(No Model.)

D. SCRYMGEOUR.

FRAME FOR SCHOOL SLATES.

No. 277,164. Patented May 8, 1883.

Fig. 1.

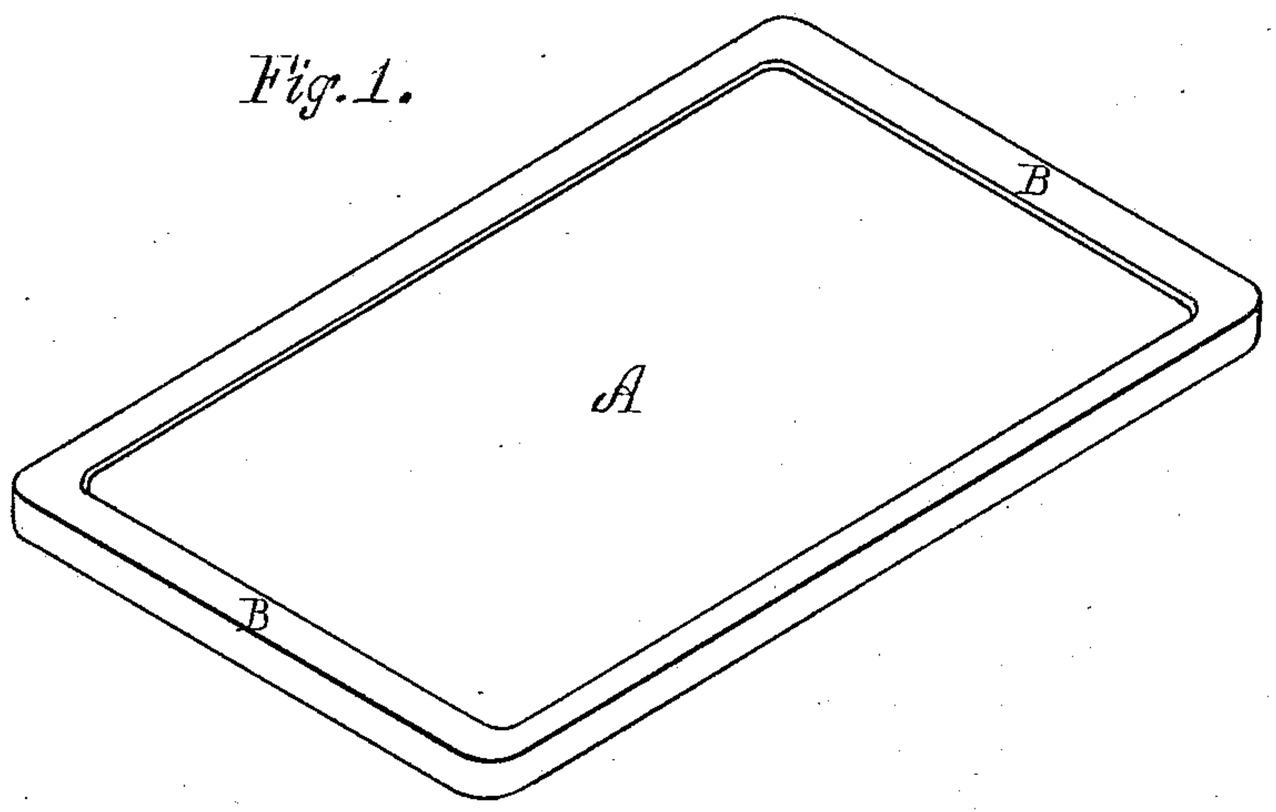
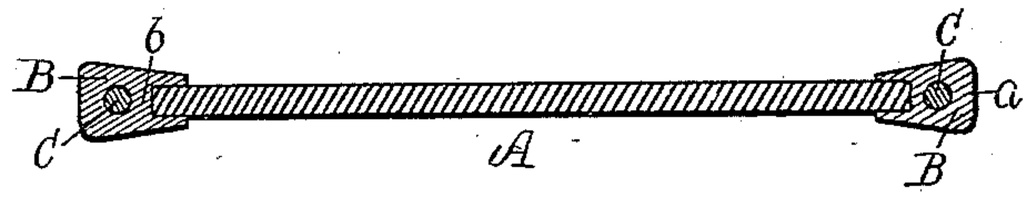


Fig. 2.



Witnesses.

H. C. Lodge.

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UNITED STATES PATENT OFFICE.

