

(No Model.)

I. READ.

BOW FOR USE IN DRILLING AND TURNING.

No. 492,559.

Patented Feb. 28, 1893.

Fig. 1.

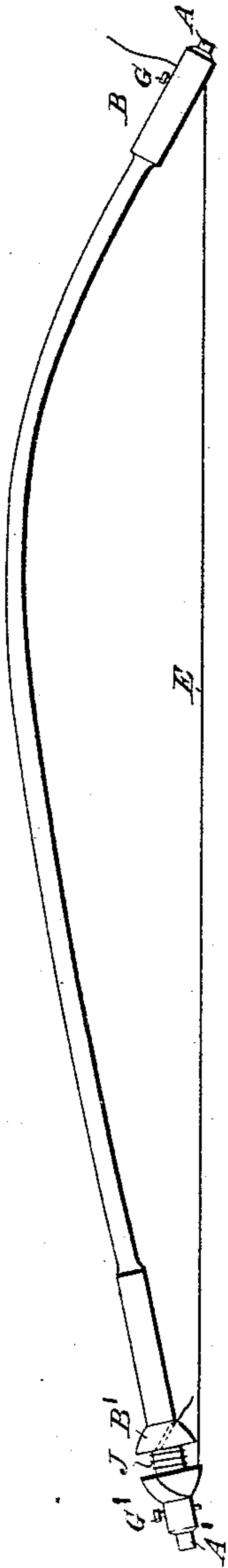


Fig. 2.

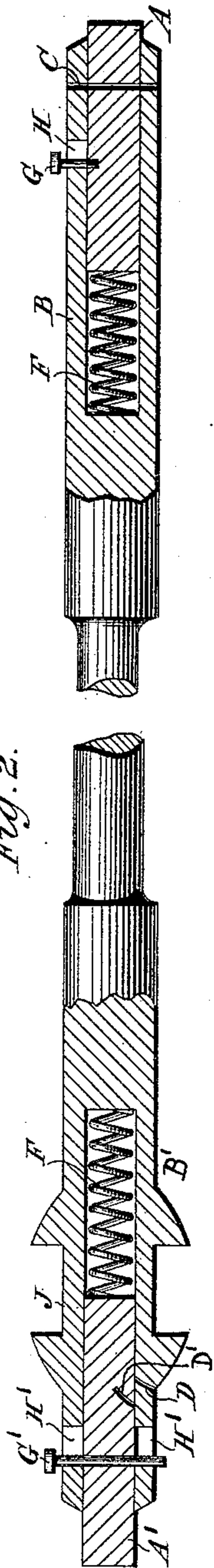


Fig. 3.

