

(No. Model.)

F. W. MUSSON.  
LEAD PENCIL.

No. 574,361.

Patented Dec. 29, 1896.

Fig. 1.

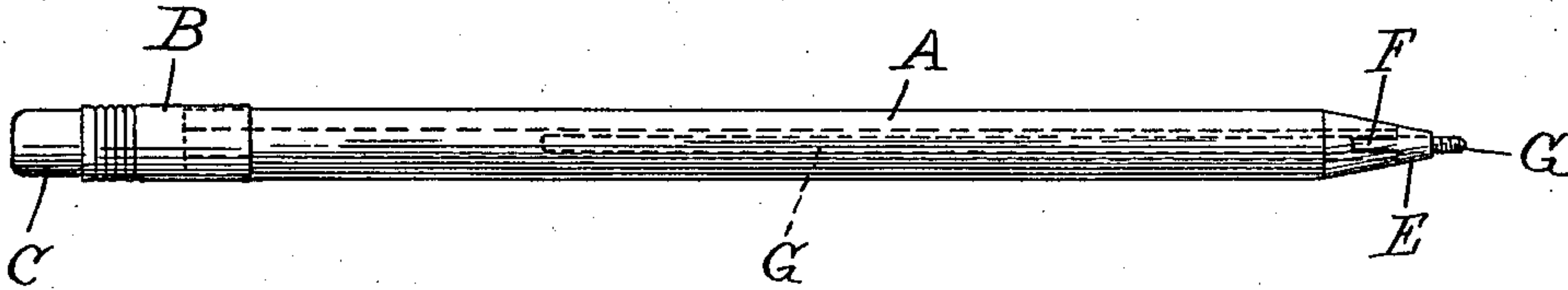


Fig. 2.

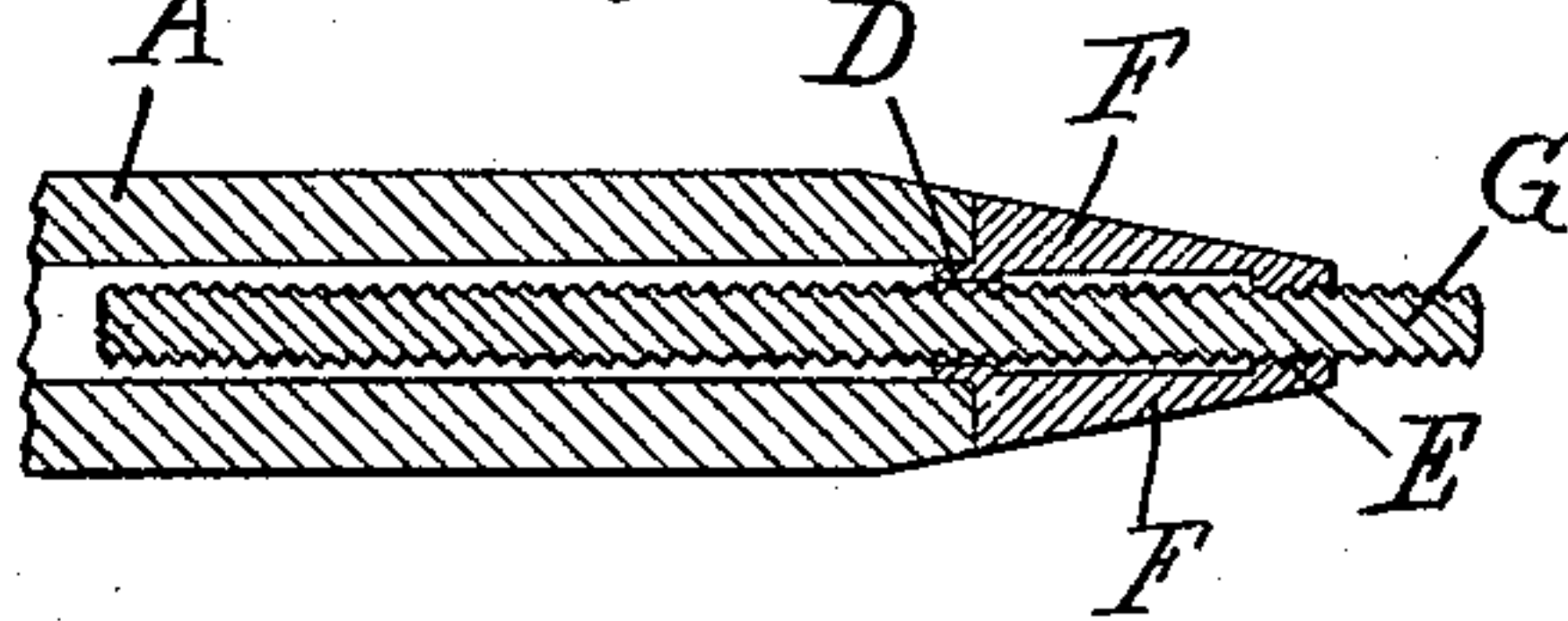
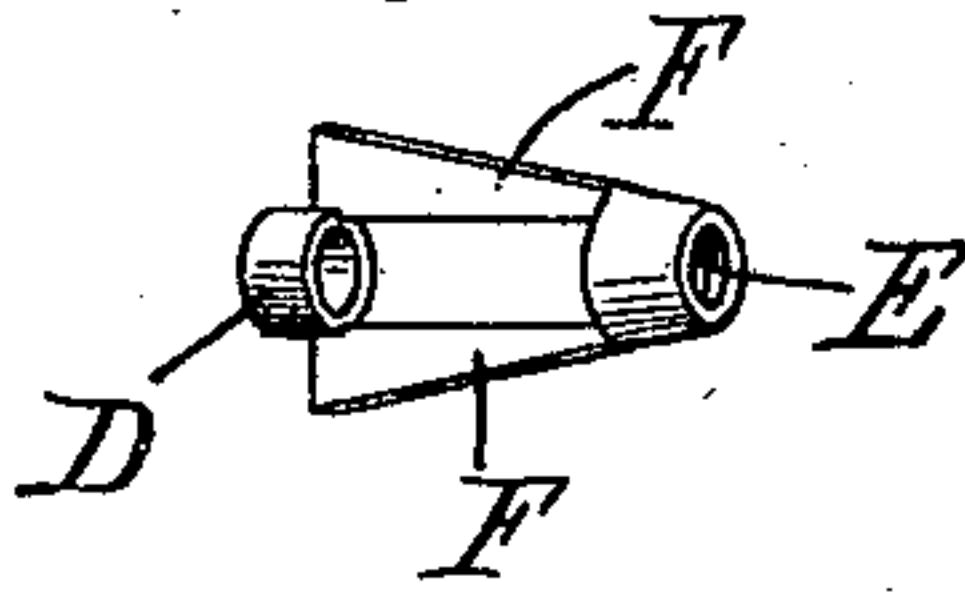


