H. O. SCHULZE.

TRAMMEL POINT.

APPLICATION FILED AUG. 22, 1917.

1,295,932.

Patented Mar. 4, 1919.

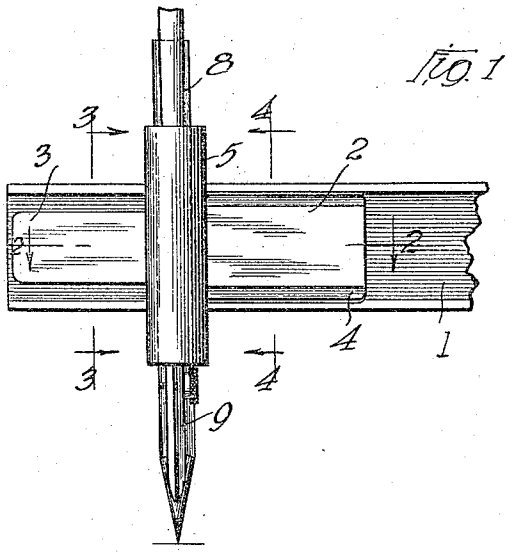



Fig. 1

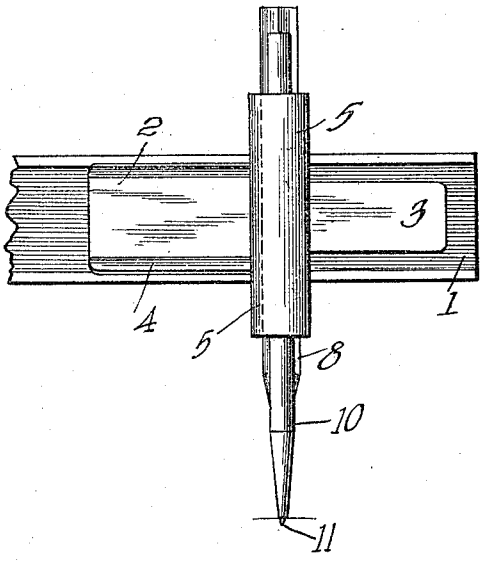



Fig. 2

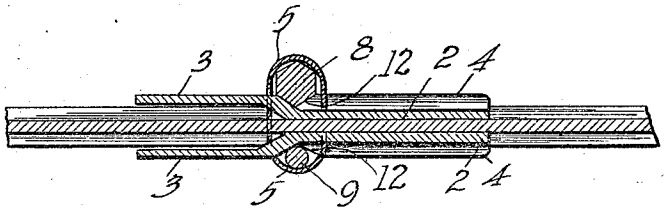



Fig. 3

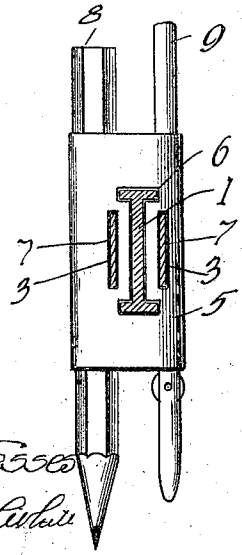
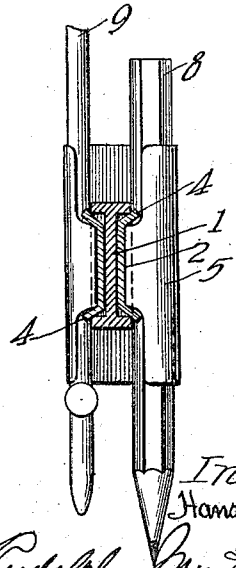



Fig. 4




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# UNITED STATES PATENT OFFICE.

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## TRAMMEL-POINT.

1,295,932. Specification of Letters Patent. Patented Mar. 4, 1919.

Application filed August 22, 1917. Serial No. 187,717.

*To all whom it may concern:*

Be it known that I, HANS OTTO SCHULZE, citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Trammel-Points; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in beam compasses, and has for its particular object to provide cheap and efficient devices adapted to be mounted on a beam to engage the pivot point and drawing instrument with said beam to provide an adjustable compass for drawing arcs of and complete circles of large radius.

A further particular object of the invention is to provide beam compasses of the character defined in which the drawing instrument and pivot point member are securely held in place by means of a spring or springs which serve at the same time to engage the supporting member of the compasses with the beam.

The invention consists in the features of construction and combinations of parts hereinafter fully described and particularly claimed.

In the accompanying drawings illustrating a suitable embodiment of the invention:

Figure —1— is a view in side elevation of a beam compass constructed in accordance with the invention.

Fig. —2— is a horizontal section of one end portion of the same on the line 2—2 of Fig. —1—.

Figs. —3— and —4— are respectively transverse sections of the same on the lines 3—3 and 4—4 respectively, of Fig. —1—.

The beam of the device preferably consists of a flat strip of metal or other suitable material shaped similarly to an I-beam, though any other desired shape may be employed, including merely a straight flat strip of wood, if desired.

