No. 620,051. Patented Feb. 21, 1899.

R. R. RAKESTRAW.

PENCIL.

(Application filed Aug. 6, 1898.)

(No Model.)

Fig. 1.

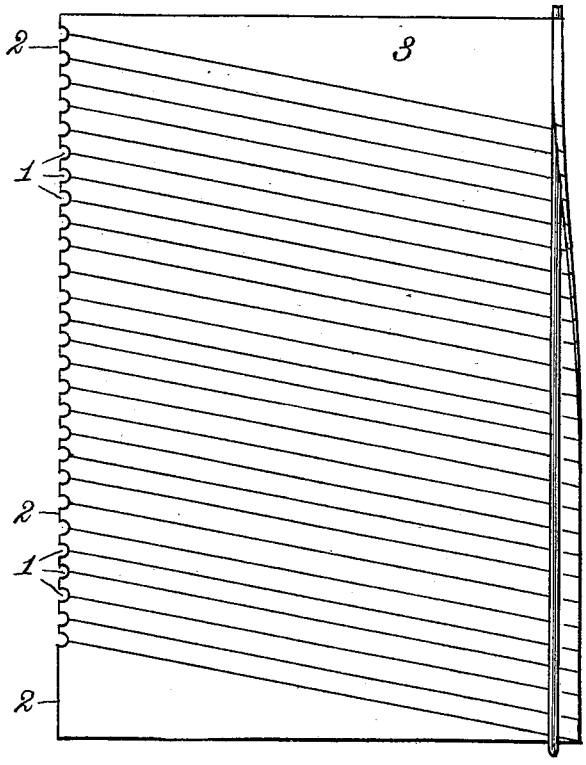


Fig. 2.

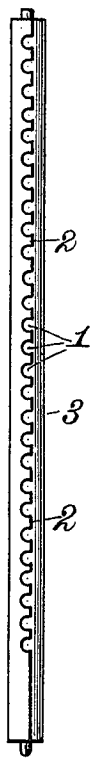


Fig. 3.

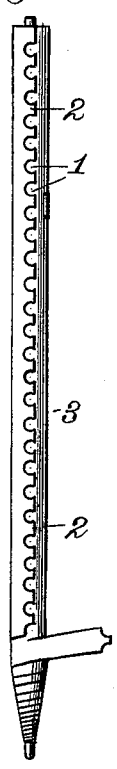
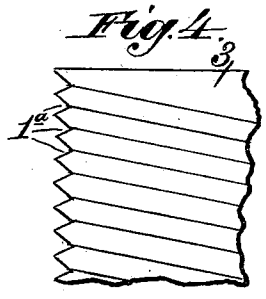


Fig. 4.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ROBERT R. RAKESTRAW, OF VIENNA, AUSTRIA-HUNGARY.

PENCIL.

SPECIFICATION forming part of Letters Patent No. 620,051, dated February 21, 1899.

Application filed August 6, 1898. Serial No. 687,987. (No model.)

To all whom it may concern:

Be it known that I, ROBERT R. RAKESTRAW, manager of works, a citizen of the United States of America, residing at Vienna, in the Empire of Austria-Hungary, have invented certain new and useful Improvements in Pencils, of which the following is a specification.

My invention relates to pencils of that class in which a sheet of flexible material—for instance, paper—having a series of weakened parallel lines is rolled or wound upon a lead or crayon, so that the weakened lines are diagonal to the axis of the roll, and strips of said material can be successively unwound from time to time for the purpose of uncovering the lead or crayon, as necessitated by the consumption of the latter. Heretofore in manufacturing such lead-pencils holes corresponding to the weakened lines have been formed in the sheet of material along a line distant from the edge of the sheet. In such prior manufacture in order to detach a strip of the material it has been necessary to cut the strip which lies between two adjacent perforations, and this is objectionable because the risk is incurred that more than one thickness of material is likely to be cut, thus severing one part of a strip from another part thereof. It is also necessary in such prior manufacture to employ a knife or other sharp instrument for performing the cutting operation referred to.

The object of my present invention is to facilitate tearing off the strips and enable this operation to be performed without the aid of a knife or like instrument and without the necessity of cutting the material.

To this end the invention consists in a pencil constructed as hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view showing the crayon or pencil about to be enveloped in its covering. Fig. 2 is a view of the pencil complete. Fig. 3 is a similar view showing the pencil during the operation of exposing more of the lead; and Fig. 4 is a detail view of a portion of the covering, showing a modified form of edge recesses.

