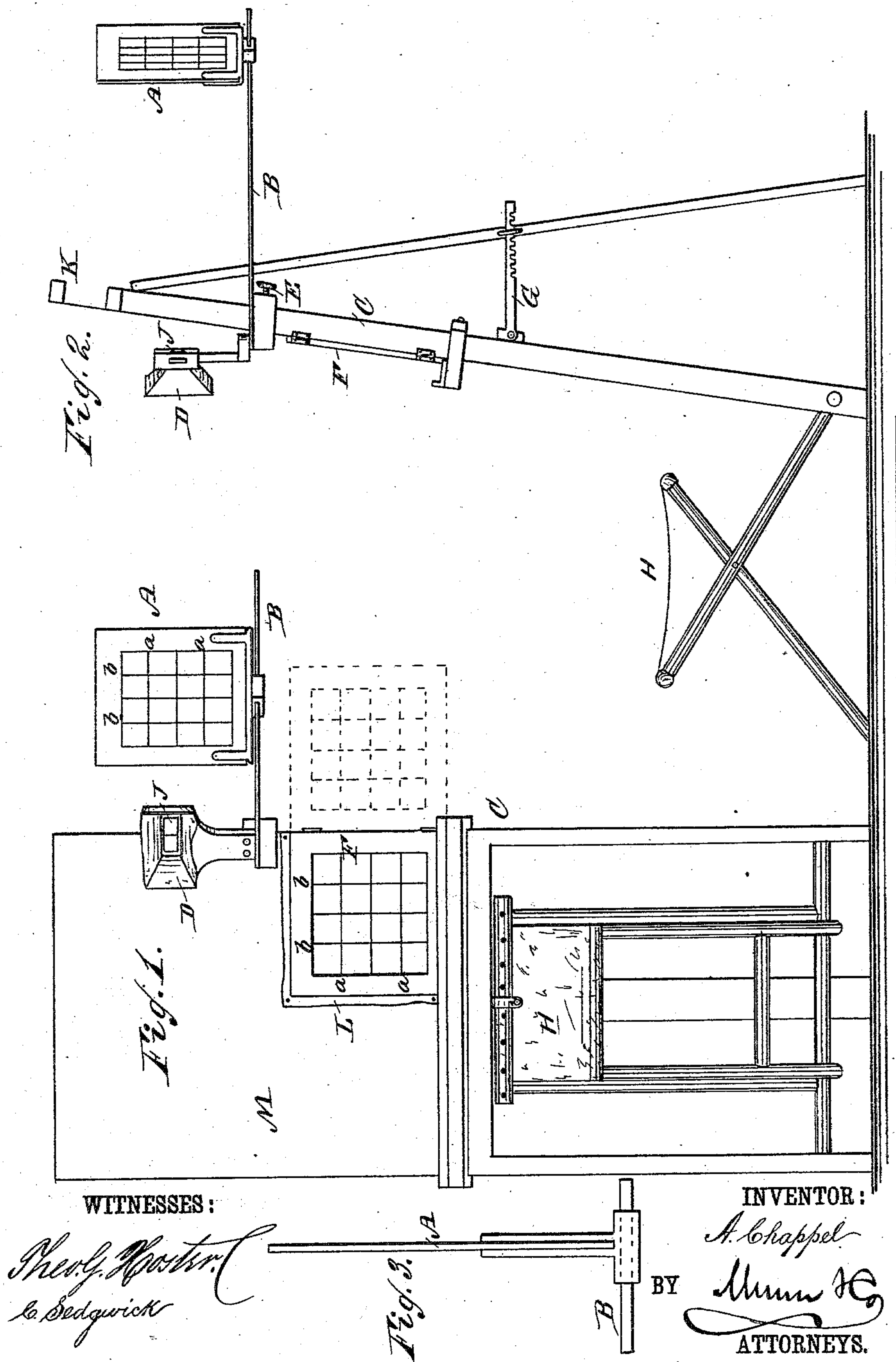


A. CHAPPEL.  
LINEARSCOPE.

Patented July 10, 1883.





