

E. L. CRALL.

DEVICE FOR TEACHING DRAWING.

No. 171,268.

Patented Dec. 21, 1875.

Fig. 1

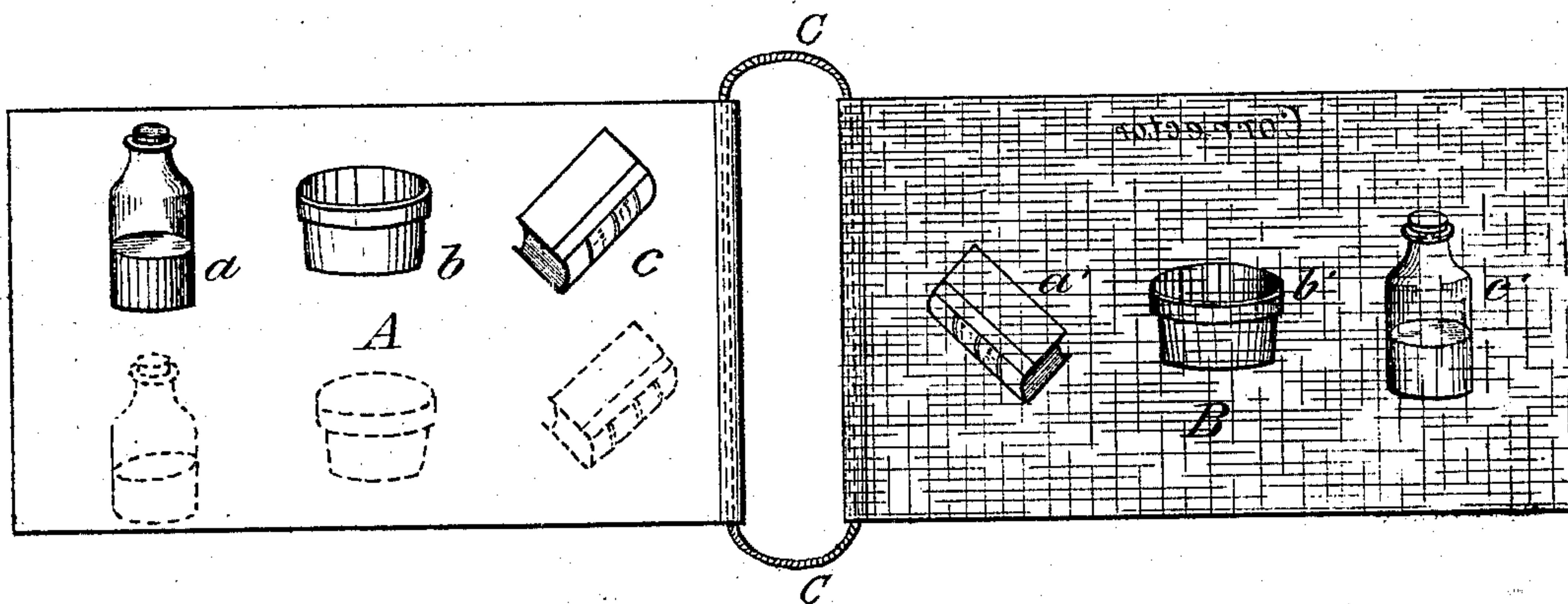
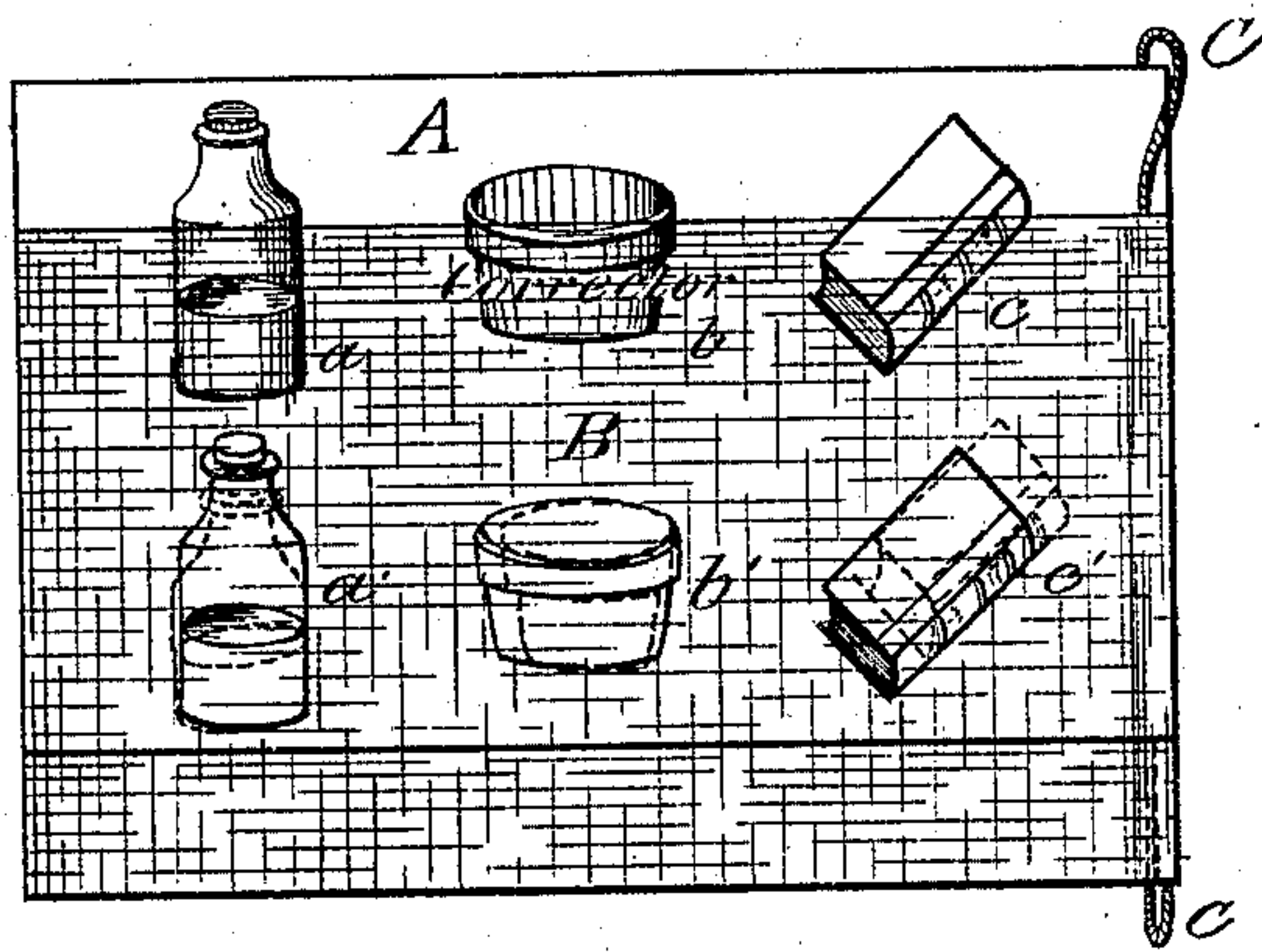


