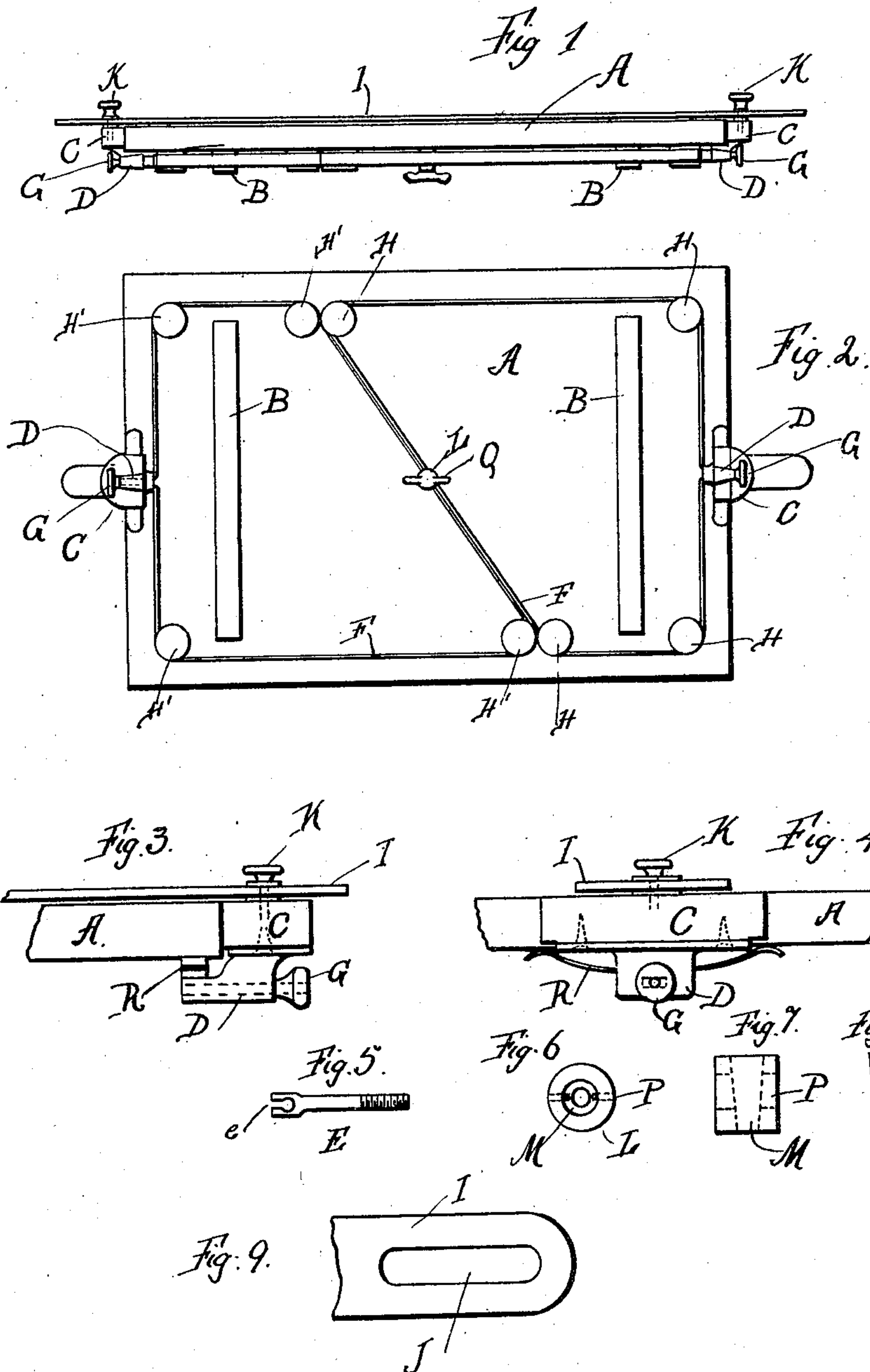


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G. R. EVANS.
ATTACHMENT FOR DRAWING BOARDS.
APPLICATION FILED JUNE 20, 1906.



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UNITED STATES PATENT OFFICE.

GEORGE R. EVANS, OF PHILADELPHIA, PENNSYLVANIA.

ATTACHMENT FOR DRAWING-BOARDS.

No. 846,987.

Specification of Letters Patent.

Patented March 12, 1907.

Application filed June 20, 1906. Serial No. 322,512.

To all whom it may concern:

Be it known that I, GEORGE R. EVANS, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a certain new and useful Improvement in Attachments for Drawing-Boards, of which the following is a specification.

My invention relates to a new and useful improvement in attachments for drawing-boards, and has for its object to provide an exceedingly simple and effective device of this description, which when applied to a drawing-board will permit the straight-edge or square to be placed at any desired angle and thereafter be moved to and fro upon the board, always maintaining the angle at which it is set, so as to produce parallel lines at any distance apart within the capacity of the board, thus overcoming the many disadvantages heretofore experienced by draftsmen in producing parallel lines at various angles without having to use two or more squares and triangles.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, reference being had to accompanying drawing, forming a part of this specification, in which—

Figure 1 is a side edge view of a board having my improvement applied thereto. Fig. 2, a bottom plan view of the same; Fig. 3, a section of a portion of the board, showing one of the brackets for attaching the traveling tape to the straight-edge; Fig. 4, a detail end view of Fig. 3; Fig. 5, a detail view of the attaching-pin; Fig. 6, a plan view of the tape-clamp; Fig. 7, a side view thereof; Fig. 8, a detail view of the tape-clamping plug; Fig. 9, a detail view of one end of the straight-edge, showing the slot therein, by which it is attached to one of the sliding blocks.

