

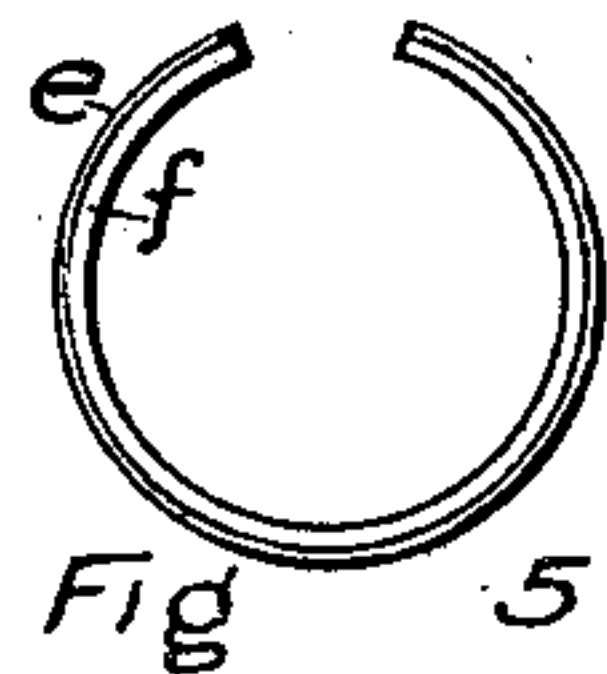
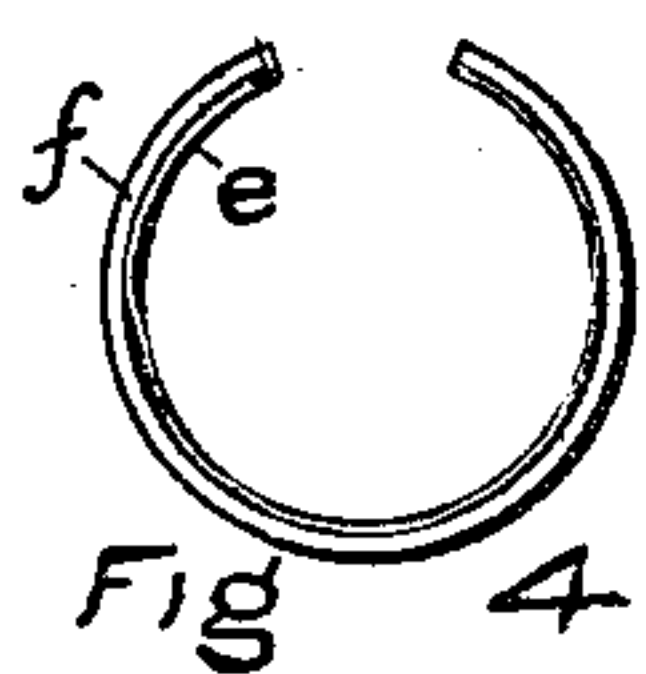
