

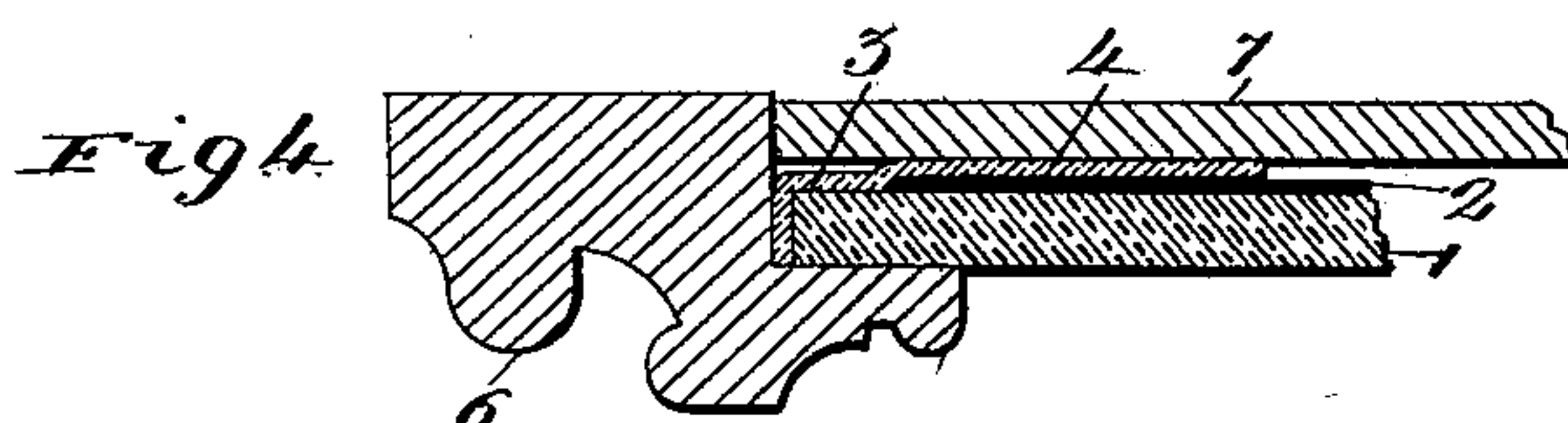
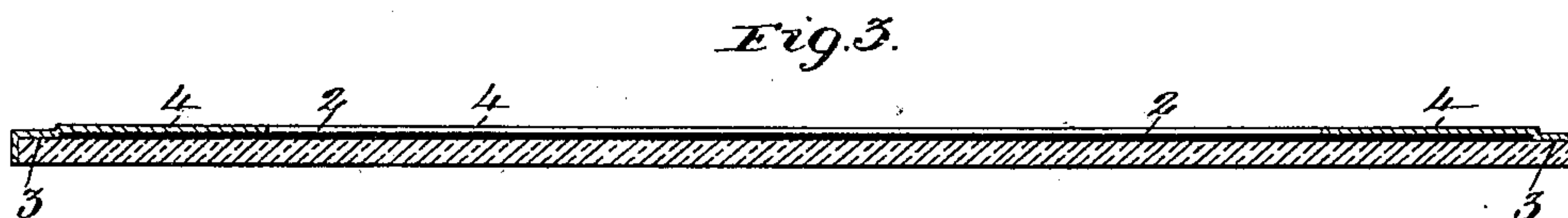
