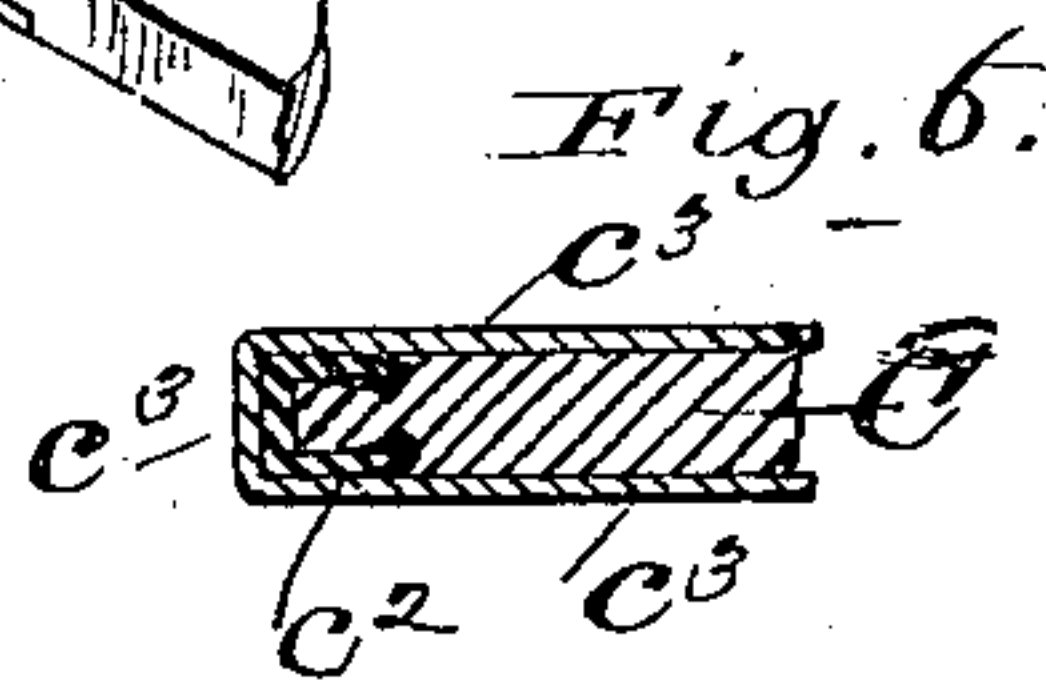
