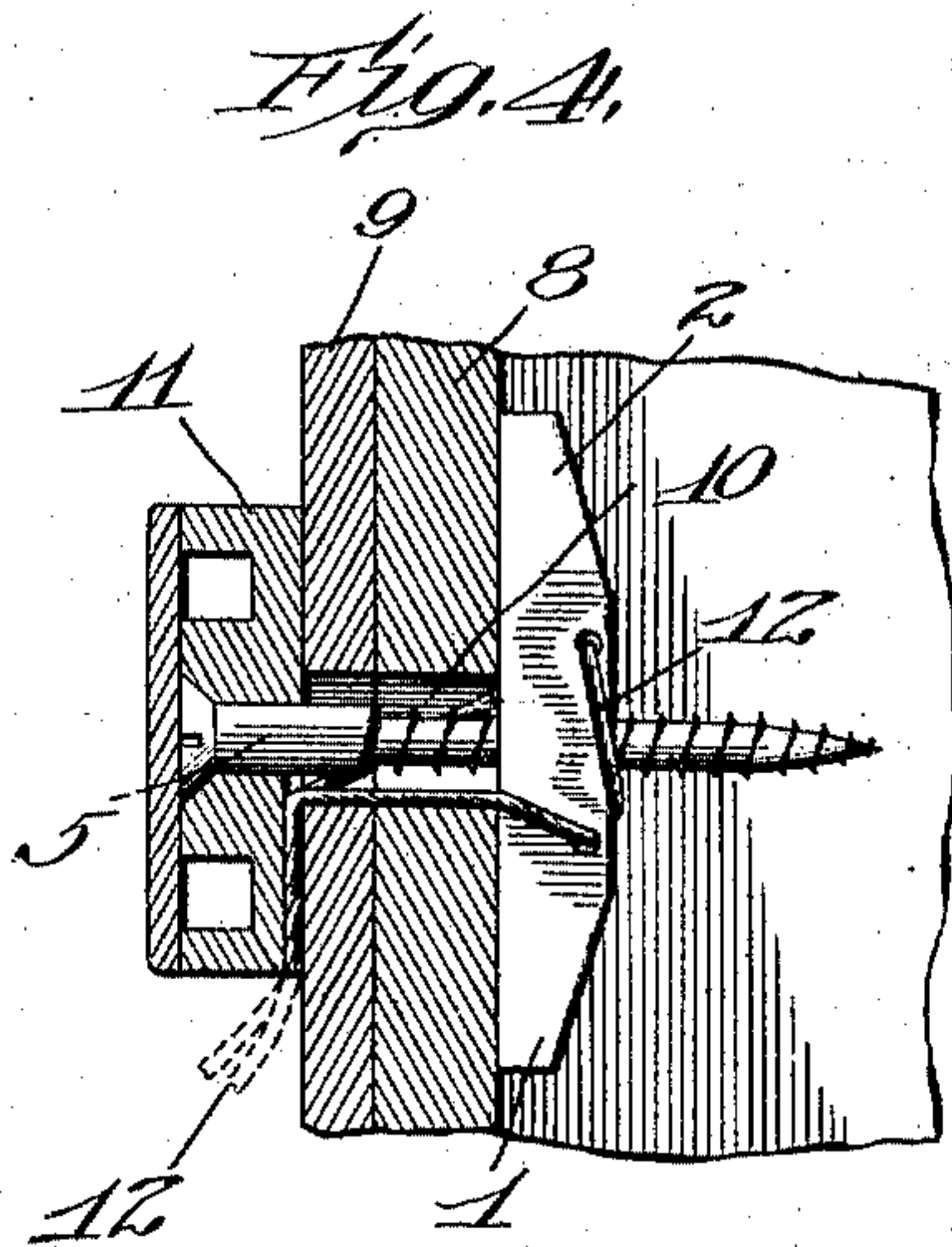
