No. 864,090. PATENTED AUG. 20, 1907.

H. T. FOX-ESMOND.

TEACHING OR DEMONSTRATING APPARATUS.

APPLICATION FILED SEPT. 11, 1906.

2 SHEETS—SHEET 1.

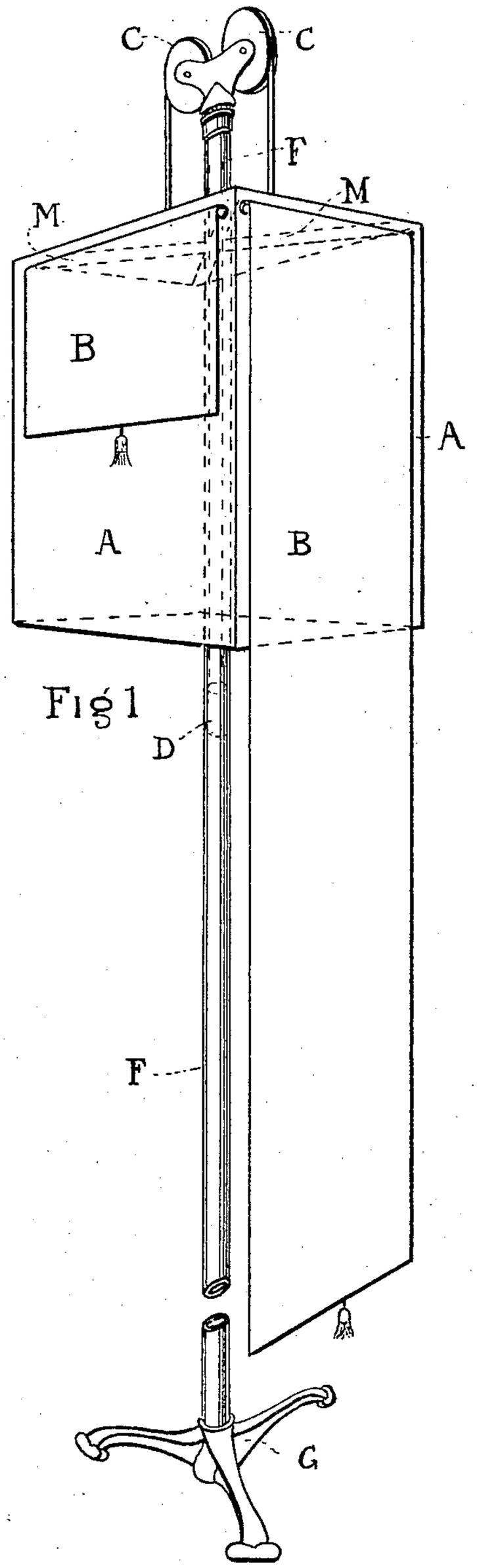

Fig 1

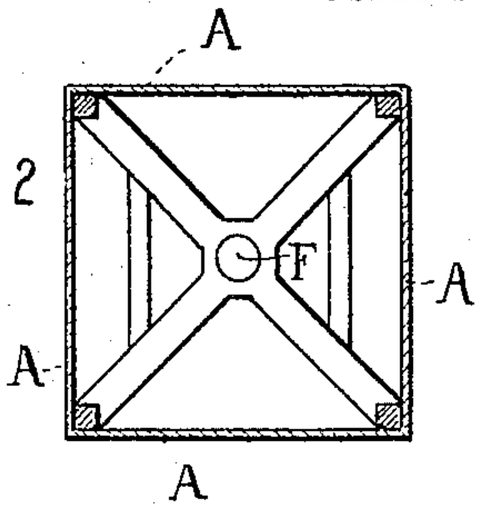