Referring to these drawings, A represents the drawing-board, which may be made of any desired size, preferably having the cleats or strips B upon its under side, which not only serves to prevent the warping of the board, but also to raise the bottom of the board sufficient from the surface of the table

upon which it may be placed to prevent the mechanism of my attachment from coming in contact with said surface.

C represents two blocks, preferably of wood, adapted to slide along the edges of the board, and to each of these blocks is secured the bracket D by means of suitable screws, and through this bracket is formed a hole for the reception of the pin or bolt E, the greater portion of this bolt being round in cross-section, while the head thereof is square and the hole through the bracket is of corresponding shape, so that when the head of the bolt is in place it will prevent it from turning. The head of this bolt is slotted, as indicated at e, the object being to receive the ends of one of the traveling tapes F, these ends being bent within the circular portion of the slot, so as to prevent their withdrawal by lengthwise strains upon the tape. These tapes F are of tempered steel. The outer end of the bolt E is threaded to receive the thumb-nut G, by which it is drawn and held in place, and this arrangement also provides for the tightening of the tape by the proper manipulation of the thumb-nut.

A series of guide-pulleys H, here shown as four in number, are secured upon the under side of the board, and around these pulleys runs one of the tapes F, while the other tape runs around a corresponding series of pulleys H', the result of which is that either of the blocks C may be moved independent of each other along the edge of the board so long as the tapes are free to travel independent of each other.

I represents the straight-edge in which the slots J are formed with each end thereof, and this straight-edge is secured to the blocks C by the thumb-screws K, the latter passing through the slots J and being threaded into the block, and this will permit the adjustment of the straight-edge to any angle by moving the blocks C in one direction or the other, and when the proper angle has been reached the thumb-screws K are then set so as to hold the straight-edge in this adjustment. To permit the straight-edge to be moved back and forth over the board while maintaining the angle to which it has been adjusted to produce parallel lines, it is necessary that the two tapes shall be clamped together at a point where they travel parallel to each other, and this I accomplish by

means of the clamp L, which has formed therethrough a tapered hole M, (shown in Fig. 6 and in dotted lines in Fig. 7,) which tapered hole is for the reception of the tapered clamp-plug N, the latter having a slot O therein, through which both of the tapes pass, said tapes also passing through the cross-slot P. (Shown in dotted lines in Figs. 6 and 7.) A suitable thumb-nut Q is run upon the threaded end of the plug N in order that it may be drawn into the tapered hole, by which means the tapes may be firmly clamped, so as to cause them to travel together, as will be readily understood.

From this description it will be obvious that after the straight-edge has been set at the desired angle it is only necessary to move the blocks C in one direction or another to cause the straight-edge to move across the board while maintaining the angle at which it was previously set, thus providing for the drawing of the parallel lines at any distance apart, after which it will be seen that when the blocks are moved the tape connected with each block will travel around the guide-pulleys and that portion of the tapes which stretch diagonally across the center of the board being clamped together will cause each tape to act in unison and at the same rate, thus maintaining the relative position of the blocks to each other, which will maintain the angle of the straight-edge. The straight-edge may be quickly reset by simply loosening the thumb-nut Q, so as to free the tapes from each other, which will leave the blocks C free to be reset at the angle desired, when by reclamping the tapes together by the proper manipulation of the thumb-nut Q the straight-edge may be again moved for producing parallel lines.

R represents a bow-spring attached to each of the brackets D, and each of these springs bears upon the under side of the board, so as to provide a certain amount of friction to prevent the slipping of the straight-edge when the latter is set for drawing a line.

By the use of my improvement in practice many of the disadvantages heretofore

experienced by draftsmen in drawing parallel lines on the square or at various angles are overcome and the work greatly facilitated.

Having thus fully described my invention, what I claim as new and useful is—

1. In combination with a drawing-board, two traveling tapes, portions of which lie parallel and in close proximity with each other, means for clamping said parallel portions together, two blocks, one attached to each tape and a straight-edge attached to said blocks, as and for the purpose set forth.

2. In combination, a drawing-board, two blocks each adapted to travel along one edge of the board, a straight-edge attached to said blocks, a bracket carried by each of the blocks, a tempered-steel tape secured to each of the brackets, a series of guide-pulleys over which each tape travels, said pulleys being so arranged as to cause a portion of each of the tapes to lie side by side and a clamp through which the tapes pass and by which they may be clamped together, as and for the purpose set forth.

3. The herein-described combination of a drawing-board, two series of guide-pulleys journaled upon the under side of the board, two tapes running over said pulleys and so arranged that a portion of each tape lies parallel and in proximity to a portion of the other, means for clamping the last-named portions of the tapes together, two brackets to which the ends of the tapes are attached, a spring carried by each of the brackets adapted to bear against the under side of the board, a block secured to each of the brackets, a straight-edge having slots in each end and thumb-screws passed through said slots for attaching the straight-edge to said blocks, as shown and described.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

GEORGE R. EVANS.

Witnesses:

JOHN R. O'NEILL,
MONROE BUCKLEY.