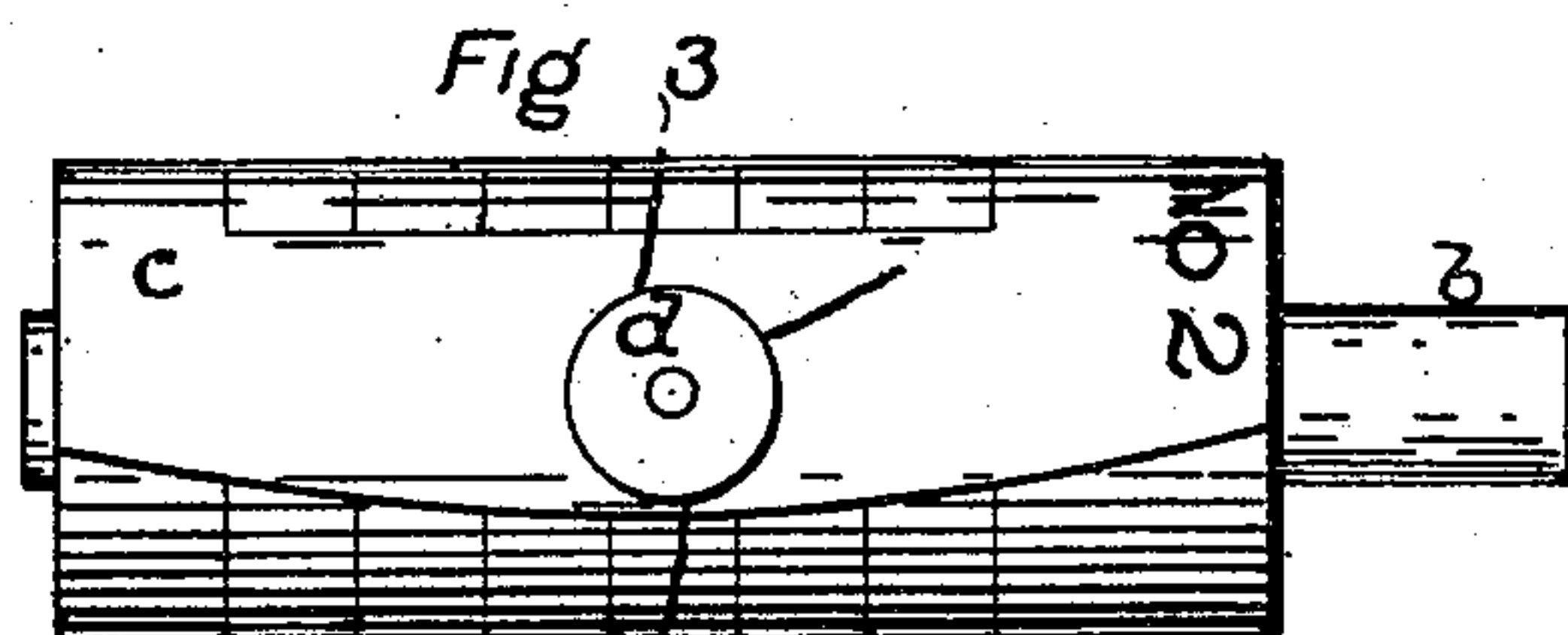
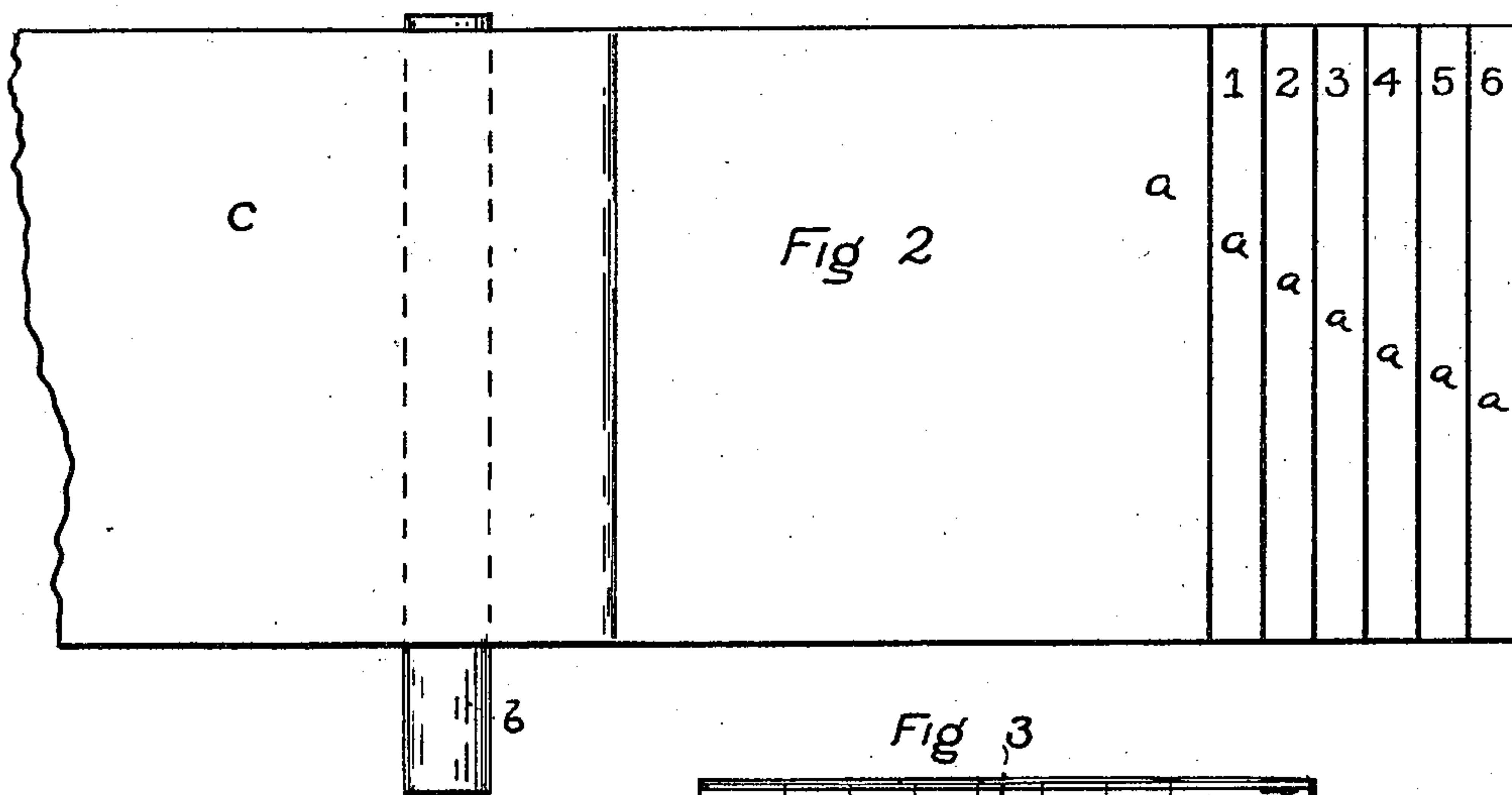
