

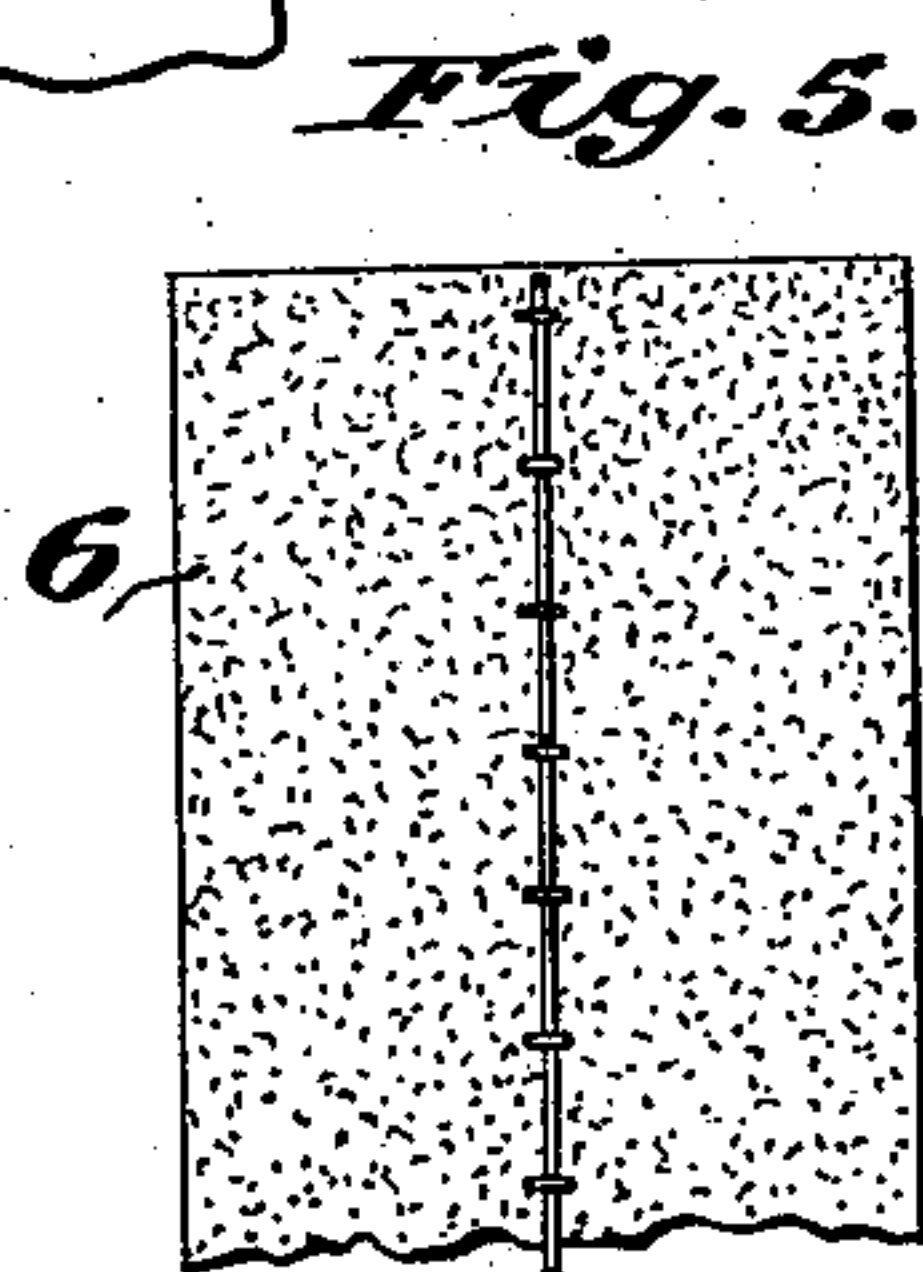
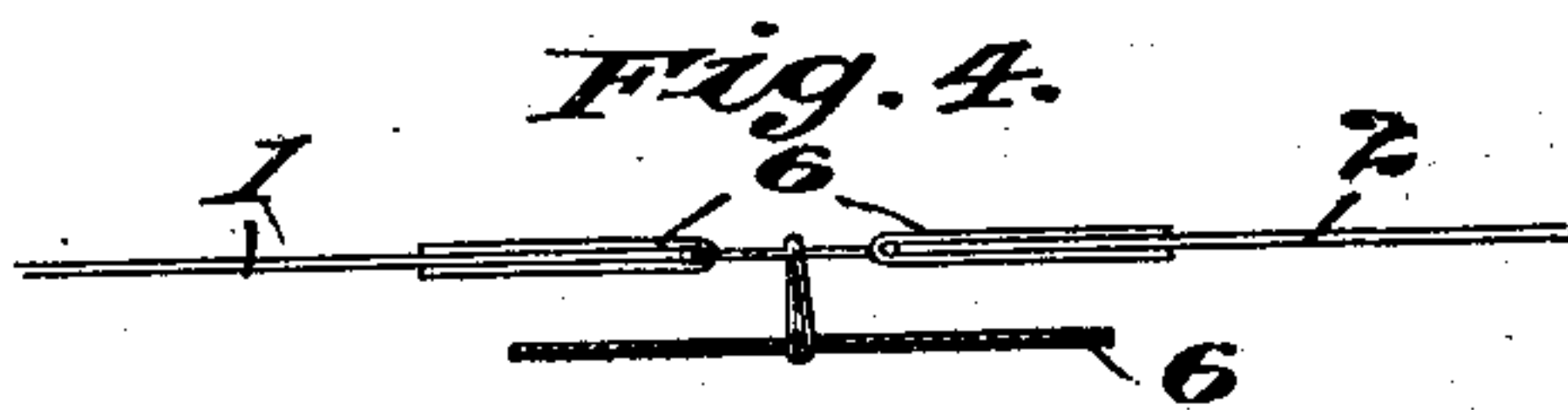
