(No Model.)

F. W. MUSSON.

PENCIL.

No. 574,363. Patented Dec. 29, 1896.

Fig. 1.

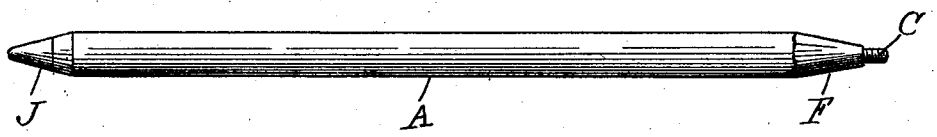
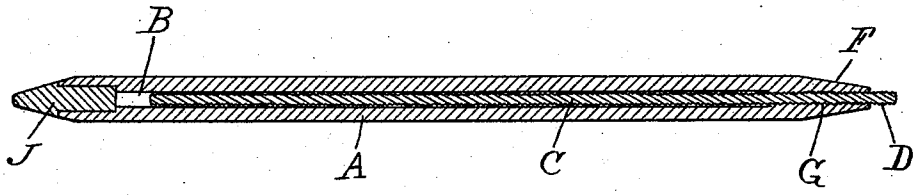


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

FREDERICK W. MUSSON, OF CHICAGO, ILLINOIS.

PENCIL.

SPECIFICATION forming part of Letters Patent No. 574,363, dated December 29, 1896.

Application filed August 10, 1896. Serial No. 602,272. (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 Improvements in Pencils, of which the following is a specification.

My invention relates to automatic lead-pencils, or lead-pencils with movable leads, and has particularly for its object to provide a form of pencil which shall be capable of use in cheap or inexpensive pencils, while at the same time getting substantially all the benefits of an ordinary higher-priced pencil with a movable lead.

My invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a side view of a complete pencil, and Fig. 2 is a longitudinal section therethrough.

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

A is the exterior case or pencil-body, which may be made of wood. It is to be composed of some substance, fibrous or otherwise, which can be cut with a knife or pencil-sharpener in the ordinary manner when desired. It is cylindrical or provided with a central longitudinal aperture B, in which the lead C, preferably screw-threaded, as indicated, is inserted. The diameter of the aperture is such that the lead is free to move therein.

The forward end of the pencil-case F is tapered in the usual manner and provided with an internally-screw-threaded aperture G, which engages the thread on the lead. This tip is preferably continuous with the body of the pencil, though of course it might be of some other substance secured permanently to the body of the pencil. It is of such length that it can be cut or sharpened for a considerable distance, or back to a point where the case is of a length not too short for convenient use in the ordinary manner in which lead-pencils of this class are employed.

J is the rubber tip, which may or may not be used. Indeed, the end of the pencil can be closed or covered in any desired manner. The aperture B, being larger than the aperture G, will ordinarily be formed by a tool entering from the blunt end of the pencil, but it could be formed from the other end, as, for example, in the case where the tip is subsequently attached.

I do not, of course, desire to be understood as limiting myself to the particular proportion of parts or to the materials mentioned. I have shown simply an operative pencil such as I have used, and doubtless very extensive alterations and variations could be made in it without departing from the spirit of my invention.

I speak of the "screw-threads," but of course by that term I mean broadly to include any such formation of parts as would cause one when turned on the other to reciprocate thereon, and with this significance I desire to employ the term "screw-threaded."

The use and operation of my invention will be quite apparent from the drawings and from what has been said.

The pencil being complete and in the form indicated in the drawings is ready for use. The user will write with the pencil until the projecting point of lead has become too short for such work. He will then take the pencil-case in one hand and the projecting point of lead between his forefinger and thumb and rotate the lead. This will cause the lead to reciprocate in the pencil or to move outwardly, being forced along by the screw-thread. This action is continued until the point of lead is sufficiently extended for use, whereupon the pencil is again ready for use. This operation may be continued until the lead is entirely used up, the pencil-case remaining intact and being ready for the application of another lead thereto. If in the manufacture for any reason it should be desirable to leave a portion of the lead smooth, that may be done, the screw-threaded portion working as above indicated. It might also be possible to make the wood or material of the tip so hard that it would make its own cutting in whole or in part in the surface of the lead, and thus feed the lead forward without actually having the lead threaded or wholly threaded or with a finished or deep thread. If now in the use of any such pencil the lead is in any manner broken off near the tip so as to make it difficult or impossible for the lead to be reached by the hand so as to be turned, the pencil would become worthless and the case and lead be lost were it not

for the fact that the tip is of such length and the case of such material that such tip and case can be sharpened down or cut away, so as to uncover or reveal a sufficient amount of the lead to permit its further use in the manner above described. This action is not likely to occur very often, but would occur occasionally and would render the use of such a pencil unsafe and unwise, perhaps, were it not for the construction just described whereby these dangers are obviated.

I claim—

1. As a new article of manufacture a lead-pencil consisting of a case composed of a substance capable of being cut with a knife and having an enlarged aperture, an internally-threaded relatively long tip portion, a free lead threaded and adapted to engage the internal thread of the case so that the lead can be reciprocated by being rotated by the hand and when broken off at the point the case can be cut down to uncover the lead.

2. A lead-pencil comprising a continuous case having a cylindrical body with a tip shaped in the usual manner, a relatively long internally-screw-threaded aperture at such tip of the pencil to receive the lead, the aperture of the cylindrical body being of such cross-section as to permit free motion of the lead, and the length of the tip being such as to permit the same to be cut down to sharpen the pencil and uncover the lead when occasion may require, substantially as described.

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