

(No Model.)

B. W. AHNE.
BLACKBOARD RULER.

No. 523,719.

Patented July 31, 1894.

FIG. 1.

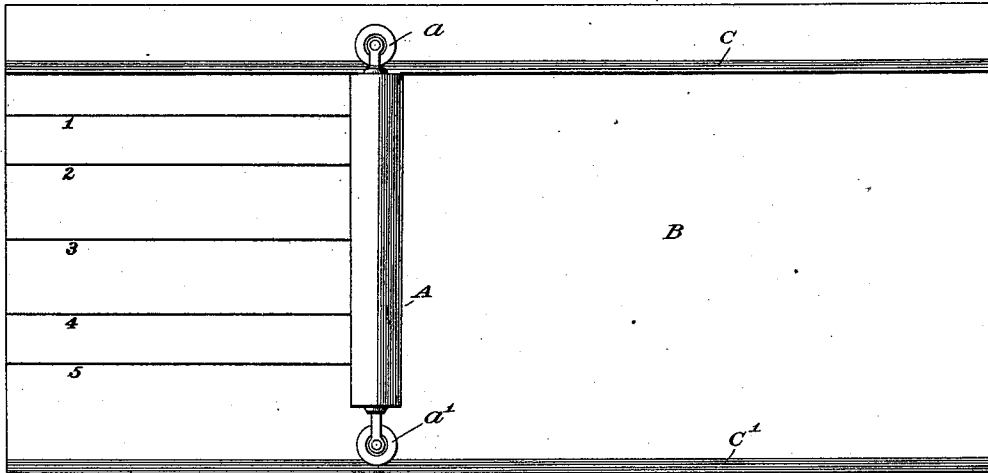


FIG. 3.

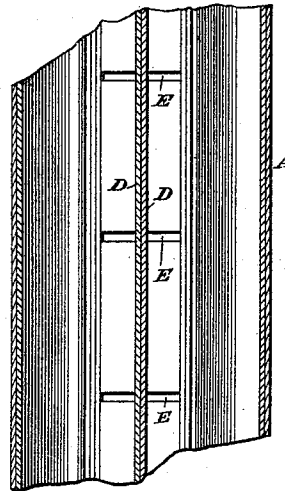


FIG. 2.

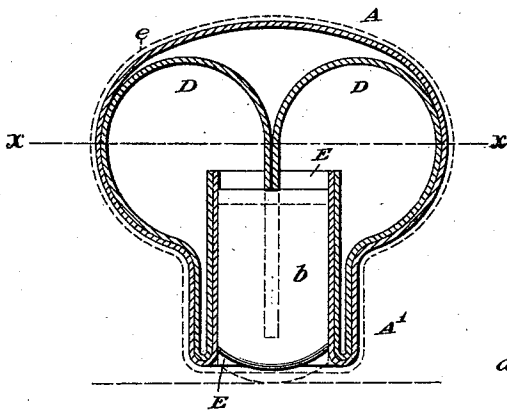
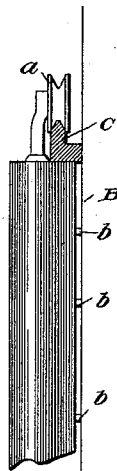


FIG. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

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BLACKBOARD-RULER.

SPECIFICATION forming part of Letters Patent No. 523,719, dated July 31, 1894.

Application filed October 28, 1893. Serial No. 489,349. (No model.)

To all whom it may concern:

Be it known that I, BERNARD W. AHNE, a citizen of the United States, residing at Bayonne, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Blackboard-Rulers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My present invention has reference to an improvement in rulers especially adapted for use with blackboards or other large surfaces and carrying suitably arranged within its own construction, its own marking devices consisting of pieces of chalk, crayon or any other suitable material.

