

(No Model.)

2 Sheets—Sheet 1.

H. P. RICHARDS.

TRACING CABINET.

No. 354,347.

Patented Dec. 14, 1886.

Fig. 1.

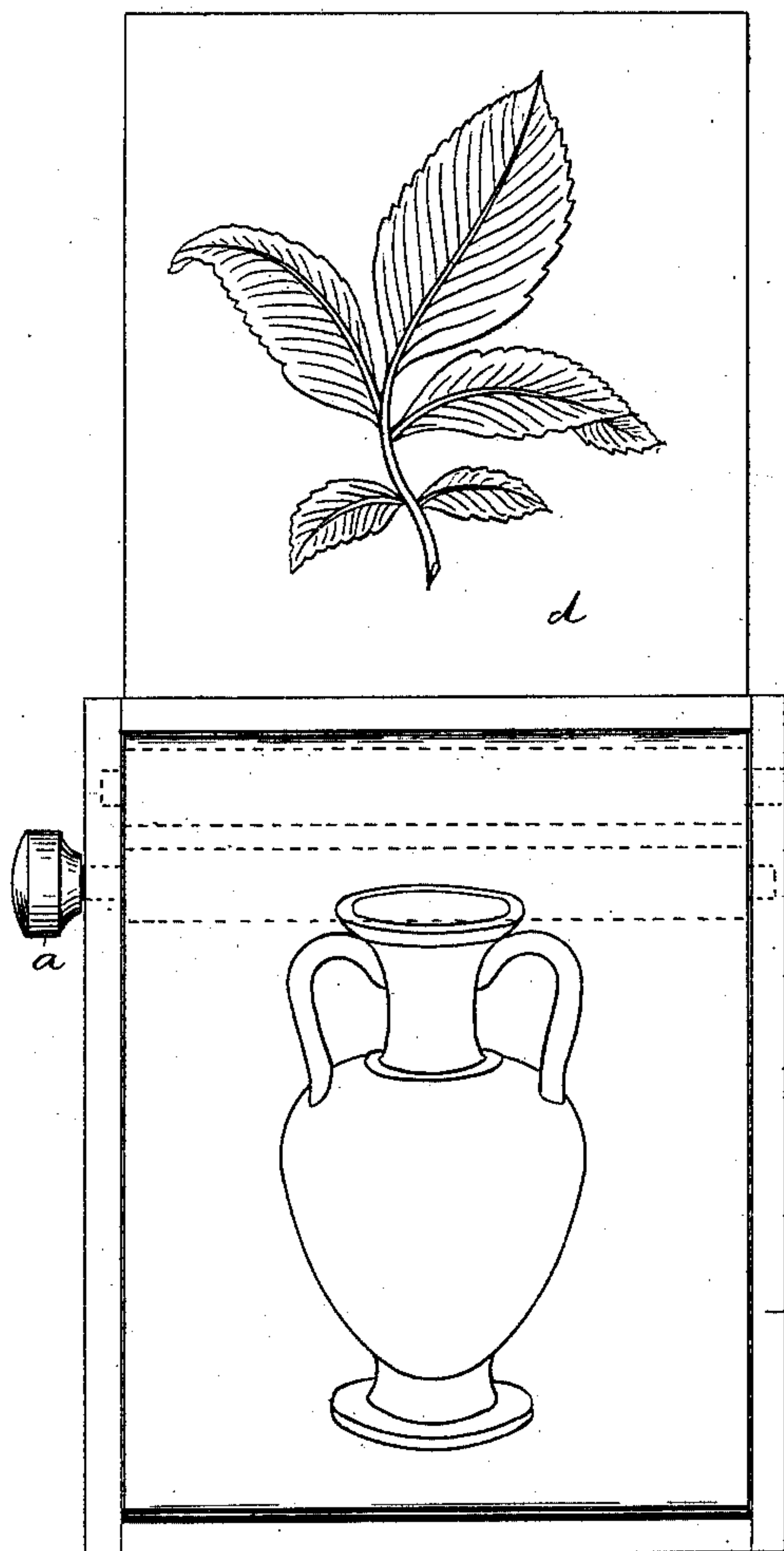
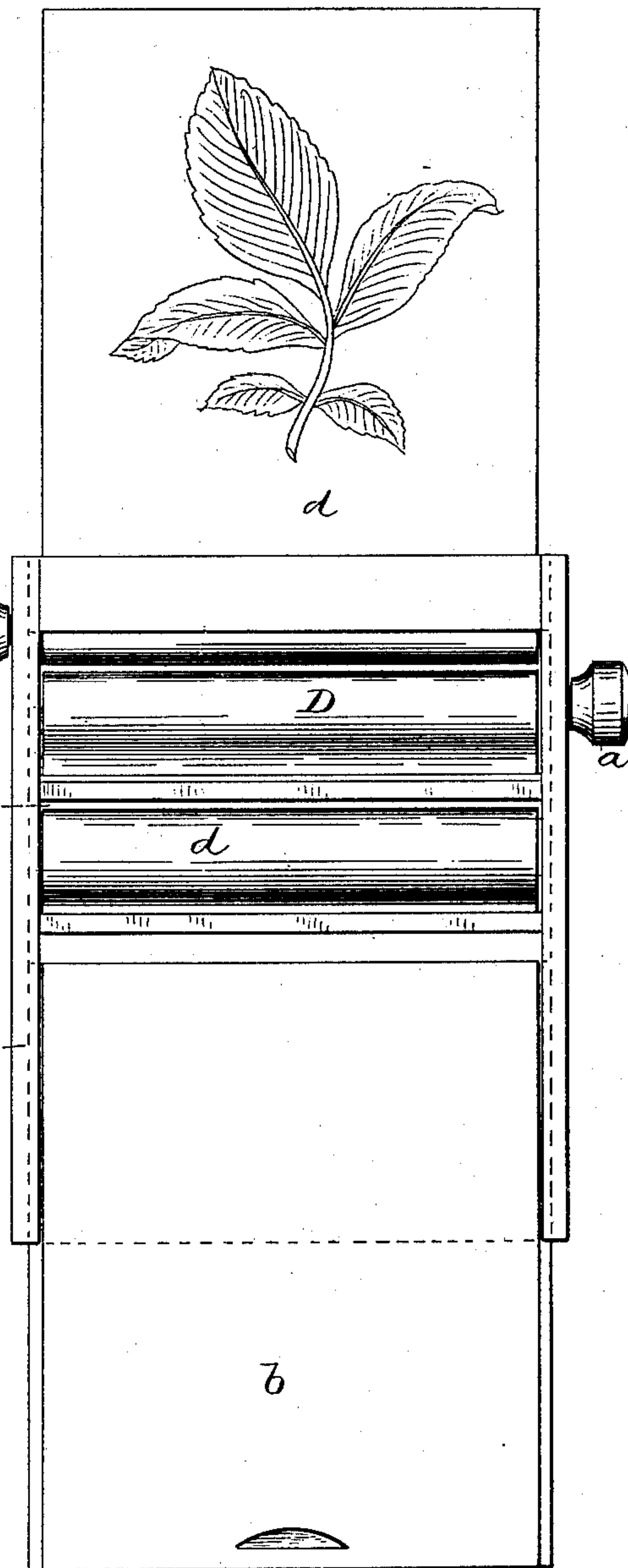