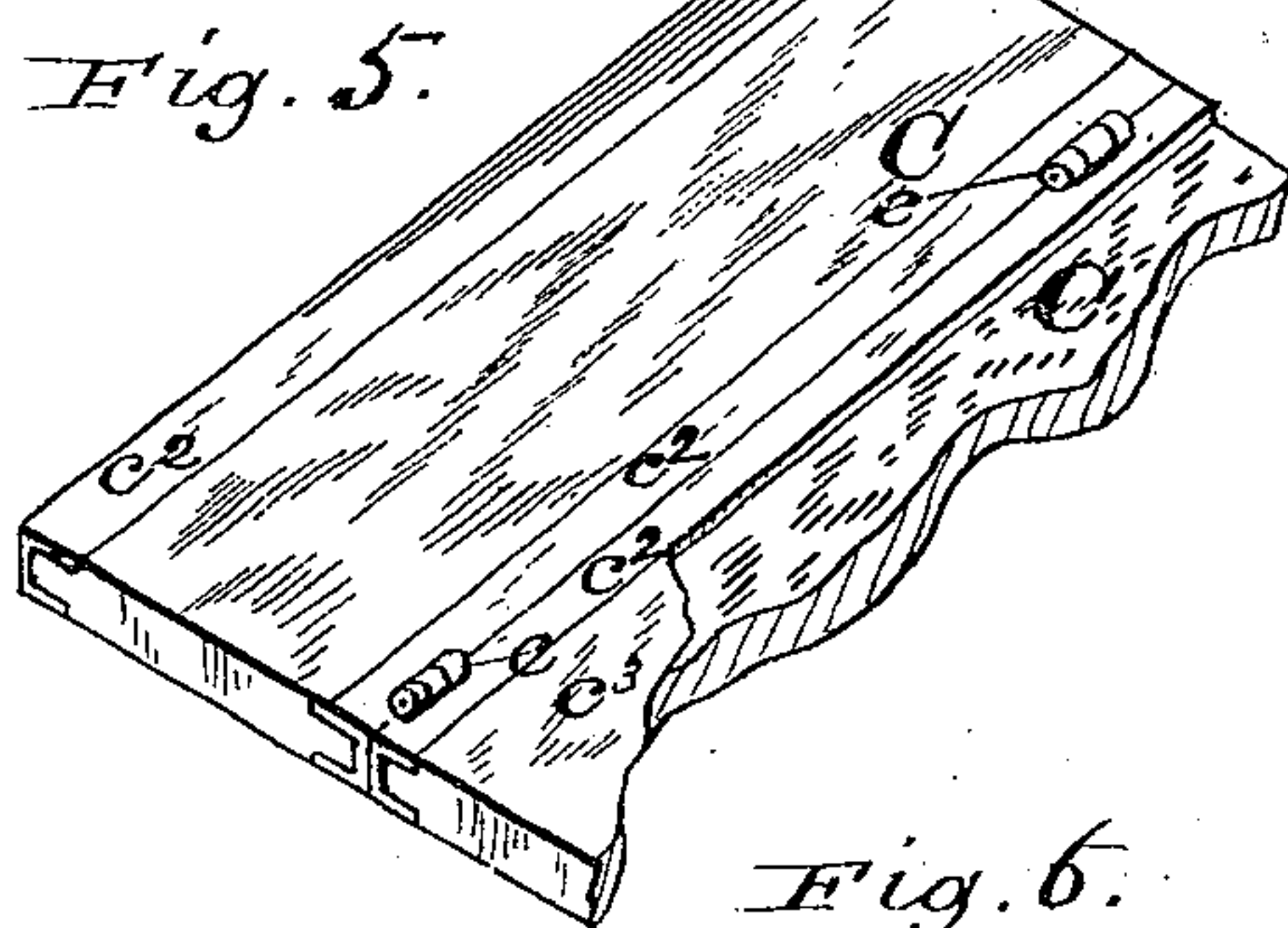
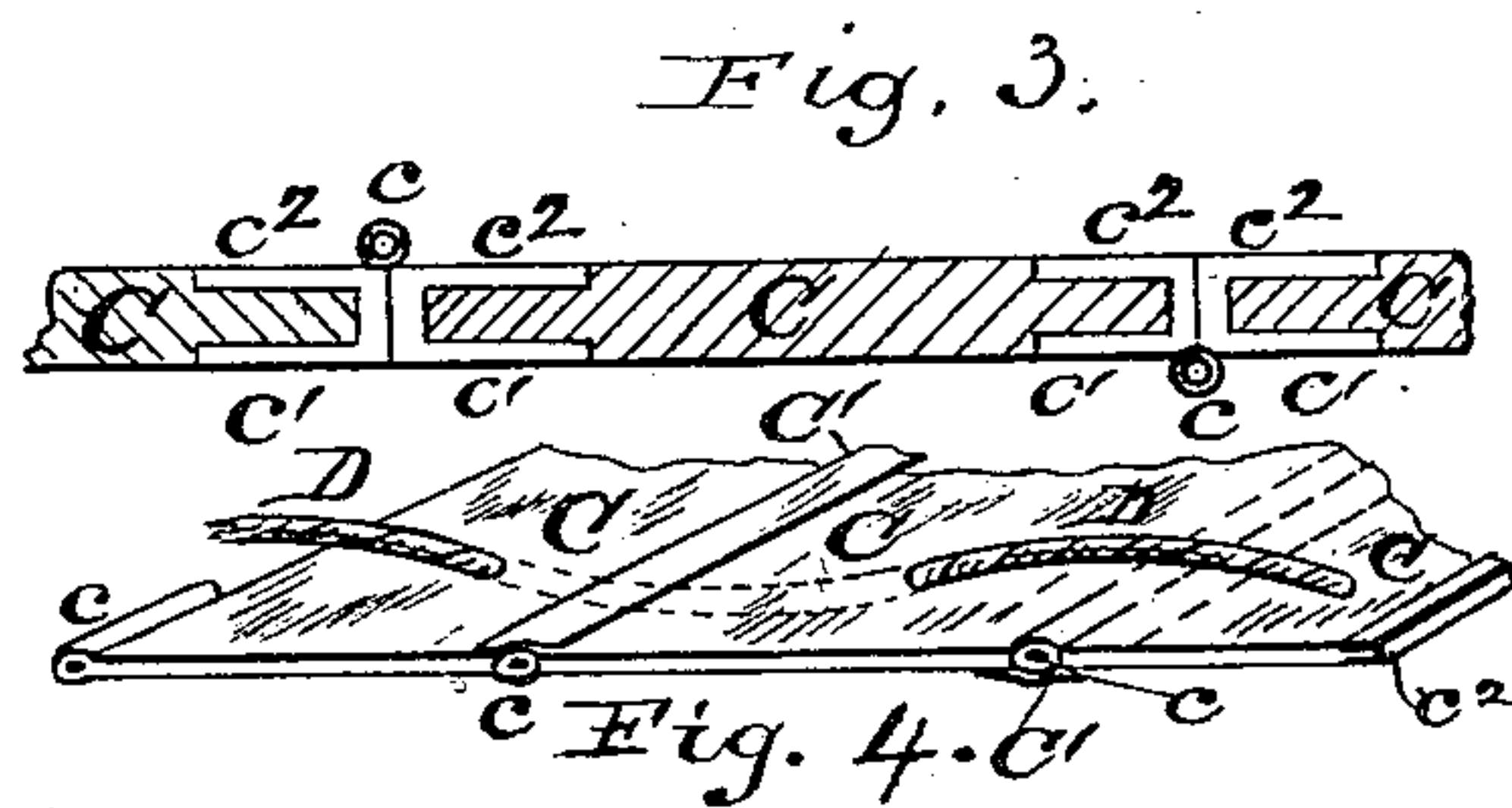
