P. S. HELLER & A. S. KLINE.

BEAM COMPASS.

APPLICATION FILED AUG. 17, 1909.

953,464. Patented Mar. 29, 1910.

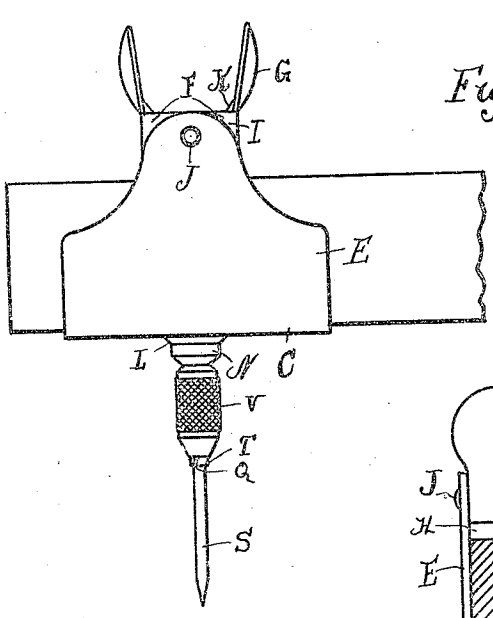
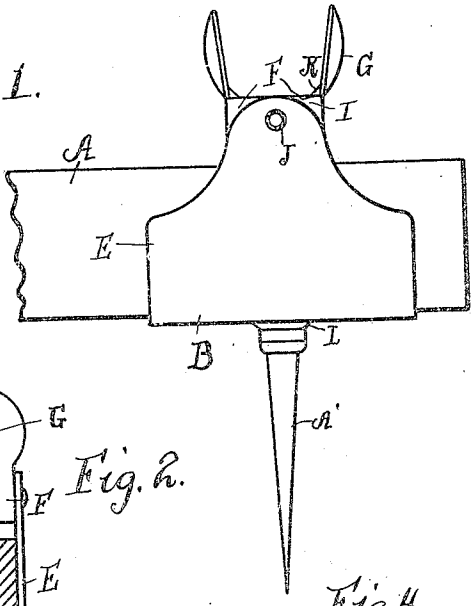


Fig. 1.



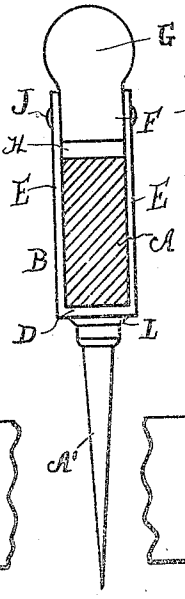


Fig. 2.

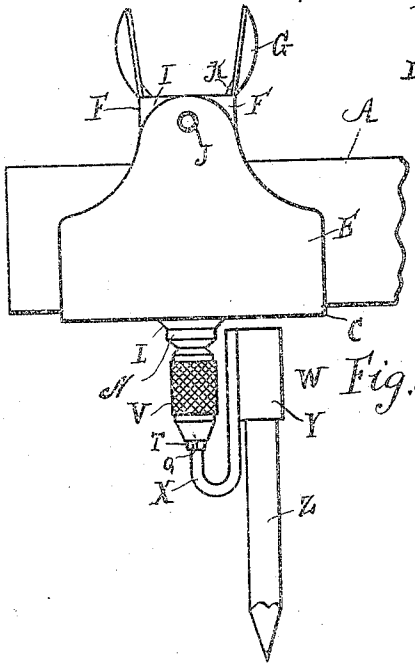


Fig. 3.

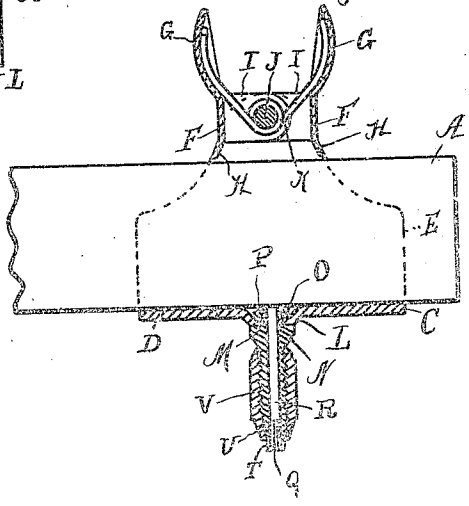


Fig. 4.

