No. 670,290. Patented Mar. 19, 1901.

T. A. McFARLAND.

SKETCHING INSTRUMENT

(Application filed July 15, 1898.)

(No Model.)

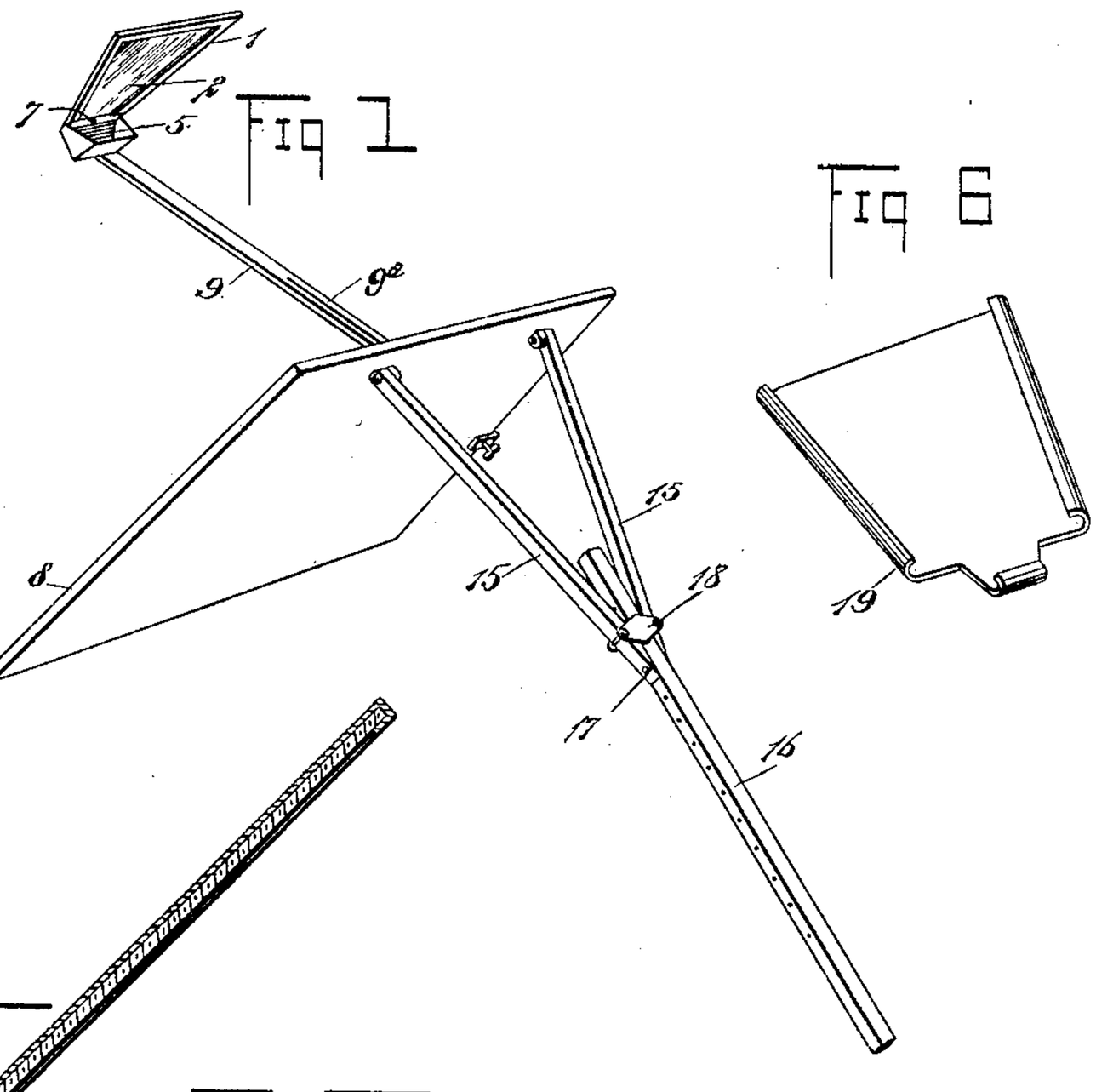

FIG 1

FIG 6

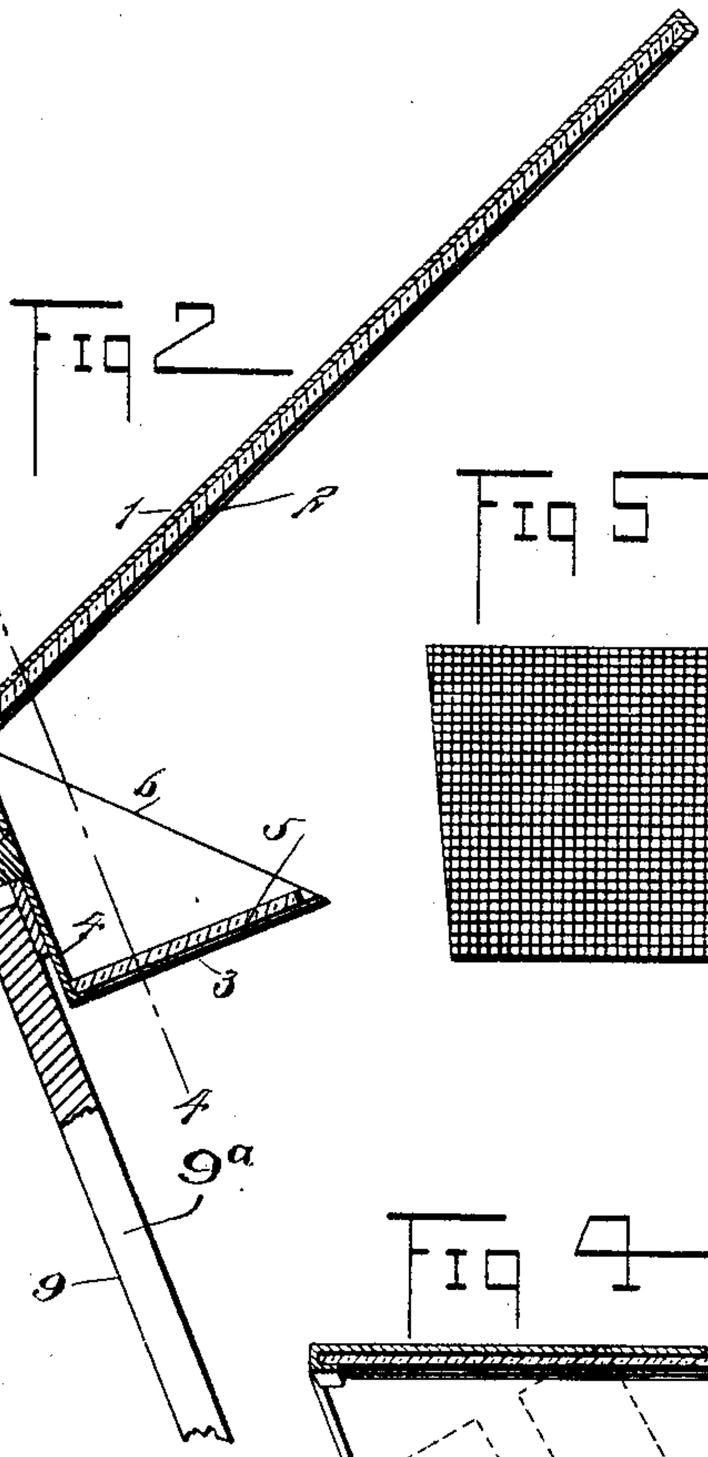

FIG 2

FIG 5

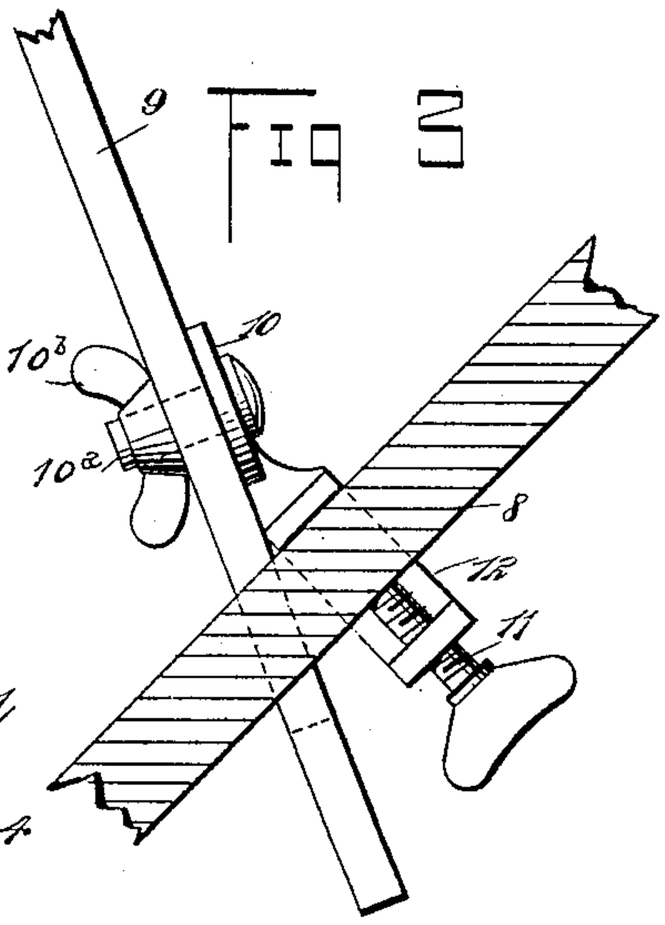

FIG 3

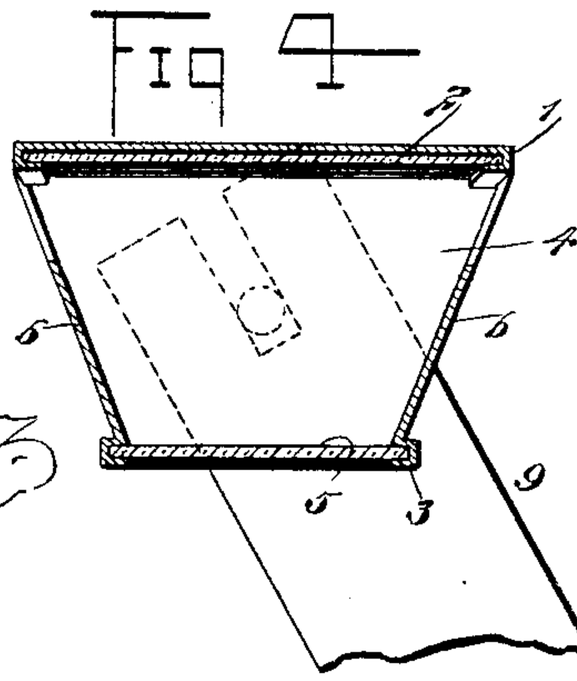

FIG 4

WITNESSES:

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SKETCHING INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 670,290, dated March 19, 1901.

Application filed July 15, 1898. Serial No. 686,025. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. McFARLAND, of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Sketching Instrument, of which the following is a full, clear, and exact description.

This invention relates to devices employed in sketching from nature; and one object is to provide a device of this character by the employment of which a landscape or other object may be easily and accurately drawn correctly on paper or canvas and which obviates the trouble and time employed, as is necessary with some of the devices made for the purpose.

A further object is to so construct the instrument that its reflecting-angles will remain fixed one relatively to the other.

I will describe a sketching instrument embodying my invention and then point out the novel features in the appended claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of a sketching instrument embodying my invention and showing the same as applied to a drawing-board. Fig. 2 is a sectional elevation of the instrument. Fig. 3 shows a clamping device for securing the instrument to a drawing-board. Fig. 4 is a section through the line 4 4 of Fig. 2. Fig. 5 is a plan view of one of the mirrors employed, and Fig. 6 is a perspective view of a mirror-cover employed.

