

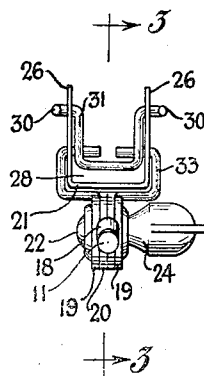
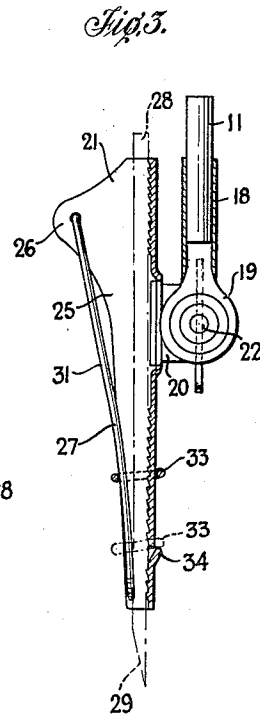
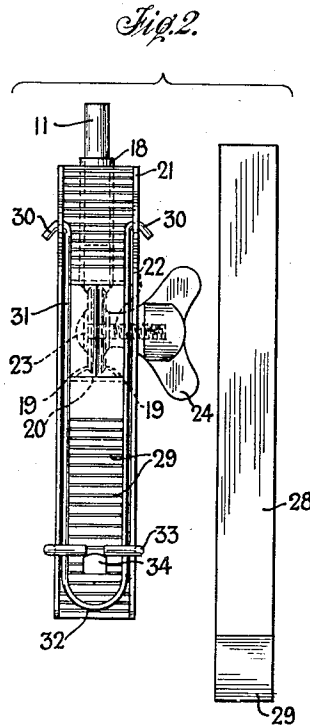
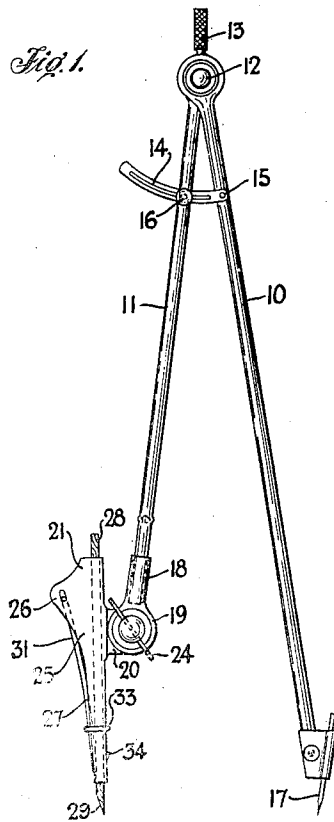
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COMPASS ATTACHMENT

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2,367,584

COMPASS ATTACHMENT

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9 Claims. (Cl. 120—13)

This invention relates to improvements in compasses and the like used in marking circles and arcs thereof. More particularly it relates to an improved holder for properly carrying soapstone or talc or other marking mediums on one leg of a compass, whereby such mediums will not break under the pressure exerted when using the compass, and whereby adjustments for different angles and on account of wear may be made quickly and easily.

In connection with the manufacture of many items today, for example, such as airplane jigs, steel plates, forgings, steel fabrication, and other work with sheet metal, a large amount of layout work is required preliminary to cutting, and compasses are in almost constant use. In many plants it is preferred to use soapstone or talc as a marking medium on one leg of the compass, but since this marking medium is somewhat brittle it is difficult to use it in relatively long sections without breaking the section intermediate its ends when pressure is applied while using the compass.

It is an object of this invention to provide an improved holder for soapstone and other marking mediums whereby relatively long sections thereof may be adjustably carried in the holder without breaking while the compass is in use.

Another object is to provide for ready adjustment of the holder to different angles as well as for adjustment of the marking medium thereby it may be continuously extended through the lower end of the holder as the operative end of the marking medium wears down in use.