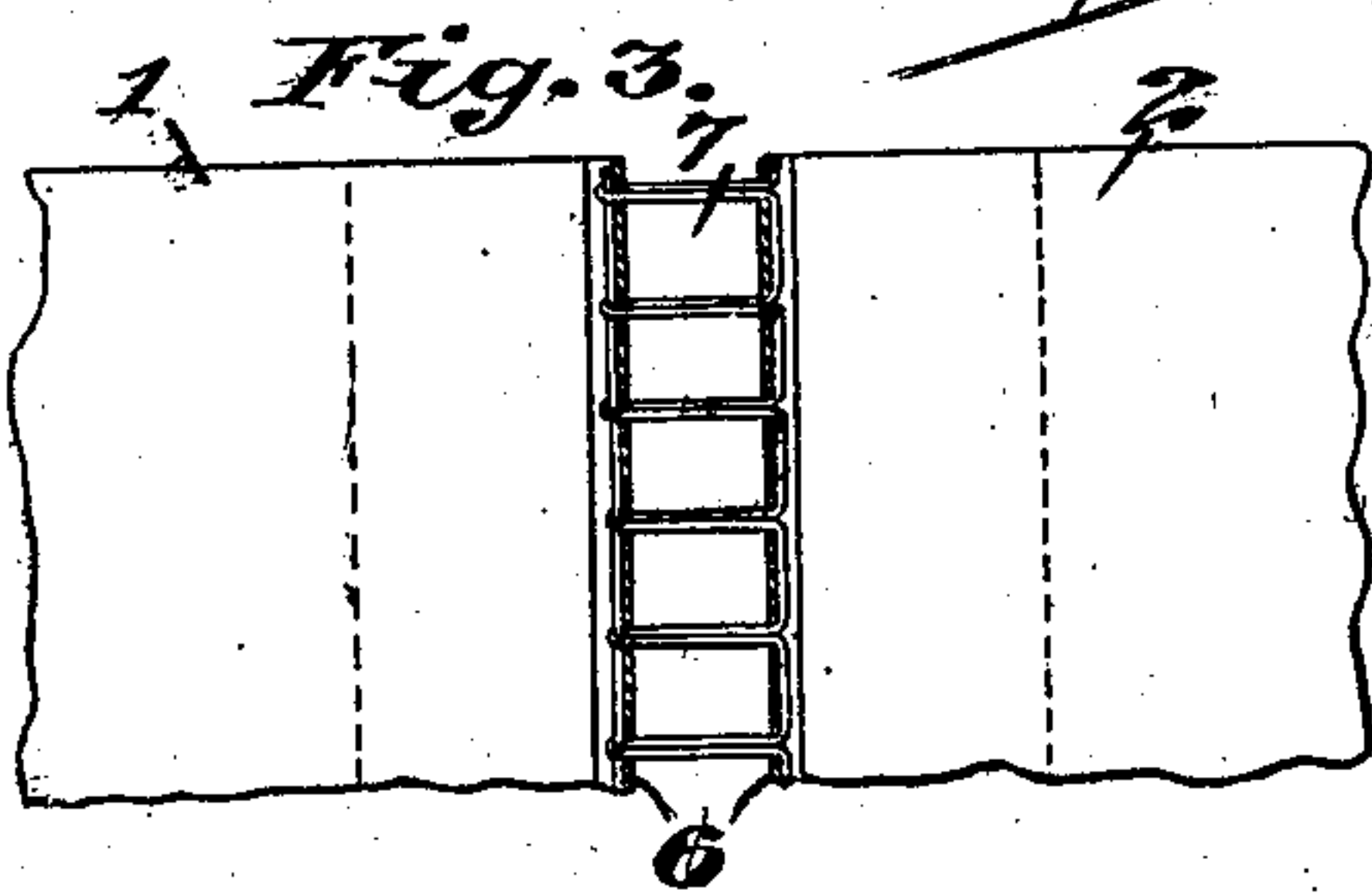
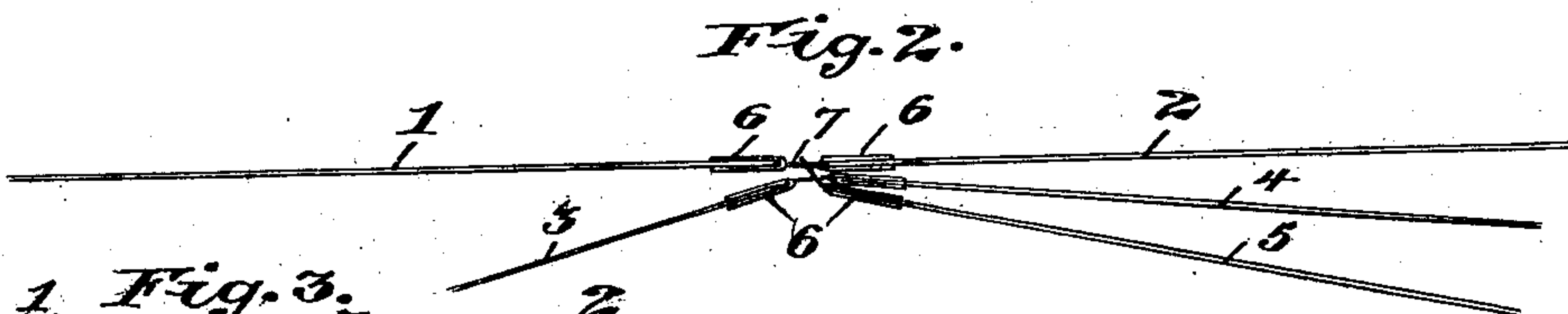
