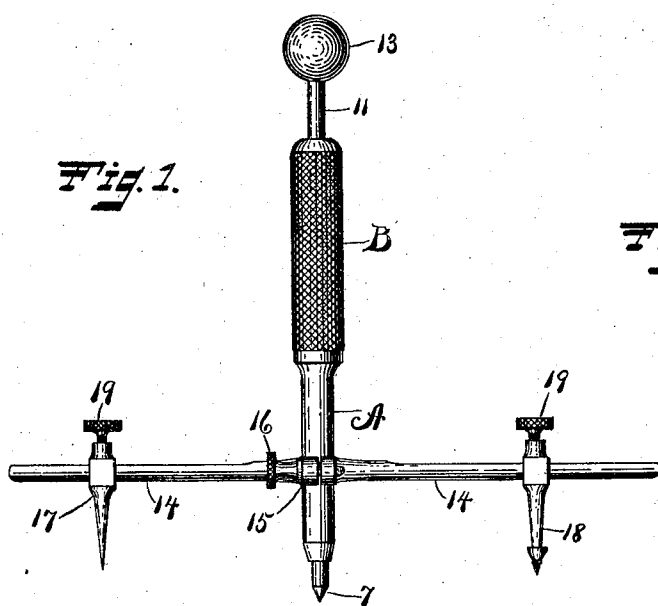
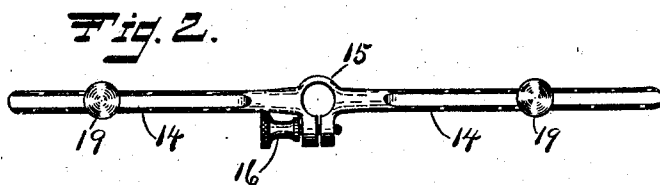
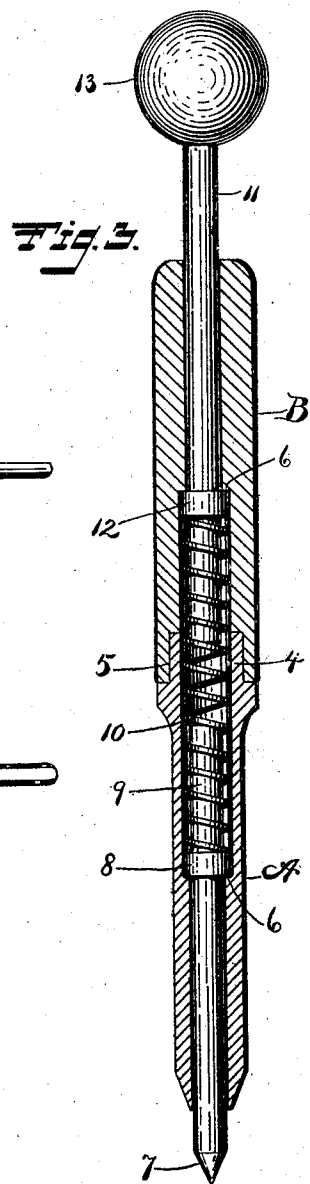


No. 800,257.

PATENTED SEPT. 26, 1905.

A. E. ABETZ.
COMPASS LEG AND POINT.
APPLICATION FILED DEC. 5, 1904.



Witnesses.

S. H. Clarke
J. F. Egan

Inventor.

Adolph E. Abetz.

By James Shepard
Atty.

UNITED STATES PATENT OFFICE.

ADOLPH E. ABETZ, OF NEW BRITAIN, CONNECTICUT.

COMPASS LEG AND POINT.

No. 800,257.

Specification of Letters Patent.

Patented Sept. 26, 1905.

Application filed December 5, 1904. Serial No. 235,488.

To all whom it may concern:

Be it known that I, ADOLPH E. ABETZ, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Compass Legs and Points, of which the following is a specification.

My invention relates to improvements in a compass leg and point; and the main object of my improvement is to provide a compass-leg with a yielding point. I also adapt this point for use as a prick-punch.

In the accompanying drawings, Figure 1 is a side elevation of my compass leg and point, together with a compass-beam attached thereto and provided with two points. Fig. 2 is a detached plan view of the said compass-beam and connected parts, and Fig. 3 is an enlarged sectional elevation of the compass leg and point without the compass-beam.