The object of the invention is to provide a ruler whereby a blackboard or other large object may be quickly ruled with ease and accuracy to provide lines at proper distances apart which may assist in the teaching of penmanship or for any other desired purpose. Although such is the primary purpose of the invention, yet it will be found in practice readily applicable to a great variety of uses to which it is conceived that a chalk carrying or marker-provided ruler may be put.

The invention therefore consists essentially in a ruler carrying its own marking devices; also in a ruler carrying its own marking devices which are adjustably arranged therein; also in a flexible ruler carrying its own marking devices adjustably arranged therein and controlled by the flexure of its wall, and also the invention consists in the construction, arrangement and combination of parts substantially as will be hereinafter described and claimed.

In the accompanying drawings illustrating my invention: Figure 1 is a front elevation of my improved crayon marker or ruler operatively arranged in connection with a surface which is to be lined with parallel lines. Fig. 2 is an enlarged horizontal cross section of the same. Fig. 3 is an enlarged partial vertical sectional view on the line xx of Fig. 2. Fig. 4 is a partial side view of the ruler showing the crayon points projecting therefrom and illustrating the manner in which it is hung by a roller upon its track.

Similar letters of reference designate corresponding parts throughout the several figures of the drawings.

My improved device may be indifferently termed a marker for lining blackboards and other surfaces, a blackboard ruler or it may be given such other designation as will properly express its function, which is that of a device for lining with parallel lines a blackboard or other surface in an easy and quick manner and one which is so arranged in connection with the surface to be marked that it can be practically operated at any desired moment without the necessity of arranging complicated parts, since the device is extremely simple in its construction and use.

My ruler consists essentially of an elongated casing made of some suitable thin flexible metal such as sheet steel or some other material that will have the quality of permitting compression and expansion upon its exterior so as to control the devices located within the same and carrying the pieces of chalk or other markers whereby the lining of a surface is accomplished. The exact shape of the elongated casing A may vary within wide limits. The cross sectional view of Fig. 2 shows the preferable form which I have adopted, it being substantially tubular or cylindrical with one side having a rectangular extension thereon formed by the infolding and bending of the thin metal of which the casing is composed. This elongated casing is provided at each end with a head and these heads carry brackets which support grooved rollers. a denotes one of the top rollers and a' one of the bottom rollers.

B denotes a blackboard or other large vertical surface. It is given here as an example of surface to be marked. Along the upper edge of this blackboard B is a rail C and along its bottom edge another rail C'. The rails C and C' provide tracks on which the top and bottom rollers a and a' may roll. Thus it will be observed that the roller casing A occupies a vertical position and is laterally adjustable across the surface of the blackboard B by means of its grooved rollers which roll upon the rails C and C'. These rollers a and a' may be of any suitable size and dimension and also there may be any number of them. Each end of the ruler may

have one roller or more than one. In some instances these rollers a and a' may be dispensed with and slides substituted in their stead. It is only necessary that the casing A should be so supported upon the surface of the blackboard in a vertical position that it may be transferred readily laterally across the board so that its projecting marker-points may line the surface of the board in the desired manner as the ruler travels across said surface.

The rectangularly shaped extension of the casing A which is caused by the infolding material of said casing is designated by the reference letter A', see Fig. 2, and is situated on that side of the casing A nearest to the surface of the blackboard. Within this rectangular extension there is placed a series of slots or flat horizontal receptacles E E which may be of any suitable shape and size, either rectangular, round or other shape and these receptacles E are adapted to accommodate within them, correspondingly shaped pieces of chalk b . Any suitable metallic construction may be arranged in connection with the rectangular extension A' to provide the required horizontal recesses E which contain the pieces of chalk. Of course any other kind of a marking device besides chalk may be situated within these recesses. Said recesses serve as horizontal guides for the pieces of chalk or other marking matter located within them. These pieces of chalk are horizontally adjustable within the slots E so that they can be made to project outward beyond the edge of the rectangular extension A' to any desired extent.

