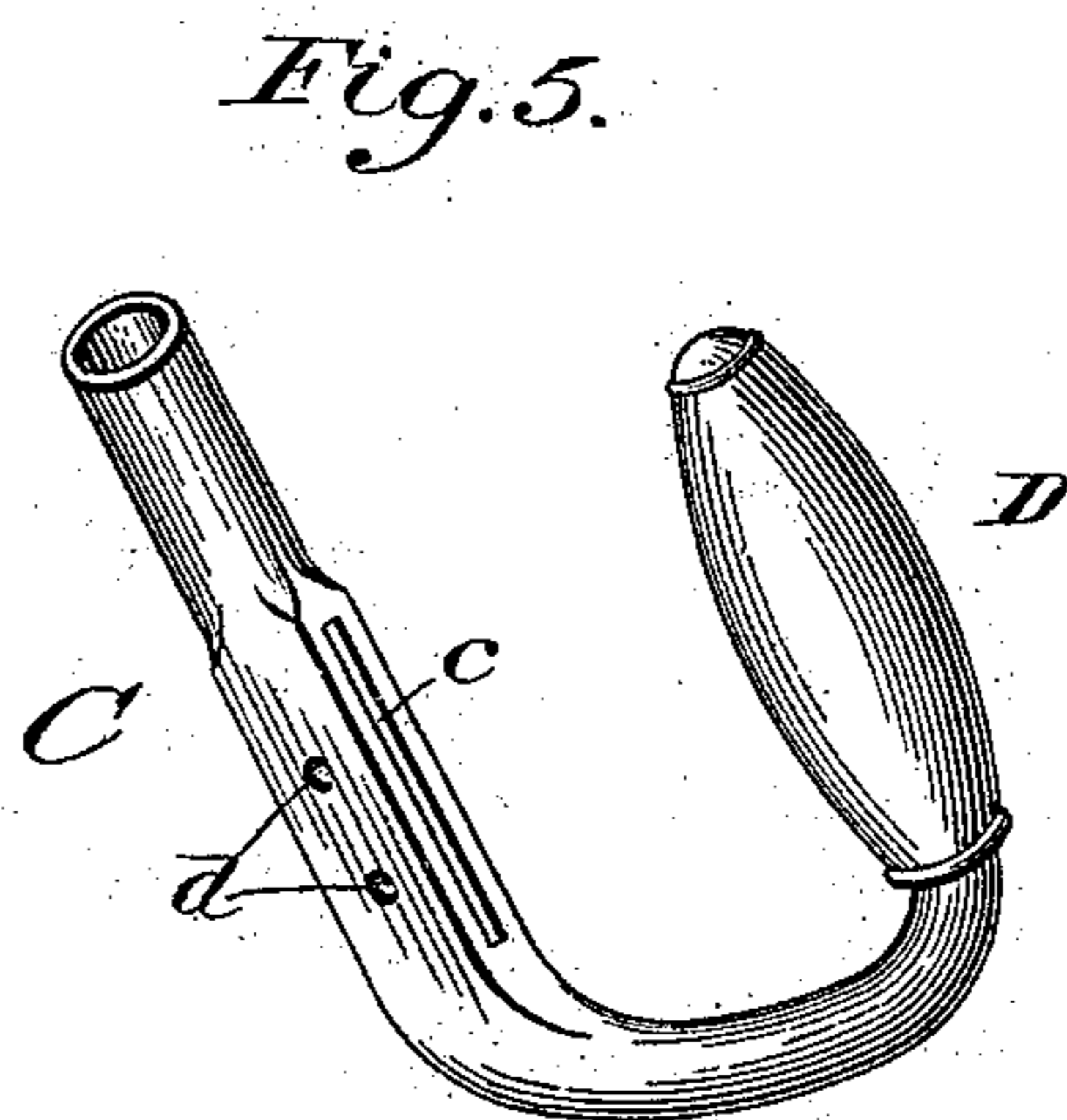