Fig. 2.



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(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

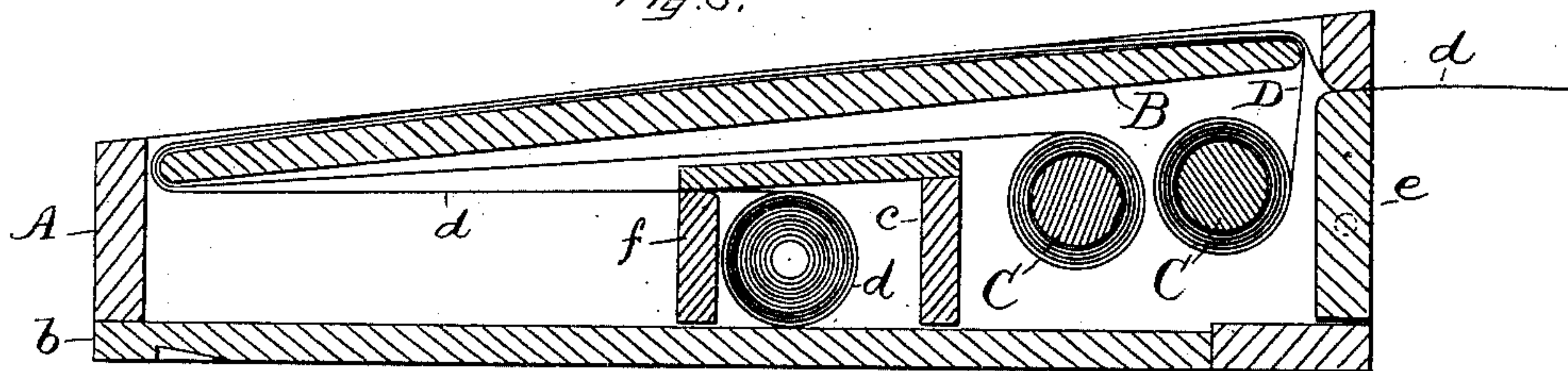


Fig. 4.