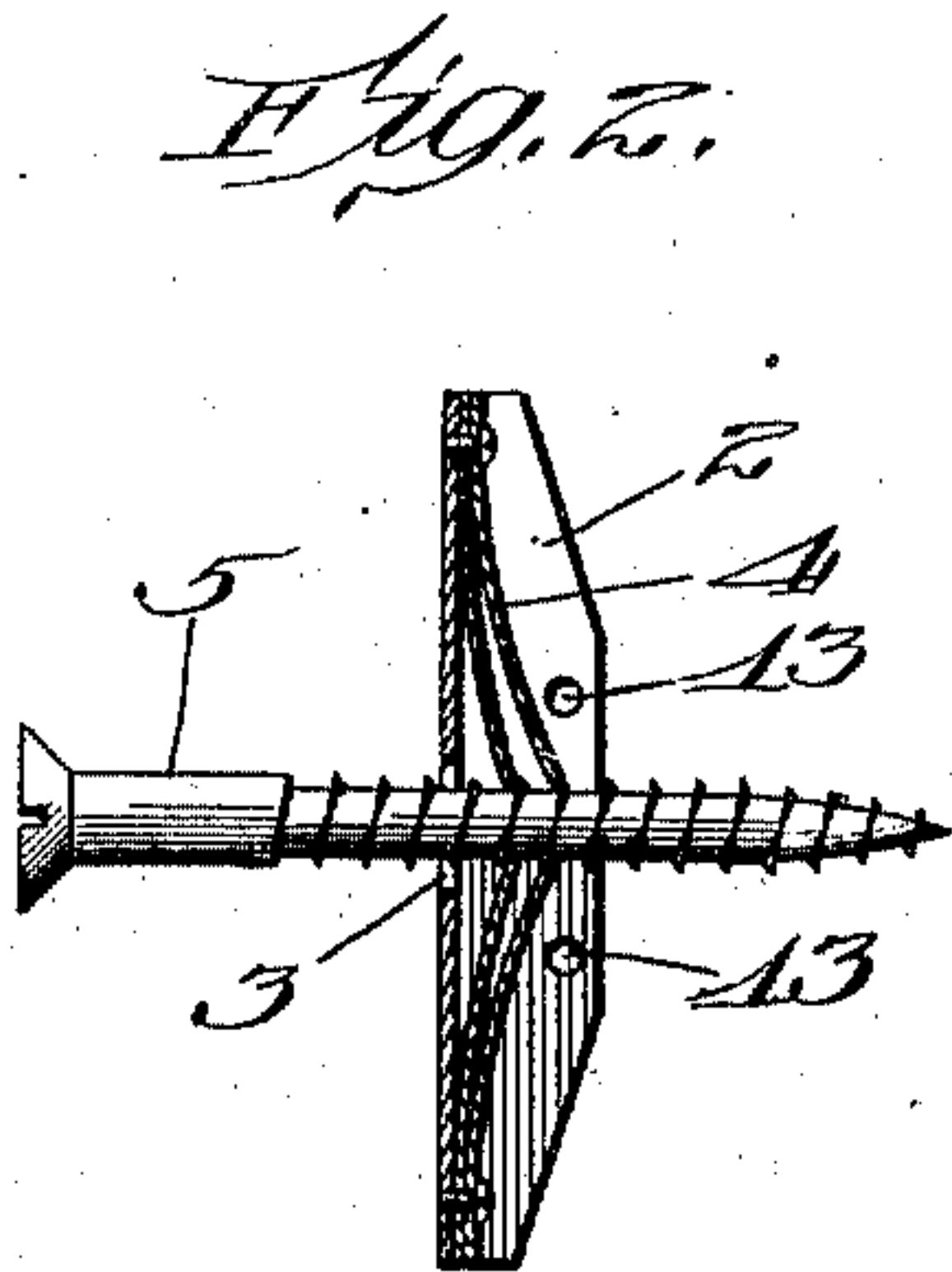
