Feb. 15, 1927. 1,617,478

F. EVANS

STEEL WOOL INK ERASER

Filed May 7, 1926

Fig. 1.

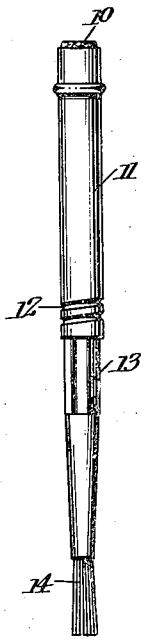


Fig. 2.

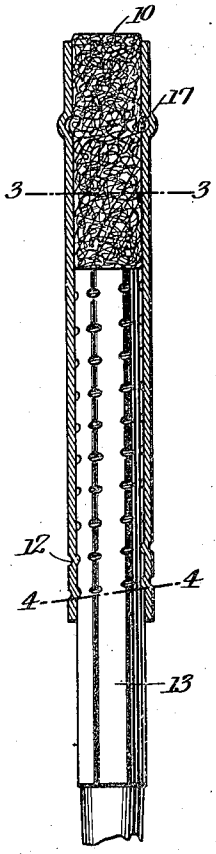


Fig. 3.

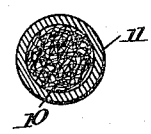


Fig. 4.

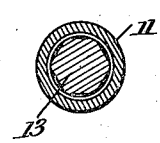


Fig. 5.

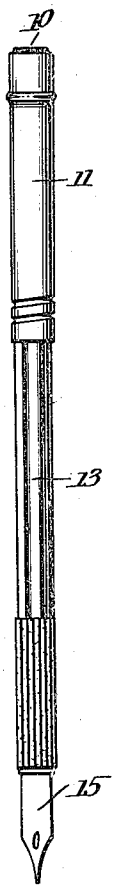
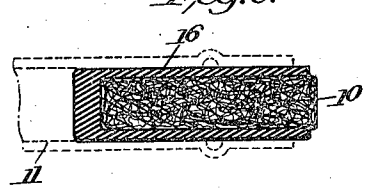


Fig. 6.



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UNITED STATES PATENT OFFICE.

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STEEL-WOOL INK ERASER.

Application filed May 7, 1926. Serial No. 107,511.

The present invention relates to an eraser peculiarly adapted by its abrasive qualities to remove ink from paper or the like without injury to the surface thereof. I have found that steel wool, when properly conditioned, has the requisite qualities to a high degree, and while I am aware that this material is used generally as a scouring agent, it has not, to my knowledge, been proposed to adapt it to the particular use of ink eraser. The essence of my invention lies in so treating and mounting the material as to render it susceptible of this use.

Proceeding from this general statement, I shall describe my invention with particular reference to the annexed sheet of drawings in which—

Figure 1 is a view of one embodiment of my invention.

Figure 2 is an enlarged view of a portion of the embodiment according to Figure 1, partly in section.

Figure 3 is a section on the line 3—3 of Figure 2.

Figure 4 is a section on the line 4—4 of Figure 2.

Figure 5 is a modified form similar in general to that of Figure 1.

Figure 6 is a longitudinal section of a special form of capsule or jacket for the steel wool.

In its usual state steel wool is not sufficiently stable or compact to be used readily as an ink eraser. Consequently, the first step of manufacture is to subject the wool, which in all the figures is denoted by the reference character 10, to sufficient pressure to compress it substantially. It is to be understood that this pressure is not sufficient to render the mass extremely dense, but merely sufficient to bring the fibers more closely together and to promote their coherence. In use this compressed mass will be of cylindrical shape so as to be received in an open ended jacket 11. As illustrated in Figures 1 to 5, jacket 11 is of metal and the fibers could also, of course, be packed into the jacket previous to their compression and then be suitably compressed by subjection to pressure. In Figures 1, 2 and 5, it will be noted that the upper end of jacket 11 is provided with an annular groove 17 into which the fibers may press for better retaining the mass in position. From these same figures, it will be noted that the lower portion of the jacket is provided with an internal spiral thread 12. A polygonal stem 13 is adapted to fit within the jacket and upon rotation to engage threads 12 and thus eventually be brought into contact with the lower end of the compressed mass of steel wool. Thus when the protruding end of the mass 10 becomes worn down through use, the mass may be further extruded by rotation of stem 13 relative to jacket 11.

In Figure 1, stem 13 is shown as being provided at its free end with a brush 14, while in Figure 5 stem 13 is in the form of a writing stylus, here a pen holder provided with a point 15.

In Figure 6, I have shown a jacket 16 of readily attritable material, such as rubber, of proper consistency. This jacket may be disposed within casing 11 and protruded as needed in the manner described. In this instance, however, the walls of casing 16 form further sustaining means for the fibrous mass which may thus project for a greater distance from casing 11. Also when this attritable jacket is used the feeding arrangement as described may be omitted if desired. It will be understood that as the fibrous mass wears down, the walls of jacket 16 will do likewise while still sustaining the fibers in properly compressed condition. The form illustrated in Figure 6 may likewise be used without association with a metal jacket since it constitutes a complete unit in itself.

While I have described some particular embodiments of my invention, I believe the provision of a sustained body of compressed steel wool for use as an eraser to be broadly new, and the described embodiments are not to be construed as restrictive of the scope of my invention defined in the following claims.

I claim:

1. An eraser comprising a mass of steel wool in compressed state, and binding means for retaining the mass in such state.

2. An eraser comprising a compressed

mass of steel wool, and a sustaining jacket therefor adapted to expose a portion of the mass for use.

3. An eraser comprising a compressed mass of steel wool, a sustaining jacket therefor of readily attritable material and adapted to expose a portion of the mass for use.

4. An eraser comprising a compressed mass of steel wool, a sustaining jacket therefor of readily attritable material and adapted to expose a portion of the mass for use, and a rigid jacket for supporting said sustaining jacket.

In testimony whereof I have hereunto set my hand.

FRANK EVANS.