# UNITED STATES PATENT OFFICE.

ALONZO CHAPPEL, OF BROOKLYN, NEW YORK.

## LINEARSCOPE.

SPECIFICATION forming part of Letters Patent No. 281,020, dated July 10, 1883.

Application filed November 18, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, ALONZO CHAPPEL, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved  
5 Linearscope, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved instrument for obtaining the correct outline of objects and forms within  
10 the space of the intended picture, thereby avoiding the uncertainty of perspective points taken by the unaided eye. This instrument I have named the "linearscope."

The invention consists in the combination,  
15 with an easel, of an adjustable subdivided frame and an additional proportionately subdivided frame hinged to the easel. The artist looks through a sight and head-rest and through the adjustable subdivided frame and  
20 sees the outlines of the pictures, crossed by the subdividing lines of the frame, and then the artist draws the outlines on a sheet placed under the hinged subdivided frame in such a manner that the outlines will be relatively in  
25 same position to the subdivisions of the hinged subdivided frame as the outlines of the objects themselves are to the subdivisions of the adjustable sight-frame.

Reference is to be had to the accompanying  
30 drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of my improved linearscope, parts being shown in perspective.  
35 Fig. 2 is a longitudinal elevation of the same. Fig. 3 is an end elevation of the adjustable frame.

A frame, A, provided with a series of horizontal and vertical wires, *a b*, respectively,  
40 forming equal squares within the frame, or with a pane of glass having the lines *a b* drawn thereon, is mounted adjustably on an adjustable arm, B, projecting backward from an easel, C M, of the usual construction, the said  
45 frame A being in the vertical plane. A sight and head-rest, D, curved to fit against the forehead and nose is fastened on the end of the arm B, to agree perspectively with the point of station. The said head-rest D is provided  
50 with a glass pane, J, so that the line of vision impinges on the center of the plane of the pic-

ture, and agrees perspectively with the point of sight. By means of a clamp, E, or other device, the head-rest D and the arm B can be locked in the desired position on the easel. A  
55 frame, F, subdivided by wires in the same proportion as the frame A on the same or on a larger or smaller scale is hinged to the edge of the easel or board on the same in such a manner that the same can be folded over the  
60 sheet L, backed on the board or canvas. The easel can be adjusted at the desired inclination by means of the rack-bar G and a catch on the rear leg. A folding chair, H, is pivoted to the bottom cross-bar of the front legs of the  
65 easel. The wires or lines *a b* in the frames A and F are numbered, lettered, or otherwise marked correspondingly. The easel-frame is provided with an extensible top piece, K, to  
70 permit of holding a large canvas on the easel. Instead of using the frame F, the canvas can be lined vertically and horizontally to correspond with the frame A.

The operation is as follows: The frame A is so adjusted that the desired picture appears  
75 within the outline of the same. The several points of the outlines of the objects in the picture will be determined in position by the wires or lines *a b*, according to their position in relation to the said lines or wires or inter-  
80 sections of the same the said outlines are drawn on the sheet L or canvas. Absolutely true outlines are thus obtained, and the picture can be increased or reduced in size by varying the size of the squares of the frame F, or of the  
85 subdivisions on the canvas or sheet. The number of subdivisions must always agree on the frames A and F. The head-rest D always insures the same position of the eye of the artist as long as the outlines are being drawn. The  
90 apparatus can easily be adjusted as may be desired, and can be folded very compactly for transportation.

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

1. The combination, with an easel, of a frame, hinged, subdivided on the inside into quadrilateral spaces, and adapted to fold over the canvas, as shown and described.

2. The combination, with the easel C, of the adjustable sight and head-rest D, the arm B,

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the subdivided frame A, and the subdivided frame F, hinged to the easel, substantially as herein shown and described, and for the purpose set forth.

- 5 3. The combination, with the easel C, of the adjustable sight and head-rest D, the arm B, the frame A, divided into equal squares by wires *a b*, and the frame F, hinged to the easel,

and also divided into equal squares by wires *a b*, substantially as herein shown and described, and for the purpose set forth. 10

ALONZO CHAPPEL.

Witnesses:

E. F. MILLS,  
E. SHAW.