WITNESSES

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PHARES S. HELLER AND ANSON S. KLINE, OF ALLENTOWN, PENNSYLVANIA.

BEAM-COMPASS.

953,464. Specification of Letters Patent. Patented Mar. 29, 1910.

Application filed August 17, 1909. Serial No. 513,248.

To all whom it may concern:

Be it known that we, PHARES S. HELLER and ANSON S. KLINE, citizens of the United States, residing at Allentown, in the county of Lehigh and State of Pennsylvania, have invented a certain new and useful Improvement in Beam-Compasses, of which the following is a specification.

Our invention relates to a new and useful improvement in beam compasses, and has for its object to so construct the adjusting means that the points of the compass may be readily and easily changed and when placed in any position they will remain there without any movement while the compass is being used.

Another object of the invention is to provide a beam compass which will be strong and durable, yet light and inexpensive in construction.

In the general run of beam compasses, screws are used as the adjusting means and these form indentations in the beam, so that when a very fine adjustment is desired the screw is then brought very close to one of these indentations, and when tightened slides into said indentations, throwing out the adjustment of the tool.

In our invention the essential point is the employment of two spring actuated clips which rest upon the top of the beam at two points, hold the device steady and allow for minute adjustment.

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, we will describe its construction in detail, referring by letter to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a side elevation of a beam compass made in accordance with our improvement, the beam being broken away. Fig. 2, an end view thereof. Fig. 3, a side elevation of one of the members showing the pencil holder carrying a pencil secured thereto. Fig. 4, a longitudinal sectional view of one of the members, the beam being shown in elevation.

In carrying out our invention as here embodied, A represents the beam, which may be of any desirable length, on which is mounted the housings B and C, said housings being composed of sheet metal bent so as to form a bottom D and the sides E; on the upper ends of the sides of each of these housings are mounted the clips F, having the concavo-convex finger holds G and having their lower ends bent outward at some suitable angle to the body to form the feet H, which are adapted to rest upon the top of the beam, as will be hereinafter described. With these clips are also formed the arms I, which are bent at right angles to the body, and through these arms and the sides of the housing passes the rivet J, thus pivoting the clips to the housing. About the rivet J is coiled the spring K, the ends of which rest in the concaved portion of the clips and normally hold the finger portions away from one another.

In the bottom of the housing C is formed the indentations L, having an opening M through which passes the upper end of the gripping member N, and around that portion which enters the indentation is placed a washer O, so that when the end of said gripping member is bent over, as indicated by P, said gripping member will be securely held in place. The lower end of the gripping member is split, as indicated by Q, and has a vertical central opening R in which fits the pin S. The outer surface of the lower end of this gripping member is beveled, as indicated by T, which coincides with the internal beveled surface U on the sleeve V, said sleeve being threaded on the gripping member, and as the sleeve is threaded upward, the lower portion of the gripping member will be forced inward against the pin for securely holding said pin in position. In place of the pin S the pencil holder W which is composed of the U-shaped attaching member X, having mounted on one end the holder Y, into which slides the pencil Z may be put in its place.

To the housing B is permanently attached the center pin A′ in the same manner as the gripping member N is attached to the housing C.

In practice to move one of the housings along the beam, the clips G of that housing are taken hold of by the fore finger and thumb and pressed toward one another which will cause the feet H to move in the arc of a circle about the rivet J, causing said feet to be lifted from the top of the beam,

then by drawing the bottom of the housing against the bottom of the beam, said housing may be moved along the beam until the desired adjustment is obtained, when by letting go of the clips the feet H will come in contact with the top of the beam, the action of the spring holding said feet securely against said beam, and said feet being on an angle to the body of the clips will rest upon the beam at an angle other than a right angle thereto, which will prevent the housing from moving along the beam, and at the same time will hold the bottom of the housing against the bottom of the beam, so as to prevent any other slight movement thereof.

When working upon metal the point making the mark often becomes dull, and by having it so it can be readily removed a new one may be put in its place, thus saving a great deal of time, and when the device is to be used upon wood the pin may be replaced by the pencil holder W.