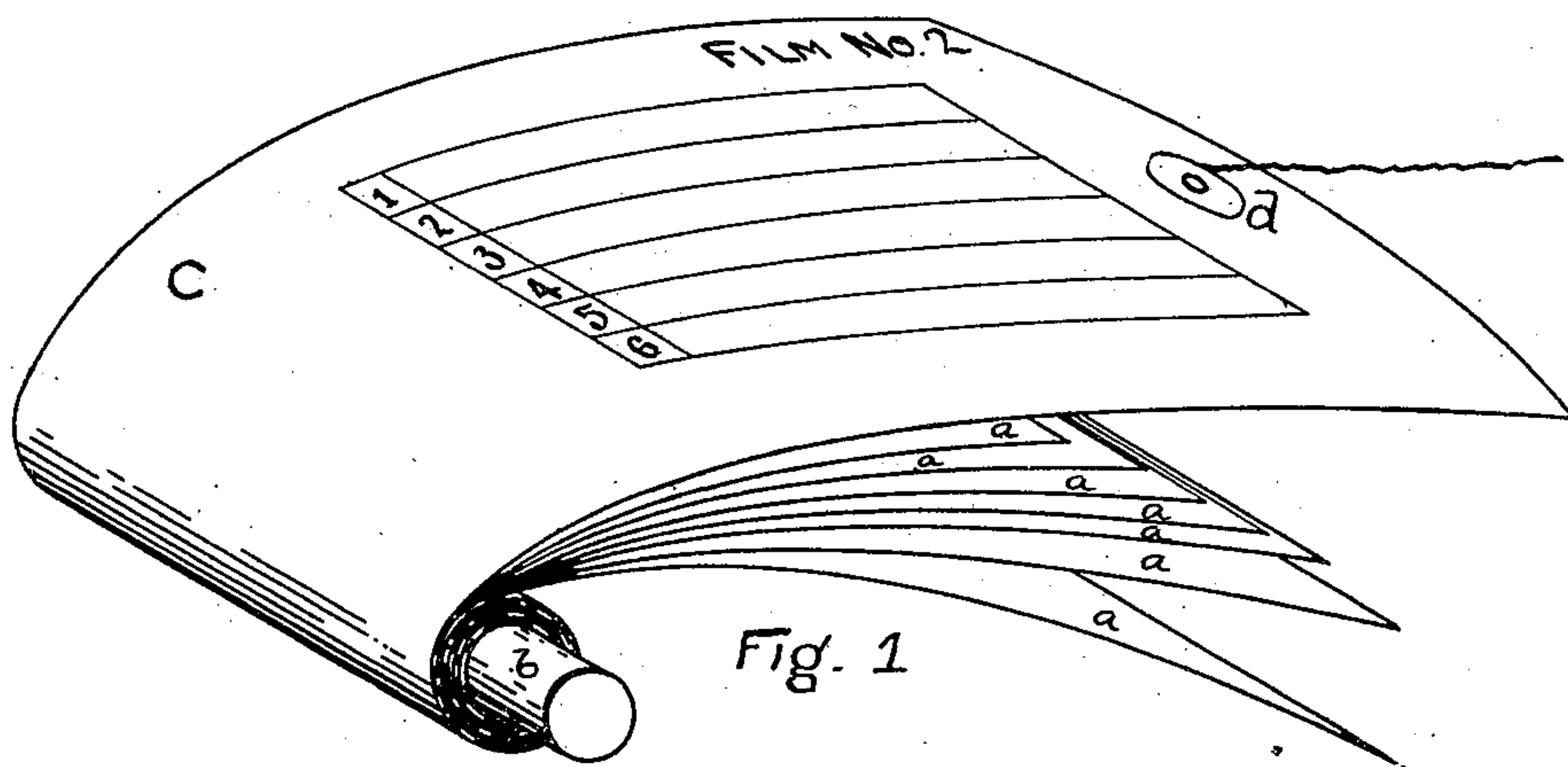
No. 644,112.