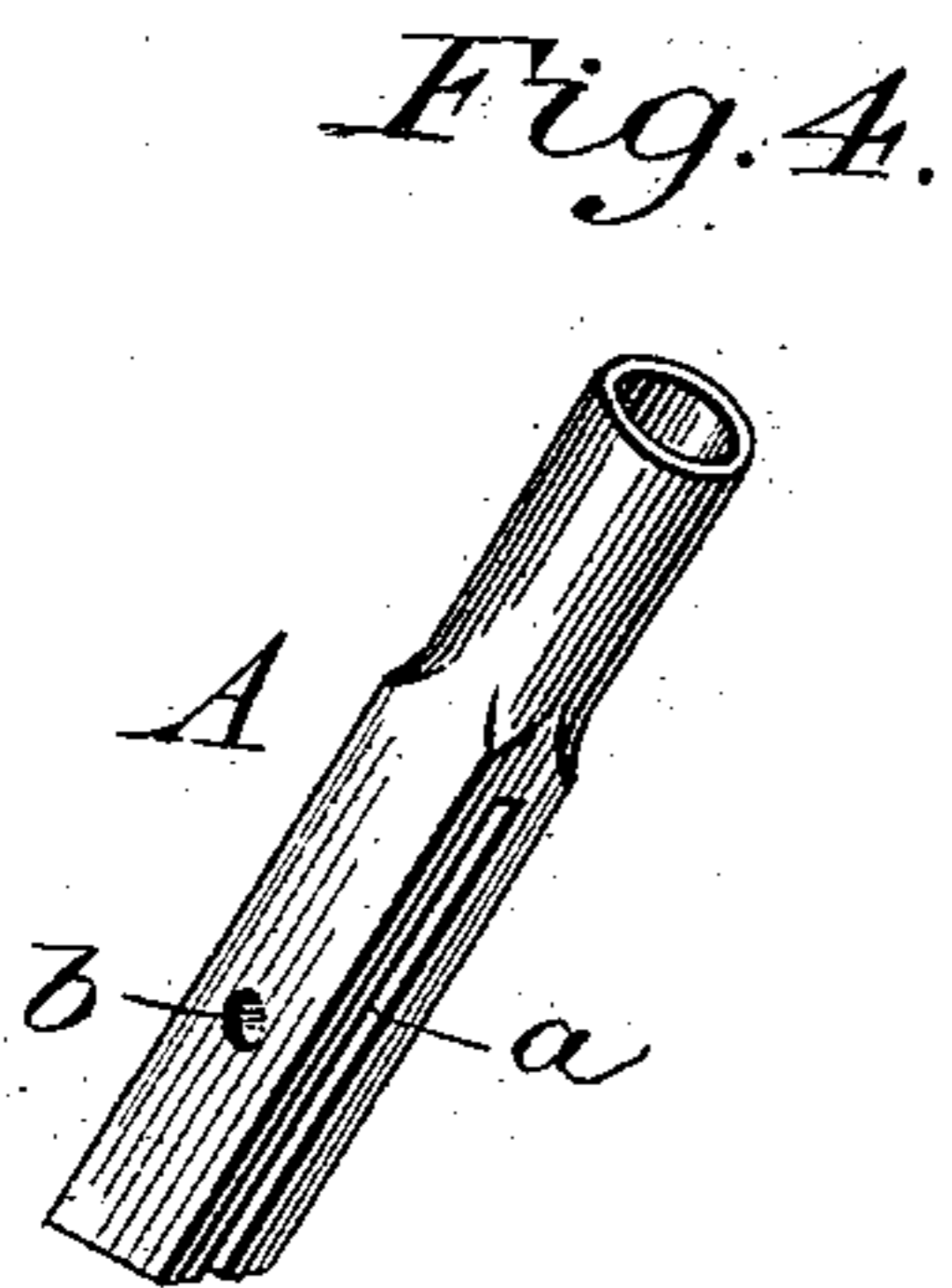
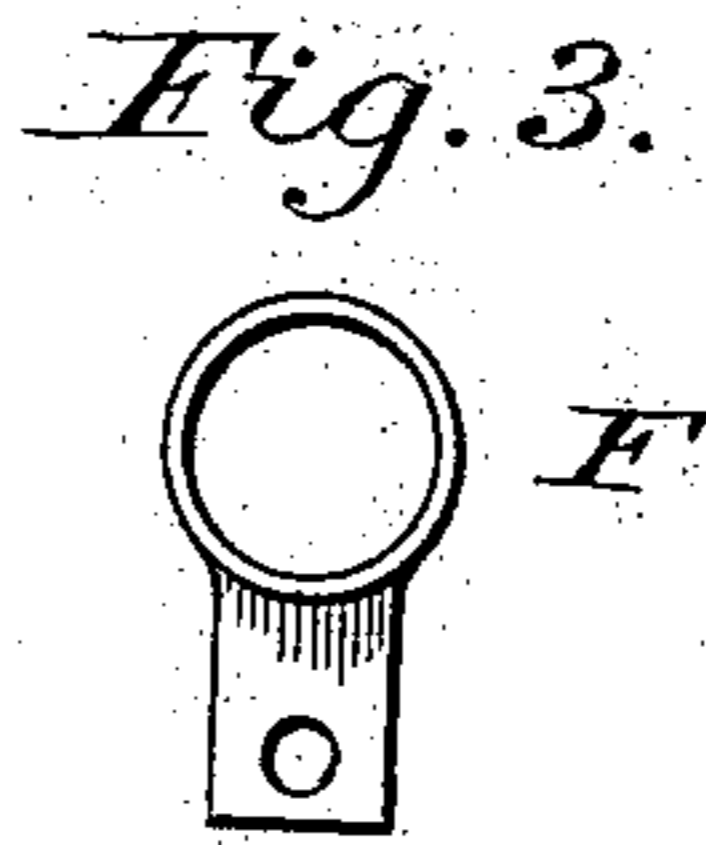