Referring to Fig. 4, the outer ends of the chalk pieces b will be seen projecting from the casing. These slots E and consequently the pieces of chalk within them may be located at any desired distance apart and there may be any number of them along the length of the ruler casing A. I reserve the liberty therefore of making a series of horizontal slots in a normally vertical ruler, in as wide a variety of forms as I may wish, to contain a series of markers which are to be located therein with their points projecting from the casing so that they may be used upon a blackboard or other surface to make lines thereon.

Within the flexible elongated casing A are located two curved spring pieces extending the full length of the casing A and made of any suitable material such as thin sheet steel so that they will be readily and highly flexible and elastic. The two inner ends of these curved spring pieces D D come together along the axial line of the casing A and are situated in a vertical slot which is cut through the several horizontal slots E, so that consequently the two contiguous ends of the pieces D are in close contact with the rear ends of the chalk pieces b and by acting thereon can push the said chalk pieces outward so that their ends will project more or less from the

rectangular extension A'. The curved spring pieces D are shaped to conform substantially to the interior of the casing A, especially at the point where said casing is infolded or peculiarly bent at the extension A' so as to provide the upright vertical walls at each side of the chalk pieces b , all as is clearly shown in Figs. 2 and 3. Thus we have within the flexible elongated ruler casing a flexible or elastic device which may be acted upon by the compression of the exterior casing to move the pieces of chalk or other marking material horizontally within their several containing recesses and cause the outer ends thereof to be projected to a greater or less extent from the casing so as to be in marking position. It will be clearly obvious therefore that the user of the ruler can by pressing upon the exterior of his ruler, cause the pieces of chalk to be projected therefrom.

It has already been stated that the ruler is located normally in a vertical position and that it is transversely adjustable across the face of the blackboard or other surface whereon it is mounted. The result of such adjustment will be, when the pieces of chalk are projected from their several slots, to cause the lines to be drawn at suitable distances apart and parallel to each other, across the face of the blackboard or other surface to be marked.

Referring to Fig. 1, the result of such an operation of my improved marking device is seen in the production of the parallel lines 1, 2, 3, 4 and 5, situated at proper distances apart which distances are regulated in accordance with the spaces between the several chalk slots in the ruler casing. Thus it will be seen that the operator can with perfect ease draw a series of parallel lines upon the blackboard. This can be done quickly and with the expenditure of but a very slight amount of effort. The lines thus produced will be straight and distinct and the entire action of the ruler will be found practical and very efficient for the purpose intended.

The exterior surface of the flexible elongated ruler A, is preferably covered with felt or some other soft fabric which is shown in Fig. 2, by the dotted lines at e . This enables the ruler to serve as an eraser when required. The felt surface by rubbing upon the blackboard surface will effectually erase the lines which have been previously drawn and the user of the ruler can so manipulate his ruler as to readily accomplish this object. Thus at one time the ruler can be used to make lines upon the blackboard and then at another time to erase those lines.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A lining device having a flexible casing and a series of marker points therein projecting through slots in the casing, all arranged so that external pressure upon the casing may

project the marker points, substantially as described.

2. A lining device having a flexible elongated casing and a series of markers therein which are projected laterally from the casing through openings therein by means of external pressure thereon.
3. A lining device for blackboards and other surfaces consisting of a flexible casing, a series of markers therein, and a spring device within the casing which acts on the markers, substantially as described.
4. A lining device consisting of a laterally-movable flexible casing, a series of pockets therein containing pieces of marking material and a spring within the casing acting on said markers.
5. A lining device consisting of a flexible

inclosing case having slots therein, pieces of chalk or the like located in said slots and a double spring in the casing acting on the chalk pieces to project them through the slots when the inclosing casing is externally pressed, substantially as described.

6. A lining ruler, consisting of a laterally-movable ruler having adjustable markers thereon and rollers at each end and tracks on which said rollers operate, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

BERNARD W. AHNE.

Witnesses:

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JOSEPH KOENER.