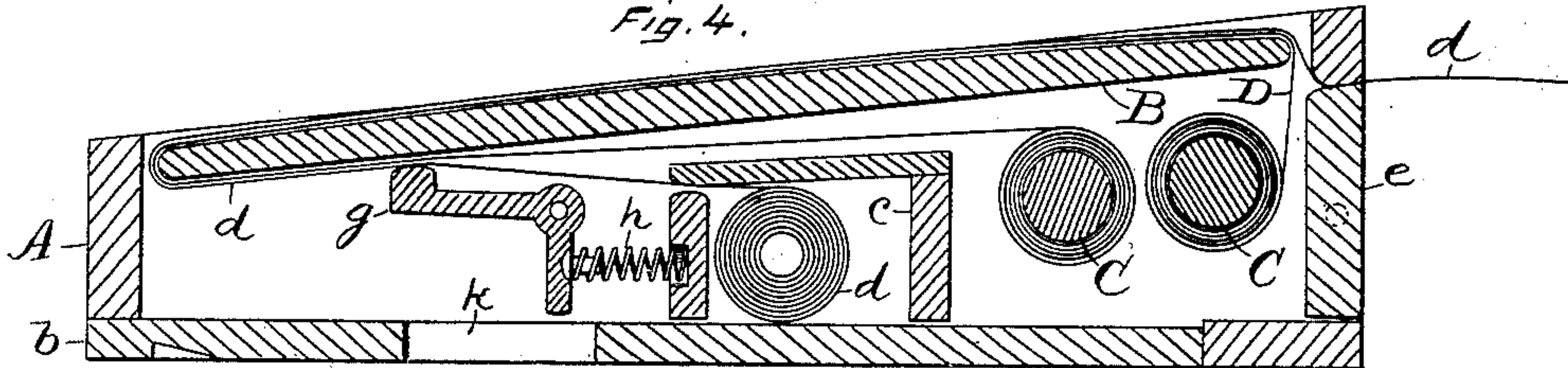


Fig. 5.

