(No Model.)

M. E. GLADFELTER.

BEAM COMPASSES.

No. 494,475. Patented Mar. 28, 1893.

Fig 1

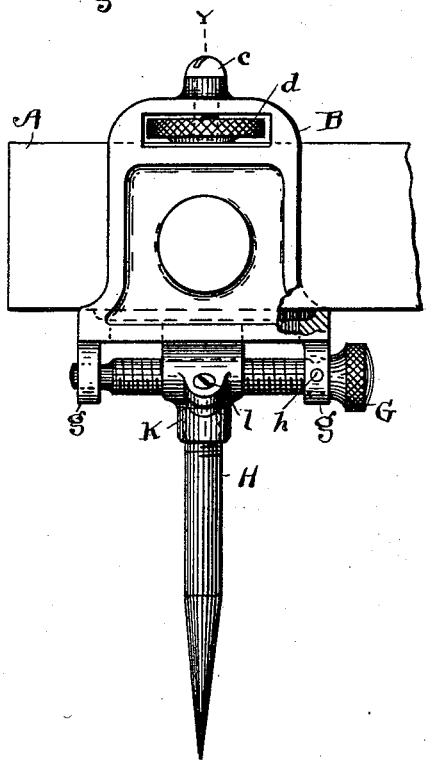
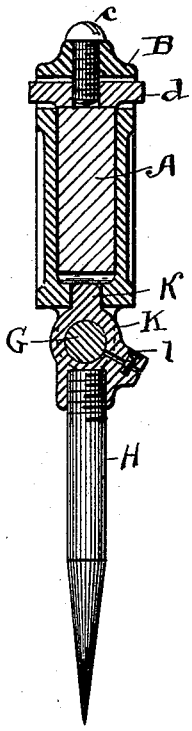


Fig 2



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BEAM-COMPASS.

SPECIFICATION forming part of Letters Patent No. 494,475, dated March 28, 1893.

Application filed November 7, 1892. Serial No. 451,165. (No model.)

To all whom it may concern:

Be it known that I, MARION E. GLADFELTER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Beam-Compasses; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to beam compasses, and the object of the invention is to provide a beam compass with means for obtaining the finest possible adjustment of the marking point, to the end that greater accuracy may be obtained with instruments of this character than has hitherto been possible. In compasses as constructed prior to my invention, the sliding socket or head alone has been adjustable, and the adjustment of this part determined the position of the marking pencil or point. But I have found that such adjustment was inadequate, especially where considerable nicety of fineness of adjustment was desirable, and hence I have produced this invention with a view to enabling the finer adjustment to be easily and accurately made.

To this end the invention consists in a beam compass provided primarily with an adjustment socket or sliding head upon the beam substantially as hitherto, and in a special and separate adjustment for the point, all substantially as herein shown and described and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of my improved instrument, and Fig. 2 is a cross section of the same substantially on line *y*, *y*, Fig. 1.

A represents a beam of the compass, which may be of the usual kind or style, or any other suitable style or kind, and B is the socket or sliding head upon said beam. Only a fraction of the beam is here shown but sufficient thereof for all the purposes of this invention. The head B has a vertical set screw *c* extending down through its center into the recess in said head above the beam A in which is located the thumb nut *d*. This nut is milled on its periphery and is threaded on the screw *c*, so that it serves to fasten the said head firmly upon the beam A in any adjustment thereof that may be made. Hence, when the said nut is screwed down, the beam and head or socket B are fastened rigidly together, but when it is run slightly up on the screw *c* the said parts are loose in respect to one another, and the head may be moved in either direction upon the beam. At its bottom the head B is provided with two ears *g* and a thumb screw G is supported in these ears and adapted to turn therein as may be necessary in the adjustment of the marking point as hereinafter described. In the neck of the said screw G I form an annular groove into which the small securing screw *h* projects and prevents the said screw G from being drawn out while it permits it to be freely turned. Obviously this latter construction might be at the other end of the screw G or any equivalent means might be employed to hold the said screw in its working position.

The pencil or other point H used to do the marking is secured in the head K, threaded to travel on the screw G, and said head has a rib *k* along its upper portion which travels in a longitudinal groove in the bottom of the socket or head B. By this construction the said head K is caused to travel back and forth upon the screw G without turning or varying its position therein, except as the position is changed purposely by turning the said screw. The head K is split longitudinally at one side, as clearly seen in both views, and a short screw *l* serves to lock the split parts together. By this means the head K may be clamped more or less firmly upon the screw G as the service may seem to require.

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

1. The beam and main head thereon, and a separate head on said main head constructed to support the marking point and bodily adjustable on the main head by means of a screw, substantially as described.

2. In a beam compass, a socket or head having a guide way longitudinally in its bottom, in combination with a marking point supporting head constructed to engage in said guideway and a screw to support and adjust said point supporting head, substantially as described.

3. In a beam compass, the main head, the point carrying head and the screw support-

ing the same, the said point carrying head split on one side and a screw to tighten said head on its support, substantially as described.

4. The main head having ears at its bottom and a channel in its bottom, in combination with a point carrying head constructed to engage in said channel, and an adjusting screw passing through said point carrying head and the ears in the main head, substantially as described.

Witness my hand to the foregoing specification.

MARION E. GLADFELTER.

Witnesses:

H. I. FISHER,

GEORGIA SCHAEFFER.