Fig. 3.



Witnesses.

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# UNITED STATES PATENT OFFICE.

FREDERICK W. MUSSON, OF CHICAGO, ILLINOIS.

## LEAD-PENCIL.

SPECIFICATION forming part of Letters Patent No. 574,361, dated December 29, 1896.

Application filed May 8, 1896. Serial No. 590,684. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK W. MUSSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Pencils, of which the following is a specification.

My invention relates to automatic lead-pencils, or a lead-pencil with movable leads.

It is illustrated in the accompanying drawings, wherein—

Figure 1 is a side view of a lead-pencil with parts shown in dotted lines. Fig. 2 is a longitudinal section of the end portion of Fig. 1. Fig. 3 is a detail of the pencil-point.

Like parts are indicated by the same letters in all the figures.

A is the pencil proper or the pencil-body, which is preferably a wood cylinder having a central bore or chamber. It may be provided with the head B, carrying the rubber-tip C, but of course this head need not be used, or any other head could be substituted. It also preferably has at the working point the tip which consists of the collar D, the screw-threaded exterior tip E, and the wings F F, which connect the two portions. The collar may or may not be screw-threaded, but the part E is preferably internally screw-threaded.

G is the screw-threaded lead. In speaking of materials I am not intending to limit myself to the particular materials mentioned, as these or other materials can be used, but I have suggested what seems to be the most convenient and satisfactory shape in which my invention can be used.

The use and operation of my invention will be quite evident, but I will describe them briefly.

The pencil is preferably of the ordinary size, shape, and appearance, the wood pencil or body consisting of the ordinary wood pencil with the cylindrical central bore. The leads are similar to ordinary leads, except that they are continuous and of any desired length, preferably about the length of the pencil proper, and are screw-threaded externally from end to end. The head of the pencil may be dispensed with or any head or cap can be used. The forward or writing portion of the pencil must be provided with a screw-threaded portion to receive the screw-threaded lead. It is preferably in the shape of a metal portion somewhat as indicated, which performs the function of serving as the forward feed-

ing mechanism for the pencil, while at the same time it holds the lead to the wood portion. The wings F slip into suitable slots in the sides of the forward portion of the wood pencil, and thus by friction hold the metallic tip with its lead to the holder, and at the same time prevent the metallic tip from rotating. In this pencil all the parts are fixed and stationary, the lead itself being movable by rotation. The point is taken between the thumb and finger and turned, whereupon the lead is worked forward or backward, as the case may require. The lead may be inserted from the tip of the pencil, and therefore the head may be solid. I have used the term "screw-threaded," but mean, of course, always to indicate such construction as would make parts when rotated on each other reciprocate with relation to each other. For instance, a spiral groove would answer as well as a screw-thread, and I use the term "screw-threaded" in the specification and claims with this broad meaning.

I claim—

1. In a lead-pencil the combination of a cylindrical body with a tip portion consisting of an internally-screw-threaded tip and parts received into slots in the body so as to hold the tip in position in fixed relation to the body, and a screw-threaded free lead to be received into the screw-threads on the tip.

2. As a new article of manufacture, a lead-pencil with a removable lead consisting of a case having a longitudinal aperture, a removable and outwardly-projecting but normally-fixed tip on the case, having an internally-screw-threaded aperture of less cross-section than the aperture of the case, and a free lead screw-threaded throughout its length and received in the tip so that the lead can be reciprocated by being rotated, and lead and tip can be removed from the case together.

3. As a new article of manufacture, a lead-pencil with a removable lead, consisting of a case having a longitudinal aperture, a removable and outwardly-projecting but normally-fixed tip on the case, having an internally-screw-threaded aperture, and a free lead screw-threaded throughout its length and received in the tip so that the lead can be reciprocated by being rotated by hand, and lead and tip can be removed from the case together.

FREDERICK W. MUSSON.

Witnesses:

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