Patented Feb. 27, 1900.

E. G. THOMAS.
ROLL BOOK FOR PHOTOGRAPHIC FILMS.

(Application filed Apr. 25, 1898.)

(No Model.)



WITNESSES

Wm. H. Mitchell.
Ola W. Gay.

INVENTOR

Edward G. Thomas

UNITED STATES PATENT OFFICE.

EDWARD G. THOMAS, OF BOSTON, MASSACHUSETTS.

ROLL-BOOK FOR PHOTOGRAPHIC FILMS.

SPECIFICATION forming part of Letters Patent No. 644,112, dated February 27, 1900.

Application filed April 25, 1898. Serial No. 678,713. (No model.)

To all whom it may concern:

Be it known that I, EDWARD G. THOMAS, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Film-Rolls for Preserving and Filing Away Photographic Negatives, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

My invention is a device for preserving and filing away film negatives. The ordinary film negative after the developing process dries with a pronounced tendency to curl toward the film side, because the gelatin film shrinks more than its celluloid support. After a short time, unless measures are taken to prevent, the negative will curl very tightly, sometimes to a roll as small as a lead-pencil, and when it is desired to obtain a print from the negative it is found very difficult to get the negative and paper into the printing-frame without turning and breaking the corners of the negative, and considerable annoyance and loss of time result. Various remedies have been proposed, and many negatives are soaked in glycerin, which removes the tendency to curl, but softens the film, so that it becomes very easily scratched. Books have been made for keeping the negatives in a flat position; but while the negative will remain flat while in the book it retains its tendency to curl and gives as much trouble in the printing-frame as before.

My invention is a device for giving to the negative a permanent set in the direction opposite to that in which it tends to curl, which set will neutralize the negative's tendency to curl, and the result will be a practically flat negative.

In the description of my invention following reference is made to the drawings which accompany and form a part of this specification, and reference-letters in the text refer to similar letters on the drawings.

Figure 1 is an isometric view of the device partly unrolled. Fig. 2 is a plan view of the device wholly unrolled and with the outer sheet turned back. Fig. 3 is a side elevation of the device rolled and ready to be filed

away. Figs. 4 and 5 are explanatory diagrams.

The device consists of a number of thin leaves *a a*, joined to form a book. At one end the leaves are joined to the roller *b*. A sheet *c*, long enough to cover all the others; is placed outside the others and has a device for retaining the roll in a rolled state. The negatives are placed in the roll with their film sides away from the roller, so that when the roll is rolled the negatives will be rolled with their film sides out.

Figs. 4 and 5 illustrate the action of the device. Fig. 4 shows the way the negative will curl if left to itself—*i. e.*, with the film inside. *e* is the film, and *f* its celluloid support. Fig. 5 shows the position of the negative when held by my device. The film *e* is now on the outside of its celluloid support *f*, and the set received by remaining in this position will act to overcome and neutralize the tendency of the negative to take the position of Fig. 4, resulting in a practically flat negative when it is removed from the roll.

For convenience in selecting a given negative I propose to allow each leaf of the roll to project slightly beyond the one above it, as is clearly seen in Fig. 2. By numbering the sheets a convenient means of reference is obtained, which is further improved by means of an index printed on the outside sheet, as shown in Fig. 1, in which the name of the negative can be entered when placed in the roll. Means for noting the number of the roller on that part of the cover that appears when the device is rolled is provided.

For convenience in rolling the roller is made longer than the width of the leaves and may be seized by the fingers of one hand, while the other is placed around the roll. The roller may be of wood, paper, or other substance, or the roll may be rolled about itself. Any form of fastening device *d* may be used which will secure the roll in a closed position.

My invention may also be practiced with a single sheet, since the negative may be placed above or below the sheet, and as the sheet is rolled its convolutions will serve to reverse and hold the negative properly.

The treatment of the negative above described differs from any treatment heretofore

practiced so far as I am aware, although the results have been desired ever since the first use of negatives of this character, and this result cannot be attained by pressing in a
5 flat book or by rolling between leaves of a roll, unless the negative is placed in the roll in such position that it will be rolled up in a direction the opposite to that in which it naturally curls.

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

1. The film-holder above described consisting of a roll carrying a set of leaves attached
15 thereto by one of their edges and narrower

in width than the length of the roll, each leaf being shorter than the leaf immediately following it, as set forth.

2. The film-holder above described consisting of a set of leaves attached at one end to
20 a roll longer than the attaching edge of said leaves, each leaf being longer than the one immediately preceding it, said holder being provided with a suitable cover and means for
fastening said cover about said holder, as and
25 for the purposes set forth.

EDWARD G. THOMAS.

Witnesses:

F. F. RAYMOND, 2d,

J. M. DOLAN.