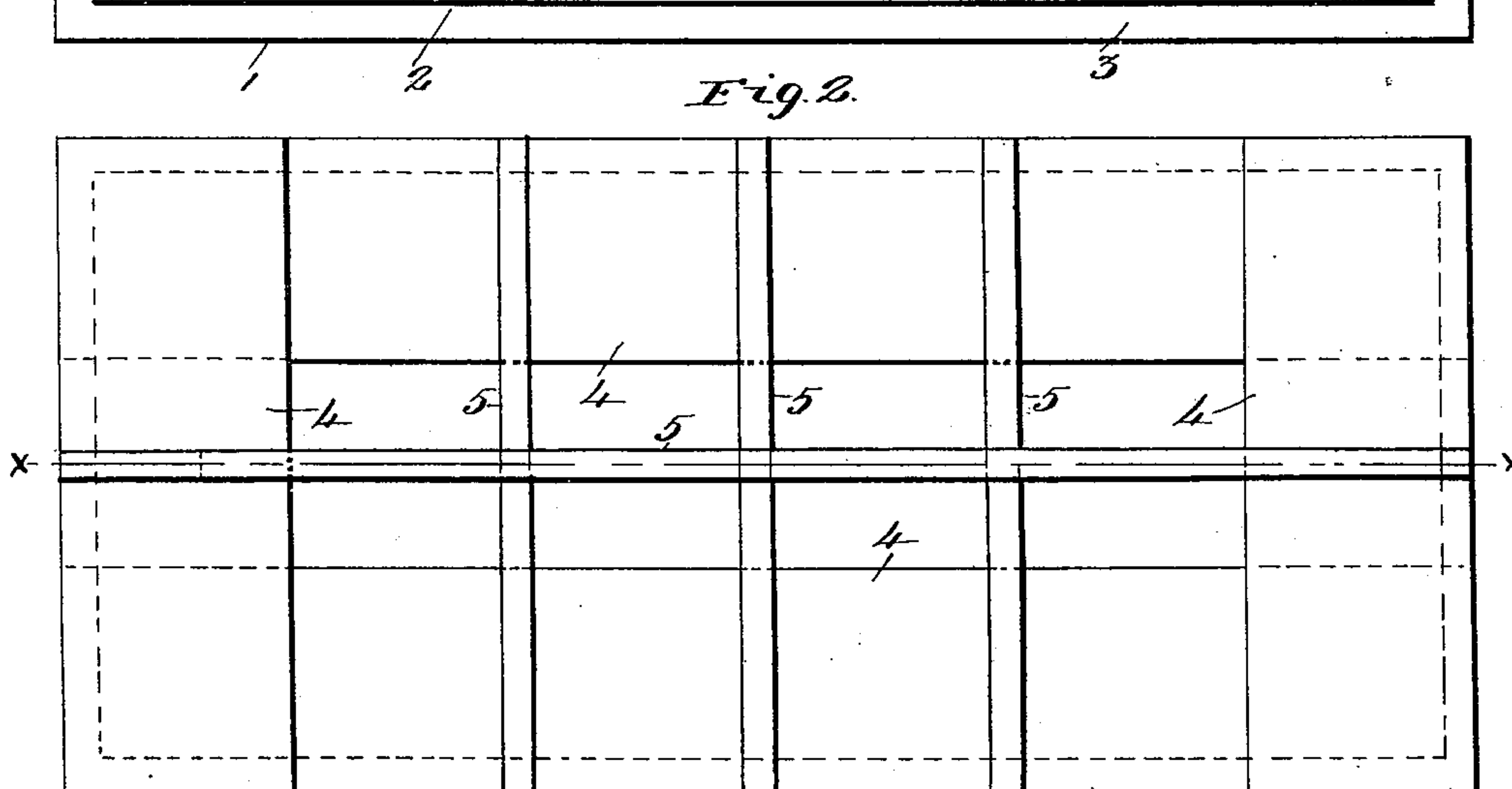
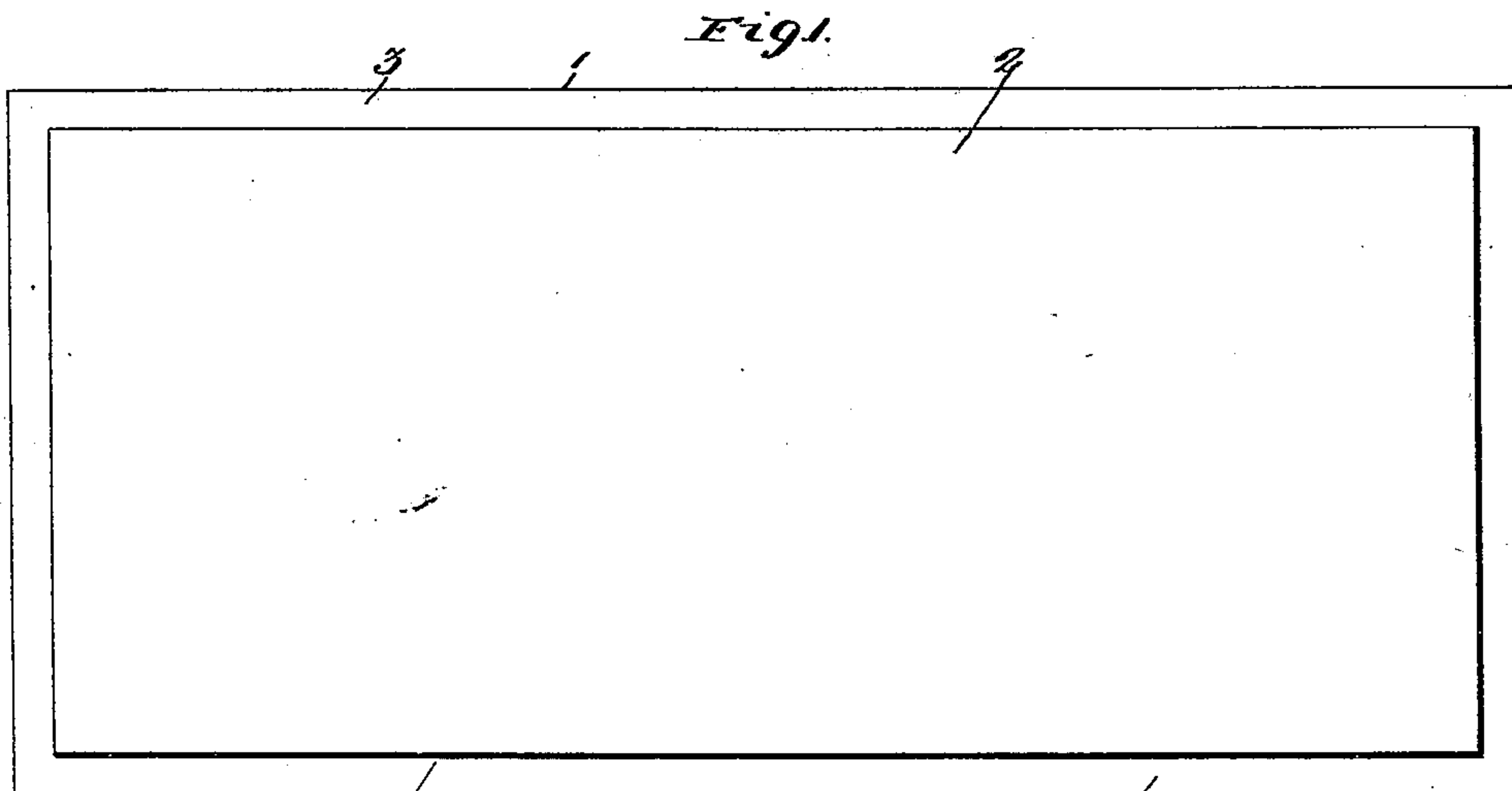
No. 631,121.