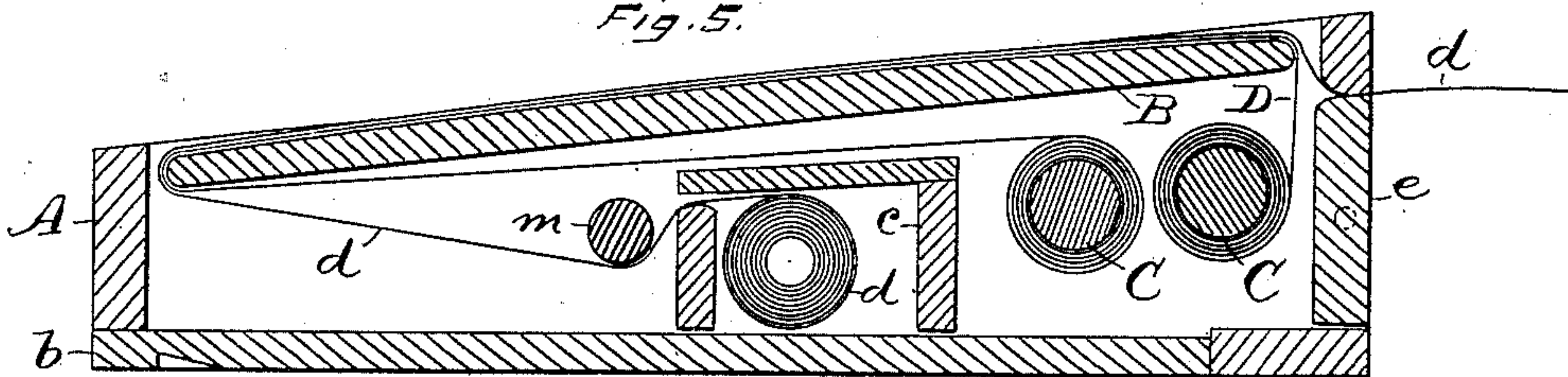
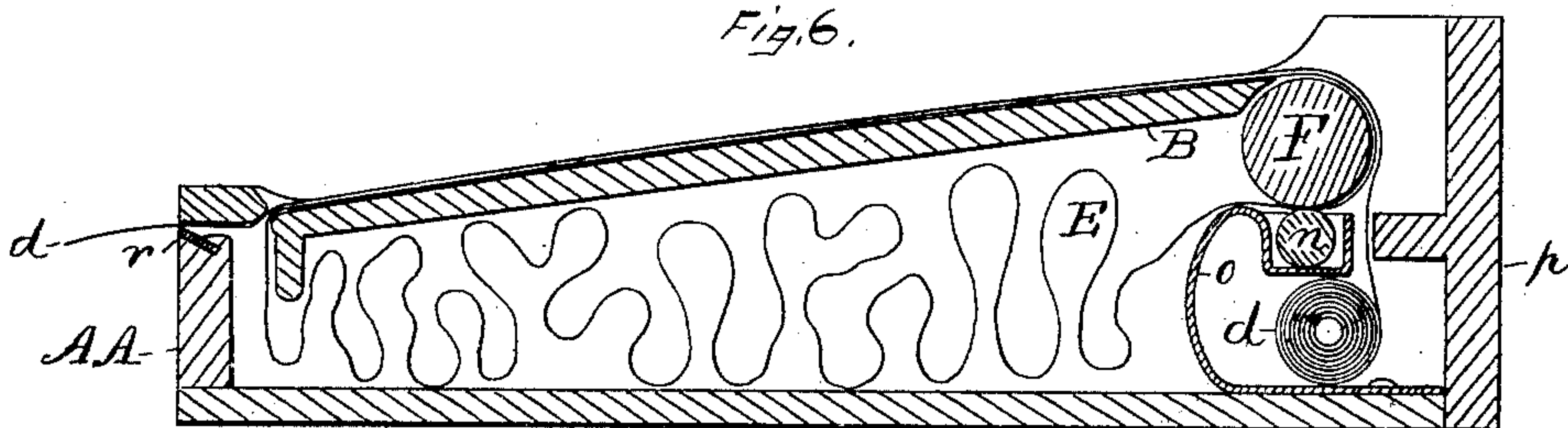


Fig. 6.



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# UNITED STATES PATENT OFFICE.

HUBERT P. RICHARDS, OF NEWTON, MASSACHUSETTS.

## TRACING-CABINET.

SPECIFICATION forming part of Letters Patent No. 354,347, dated December 14, 1886.

Application filed April 23, 1886. Serial No. 199,976. (No model.)

*To all whom it may concern:*

Be it known that I, HUBERT P. RICHARDS, a citizen of the United States, residing at Newton, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Tracing-Cabinets, of which the following is a specification

My invention relates to improvements in tracing-cabinets; and the chief object of my invention is to enable a long strip of tracing paper or cloth to be arranged within the cabinet for holding it over the drawings or characters to be traced, while at the same time the pattern-strip can be changed without moving the tracing-paper to bring any desired copy over the table for tracing.

In the accompanying drawings, Figure 1 is a plan view of my tracing-cabinet. Fig. 2 is a reverse plan view of the same. Fig. 3 is a central longitudinal section thereof. Fig. 4 is a like view, showing a slightly modified construction; and Figs. 5 and 6 are like views, showing still other modifications.

A designates the case or frame, in the upper part of which is arranged the drawing board or table B, preferably, but not necessarily, rounded upon its upper surface. This table is secured by its side edge to the case, while at each end there is a space for the passage of strips of paper. Within this case I arrange two rollers, C C, as shown in Figs. 3, 4, and 5, and as indicated in broken lines in Fig. 1. These rollers are provided with operating-handles *a*, Figs. 1 and 2, and to one of said rollers I fasten one end of a pattern-sheet, D, while the opposite end of said sheet is secured to the other roller. A portion of the body of the sheet between the two rollers is drawn over the top of the drawing table or board B, the sheet passing through the spaces at the ends of said board, as shown. This sheet may be made to contain any desired letters, figures, characters, or objects to be copied, and by turning the rollers any of said objects may be brought over the upper surface of the table.