My improvements, although applicable to all pencils of the kind or class hereinbefore referred to, are chiefly intended to be applied to pencils made as described in my application of even date herewith—that is to say, pencils wherein the several convolutions of the rolled sheet of flexible material are united by a feeble adherent or feebly-adhesive substance or composition which, while offering great resistance to relative longitudinal movement of said convolutions, offers but little resistance to the unwinding of the strips in the operation of pointing the pencil. I do not, however, confine my invention to a pencil constructed as just described. I make such pencils with notches, recesses, or slits 1 in the outer edge 2 of the sheet 3 of flexible material, as contradistinguished from a series of holes or perforations located in the sheet at a distance from the edge, corresponding, respectively, to the weakened lines in said sheet, and when said feeble adherent is suitable for the purpose of securing the outer notched or serrated edge of the sheet to the convolution beneath it I apply no other adhesive material to the outer edge of the sheet for this purpose. In some cases, however, I find it advantageous in making such pencils to use on the outer edge, in conjunction with said feeble adherent, some adhesive material, such as a weak solution of dextrine or glue, which will be dried instead of melted by heat for the purpose of insuring the adherence of the edge immediately the rolling of the pencil is completed, and thus preventing unwinding of the roll.

In the practical manufacture of my improved pencil I first provide a sheet of flexible material 3, such as paper, with a series of weakened parallel lines 1 and with notches, recesses, or slits 2 in its outer edge, as before described, corresponding to said weakened lines, and apply to said flexible material a coating of a feeble adherent or soak it in a feeble adherent and allow it to dry, and then apply to the outer edge of the sheet an adherent, such as a weak solution of glue, that will be dried instead of melted by the application of heat, and roll or wind said sheet upon a lead or crayon, so that said weakened lines are diagonal to the axis of the roll, at

the same time applying heat to melt said feeble adherent, so that when cooled it will unite the several convolutions of said material.

The feeble adherent which I use for the purpose above specified may consist of rosin or resin or gum-resin dissolved in benzene, turpentine, or other suitable solvent, which solvent is evaporated, so as to leave a feebly-adhesive coating on said flexible material, or it may consist of a solution of india-rubber in a solvent, such as ether or benzene, which is evaporated, so as to leave a thin film or coating of the rubber on said flexible material, or it may consist of any other suitable substance or composition—such, for example, as are also mentioned in the specification of my application of even date herewith.

In making pencils in which adhesive material is applied only to the notched or serrated edge of the flexible material I can also use any of the aforesaid feeble adherents which may be suitable for the purpose. The edge recesses shown in Figs. 1, 2, and 3 are substantially U-shaped; but they may be V-shaped, as at 1^a, Fig. 4. In any case the adhesive material used for securing said edge must be such as will prevent accidental detachment thereof from the convolution beneath it, while offering but little resistance to the detachment of the several strips.

The great advantage in a pencil constructed in accordance with my invention is that the end of a strip of the material can be very readily detached from the convolution beneath it by simply inserting the finger-nail beneath said end, and the strip can then be unwound without the use of any implement or any cutting whatsoever.

What I claim is—

1. A pencil consisting of a lead or crayon, a sheet of flexible material weakened along parallel lines and having notches, recesses or slits in its outer edge corresponding respectively to said weakened lines, which sheet is rolled or wound upon said lead or crayon, and a feeble adherent uniting said outer edge to the convolution of said material beneath it, for the purposes above specified.

2. A pencil consisting of a lead or crayon, a sheet of flexible material weakened along parallel lines and having notches, recesses or slits in its outer edge corresponding respectively to said weakened lines, which sheet is rolled or wound upon said lead or crayon, and a feeble adherent uniting said outer edge to the convolution of said flexible material beneath it and also uniting the several convolutions of said material, for the purposes above specified.

3. A pencil consisting of a lead or crayon, a sheet of flexible material weakened along parallel lines and having in its outer edge notches, recesses or slits corresponding respectively to said weakened lines, which sheet is rolled or wound upon said lead or crayon, and a feebly-adhesive composition one of the constituents whereof is rosin uniting said outer edge to the convolution of said material beneath it, for the purposes above specified.

4. A pencil consisting of a lead or crayon, a sheet of flexible material weakened along parallel lines and having in its outer edge notches, recesses or slits corresponding respectively to said weakened lines, which sheet is rolled or wound upon said lead or crayon, and a feebly-adhesive composition one of the constituents whereof is rosin or resin uniting said outer edge to the convolution of said material beneath it, and also uniting the several convolutions of said material, for the purposes above specified.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ROBERT R. RAKESTRAW.

Witnesses:
HENRY C. CARPENTER,
F. E. BLAISDELL.