Patented Aug. 15, 1899.

D. J. MURNANE.  
PROTECTOR FOR MERCURY BACK MIRRORS.

(Application filed Sept. 14, 1898.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

DANIEL J. MURNANE, OF TUXEDO PARK, MISSOURI, ASSIGNOR TO THE  
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## PROTECTOR FOR MERCURY-BACK MIRRORS.

SPECIFICATION forming part of Letters Patent No. 631,121, dated August 15, 1899.

Application filed September 14, 1898. Serial No. 690,979. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL J. MURNANE, a citizen of the United States, residing at Tuxedo Park, in the county of St. Louis and State of Missouri, have invented certain new and useful Improvements in Protectors for Mercury-Back Mirrors, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in protectors for mercury-back mirrors; and it consists in the novel arrangement and combination of parts, as will be hereinafter described more particularly and pointed out in the claims.

In the drawings, Figure 1 is a plan view of the mercury side or back of the mirror prepared according to my invention. Fig. 2 is a similar view of the protector or covering secured thereto. Fig. 3 is a longitudinal section taken on the line *xx* of Fig. 2, and Fig. 4 is an enlarged section of a mirror having my invention applied thereto and arranged in an ordinary frame.

My invention is designed to be particularly used in connection with what are known as "mercury-back mirrors," and has for its object to provide means for protecting the mercury or sensitive side of the same, whereby the mercury is not only protected in handling the mirrors, but forms a backing or protecting-covering in packing and shipping or after the mirror is placed in the frame or other place designed for its use.

