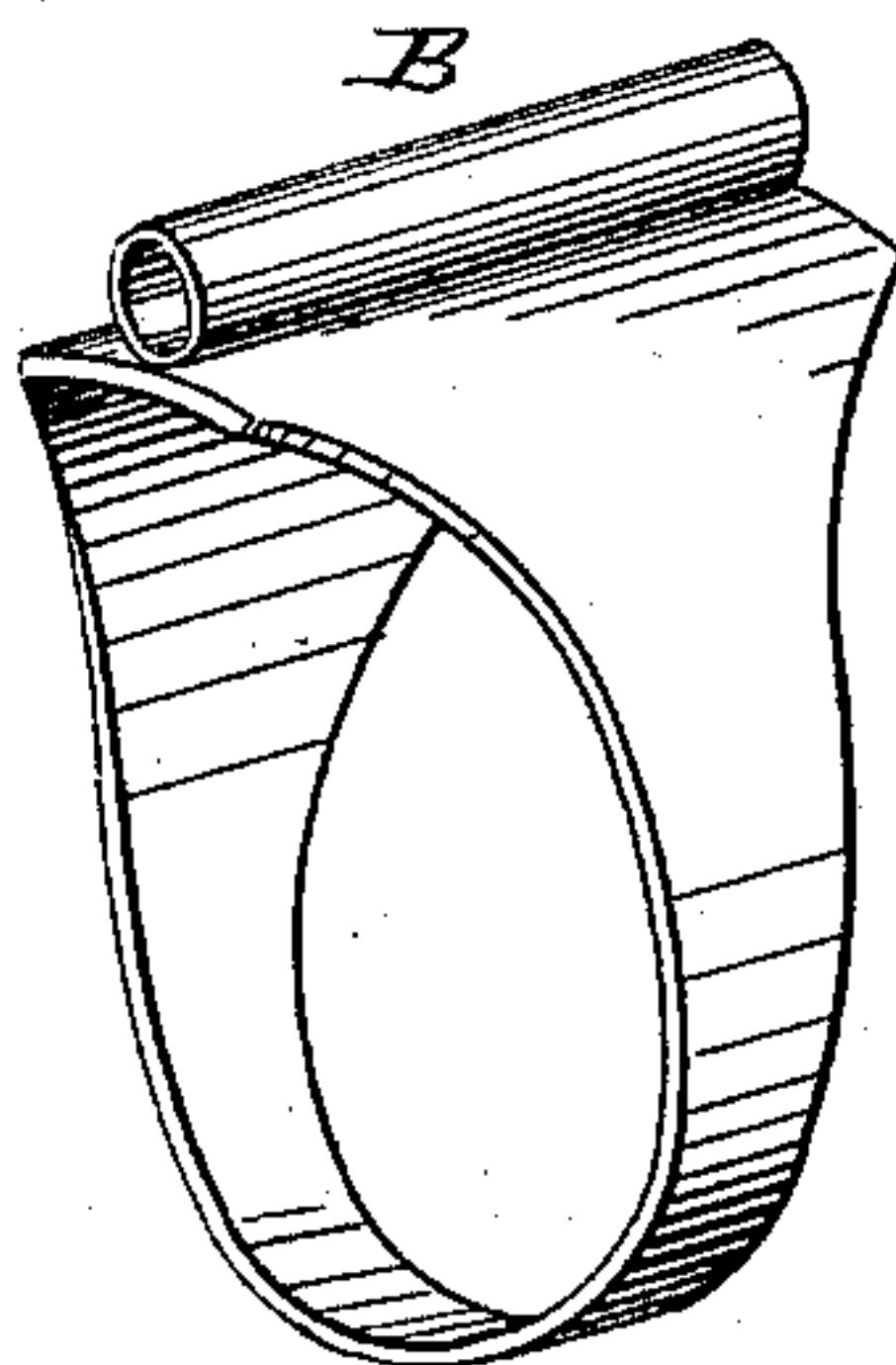
*Fig: 2.*



*Fig: 3.*



*Fig: 4.*



WITNESSES:

*Chas. Nida*  
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*H. Morrison*  
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# UNITED STATES PATENT OFFICE.