The bottom of the frame A is made in the form of a slide, *b*, so that it can be withdrawn at pleasure. Within this frame is a chamber, *c*, for containing one end of a roll of suitable tracing material, as tracing paper or cloth, *d*.

The end of this tracing material passes out of the chamber *c* through the space at one end, and up over the table on the outside of the pattern-web, and then out through the frame over the clamp *e*, which is pivoted within one end of the frame, as indicated by the broken circle in Figs. 3, 4, and 5. By pushing the lower edge of this clamp inward to turn it on its axis the upper end is thrown outward, so that the end of the tracing material may be readily passed through the case above the clamp, and when the desired length has been drawn through, the clamp is pushed back into the position shown to hold that end of the paper.

It should be noticed that although the tracing material passes over the table in the same direction as the pattern-web, either of said strips can be moved independently of the other.

In Fig. 3 the upper side of the chamber *c* is represented as bearing down upon the upper edge of the side wall, *f*, of the chamber *c*, so as to slightly pinch the paper for holding it taut over the upper surface of the board and pattern. In this construction the wood or other material which forms the upper side of the chamber *c* should be elastic enough, and so fastened in place as to press upon the paper slightly.

In Fig. 4 I have represented an angle-bar, *g*, as pivoted within the case, one arm of which is pressed upon by the spring *h*, so as to force the other arm of the angle lever or bar up against the paper and pinch it slightly by pressure toward the under side of the table. If desired, a hole, *k*, may be made in the slide *b* to admit a finger for pressure upon the angle-bar to release the friction whenever it is desired to change the tracing material or the pattern.

In Fig. 5 I have represented a transverse bar, *m*, extending across the case, around which bar the tracing material *d* may be passed, in order to create friction for holding that end in place.

I have illustrated these various methods of holding the paper, as I do not wish to confine myself to any particular means of holding either end of the tracing material. Instead of the clamp *e* other mechanism may be employed for holding that end of the paper.

In Fig. 6 the frame is designated by A A.



The pattern-strip E is in the form of an endless belt, and passes over the roller F, and between said roller and a spring-pressed roller, *n*. That portion of the belt which is not over the top of the table B can lie loosely folded or doubled under the board within the case, as shown. The roller *n* is supported in bearings which are attached to the spring *o*. The tracing material *d* is placed in the end of the case by removing the end board, *p*. This tracing material passes up over the roller F, through the spaces at the ends of the table B, over the pattern-web and table, and out through a slot over an elastic strip, *r*, which holds this end of the tracing material.

In either construction the pattern-strip may be changed without moving the tracing material to bring any desired pattern over the table. An unused portion of the tracing material may be secured over the pattern and the object traced thereon. The tracing material can then be drawn along for tracing the same object a second time, or a second object, by moving the pattern-strip, and so on until the material is used up, after which the cabinet can be refurnished with another roll of tracing material. The cabinet is principally designed for children's use, but it will be found convenient for all purposes.

I am aware that prior patents show cases provided with rollers having strips of paper wound thereon in connection with a table over which the paper was drawn, and means for preventing the rollers from accidentally moving—as, for instance, in fare-recorders for cars, sketching and phonographic cases, and table easels; also, that other patents for manifold-writing tablets show cases having rollers over which two or more strips of paper are drawn together, but not independently over a table in one direction, and other rollers set at

right angles to the first rollers, to which carbonized paper is secured and extended over the table from side to side. In one instance a sliding clamp is shown for binding one end of the strips of paper to one end of the table. All of said prior art is hereby disclaimed. By my improvement a very simple and inexpensive tracing-cabinet is produced. The pattern web or strip is free at all times to be manipulated to bring any desired pattern into position for tracing. The tracing material is not wound upon rollers, but merely stored within a chamber of the casing, and it extends over the table in the same direction as the pattern-web, but can be drawn along, as may be desired, without moving said web. The outer end of the tracing material is clamped in place, while frictional devices bear upon it and hold it in check as it extends to the table.

I claim as my invention—

A tracing-cabinet consisting of a case or frame, the table or drawing-board secured to the upper part of said case, a pattern web or strip extending over said table and into the case at the ends of said table, rollers for drawing said paper along to bring any desired pattern over said table, a chamber extending across the case parallel to the rollers for drawing the web, for holding a roll of tracing material within the case in position to have the outer end drawn over the table and pattern-web, a frictional device for holding the tracing material in check as it extends to the table, and clamping mechanism to hold the outer end of said tracing material, all substantially as described, and for the purpose specified.

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Witnesses:

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