

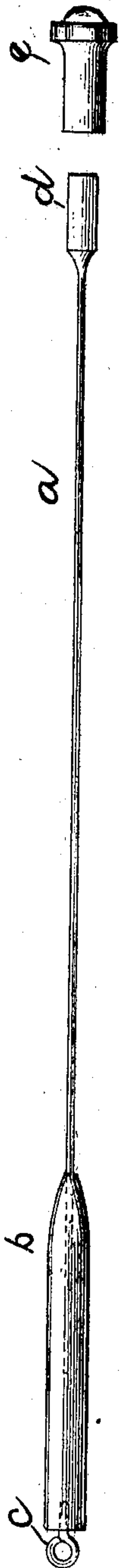
No. 830,495.

PATENTED SEPT. 11, 1906.

T. H. COSTELLO.
POINTER.

APPLICATION FILED JAN. 22, 1906.

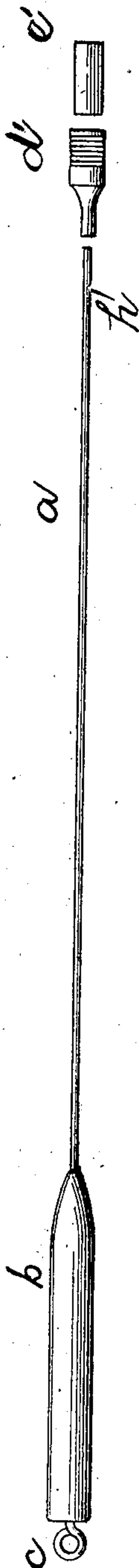
Fig. 1.



Witnesses:

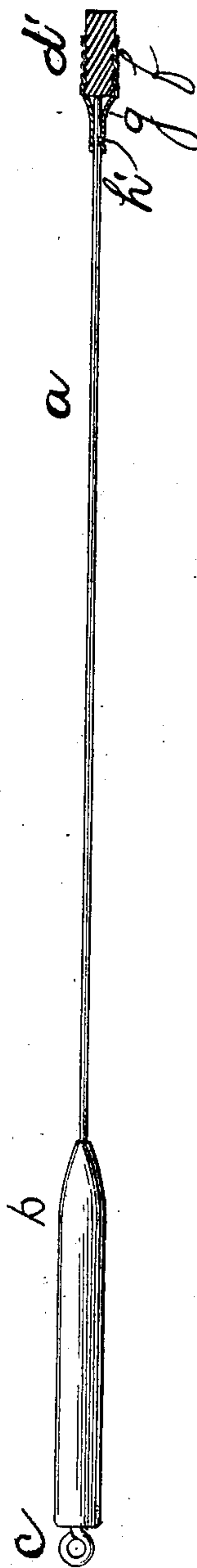
C. M. Merrill
Fillmore Birch

Fig. 2.



by

Fig. 3.



Inventor:

Thomas H Costello
by Clarence Chamberlain
Att'y.

UNITED STATES PATENT OFFICE.

THOMAS H. COSTELLO, OF CHICAGO, ILLINOIS.

POINTER.

No. 830,495.

Specification of Letters Patent.

Patented Sept. 11, 1906.

Application filed January 22, 1906. Serial No. 297,145.

To all whom it may concern:

Be it known that I, THOMAS H. COSTELLO, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Pointers, of which the following is a specification.

My invention relates to pointers which are used for school and educational purposes in explaining matters represented by wall-display on maps, blackboards, and charts or other illustrative objects. Such pointers have heretofore been made of wood and originally were made of hickory formed into slender rods. This wood was well adapted to the purpose, but has become scarce and expensive, and in the attempt to substitute other woods therefor cheaper and more common ones—such as maple, beech, and the like—are used. Pointers of these materials are, however, heavy and brittle, readily warp with changes of temperature and conditions of the atmosphere, or break if knotted or cross-grained portions are worked up into the finished article. The result is a large and frequent loss to the manufacturer, dealer, and user, as well as an imperfect and unsatisfactory instrument.