HENRY MORRISON, OF PITTSBURG, PENNSYLVANIA.

## IMPROVEMENT IN RIBBON-GOLD SPOOLS FOR DENTAL USE.

Specification forming part of Letters Patent No. **219,293**, dated September 2, 1879; application filed February 6, 1879.

*To all whom it may concern:*

Be it known that I, HENRY MORRISON, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Ribbon-Gold Spools, of which the following is a specification.

Figure 1 is a side view of my improved apparatus, illustrating its use. Fig. 2 is a detail cross-section of one of the spools. Fig. 3 is a longitudinal section of the same, taken through the line *xx*, Fig. 2. Fig. 4 is a detail perspective view, showing a modification of a part of the same.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved device for holding ribbon-gold while teeth are being filled, to facilitate the operation, lessen the time required, the labor of the operator, and the exhaustion of the patient.

The invention consists in the combination of the spools, the three rods, connected together by ball-and-socket joints, and the socket, with each other and with the clamp or other holder for holding ribbon-gold for filling teeth.

A is a U-spring clamp the arms of which are slitted longitudinally to adapt them to fit upon the irregularities of the teeth, and thus keep their places securely.

To the base of the clamp A is swiveled a tube, B, to receive a rod, C, which is split longitudinally to give it sufficient spring to keep it in place.

The parts of the rod C are held together by a sleeve, *c'*, made with roughened ring corrugations for convenience in handling it.

With the end of the rod C is connected, by a ball-and-socket joint, the end of a short rod, D. The outer end of the rod D is slitted, and is connected by a ball-and-socket joint with a third rod, E, upon which is formed a journal to receive the two spools or reels F, which are formed of a hub or drum, provided with disks or with arms and rims at their ends.

Upon the inner part of the journal of the rod E is placed a small spiral spring, G, which presses against the inner spool, F, and the tension of which is regulated by a split tubular spring-knob, H, slipped upon the outer end of the said rod, holding spools in position.

Through the flanges or arms of the spools F are passed pins *f'*, at such a distance from their hubs or drums that the end of a gold

ribbon can be inserted between the said pins and hubs. The ribbon-gold is then bent back and wound upon the spool, the pin *f'* holding its inner end securely.

In case the ribbon-gold is not long enough to fill the spool another ribbon may be spliced to it by indenting the adjacent ends with a serrated instrument.

In preparing the ribbon-gold I procure chemically pure gold in ingots, and roll or hammer it into sheets of the desired length and thickness. The gold sheets are then slightly annealed and laid upon a smooth surface of metal. A straight-edge is then laid upon it, and it is cut with a revolving sharp-edged wheel into ribbons to fit the different widths of spools; or the gold is drawn into wire of different gages, and then rolled into ribbons of the desired width and thickness. The ribbon-gold thus prepared is then wound upon the spools, as hereinbefore described, and is then subjected to heat until properly annealed for adhesive gold. Two spools of different widths are then placed upon the journal of the rod E, turning in opposite directions, so that the operator can have a wider and heavier ribbon and a narrower and lighter ribbon to pack around the walls of a cavity, and may thus be able to do the work properly.

In case the spring-clamp A cannot be conveniently used, the socket B may be attached or swiveled to a ring, I, to be placed upon the finger of the left hand, between the first and second joints.

The clamp A is applied to the tooth with an ordinary clamp-forcep.

The swiveled socket and the jointed rods allow the spools to be so adjusted that the ribbon-gold can easily unwind from the spools as it is used.

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

The combination of the spools F, the three rods E D C, connected together by ball-and-socket joints, and the socket B, with each other and with the clamp A, or other holder for holding ribbon-gold for filling teeth, substantially as herein shown and described.

HENRY MORRISON.

Witnesses:

E. G. COMINGO,  
F. R. STONER.