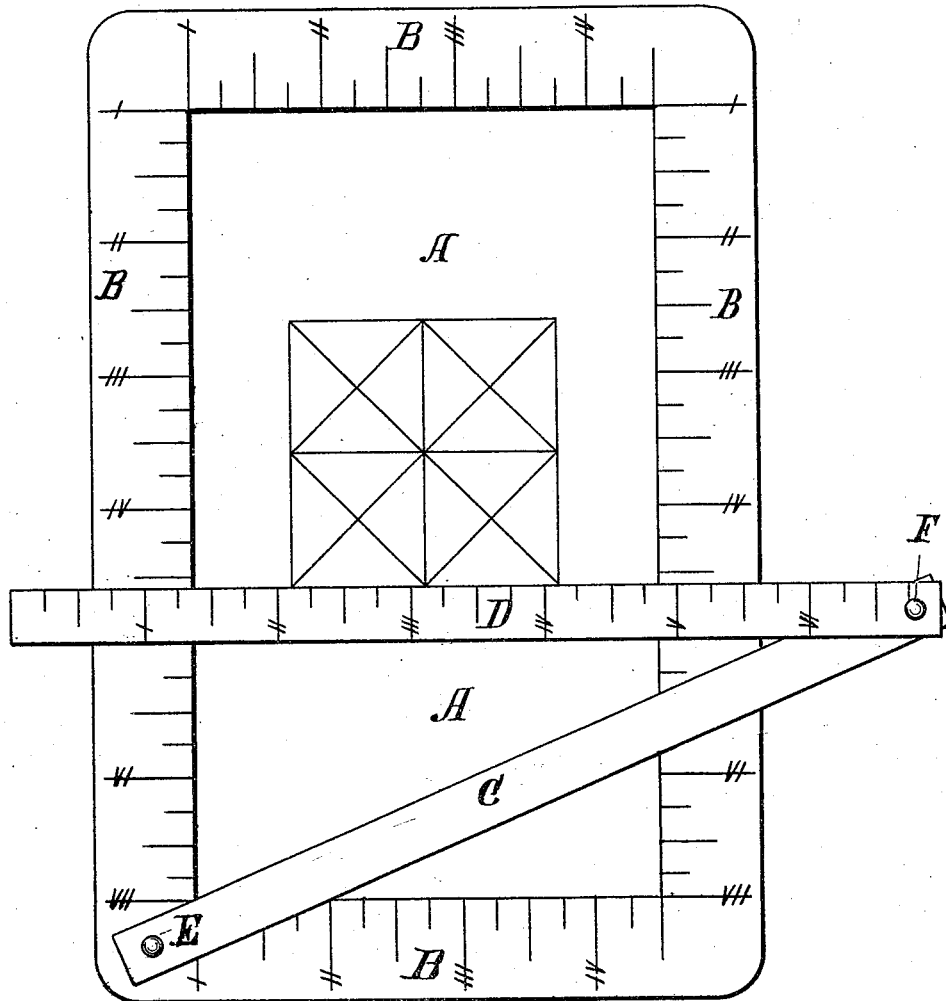


M. HILLS.
SLATE-FRAME ATTACHMENT.

No. 193,117.

Patented July 17, 1877.



WITNESSES:

W. R. Wright,
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INVENTOR

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UNITED STATES PATENT OFFICE.

MARTIN HILLS, OF TRENTON, NEW JERSEY.

IMPROVEMENT IN SLATE-FRAME ATTACHMENTS.

Specification forming part of Letters Patent No. **193,117**, dated July 17, 1877; application filed June 12, 1877.

To all whom it may concern:

Be it known that I, MARTIN HILLS, of Trenton, State of New Jersey, have invented a new and useful Improvement in Combined Slates and Rulers; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification.

My invention has for its object the provision of a slate the frame of which shall be provided with such marks or figures, and which shall be so combined with a ruler, as to furnish to those unskilled in the art of drawing a device by which various geometrical figures may be drawn easily and accurately on the slate, and by which children or others may be taught the elements of the science of numbers.

In the drawing, A represents the slate, the frame B of which is divided into inches or fractions of an inch, or other desirable spaces, which are consecutively numbered and marked, as shown, the divisions or numbers upon the parallel sides being made to correspond with each other in position upon said sides of the frame. C D is a jointed ruler, one end of which is pivoted at E to the frame

B of the slate, and which ruler is free to vibrate horizontally about the pivot E. The ruler being itself jointed at F enables its parts to vibrate freely each about the other.

It will thus be readily understood that any geometrical figure composed of straight lines can be readily and accurately drawn by the aid of this device, as the pivotal connections of the ruler at E and F enables the ruler to be placed at any desired angle to a previous position of the same, and the graduated divisions of the frame of the slate provide a means of fixing definitely its relative successive positions.

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

1. A slate provided with a jointed ruler, C D, pivoted to its frame, substantially as shown and described, and for the purpose set forth.

2. A slate provided with a graduated frame, in combination with a jointed ruler pivoted to said frame, substantially as shown and described, and for the purpose set forth.

MARTIN HILLS.

Witnesses:

ANTHONY T. WILLIAMS,
FREDERICK R. MANN.