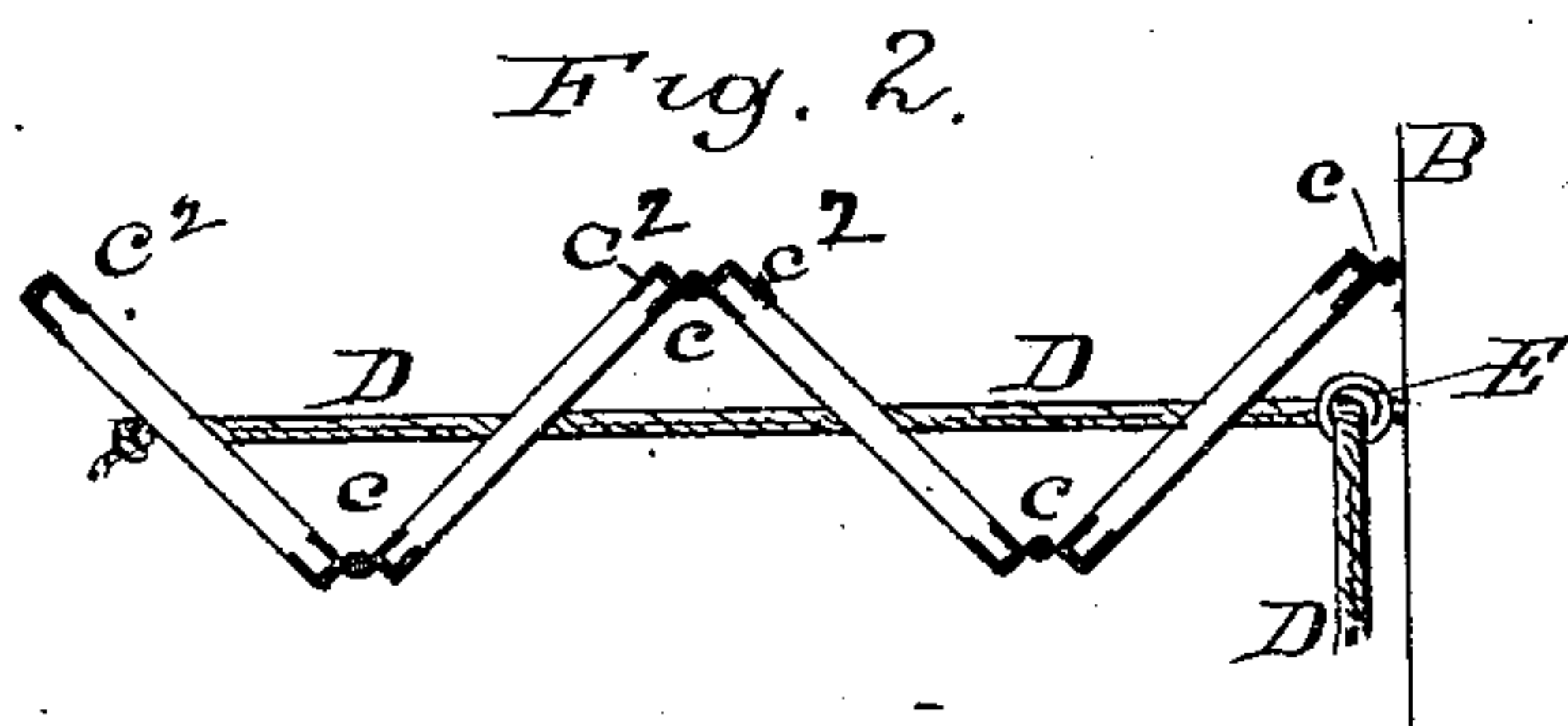