Fig 2

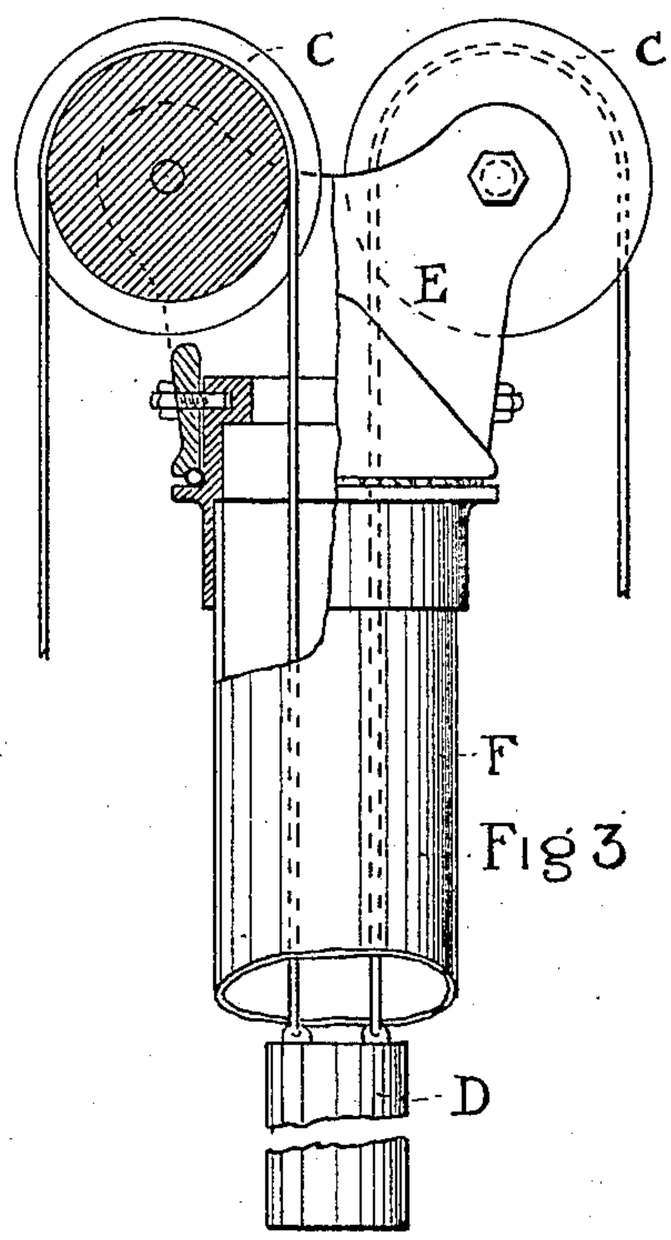

Fig 3

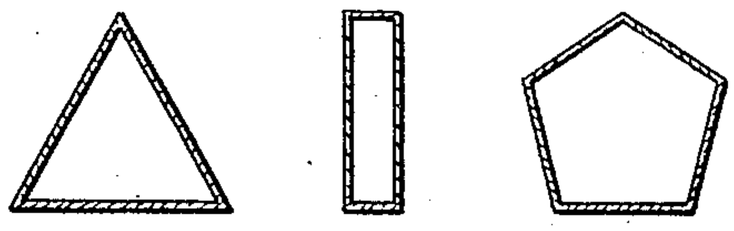

Fig 4 Fig 5 Fig 6

WITNESSES

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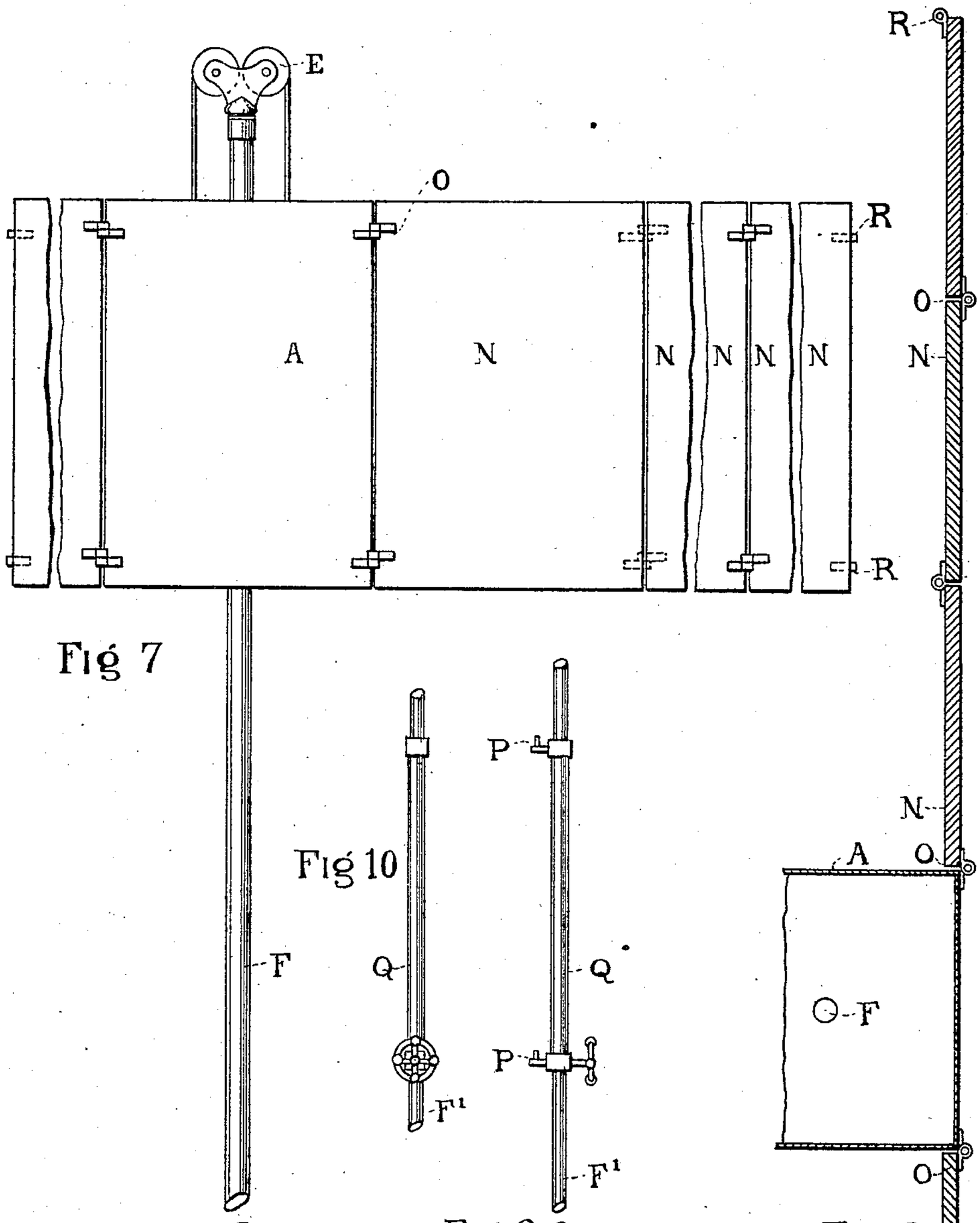