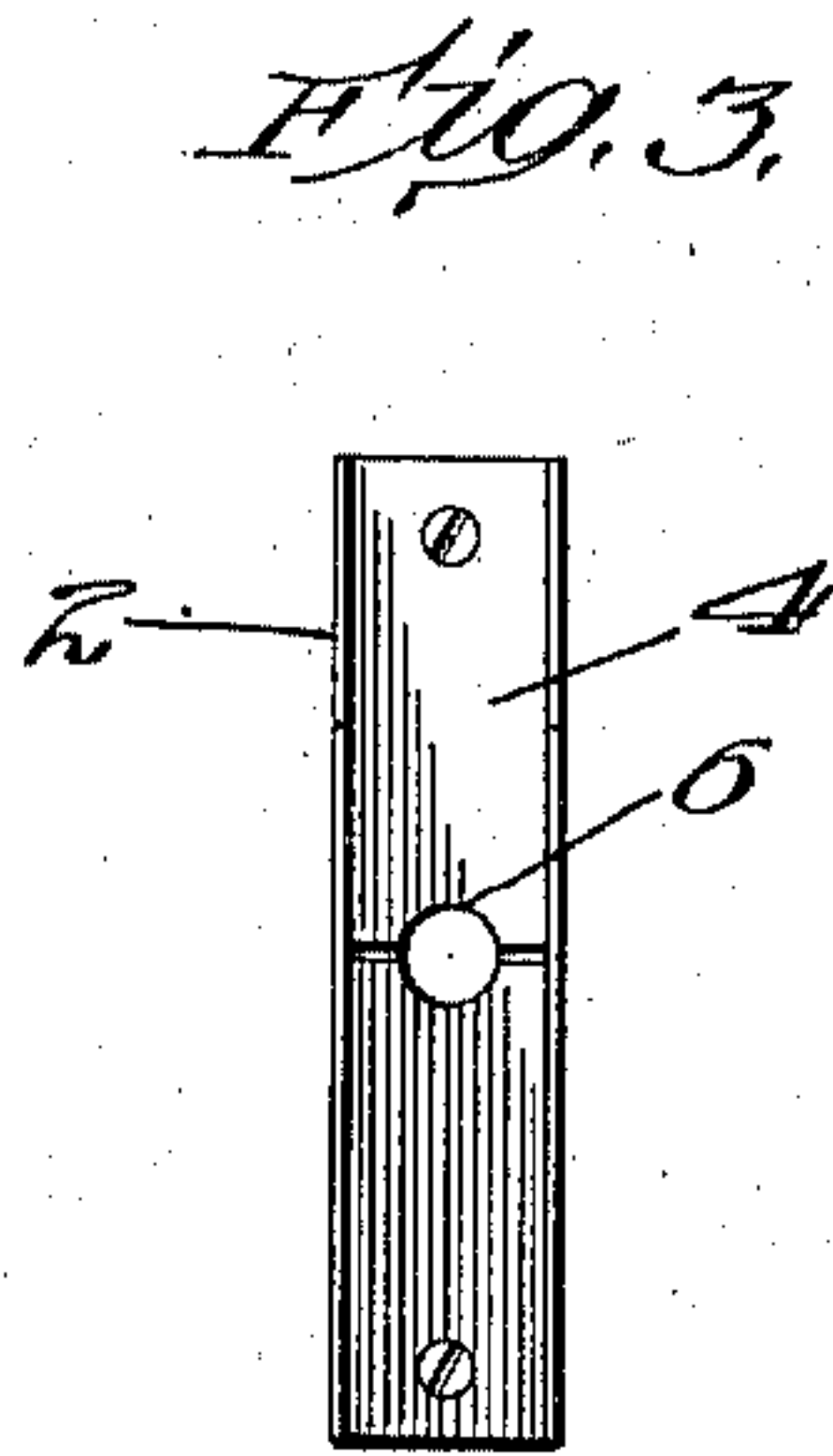