The instrument-engaging elements of the device consist each of a pair of clamping members having beam-engaging end portions or jaws 2, terminating in handle portions 3, which are off-set from the portions 2 so as to lie substantially parallel with the web of the beam 1 and separated therefrom. The jaw portions 2 are of greater width than the handle portions 3, and are provided with flaring side edge flanges 4 which are adapted to engage the flanges of the beam 1. The jaw members 2 with their handle portions 3 are disposed upon opposite sides of the beam 1 and are connected together by means of a flat spring 5 which consists of an elliptical split tube through the slot or open end of which the jaws 2 project. Opposite the open side or slot of said tube the same is provided with a slot or opening 6 conforming substantially to the shape in cross-section of the beam 1, and through which the latter is adapted to slide freely. Parallel with the slot 6 and disposed on opposite sides of the same are slots 7 through which the handle portions 3 of the clamping members project. The opposed inner walls of the slots 7 nearest contiguous to the side walls of the slot 6 constitute the fulcrums on which the handle members 3 turn to separate the jaws 2 for releasing the beam 1.

The said tube 5 is adapted to be expanded by inserting therethrough such devices as for example a pencil 8 and a ruling pen 9 or, in place of the latter, a cylindrical element 10 equipped with a needle-point 11 to constitute the axis about which the beam is adapted to be swung. These devices 8, 9 or 10 are of greater diameter or dimensions in cross-section than the spaces within the tube 5 opposite each of the jaws 2, the flanges of the latter being cut away to provide recesses 12 into which the said devices 8, 9 or 10 are adapted to be received. Ordinarily when the said devices 8, 9 and 10 are omitted, the edges of the tube 5 bordering the open end or slot thereof bear upon the outer faces of the jaws 2, and serve to contract the same so as to firmly engage the interposed beam 1. When the instruments, such as the parts 8, 9 or 10, are inserted, the edges of the tube bordering the opening therein are moved out of engagement with the outer faces of the jaws 2, and exert their pressure upon said jaws through the intermediacy of the said instruments at a point nearer the fulcrums of the handle members 3; the pressure transmitted by the instruments being sufficient to maintain said jaws firmly engaged with the beam 1.

The tubular springs 5 are of greater length than the width of the beam 1, and provide relatively long sleeves opposite the outer faces of the jaws 2 to receive and securely hold the drawing instruments and

the like in place and against movement during the operation of the drawing of circles or arcs of circles.

It will be obvious that the said instrument-holding elements may be readily adjusted longitudinally of the beam 1 by merely pressing the handle members 3 toward the side faces of the beam thereby separating the jaw members 2 and releasing them from engagement with the beam. The said instrument-holding devices may then be moved longitudinally of the beam to any desired position and will, upon releasing the pressure on the handle portion 3, again firmly engage the beam.

The several faces adapted to be interengaged as above described may obviously be milled or equipped with other suitable means for increasing their frictional hold upon each other and preventing relative movement thereof; such means being omitted from illustration as matters of common knowledge and constituting no specific part of the invention.

While I have shown the preferred embodiment of the invention in the accompanying drawings, it will be obvious, that the construction illustrated and described may be changed and varied in details without departing from the invention as defined in the appended claims.

I claim as my invention:

1. A beam-compass including a bar or beam and means for engaging drawing instruments therewith, said means including a clamp comprising two jaws engaging opposite faces of the bar or beam, a handle element integral with each jaw and adapted to be simultaneously forced toward the bar or beam to disengage the jaws therefrom, a split tubular spring having slots through which the bar or beam and the handle elements respectively pass, said slots disposed opposite the opening in the tube, the edges of the latter bearing upon the jaws for forcing them into engagement with the bar, the handle elements being fulcrumed in the slots through which they pass and adapted when pressed toward the side faces of the bar or beam to force the jaws to expand the open side of the tube, the latter coacting with the outer faces of the jaws to present expansible sleeves adapted to receive and engage drawing instruments.

2. A beam-compass including a bar or beam, and a clamping member adapted for carrying drawing instruments, the said clamping member including a pair of jaws for engaging opposite side faces of the bar or beam, a handle element integral with each jaw and spaced from the bar or beam, and a spring engaged with said jaws for holding them normally engaged with the bar or beam and engaged also with said handle elements to provide fulcrums on which the same and said jaws turn.

3. A beam-compass including a bar or beam, and a clamping member adapted for carrying drawing instruments, the said clamping member including a pair of jaws for engaging opposite side faces of the bar or beam, a handle element integral with each jaw and spaced from the bar or beam, and a spring engaged with said jaws for holding them normally engaged with the bar or beam and engaged also with said handle elements to provide fulcrums on which the same and said jaws turn, said springs coacting with said jaws to engage drawing instruments with the latter while acting to maintain said jaws engaged with the bar or beam.

HANS OTTO SCHULZE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."