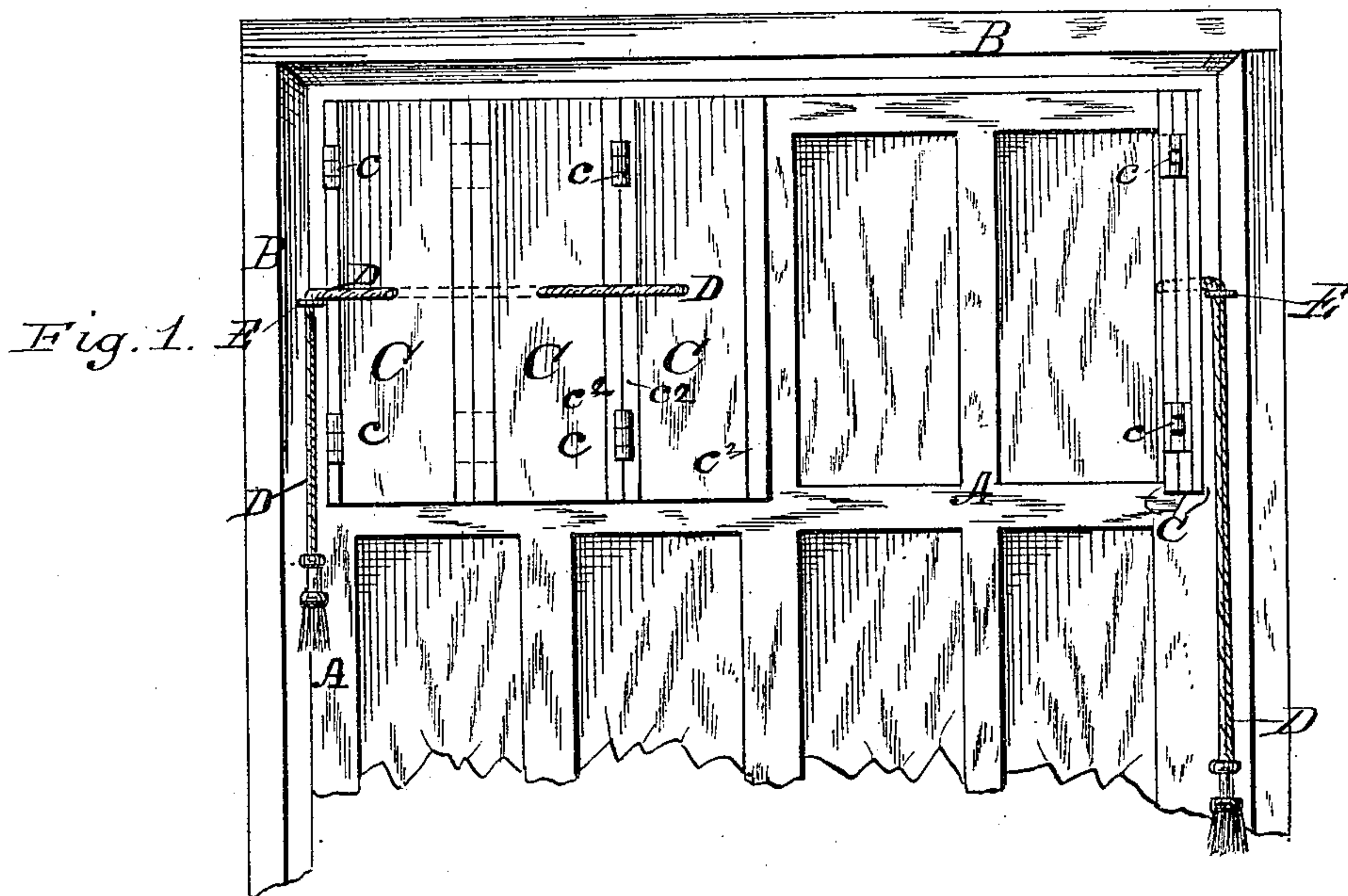