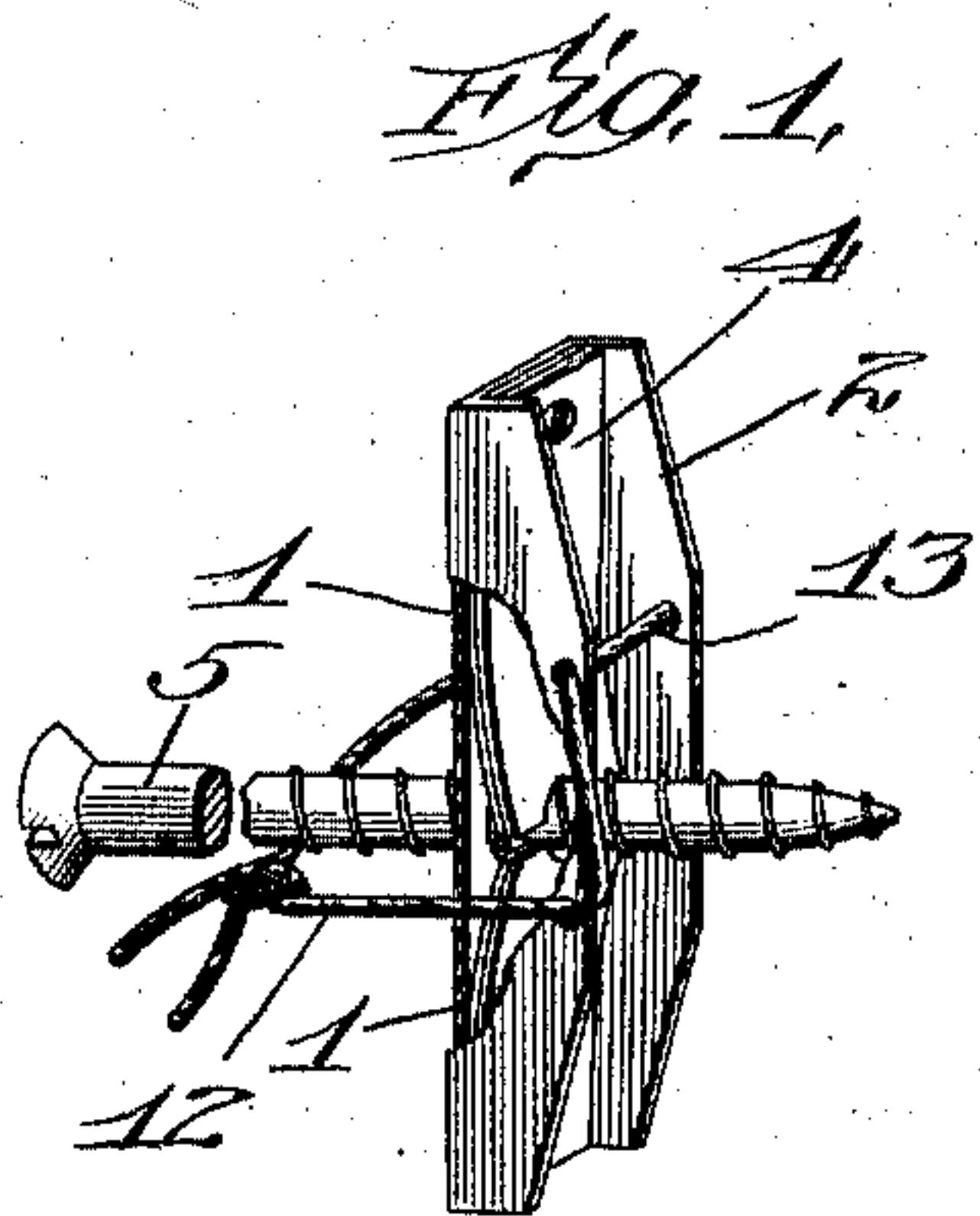