Fig 7

Fig 10

Fig 9

Fig 8

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UNITED STATES PATENT OFFICE.

HENRY THOMAS FOX-ESMOND, OF SYDNEY, NEW SOUTH WALES, AUSTRALIA.

TEACHING OR DEMONSTRATING APPARATUS.

No. 864,090. Specification of Letters Patent. Patented Aug. 20, 1907.

Application filed September 11, 1906. Serial No. 334,150.

To all whom it may concern:

Be it known that I, HENRY THOMAS FOX-ESMOND, a subject and citizen of Australia, residing at No. 14 Margaret street, Rozelle, Sydney, State of New South Wales, Commonwealth of Australia, school-teacher, have invented new and useful Improvements in a Teaching or Demonstrating Apparatus, of which the following is a specification.

The object of my invention is to provide a teaching and demonstrating apparatus of greater efficiency than the ordinary black board or other similar appliance now in use for the purpose of demonstration in school teaching, art instruction, lecturing, or other like means of imparting information.

My invention consists principally of a polygonal frame of box shape formed with two or more sides whereon demonstrations, as stated, may be exhibited, such frame being so fixed on a central pillar as to be movable vertically up and down, and so as to be also rotated, so that the different sides of the frame may be turned in any desired direction.

I carry out the said invention by the construction of a central pillar preferably supported by two, three or more feet. The same can be either portable or fixed to the floor. Sheaves are placed into a frame fixed on the top of the pillar, by means of which sheaves the polygonal frame is suspended by supporting cords with a balance weight working inside or outside of the said pillar so that the frame will be movable vertically up and down. The frame carrying the sheaves is pivoted on a ball bearing or other suitable pivot so as to rotate the polygonal frame and exhibit any side thereof as required. Demonstrations may be shown on paper or other fabric, or otherwise on every side of the frame, or rollers bearing rolls of paper or fabric may be fixed at the top of every side so that the paper or fabric thereon may be drawn across the sides of the frame, and extend beyond it to the foot of the pillar if required. The rollers may be spring rollers or they may be actuated by hand, winding, or other means. The rollers having the rolls of paper or fabric thereon or the rolls of paper or fabric separately, may be movable for storage and further use, and several rollers may be affixed to each side. In addition to the rollers I may affix a series of one or more detachable boards to the central frame, extending such boards outwards by hanging them on the central frame, and on one another, by suitable eyelets and pintles forming a hinged support. I may terminate the series of hinged boards by a pillar or standard, having thereon a sliding part to which one of the hinged eyelets may fit and receive support.

My invention is illustrated in the accompanying drawings in which the same letters indicate the like parts.

Figure 1 is a perspective view of the apparatus. Fig. 2 is the plan of a polygonal frame having four sides. Fig. 3 shows one kind of pivot which may be used on the top of the central pillar. Figs. 4, 5, and 6 show different descriptions of frames. Figs. 7 and 8 respectively show an elevation and horizontal section of the apparatus shown in Fig. 1 with the additional detachable boards. Fig. 9 is an elevation of a supporting pillar or standard. Fig. 10 shows a separate view of the slide thereon.