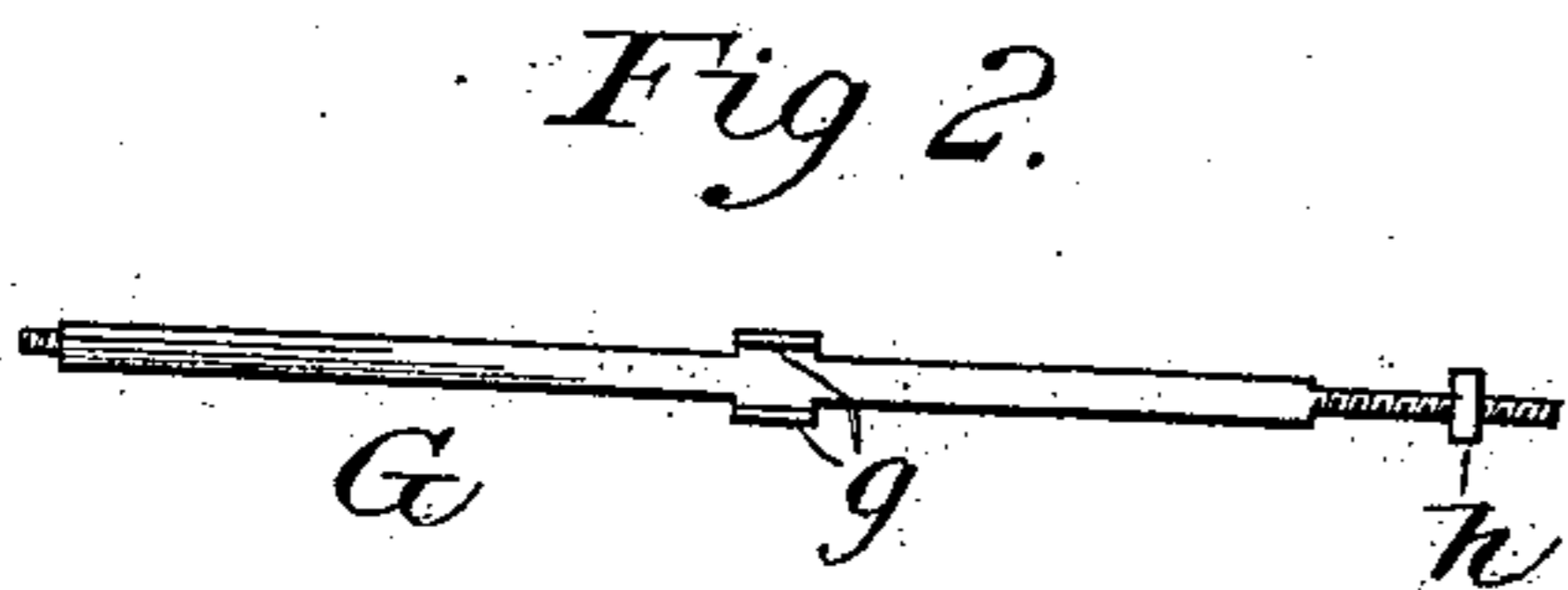