Fig. 2



Attest:

Wm. Baggers  
C. A. Snow

Inventor:

Robert L. Crall,  
by Louis Bagger  
his atty.



# UNITED STATES PATENT OFFICE.

EGBERT L. CRALL, OF ATHENS, OHIO.

## IMPROVEMENT IN DEVICES FOR TEACHING DRAWING.

Specification forming part of Letters Patent No. **171,268**, dated December 21, 1875; application filed October 22, 1875.

*To all whom it may concern:*

Be it known that I, EGBERT L. CRALL, of Athens, in the county of Athens and State of Ohio, have invented certain new and useful Improvements in Apparatus for Teaching Free-Hand Drawing; and I do hereby declare that the following is a clear and exact description of my invention, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, which forms part of this specification, and in which—

Figure 1 represents a drawing-sheet having my improvement, and Fig. 2 shows the manner of using said improvement.

Similar letters of reference indicate corresponding parts in both figures.

This invention consists in the combination of one or more drawing-sheets having the designs to be copied by the pupil printed at the top, with corresponding transparent correcters or "verifiers;" and also in the construction of a verifier, in such a manner that the pupil cannot use the verifier in tracing the design to be copied and verified upon the drawing-sheet, so that by placing the figures imprinted upon the transparent sheet or plate over the figures copied by the pupil the latter can be verified; and it is seen at once if, or how far, the pupil, in his effort, has departed from the figure or design to be copied.

In the drawing, A represents the drawing-sheet, having figures or designs *a b c* printed at the top. B is a flexible sheet or inflexible plate, (either may be used, as they answer the same purpose,) having imprinted or engraved upon its surface figures *a' b' c'*, that are exact copies or counterparts of the designs *a b c* on the drawing-sheet. B is secured to the drawing-sheet by means of strings C C at the top and bottom, so that it may be moved readily up or down the latter, for the purpose of placing any of the fac-similes on B over any of the copies of the corresponding figure made by the pupil, as shown in Fig. 2. In this figure the dotted lines represent the copies of the designs *a b c* made by the pupil, and by placing the figures *a' b' c'* exactly over these copies, as shown, the deviation, if any, from the true lines is seen at a glance.

The object of the second part of my invention is to prevent the pupil from using the verifier surreptitiously in copying the design by tracing its outlines upon the drawing-paper underneath with some pointed instrument. For this purpose I employ a plate of clear glass, and cement upon it, with some transparent gum or mucilage, thin tracing-paper or tracing-cloth having the verifying-design printed upon it. The hard glass plate will prevent the tracing of the design upon the paper or cloth pasted upon it by following its outlines, and the same plate of glass may be used for a variety of different designs or verifiers by washing off the tracing-paper after the pupil has learned to copy the figure or design accurately, and substituting another design.

I am aware that copy-slips for teaching penmanship, consisting of a copy painted or depicted upon a transparent material, and framed so as to raise it slightly, have been used before, and I do not, therefore, claim a copy-slip or verifier broadly; but

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. As a new article of manufacture, a copy-book for teaching free-hand drawing, consisting of sheets of drawing-paper A, having the designs *a b c* to be copied by the pupil printed at the top, alternated with transparent sheets or verifiers B, having fac-similes of figures *a b c* printed upon them, substantially as and for the purpose herein shown and specified.

2. As a new article of manufacture, a correcting or verifying plate for free-hand drawing, consisting of a plate of clear glass having cemented upon it a sheet of thin tracing-paper or tracing-cloth, imprinted with a duplicate copy or fac-simile of the figure or design from which the drawing is to be made, substantially as and for the purpose herein shown and described.

EGBERT L. CRALL,

Witnesses:

HENRY T. BROWN,  
A. G. BROWN.