In Fig. 1 "F" represents the central pillar, fixed into or removable from the stand "G", having three feet shown in drawing to support the same. The pillar is constructed preferably of tubing, but may be of any suitable material.

"A" "A" is the polygonal frame showing two sides, the same being constructed of board, card board, or other suitable flat substance.

"M" "M" are rollers fixed at the top of the sides.

"B" "B" represent paper or fabric un-rolled or partly so.

"C" "C" are sheaves carrying supporting cords attached to the frame "A" "A", having fixed at one end thereof a balance weight "D", moving inside or outside of the pillar. The said sheaves and the frame carrying the same are pivoted at "E" on a ball bearing or other suitable pivot, in order to rotate the frame "A" "A" in a horizontal plane, and so as to expose the sides in any direction.

In Fig. 2 the letters "A" "A" "A" "A" show the four sides of a polygonal frame the same being rotated at the center "F".

In Fig. 3 there is shown one kind of ball bearing pivot but any suitable pivot may be used such as a plain pin or socket, as ordinarily used for rotation purposes. In such figure "F" represents part of the pillar or central column.

In Fig. 4 is shown a plan of a frame having three sides.

In Fig. 5 is shown a plan of a frame having two sides connected together. The same would represent an ordinary teaching board having either side of it available for demonstration with or without rollers thereon, elevated, and rotating as shown.

Fig. 6 is a plan of a frame having five sides. The sides of a frame may be flat or slightly curved, and a suitable clamp may be applied to hold the paper or fabric rigid for being written or drawn upon.

In Fig. 7 the letter "N" shows detachable boards, the letter "O" pintles or eyelets fixed to any two corners of the polygonal frame "A" "A" forming a hinge or support. Each board "N" is similarly provided with eyelets or pintles, so that other boards may be attached to the same as shown terminating at "R" with an eyelet or pintle, which may be attached to the pillar or standard for support.

In Fig. 8 the letter "N" shows detachable boards,

"O" eyelets or pintles and "R" the terminating eyelet or pintle on a board "N".

In Fig. 9 "F[1]" represents the pillar of the standard having thereon eyelets or pintles "P". "Q" is a slide thereon capable of movement vertically on the pillar "F", and being clamped thereon in any suitable position so as to support the end of a series of boards at any desired height.

Having now fully described and ascertained my said invention and the manner in which it is to be performed I declare that what I claim is—

1. A demonstrating apparatus comprising a pillar, a frame suspended from the top thereof and having vertical and rotary movement.

2. A demonstrating apparatus comprising a pillar, sheaves rotatably supported at the upper end thereof, a frame, a weight and cords having one end connected to the frame and passing over the sheaves and having their other ends connected to the weight.

3. A demonstrating apparatus comprising a pillar, a sheave carrying frame rotatably mounted at the upper end of said pillar, a balance weight, cords connected to said weight and passing over the sheaves and a demonstrating frame surrounding the upper end of the pillar and having rotary and vertical movement thereon, said frame being connected to the cords.

4. A demonstrating apparatus comprising a central pillar, a frame suspended from the top of the pillar and having vertical and rotary movement on said pillar and demonstrating surfaces carried by said frame.

5. A demonstrating apparatus consisting of a frame having two or more sides, so as to admit of different demonstrations being exhibited thereon, such frame being in combination with and suspended upon a central pillar, means for permitting rotary and vertical movement of the frame on the pillar; said frame having eyelets or pintles on the edges thereof, and in combination therewith separate demonstrating boards, having on one edge thereof pintles or eyelets to fix into the eyelets or pintles of the frame suspended on the central pillar, or into the eyelets or pintles of a board attached therto; and a standard having thereon a sliding part to which is fixed eyelets or pintles to fit into the pintles or eyelets of a board or the last board to be supported.

6. A demonstrating apparatus consisting of a frame, having two or more sides, so as to admit of different demonstrations being exhibited thereon, in combination with a central pillar, and with appliances for suspending the said frame to such pillar so that said frame may have vertical and rotary movement; said frame having eyelets or pintles on the edges thereof, and in combination therewith separate demonstrating boards, having on one edge thereof pintles or eyelets to fix into the eyelets or pintles of the frame suspended on the central pillar, or into the eyelets or pintles of a board attached thereto; and a standard having thereon a sliding part to which is fixed eyelets or pintles to fit into the pintles or eyelets of a board or the last board to be supported.

Dated this twenty-eighth day of July 1906.

HENRY THOMAS FOX-ESMOND.

Witnesses:
ALFRED R. LION,
ARTHUR EDWARD GOODIN.