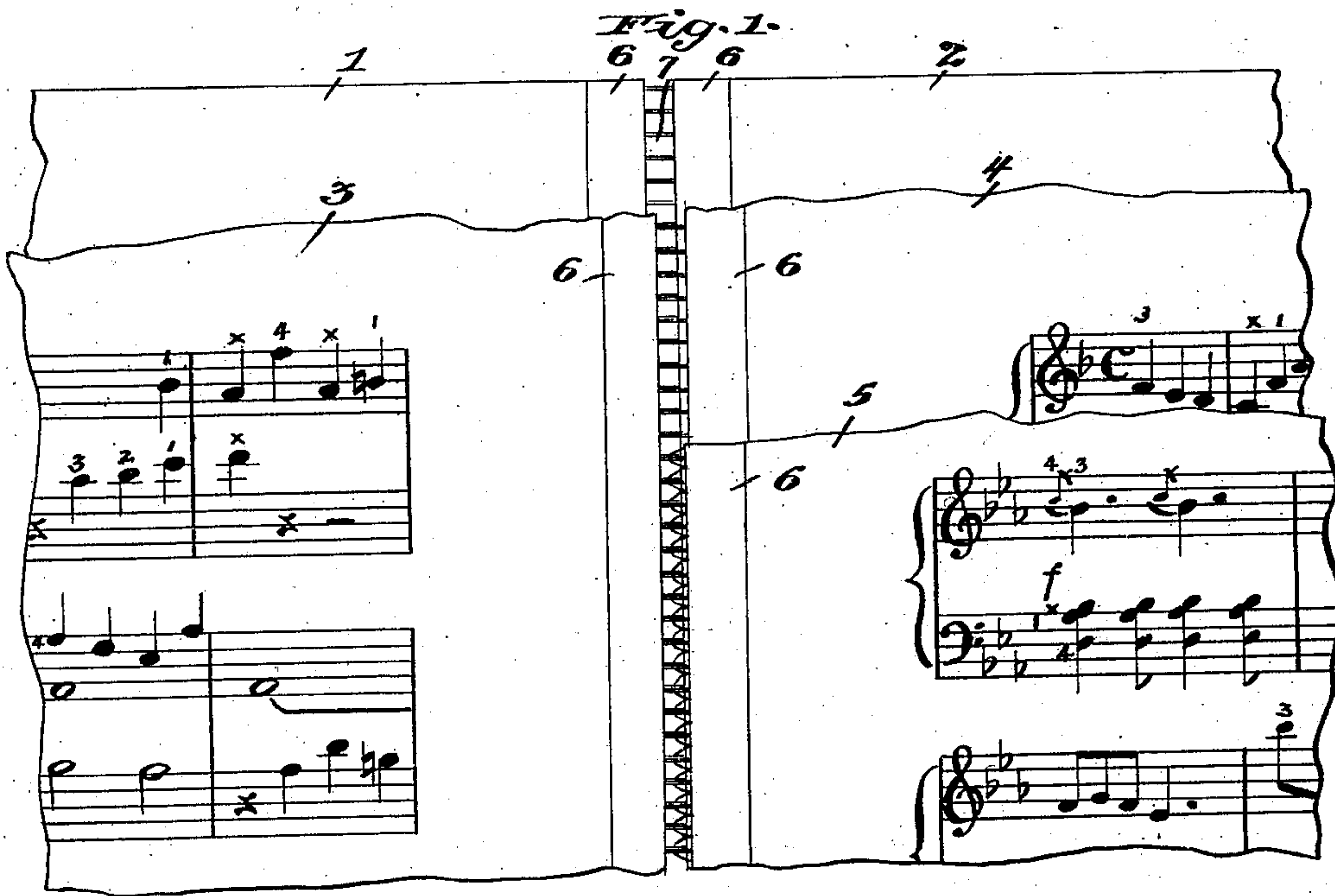
No. 747,962.