(No Model.)

I. PAINE.
SHUTTER.

No. 282,663.

Patented Aug. 7, 1883.



Witnesses:

L. b. Hills

E. E. Masson

Inventor:

Irving Paine
By E. B. Stocking
Att'y

UNITED STATES PATENT OFFICE.

IRVING PAINE, OF HORNELLSVILLE, NEW YORK.

SHUTTER.

SPECIFICATION forming part of Letters Patent No. 282,662, dated August 7, 1883.

Application filed June 4, 1883. (No model.)

To all whom it may concern:

Be it known that I, IRVING PAINE, a citizen of the United States, residing at Hornellsville, in the county of Steuben and State of New York, have invented certain new and useful Improvements in Shutters, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 is a front elevation of a portion of a window provided with shutters constructed in accordance with my invention. Fig. 2 is a plan, showing the shutters partly open. Fig. 3 is a transverse section. Fig. 4 is a modification in perspective. Fig. 5 is a perspective, showing the shutters constructed of straw-board; and Fig. 6, a modified construction of paper.

Like letters refer to like parts in all the figures.

A represents the window-sash, and B the casing.

C represents a single shutter, which may be made of wood, opaque glass, sheet metal, or paper, as hereinafter described. Each of the single shutters of a series is hinged to its successor at an opposite side at each edge, as shown at *c*, so that in opening or extending the series to close the window by the shutters as a whole each single shutter will fold in the proper direction, in order that when the entire series is closed against the casing, to "open" them—that is, to remove them from in front of the window—each single shutter or section shall rest against and flatly upon its adjacent section, as shown at the right of Fig. 1, the left of said figure showing the shutters extended and in line edge to edge. Ordinarily the sections may be opened and closed by taking hold of the outer one and pulling outward or pushing inward, by reason of the hinge-lines being located as described; but in very light or thin paper, sheet-metal, or wooden shutters or sections, when the hinges vary in the ease with which they operate, one or more sections may be thrown out of the desired order of folding one upon the other in succession, necessitating the use of an additional hand in guiding the sections, which, although not a serious objection, may, if desired, be overcome by the use of a cord, D, passing through a hole in the

center of each section or shutter, and through an eye, E, or other suitable device on the casing; so that when straightened or pulled, each section or shutter is invariably brought against its companion in the series.

In very thin sheet-metal or paper shutters I may employ a supplemental leaf, C', (see Fig. 4,) on opposite sides of the hinge edges of each section, in order to prevent the hinges operating in the wrong direction.

Each of the sections may be of any desired width—that is to say, may be and constitute simple slats or complete sections, or even complete blinds, so far as the construction of the same is concerned, and in accordance with the possibilities of the material employed. When constructed of paper, the material may be of fine texture throughout, and printed, stained, or grained in any suitable manner; or it may be of coarse texture, as straw-board, and covered either upon its exposed surfaces by a finished paper, *c*², of finer texture, and bearing an imitation of grained wood, as shown in Fig. 5, or such finer paper may be applied to all surfaces, sides, and edges, as shown in Fig. 6, the thickness of the shutter being exaggerated in these figures.

Each side edge of each section is bound, stiffened, and strengthened by a metal binding, *c*², which may be compressed into the coarser material, as shown in Fig. 6, or otherwise secured to the same, and the hinges may be formed integral with or secured to said binding, as desired. The paper, both coarse and fine, may be treated chemically or otherwise to render it water-proof and fire-proof, and asbestos or other well-known fire-proof materials may be incorporated therewith, either before or after the paper is made or finished.

By my construction of shutter-sections, strength and lightness are secured in a cheaper material, and these advantages follow without dependence upon the particular manner of applying them to each other and to the window-casing or the means shown for closing them, and can be availed of for inside or outside uses; and I therefore do not limit myself to the details set forth in these particulars; and, furthermore, if desired, the binding *c*² may be applied to the end edges of each section and covered or not by the finished paper, as described.

Having described my invention and its operation, what I claim is—

1. As an article of manufacture, a shutter or shutter-section comprising a body portion, C, provided with metal binding c^2 c^2 and hinges c , substantially as shown and described.

2. A shutter or shutter-section constructed of a paper body portion, C, surfaced with finished paper, as c^3 , and provided with metal

binding, as c^2 c^2 , and hinges, as c , substantially as shown and described.

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

IRVING PAINE.

Witnesses:

FAY P. RATHBUN,
NIROM M. CRANE.