Such being the present condition of the art, it is the object of my invention to provide a pointer which is cheap to manufacture, light in weight, resilient, and agreeable in action, and which will keep its natural straightness by the spring of the material or be readily restored thereto if the limit of elasticity is exceeded.

The principles of my invention are illustrated in the drawings, in which—

Figure 1 shows a pointer having the principal rod or shaft provided with an upset pointing end. Fig. 2 represents the enlargement of the shaft produced by furnishing it with a metallic cup, and Fig. 3 shows a longitudinal section of the pointing end represented in Fig. 2.

Further describing my invention, with reference to the drawings, in which like characters of reference denote like parts throughout, *a* is a metallic rod or shaft having a handle *b*, to which may be secured a screw-eye *c*, by which the completed structure may be suspended when not in use. In order that no injury may be done to blackboards or objects of demonstration, the pointing end of the shaft should have a tip of protecting material. This may be provided in various

ways, several practical methods being herein shown and described. The enlarged end also assists the eye when the pointer is used in demonstration.

In Fig. 1 the pointing end is provided with an enlargement *d*, which may be formed integrally with the shaft *a* by expanding or upsetting the same. Over the enlarged portion thus formed may be placed a rubber tip *e*, which for ready procurement in manufacture as well as ready replacement if lost may be the kind frequently used on lead-pencils for erasing purposes. To this end the diameter of the said enlarged portion should preferably be made to correspond to the standard opening in such pencil-tips.

Another form of enlarged pointing end is represented in side view and longitudinal section, respectively, in Figs. 2 and 3. This portion *d'* may be made of thin metal having a large tubular end, preferably corrugated, while the other end thereof may be drawn into a bottle-neck, the internal diameter of which shall correspond to that of the rod or shaft *a*. The shaft may have a notch *h*, into which when the enlarged tubular portion is fitted thereover a portion of the neck may be depressed, as shown at *h'* in Fig. 3, thus securely attaching the tubular portion or socket to the rod. When made in the manner last described, the structure is fitted to receive the common solid pencil eraser-tip indicated by *e'*, which can be inserted and socketed therein. The external diameter also is adapted to receive the other form of pencil-tip *e* shown in Fig. 1. This construction is very simple and cheap. Being adapted to take either form of standard eraser-tip, the manufacture is simplified, while the tips if lost can be replaced at once.

The shaft *a* may be made of different qualities of material; but I prefer to use a section of slender highly-elastic steel wire. This will be found to make a very agreeable instrument to use, as it is lively and resilient in the hand, while it readily resumes its normal straightness when bent.

I claim—

1. A pointer comprising a metallic shaft, a handle, and a protecting-tip.
2. A pointer comprising a flexible metallic shaft, a handle, and an elastic tip.
3. A pointer, comprising a resilient metallic shaft, a handle, and an enlarged pointing end.
4. A pointer comprising a resilient metal-

lic shaft, a handle, and an enlarged protecting-tip.

5 5. A pointer comprising a resilient metallic shaft, a handle, and an enlarged elastic protecting-tip.

6. A pointer comprising a metallic shaft, having an enlarged end, an elastic tip therefor, and a handle at the other end of the shaft.

10 7. A pointer comprising a metallic shaft having a hollow enlarged end, a tip adapted to fit in said hollow, and a handle at the other end of the shaft.

15 8. The combination in a pointer of a shaft and a tip-socket, the said socket having one

end smaller than the other and adapted to fit over the diameter of the shaft.

9. The combination in a pointer of a shaft and tip-socket, the said socket having one end smaller than the other and adapted to fit 20 the diameter of the shaft, and means for securing the said socket to the shaft.

In witness whereof I have hereunto set my hand, this 18th day of January, A. D. 1906, in the presence of two subscribing witnesses.

THOMAS H. COSTELLO.

Witnesses:

C. K. CHAMBERLAIN,
A. S. PHILLIPS.