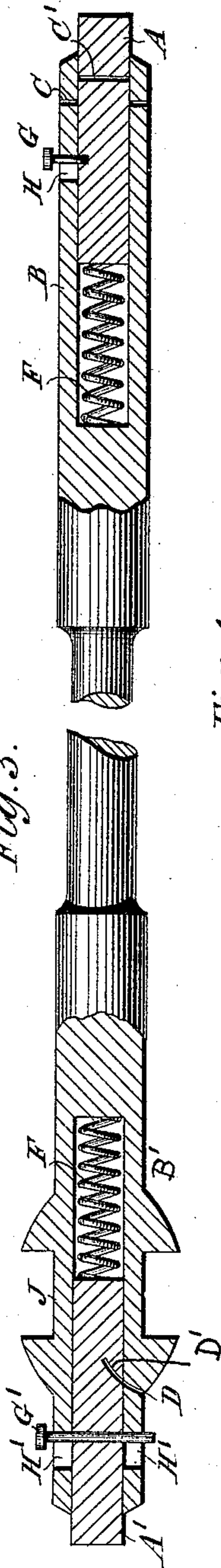
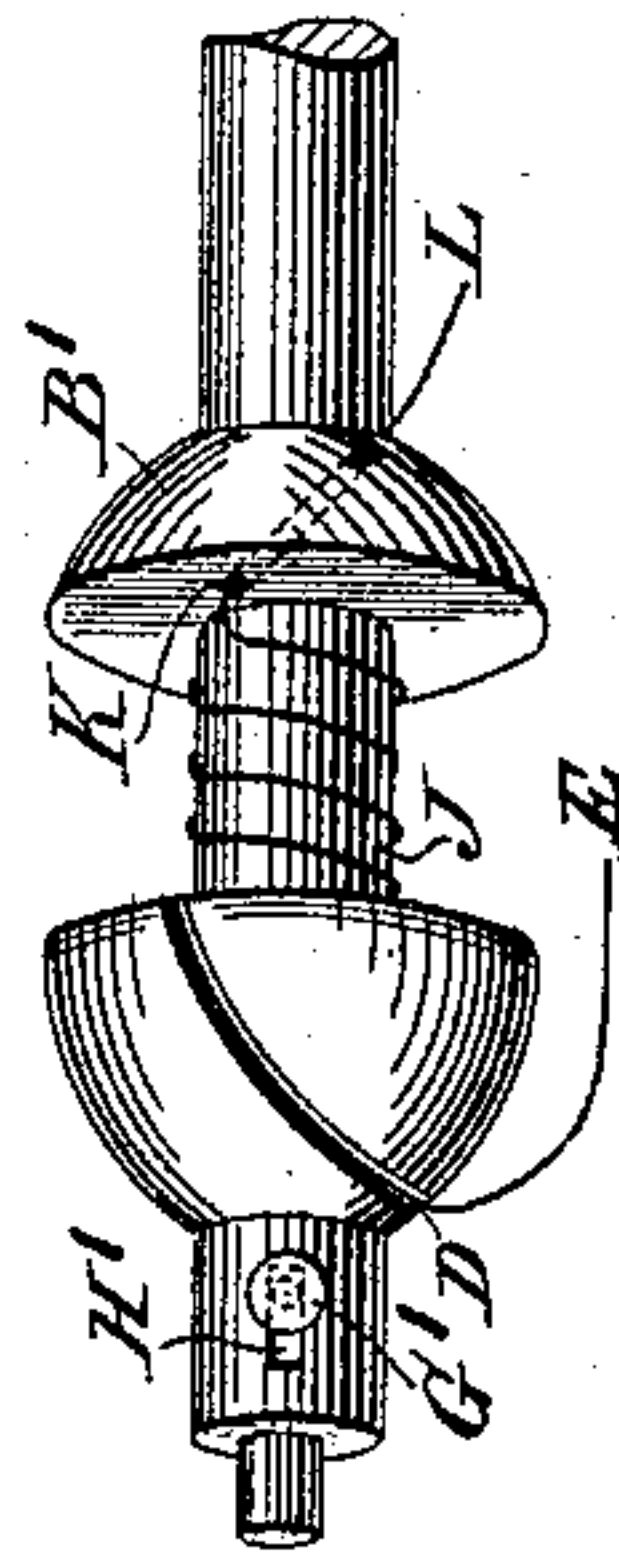


Fig. 4.



Witnesses.

Albert Jones.  
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# UNITED STATES PATENT OFFICE.

ISAAC READ, OF EASTBOURNE, ENGLAND.

## BOW FOR USE IN DRILLING AND TURNING.

SPECIFICATION forming part of Letters Patent No. 492,559, dated February 28, 1893.

Application filed February 29, 1892. Serial No. 423,319. (No model.) Patented in England July 23, 1890, No. 11,546; in France October 24, 1890, No. 209,093, and in Switzerland November 4, 1890, No. 2,904.

*To all whom it may concern:*

Be it known that I, ISAAC READ, a subject of the Queen of Great Britain, residing at Eastbourne, in the county of Sussex, England, have invented a new and useful Improvement in Bows for Use in Drilling and Turning, (for which I have obtained Letters Patent in Great Britain, No. 11,546, bearing date July 23, 1890; in France, No. 209,093, bearing date October 24, 1890, and in Switzerland, No. 2,904, bearing date November 4, 1890,) of which the following is a specification.