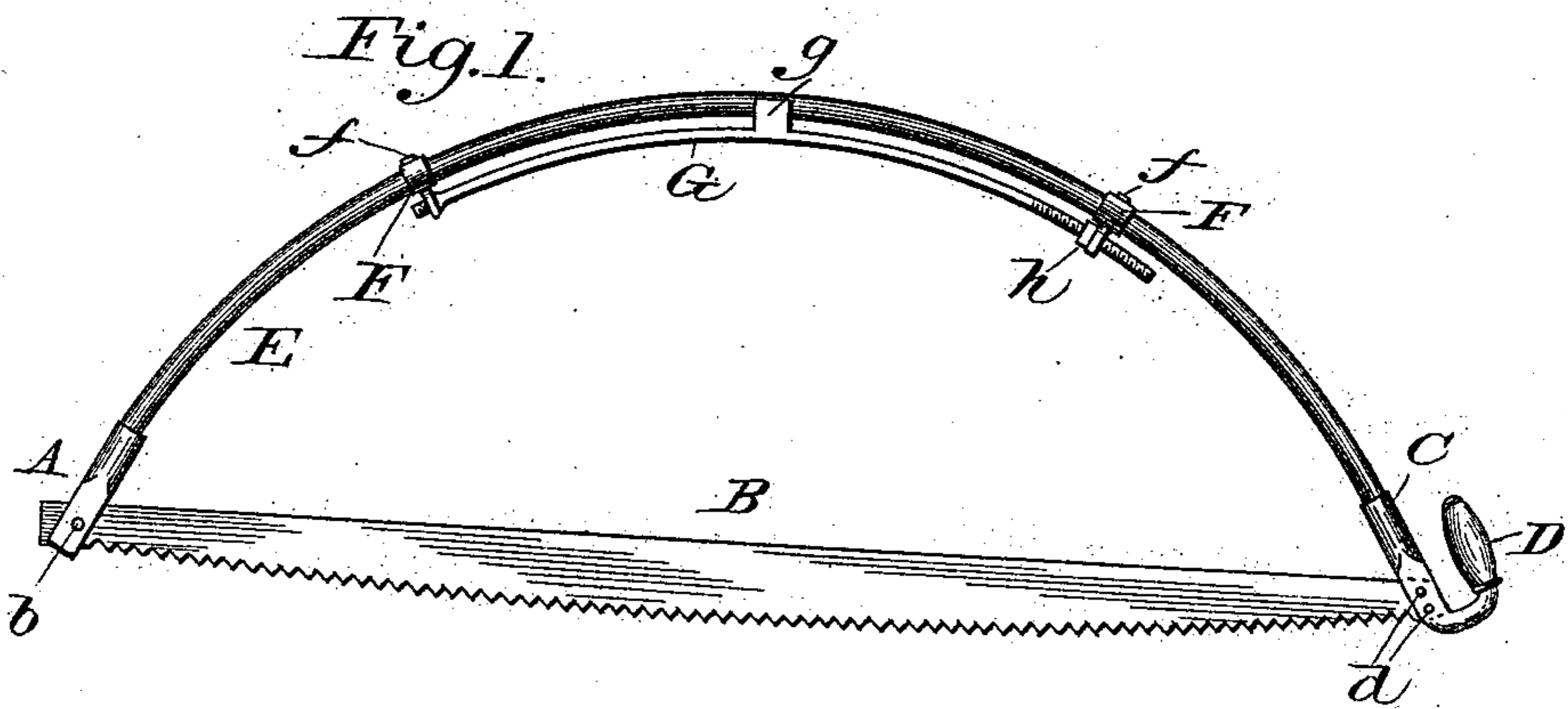