The compass-leg is formed mainly of two parts A B put together at the middle in any proper manner—as, for example, by a projection 4 on one part that fits into a socket 5 on the other part. Both of these parts A B are bored centrally from end to end and then counterbored from their meeting ends to form the enlargements and opposing shoulders 6 6. The part A is for the lower or point end of the leg and is preferably reduced in size and tapered at the lower end, as shown. The part B is the handle end and is left larger and is preferably knurled or roughened for convenience of handling. The two parts A B together constitute the handle and the centering-leg of the compass.

The point 7 may be of any desired form at its extreme lower end; but I have shown it in the form of a light prick-punch. It is provided with a body that fits the central bore of the part A, a flange or enlargement 8, and a reduced portion 9 above the said flange. A spiral spring 10 is placed within the counterbored portion of the part A with one end resting on the flange 8 and with its opposite end in contact with any suitable abutment, whereby the spring has a constant tendency to project the point 7 from the lower end of the part A until its projection is limited by the flange or stop-shoulder 8, while at the same time it will yield and permit the part A to slide downwardly on the point when the end of the point is resting on the work. I prefer to employ this point and spring in connection with a sliding hammer in the form of

a rod 11, having an enlargement or flange 12 and a pad or knob 13 for receiving a light blow from the operator's hand. This hammer is placed in the part B with the flange 11 in position for engaging the shoulder 6 and with the upper end of the spring 10 engaging the said flange, whereby the said flange serves as the resisting abutment or stop-shoulder of the spring 10 for yieldingly holding the point 7 in its projected position. A companion compass leg or legs may be attached to this centering compass-leg in any ordinary and desired manner. For example, I have illustrated a compass beam or beams 14, with a spring-socket 15 and clamp-screws 16, whereby the same may be slipped upon the cylindrical portion of the part A and clamped thereon at any desired position above the point 7. The beam or beams may be provided with any ordinary legs or points—as, for example, the metal point 17 and pencil-holding point 18—adjustably mounted on the beams and held in place by the ordinary set-screws 19.

In using my compass the operator takes hold of the part B, places the point on the work at the desired center, and presses down gently, so as to slightly compress the spring 10. If the work is metal and it is desired to make a light center as a mark or to support the point in scribing a circle, the operator strikes a light blow with the palm of his hand on the pad 15, thereby compressing the spring 10 and depressing the rod 11 until its lower end strikes the upper reduced end 9 of the point 7 and forces the point lightly into the metal. In scribing a circle the handle will be depressed sufficiently to put the spring under a light tension, whereby the point is yieldingly held to its work and the circle is or may be scribed with less danger of losing the center than when using a centering compass-leg with a rigid point. When the two legs or points 17 and 18 are on the beam, the tool can be tilted on the point 7 to carry the top of the part B toward that side having the point that it is desired to use, so that said point may strike the work, while the other point will be raised by the act of tilting the tool, and therefore not hit the surface of the work. By making the companion leg or legs adjustable relatively to the length of the centering-leg the compass may be used for scribing a circle in a different plane from that on which the center is located. The advantage of holding the point

with certainty under a yielding pressure at the desired center is attained in the use of the leg as a prick-punch for laying out work, as well as in the use of the device in scribing
5 a circle.

I claim as my invention—

1. The herein-described implement comprising a handle, a point slidably mounted in the lower end thereof and having a stop-
10 shoulder for limiting the outward projection of the said point, a hammer slidably mounted in the upper end thereof and having a stop-shoulder for limiting the outward movement of the said hammer, and a spring inter-
15 posed between the said point and hammer and acting to force the said point and hammer outwardly for bringing the said stop-shoulders into engagement with the said handle.

20 2. The herein-described implement comprising a handle, a point slidably mounted

in the lower end thereof and projecting below the said lower end, a hammer slidably mounted in the upper end thereof and having a projecting end for receiving a light
25 blow from the operator's hand, and a spring interposed between the said point and hammer and acting to force the said point and projecting end of the hammer outwardly.

3. The herein-described implement, com-
30 prising a handle forming a compass-leg, a point slidably and yieldingly mounted in the lower end thereof, a companion compass-leg mounted on the said handle, and means
35 for adjustably securing the said compass-leg at various points in the length of the said handle.

ADOLPH E. ABETZ.

Witnesses:

JOHN SILL,
Y. J. STEARNS.