My invention relates to an improvement in bows such as are used by watchmakers, jewelers and others in drilling and turning watch and other work, and my invention has for its object to provide a more efficient and ready means of fastening the hair gut, or other filament to the ends of the bow whereby the tension may be quickly adjusted to suit the requirements of the work and the objections to looping and knotting the hair or gut are avoided.

In the accompanying drawings in all the figures of which the same part is indicated by like letters of reference Figure 1 is a perspective view of a complete bow made in accordance with my invention. Fig. 2 represents enlarged views of the handle end showing the two extreme positions of the hair or gut gripping device. Fig. 3 represents enlarged views of the fore end of the bow showing the two extreme positions of the filament gripping device adopted at that end, and Fig. 4 is a perspective view of the cylinder formed at the handle end of the bow showing the manner in which the end of the filament is first secured and then guided to the gripping device.

The invention consists in the combination of a solid part A or A' and a tubular part B or B' fitting the one in the other with capability of longitudinal sliding motion the one with regard to the other and each having a transverse hole C and C' or lateral slit or notch D and D' for the hair gut or other suitable filament E and a spring F acting on the solid sliding part A or A' and tending to put the holes or slits in the two parts out of register so as to cause the filament previously threaded or otherwise inserted therein to be firmly nipped between the two parts.

It further comprises means for limiting the motion of the sliding part A or A' and of readily operating it so as to make the holes or slits in the two parts coincide for the purpose of inserting the filament therein.

In the preferred form the tubular part or socket B or B' is affixed to the end of the bow and contains the solid sliding part or plunger A or A' and likewise the spring F which tends to force the plunger outward the motion being limited by a lateral stud G or G' projecting through a slot H or slots H' in the tubular part B or B' and by which the plunger may be readily drawn inward to make the holes or slits coincide. Or the plunger may be forced inward by pressure applied to its outer end which is more convenient when a lateral slit or notch is used instead of a diametrical hole. The tubular part B' at the handle end of the bow is enlarged and formed with a circumferential groove J in which any surplus filament is wound. The forward flange of the tubular part B' is drilled through as shown at K at an angle and the rear flange is slit at D to correspond with the slit D' in the part A'.

In order to secure the filament E one end is passed through the hole K from the groove J to outside the flange; and any surplus filament is wound in the groove J; the obliquity of the hole K preventing any slip of the filament. The part A' is then forced into the part B' until the stud G' comes against the opposite ends of the slots H' when the slits D and D' will correspond as shown and the filament is passed through the slit D into the slit D' when the part A' is released and the spring F forces it out and causes this part of the filament to be firmly held. The part A is then forced into the part B so that the holes C and C' correspond and the other end of the filament is threaded through these holes and the part A released when this end of the filament will also be firmly gripped. The groove J thus serves to retain any surplus filament and when this surplus is exhausted the end of the filament is secured in the slits D D' only.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. In a bow for drilling and turning, a fastener end consisting of the tubular part slit-

ted or perforated, of the solid part sliding therein and also slitted or perforated, of a spring and of a stud to limit the motion of the solid part: for securing and readily altering the length of the hair gut or other filament employed for the bow substantially as described and shown in the accompanying drawings.

2. In a bow for drilling and turning, a fastener end consisting of a slitted tubular part B' provided with a groove J to hold the surplus filament and with means for holding the end of the filament, of a slitted solid part A', of a spring F and a stud G' to limit the movement of the solid part A: for securing, holding and readily altering the length of the hair gut or other filament employed for the bow

substantially as described and shown in the accompanying drawings.

3. In a bow for drilling and turning, a part B' at one end provided with a groove J for holding the surplus filament, with an oblique hole K passing through one flange from the bottom of the groove J to outside the part B' for holding the end of the filament, and with a slit in the other flange for guiding the filament into the gripping mechanism, substantially as described and shown in the accompanying drawings.

ISAAC READ.

Witnesses:

W. F. GERMAIN,  
G. W. HARRIS.