The instrument comprises a frame having an upper portion 1, designed to receive and hold a main reflecting-mirror 2, and also having a portion 3 connected to the portion 1 by means of a back piece 4. In the portion 3 of the frame is arranged a second mirror 5, and I find for accurate work that the mirrors 2 and 5 should stand at an angle of twenty-two and one-half degrees one relatively to the other. The frame may be stiffened by side pieces 6, connecting the portion 3 with the portion 4. The mirror 5 is only partially silvered—that is, it has transparent portions and reflecting portions (represented by the fine lines in Fig. 5) to receive the reflection from the main mirror 2. The transparent portions, which are represented by the squares in Fig. 5, will allow a person looking through the peep-hole 7 to see the paper or canvas arranged on the board 8 and enable him to guide his pencil over the paper or canvas to produce the sketch. The board 8 must at all times be on the same parallel plane with the mirror 2; but the mirror or sketching instrument may be moved transversely of the board for the purpose of centering the sketch.

I have here shown the sketching instrument as connected with the board by means of an arm 9, vertically adjustable in a clamp 10, designed to be clamped to the board 8, as here shown, by means of a thumb-screw 11. The arm 9 is rendered adjustable in the clamp 10 by means of a longitudinal slot 9^a in the arm and a bolt 10^a passed through the clamp and slot and provided with a winged nut 10^b, as shown in Fig. 3, the lower end of the slot being indicated in said figure by dotted line. By thus connecting the arm 9 and clamp 10 they form an extensible arm, by means of which the mirrors can be adjusted toward or from the board, so as to vary the size of the image seen upon the board. The clamp portion 10 is arranged at an angle relatively to the clamp portion 12, which engages with the board, so that the proper relation or parallelism will be maintained at all times between the mirror and the board. This angle of the clamp is made necessary because of the angle formed between the mirrors and the portion 4 of the frame. Of course said portion 4 of the frame is parallel with the arm 9. The frame 4 may be removably secured to the arm 9 by means of a lug 13, extended from the frame portion 4 through a slot in the arm 9 and provided with a thumb-nut 14 at its outer end.

It will be seen that both mirrors are substantially of keystone shape, the broader portion being toward the landscape or object being sketched. Such shape is found preferable because of the widening vision of the eye.

While sketching, one edge of the board 8 is to be held on the knee or lap and the other edge is to be supported from the ground. For this means I employ two supporting-rods 15, which are detachably pivoted at their upper ends to the under side of the board and have

their lower ends adjustably connected to a bar 16. This bar 16 is provided with a number of holes, into either one of which pintles 17 on the lower ends of the arms may be inserted. The lower ends of the arms 15 are held together, but are allowed to swing by a strap or yoke 18, the bolts of which engage in notches formed in the arms. It will be seen that the support formed by the rods 15 and bar 16 extends downwardly from the board 8, while the extensible arm which carries the mirrors extends from the board in the opposite direction—that is, upwardly.

In operation the board, and consequently the main glass 2, should be held at an angle of about forty-five degrees. The landscape or other object will be reflected in the mirror 2 and from there reflected onto the mirror 3, so that a person looking through the hole 7 will see the image in such a manner as to be enabled to trace or mark it on the paper or canvas on the board. Obviously the size of the sketch may be regulated by moving the sketching instrument upward or downward relatively to the board.

To protect the mirror 5 when the device is not in use, I may employ a cover 19, having its opposite edges adapted to engage with side projections or cleats on the frame portion 4. For the sake of lightness the frame and cover will be made of a suitable metal.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

A sketching apparatus, comprising an inclined drawing-board, a frame having two mirrors arranged therein at an angle to each other, and provided with a peep-hole, one of the mirrors being smaller than the other and having a series of transparent portions throughout its surface, and means for adjustably securing the said frame to the board and holding it so that its larger mirror will at all times be parallel with the board, substantially as described.

THOMAS A. McFARLAND.

Witnesses:
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J. E. MATHEWS.