(No Model.)

J. DANIELSON.
SAW.

No. 528,415.

Patented Oct. 30, 1894.



Witnesses:
Francis Adkinson
E. A. Macmillan.

Inventor:
John Danielson,
per Edward J. Russell
Attorney.

UNITED STATES PATENT OFFICE.

JOHN DANIELSON, OF ALHAMBRA SPRINGS, MONTANA.

SAW.

SPECIFICATION forming part of Letters Patent No. 528,415, dated October 30, 1894.

Application filed April 21, 1893. Serial No. 471,350. (No model.)

To all whom it may concern:

Be it known that I, JOHN DANIELSON, a subject of the King of Sweden and Norway, and a resident of Alhambra Springs, county of Jefferson, State of Montana, have invented a new and useful Improvement in Saws, of which the following is a specification.

Long saws are necessary for use in cutting up the large trees utilized in lumbering, &c., and several inventions have been made to enable one man to advantageously use them. In most cases more or less machinery is used.

My invention supplies a saw and simple frame that enables one man to handle, successfully, the longest saw necessary, with ease and in all positions.

It consists of a wooden spring pole, having a steel stiffening spring at the center, and sprung upon the saw blade by means of metal sockets.

Figure I shows side elevation of whole apparatus. Fig. II shows plan view of steel spring. Fig. III shows end elevation of clip for holding spring. Fig. IV shows perspective of end socket. Fig. V shows perspective of handle socket.

Similar letters refer to similar parts in all the drawings.

The metal end-socket A is attached to one end of the saw B by means of the slot *a* and bolt *b*. The metal handle-socket C is likewise attached to the saw B, by means of the slot *c* and bolts *d d*, and is bent into a U shape to receive the wooden handle D. Into these sockets A and C are sprung the ends of the spring pole E. Attached to the under side of the spring pole E by means of the clips F F, is the steel spring G. The clips F F are held in position by the screws *f f*. On the upper side of the spring G are two small lugs or flanges *g g* which embrace the pole E and prevent the spring G from slipping sidewise. One end of this spring G is threaded and carries the nut *h*. By screwing this nut *h* against the clip F, the spring may be tightened. The advantages of this spring frame are many.

It allows one man to use the usual two-man saw with ease. The trouble of vibration, common to one-man saws, is entirely obviated. The usual thickening of the back to stiffen the saw is unnecessary, and a very thin saw may be used, thinner at the back than at the cutting edge and having very little set. It is easily carried through the timber, and the bow affords a new handle when the cut is deep in the log, thus doing away with much stooping. In case of breaking of the bow, a new one can be readily adjusted. In case of pinching of the log above the saw, no wedges need be used, as the end bolt can be quickly removed and the saw withdrawn through the cut.

The pole is preferably made of hickory, and by the addition of the steel spring, keeps the necessary tension for a long time.

With this simple mechanism, one man can cut nine cords of wood in the timber, in the same time and with greater ease than the same man can cut three cords, with the ordinary one-man saw.

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

1. In a saw, the combination of the saw blade and the spring frame, with the metal stiffening spring, placed centrally on the underside of the frame, substantially as shown and described.

2. In a saw, the combination of the saw blade and the spring frame, with the metal stiffening spring fastened to the frame by the clips *f f* and having the lugs *g g* and one threaded end carrying the nut *h*, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 7th day of April, 1893.

JOHN DANIELSON.

Witnesses:

EDWARD C. RUSSEL,
ALFRED LUAHR.