Of course we do not wish to be limited to the exact details of construction here shown, as these may be varied within the limits of the appended claims without departing from the spirit of our invention.

Having thus fully described our invention, what we claim as new and useful, is—

1. In a device of the character described, a beam, housings composed of a bottom and sides, oppositely disposed clips pivoted between the upper ends of said sides, feet formed with the lower ends of said clips, springs for normally holding said feet in engagement with the top of the beam, and pins secured to the bottoms of said housings.

2. In a device of the character described, a beam, housings, each of which is composed of a bottom and sides, oppositely disposed spring actuated clips pivoted between the upper ends of the sides, feet bent outwardly from the lower ends of said clips adapted to engage with the top of the beam, and pins secured to the bottoms of the housings, as specified.

3. In a device of the character described, a beam, housings, each of which is composed of a bottom and sides, clips having concavo-convex portions, feet formed from the lower ends of said clips and bent outward, arms bent at right angles to said clips, two of said clips mounted in each of the housings, rivets passing through the upper ends of the housings and the arms of the clips for pivoting said clips to the housings, springs wound about the rivets, the ends of which rest within the finger portions for normally holding the feet in engagement with the top of the beam, and pins secured to the bottoms of the housings.

4. In a device of the character described, a beam, housings, each of which is composed of a bottom and sides, clips having concavo-convex portions, feet formed from the lower ends of said clips and bent outward, arms bent at right angles to said clips, two of said clips mounted in each of the housings, rivets passing through the upper ends of the housings and the arms of the clips for pivoting said clips to the housings, springs wound about the rivets, the ends of which rest within the finger portions for normally holding the feet in engagement with the top of the beam, a center pin secured to the bottom of one of said housings, and a chuck secured to the bottom of the other housing adapted to receive a marking instrument.

5. In a device of the character described, a beam, housings, each of which is composed of a bottom and sides, clips having concavo-convex portions, feet formed from the lower ends of said clips and bent outward, arms bent at right angles to said clips, two of said clips mounted in each of the housings, rivets passing through the upper ends of the housings and the arms of the clips for pivoting said clips to the housings, springs wound about the rivets, the ends of which rest within the finger portions for normally holding the feet in engagement with the top of the beam, a center pin secured to the bottom of one of said housings, and a chuck secured to the bottom of the other housing adapted to receive a pin or pencil holder.

6. In a device of the character described, a beam, housings, each of which is composed of a bottom and sides, clips having concavo-convex portions, feet formed from the lower ends of said clips and bent outward, arms bent at right angles to said clips, two of said clips mounted in each of the housings, rivets passing through the upper ends of the housings and the arms of the clips for pivoting said clips to the housings, springs wound about the rivets, the ends of which rest within the finger portions for normally holding the feet in engagement with the top of the beam, a center pin secured to the bottom of one of said housings, a gripping member having a split lower end and provided with a central opening secured to the bottom of the other housing, the lower end of said gripping member being beveled, a sleeve having internal beveled side walls threaded on said gripping member, and a marking instrument adapted to register with the central opening in the gripping member.

7. In a device of the character described, a beam, housings, each of which is composed of a bottom and sides, clips having concavo-convex portions, feet formed from the lower ends of said clips and bent outward, arms bent at right angles to said clips, two of said clips mounted in each of the housings, rivets passing through the upper ends of the housings and the arms of the clips for pivoting said clips to the housings, springs wound about the rivets, the ends of which rest within the finger portions for normally holding

the feet in engagement with the top of the beam, a center pin secured to the bottom of one of said housings, a gripping member having a split lower end and provided with a central opening secured to the bottom of the other housing, the lower end of said gripping member being beveled, a sleeve having internal beveled side walls threaded on said gripping member, and a pencil holder composed of a U-shaped attaching member, on one end of which is mounted a holder, the opposite end of the attaching member adapted to register with the central opening.

In testimony whereof, we have hereunto affixed our signatures in the presence of two subscribing witnesses.

PHARES S. HELLER.
ANSON S. KLINE.

Witnesses:
OSCAR P. MEITZLER,
QUINTUS R. MUSSELMAN.