A. L. ELLIS.
TOGGLE BOLT.
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965,845.

Patented July 26, 1910.



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UNITED STATES PATENT OFFICE.

ALVIRUS L. ELLIS, OF CHICAGO, ILLINOIS.

TOGGLE-BOLT.

965,845.

Specification of Letters Patent.

Patented July 26, 1910.

Original application filed December 22, 1902, Serial No. 136,202. Divided and this application filed October 21, 1907. Serial No. 398,535.

To all whom it may concern:

Be it known that I, ALVIRUS L. ELLIS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Toggle-Bolts, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawing, forming a part of this specification.

My invention relates to an improvement in toggle bolts, my object being to provide a toggle bolt for securing various articles to the hollow tiling of fire proof walls, such as are used in construction of modern buildings, which shall be simple in construction and cheap to manufacture. It will be understood, however, that I do not wish to limit myself to this particular use of my invention, as there are various other places in which the device may be used to advantage.

I have illustrated and claimed in my prior Patent No. 870,820, dated Nov. 12, 1907, one form of my toggle bolt and the present application is a division of said application before mentioned.

In the accompanying drawings, I have illustrated my invention and in said drawings Figure 1 is a perspective view of my device with part of the same broken away to show the interior construction; Fig. 2 is a sectional view of my invention; Fig. 3 is a front elevation of the same; and Fig. 4 is a sectional view of a wall, showing the manner in which my toggle bolt is arranged for use.

According to the preferred manner of constructing my toggle bolt, the same is made from a metal plate 1, having the longitudinal edges bent up, as at 2, and provided with an opening 3 for the reception of a screw. At each end of the plate are preferably riveted two spring plates 4, one on top of the other, the free ends of said plates being arranged to project over the opening 3 and adapted to grip the pin 5 which is shown in the form of a screw when it is passed between them and thereby prevent the withdrawal of the pin. The ends of the spring plates 4 preferably have arc-shaped openings 6 formed therein, to permit the pin to readily pass between the same. Ordinarily a wood screw of the construction shown is used in connection with

my toggle, although, if desired, any other form of screw or pin may be used.

For the purpose of illustrating the application of my toggle, I have shown in Fig. 4, a broken section of a wall, which is constructed of hollow tile 8, over which is plaster 9. An opening 10 leading to the interior of the tile is shown to receive the toggle bolt and a molding 11 for electric wires is indicated as the article to be supported by the toggle bolt. In setting in position a cord 12 is first secured to the toggle preferably by passing it through holes 13 formed in the bent-up edges thereof. The toggle is then placed through the hole 10, in the tile and held in a position by the cord from the outside. The pin is then passed through the molding shown for electric wires and pushed through the opening in the toggle and between the springs 4. Should the bolt be only loosely clamped in position by pushing the pin into the toggle, it may be tightened by turning the pin.

Various modifications may be made in the construction which I have herein shown and described, without in any way departing from the spirit of my invention and the same yet remain intact and be protected.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a toggle, the combination with a pin, of a plate adapted to receive and retain one end of said pin, and flexible means attached to said plate for supporting the latter in any desired position during the insertion of the pin.

2. In a toggle, the combination with a pin, of an inflexible plate having an opening therethrough through which said pin is inserted, and flexible clamping plates carried by said inflexible plate and arranged on that side thereof which is opposed to that from which the pin is inserted, said clamping plates allowing the insertion of the pin through the opening of the first-mentioned plate but preventing withdrawal of the pin.

3. In a toggle, the combination with a pin, of an inflexible plate having an opening therethrough through which said pin is inserted, and flexible clamping plates each secured at one of its ends to the first-mentioned plate, and located on the opposite side thereof to that from which the pin is inserted, in such manner that their free ends

project over the opening of the first-mentioned plate and engage the pin when the latter is inserted through the opening of the first-mentioned plate.

- 5 4. A toggle for use in inaccessible positions, comprising a pin, a plate having an opening therethrough through which said pin is inserted, flexible clamping plates secured at one end to the first-mentioned plate,
10 on the opposite side thereof to that from which the pin is inserted, in such manner that their ends project over the opening of the first-mentioned plate and engage the pin

when the latter is inserted through the opening of the first-mentioned plate, and adjusting means for supporting the first-mentioned plate in any desired position during the insertion of the pin. 15

In witness whereof, I have hereunto subscribed my name in the presence of two witnesses. 20

ALVIRUS L. ELLIS.

Witnesses:

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T. V. RYAN.