PATENTED DEC. 29, 1903.

W. M. GAMBLE.
LEAF HINGE.

APPLICATION FILED SEPT. 18, 1903.

NO MODEL.



Witnesses,
J. D. Mann,
A. N. Graves

Inventor,
William M. Gamble,
By *Offield Towler* *Linthicum*,
Attys.

UNITED STATES PATENT OFFICE.

WILLIAM M. GAMBLE, OF CHICAGO, ILLINOIS.

LEAF-HINGE.

SPECIFICATION forming part of Letters Patent No. 747,962, dated December 29, 1903.

Application filed September 18, 1903. Serial No. 173,715. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. GAMBLE, a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Leaf-Hinges, of which the following is a specification.

This invention relates to improvements in leaf hinges or binders adapted for flexibly securing together two or more leaves or the like, relating particularly to binders or hinges formed of gummed strips flexibly united with each other and adapted to be applied to the leaves which are to be hinged together, but relating more specifically to an improvement in the construction of a leaf-hinge constituting the invention in my United States Patent No. 691,757, dated January 28, 1902.

The object of the invention is to provide a simple, inexpensive, and always ready device of the character referred to which will form a durable and convenient means for flexibly uniting or hinging together two or more leaves or analogous objects and to provide a merchantable device which can be manufactured in various forms to accommodate various numbers of leaves and be put upon the market at a nominal cost.

To these ends the invention consists in the matters hereinafter described, and more particularly pointed out in the appended claims, and will be readily understood from the following description, reference being had to the accompanying drawings, in which—

Figure 1 is a fragmentary face view of a five-leaf hinge. Fig. 2 is an end view of Fig. 1. Fig. 3 is a fragmentary view with the hinge-strip shown in section to expose one form of stitch used. Fig. 4 is a fragmentary end view of a three-leaf hinge with the strip for the third leaf open to receive the edge of it. Fig. 5 is a fragmentary view of the gummed face of a strip open to show the edge of the stitch; and Fig. 6 is a fragmentary view similar to Fig. 4, but showing a four-leaf hinge.