Briefly stated, the invention consists in removing a certain portion of the mercury from the glass forming the mirror, along a line adjacent to the edge thereof, leaving a clear uniform marginal border or surface of clean transparent glass, to which surface and to the edge of the glass is secured in any well-known manner suitable flexible material or textile fabric, which overlaps or entirely covers the remaining mercury on the glass in order to insure perfect protection to said mercury for the purposes previously stated.

Referring to the drawings, 1 represents the ordinary plate-glass, one side of which is first

entirely covered with tin-foil and mercury 2 by the well-known process to form a mirror. After the mirror has been made a suitable portion of the mercury and tin-foil is removed from the glass to form a uniform marginal border or surface 3 of clean transparent glass, or, in other words, the glass forming the border is in the same condition as before it had been previously covered, the said mercury and tin-foil being removed from the glass in any suitable manner.

To the clean glass forming the border and the vertical edge of the glass adjacent thereto is secured suitable flexible material or textile fabric (such as flannel or the like) by means of glue or any other adhesive substance, the said fabric or material extending over the mercury a suitable distance and in direct contact with the mercury on the glass, thereby forming a protecting-covering for that side of the mirror.

In carrying out my invention I preferably employ strips 4 of textile fabric or paper, the length of which corresponds to the length and width of the glass, the said strips overlapping one another at the corners, as clearly shown in Fig. 2, or said strips might be mitered instead of overlapping, as may be found most desirable. When strips are used that do not entirely cover the mercury side of the mirror, the same may be held in their proper position and against the said mercury by the employment of additional narrow connecting-strips 5, the ends of which are secured to the strips 4. In some instances, however, the strips 4 may be of a width to entirely cover the mercury, and in which instance the additional strips 5 would be dispensed with.

In Fig. 4 I have shown the mirror prepared according to my invention and located in an ordinary frame, in which 6 represents the frame and 7 the ordinary backing, which is placed in and secured to the frame against the covering of textile fabric 4. It will also be seen in Fig. 4 that the border 3, or that portion of the glass that is devoid of mercury, is not of a width to be observed or seen when the mirror is placed in the frame, and by covering the edges of the glass also with the



fabric it provides an additional and most desirable means for handling the mirror and also forms a yielding and dust-proof cushion for the same when placed in the frame.

5 While mercury-back mirrors are superior in many respects and lasting, yet the manufacture of them has almost been discontinued from the fact that the mercury is very sensitive and cannot be handled in the slightest  
10 manner without destroying the mirror; but by the employment of my invention inexperienced persons can handle the mirror without any danger of defacing or injuring the mercury, and it further forms a protecting-  
15 covering for the mirror under any and all usages and conditions that the same is necessarily subjected.

By removing the mercury and tin-foil from the glass after the mirror has been made, as  
20 before stated, particularly from the edges to which the mercury drains during the manufacture of the same, there is a considerable saving of material which may again be utilized, and, further, by the use of the margin or  
25 uncovered portion of the glass the mirror can be handled without damaging the same before the protector is secured thereto. It is further to be noted that by removing the mercury and tin-foil from the glass in the man-  
30 ner stated it provides means for securing the protector to mirrors having various irregular edges or shapes, which cannot be accomplished in any other manner.

I am aware that prior to my invention various  
35 forms of protectors have been employed and secured directly to the back of the mirror;

but in my present invention the cover or protector is secured to the glass itself or that portion of the latter from which the mercury has been removed and is in yielding contact only  
40 with the mercury remaining upon the glass, and it has been found by practice that paint or other suitable material usually employed for painting or covering the backs of mirrors manufactured under other processes than  
45 mercury-back mirrors cannot be applied to the mercury without injuring the same.

Having fully described my invention, what I claim is—

1. A mercury-back mirror, having a portion  
50 of the mercury removed therefrom, adjacent to one or more of its edges, and a flexible cover secured directly to the glass, from which the mercury has been removed, and adapted to cover the remaining mercury, but  
55 unsecured thereto, as and for the purpose described.

2. A mercury-back mirror, having a portion  
60 of the mercury removed therefrom, adjacent to its edges forming a margin of transparent glass, and a flexible cover secured directly to the glass, from which the mercury has been removed, and adapted to cover the entire remaining mercury, but unsecured thereto, as  
65 and for the purpose described.

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

DANIEL J. MURNANE.

Witnesses:

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