DAVID SCRYMGEOUR, OF FOXBOROUGH, ASSIGNOR OF ONE-HALF TO SAMUEL K. SCRYMGEOUR, OF WORCESTER, MASSACHUSETTS.

FRAME FOR SCHOOL-SLATES.

SPECIFICATION forming part of Letters Patent No. 277,164, dated May 8, 1883.

Application filed July 6, 1882. (No model.)

To all whom it may concern:

Be it known that I, DAVID SCRYMGEOUR, a citizen of the United States, residing at Foxborough, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Frames for School-Slates; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to means whereby the slate ordinarily adapted for school purposes may be rendered noiseless, less liable to break owing to falls, and will not scratch any smooth surface upon which it may be laid when in use; and it consists in an ordinary slate surrounded by a wire, rattan, or other similar flexible material, said wire being somewhat larger than the dimensions of the slate and covered with rubber in manner to be hereinafter described, the rubber serving as a perfect protection to the slate against the jars and shocks incident to a fall thereof.

The drawings accompanying this specification represent, in Figure 1, an isometric view, and in Fig. 2 a cross-section, of a slate embodying my improvements.

In these drawings, A represents a school-slate of the ordinary size and shape, while B represents a covering of rubber surrounding and closely hugging the edges of said slate, and constituting a means for protecting it from any sudden shocks or strains liable to produce a fracture and render it useless.

Hitherto school-slates have generally been made with a wooden frame, which in the hands of children has been an article productive of much noise, and hence a very great objection. This fault has been partially remedied or obviated by covering the wooden frame with felt or cloth of several thicknesses. Still this covering does not prevent fracture of the slate, as the latter is held securely in the wooden frame, and any sudden shock due to a fall is directly transferred to the slate, thereby fracturing it. The frame which I propose to make renders the slate perfectly noiseless, and can be very easily cleansed by plunging the entire article into water.

C in the drawings represents a wire surrounding the slate A, and forming a rectangular frame of somewhat larger dimensions, as is shown in Fig. 2. This is for the purpose of receiving and retaining the elastic rubber medium or covering B between the wire frame and the slate A. It is obvious that any sudden shock is received by the outside portion, *a*, thence transmitted with diminished force to the wire C, and finally entirely overcome by the interior surrounding portion, *b*, which effectually protects the slate. This frame may be made of light rattan or other equivalent material, and is put around or about the slate, not only to break and obviate any shocks, but to give additional strength and firmness to the rubber covering and prevent its being stretched and torn off.

I will now proceed to describe the method of making a slate with a frame containing my improvements.

I take a piece of copper wire, bend it around the rectangular slate, and braze its ends together. I then envelop said wire and the edges of the slate with unvulcanized rubber, and subject said rubber to pressure and heat while in contact with sulphur. The pressure is applied by a mold of the shape necessary to make a frame resembling that shown in the drawings. This will cause the rubber to cling tightly to the wire and the edges of the slate, and the pressure, in connection with the heat, will vulcanize the rubber, so that it will retain permanently the shape thus given it. By this means, by varying the shape of the mold, variously shaped rubber coverings may be made for any slate, and the heating or vulcanizing process which the rubber undergoes renders the entire mass C homogeneous and securely fastens it to the slate A and about the wire C. One advantage of this rubber covering as a substitute for the ordinary wooden frame is that it prevents the slate from slipping and moving about on the smooth surface of the desk, and it will remain in any position with-

out requiring the assistance of the other hand to maintain steadiness when being written upon. The wire and its rubber covering constitute together the slate-frame, which presents on its inner face the necessary groove or recess to receive the edge of the slate.

I am aware that it is not new to construct a slate-frame with a hollow rubber tubing slitted to receive the edges of the slate. I am also aware that it is not new to construct a slate with its frame of one piece of rubber. I therefore do not claim either of the above constructions.

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

1. In combination with a slate, a frame for the same, consisting of solid rubber or other elastic material recessed to receive the edges of the slate and a wire within said rubber, substantially as set forth.

2. The method of making and attaching a frame to a school-slate, consisting in bending a piece of wire around the rectangular slate and brazing its ends together, then enveloping said wire and the edges of the slate with unvulcanized rubber, and finally subjecting said rubber to pressure and heat while in contact with sulphur, thereby causing said rubber to be vulcanized and cling tightly to the wire and slate, substantially as herein set forth.

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

DAVID SCRYMGEOUR.

Witnesses:

H. E. LODGE,

F. G. SIMPSON.