Similar numerals refer to similar parts throughout all the figures.

Referring to the drawings, 1, 2, 3, 4, and 5 designate a series of leaves to be hinged together, in the present instance representing leaves of music.

6 designates the hinge-strips, preferably all the same and made of any suitable mate-

rial, such as strips of tape or other flexible and tough fabric adapted to be coated on one side with a suitable gum or adhesive material, as indicated by the stipple-shading shown in Fig. 5, which when moistened becomes adhesive. The strips may or may not be made of material having a selvage or woven edge. The manner of uniting these strips to form a flexible hinge between the leaves to which they are to be secured differs materially from that shown in my patent above referred to, constitutes the principal subject-matter of the present invention, and may be briefly described as follows: The strips being of a sufficient width to provide suitable attaching-surface on each side of a leaf when folded longitudinally around the edge thereof are joined together by a series of stitches passing back and forth through their medial lines longitudinally from one strip to the other, (in a two-leaf hinge,) said strips being separated sufficiently during the stitching thereof to provide a substantial and uniform space between their medial lines or folded edges after they have been folded each around the edge of a separate leaf in the manner above referred to and as seen at 7, Figs. 1, 2, and 3.

In a three-leaf hinge two attaching-strips are stitched together in the manner above described, and a third strip is stitched through its medial line with the stitches passing back and forth through the strip and around the connecting-stitches of the first strips in the manner shown in Fig. 4.

In a four-leaf hinge two pairs of strips are respectively stitched together in the same manner as in a two-leaf hinge, the stitches of each pair, however, being at right angles with and intersecting the stitches of the other pair, leaving a substantial space between the folded edges of the strips, as will be clearly seen in Fig. 6.

In a five-leaf hinge two pairs are respectively stitched together in the same manner, one pair being placed slightly above the other, so that their stitches are parallel and in substantial register with each other, as shown in the upper half of Fig. 1, and a fifth strip is then stitched through its center, with the stitches passing between and around the stitches of both pairs, as shown in the lower half of Fig. 1.

It will thus be seen that the manner of stitching the strips together affords a very flexible and a very durable hinge between the leaves, produces a hinge in which only the connecting strands are exposed to view, the ends and turns of the stitch being folded between the halves of the strips as they are folded around the edge of the leaf, giving a very neat and compact effect, also producing a hinge which can be economically manufactured, the inside or attaching faces of the strips gummed, and the hinges put upon the market ready to be moistened and applied to various sets of leaves.

I am aware that it has heretofore been proposed to secure leaves together by means of two strips of fabric stitched together back to back along their longitudinal axis, thereby providing flaps or securing portions to be applied to both sides of the two sheets to be united. This construction, however, does not possess the advantage of my invention, for the reason that the strips are secured together back to back and the extent of pliability of the hinge is practically that of the fabric itself, whereas in my invention the intervening space between the sheets is a substantial one bridged only by the threads extending across the gap, and this renders the hinge not only more pliable, but also affords a freedom of movement of the edge of one sheet relative to that of the other or others which greatly facilitates the turning of the leaf.

Various modifications may be made in the construction here shown without departing

from the spirit of the invention, and I do not, therefore, limit myself to the particular stitch or other details of construction shown.

I claim—

1. Two or more strips of adhesive fabric adapted to be respectively folded longitudinally to embrace edges of sheets and united by stitches along the line of fold, said stitches being of a length to hold the strips at a substantial distance apart, substantially as described.

2. Two or more strips of adhesive fabric adapted to be respectively folded longitudinally to embrace edges of sheets and united by stitches along the line of fold, said stitches being of a length to hold the strips at a substantial distance apart and the longitudinally-extending laps of the stitches arranged on the adhesive sides of the strips, whereby they are hid from view within the folds of the strips, substantially as shown and described.

3. Two strips of adhesive fabric adapted to be respectively folded longitudinally to embrace edges of sheets and united by stitches along the line of fold, said stitches being of a length to hold the strips at a substantial distance apart, and one or more additional similar strips united with the first pair by means of stitches which engage the connecting-stitches of said first pair at points between the latter, substantially as described.

WILLIAM M. GAMBLE.

Witnesses:

WILLIAM R. LITZENBERG,
FREDERICK C. GOODWIN.