A further object is to provide a novel holding means in the form of an elongated, relatively wide channel member having spring means extending for a substantial portion of said member to bear against and hold a marking medium in said member, and having a pressure link or ring surrounding said member and said spring to yieldably hold a substantial portion of the latter against said marking medium.

A further object is to provide holding mechanism of the character referred to which can be quickly released from holding engagement with the marking medium to permit removal of short stubs of the latter which can no longer be economically used, and to permit replacement of such stubs with relatively long sections of marking medium.

Other objects and advantages will become apparent from the following description taken in conjunction with the accompanying drawing.

In the drawing:

Fig. 1 is a front view of a compass embodying my invention,

Fig. 2 is an enlarged detail view of the holder and marking medium,

Fig. 3 is an enlarged sectional view through the holder taken substantially on line 3—3 of Fig. 4, and

Fig. 4 is top view of the holder.

Referring to the drawing the numerals 10 and 11 indicate respectively the two legs of a compass which are pivotally joined together at their upper ends, as indicated at 12, and are provided with a finger gripping extension 13. Below the joint 12 an arcuate adjusting bar 14 is suitably secured to the legs 10 and 11 to permit the latter to be held in any desired spaced relation. As shown, one end of bar 14 is secured to leg 10 as by a pin 15, while leg 11 is movable along the bar and can be secured thereto at any desired point by tightening a thumb screw 16 in the usual manner. The lower end of leg 10 carries the customary adjustable metal point 17.

All of the foregoing elements are well known in the art and form no part of my invention except in combination with the holder for the marking medium which will now be described.

As clearly shown in Fig. 1, leg 11 is made shorter than leg 10 and the lower end of the former is received in a socket member 18 in which it may be suitably secured as by welding. Member 18 has an enlarged bifurcated annular portion 19 which pivotally receives between its bifurcations an extension 20 formed on the back of a channel member 21. The pivotal action of member 18 is obtained by means of a pin 22 which extends through members 18 and 20 and has a squared portion 23 adjacent its head which is received in a similarly shaped opening formed in one bifurcation of the annular portion 19. Thus, turning movement of the member 18 also turns the pin 22 and a wing nut 24 is arranged on pin 22 to tighten the pivotal joint and hold channel member 21 at any desired angle with respect to member 18.

The channel member 21 is relatively wide, having its sides 25 formed with rounded extensions 26, and from the latter these sides taper downwardly as indicated at 27. A marking medium 28 is received in channel member 21 and rests against a corrugated surface 29 (Fig. 2) formed on the latter, which surface is adapted to prevent slippage of the marking medium. This marking medium is preferably soapstone or talc, but may be of any other suitable material. As will be noted, the marking medium is

preferably flat and also relatively wide so as to be received in the channel member 21 without too much play between the sides 25. The marking medium is also of substantial length when it is first inserted in the channel member, being preferably longer than the latter so as to extend beyond the channel member at both ends thereof. The lower end of the marking medium is sharpened as indicated at 29 so that a clear, sharp line will be made.

In the extensions 26, the free ends 30 of an elongated wire spring 31 are inserted, and the loop 32 of this spring extends almost to the lower end of the member 21 to bear against the lower portion of the marking medium. As clearly shown in Figs. 1 and 3, the legs of spring 31 are slightly curved inwardly toward the marking medium whereby a portion of these legs as well as the looped end of the spring will bear against the marking medium, thus permitting a greater area of the spring to engage the marking medium than would be possible if this curve were omitted. This arrangement is less likely to cause breakage of a brittle marking medium since the pressure of the spring is applied over a substantial area.

The lower end of the channel member receives a pressure link or ring 33 which extends over the legs of spring 31 and by virtue of the tapered sides on member 21 can be forced upwardly on member 21, as shown in full lines in Fig. 3, to securely hold the spring in engagement with the marking medium. To prevent the link 33 from slipping off the lower end of the channel member, a portion 34 of the latter is bent rearwardly so as to prevent downward movement of the link, as indicated in Fig. 3. It will be apparent that marking mediums of various thicknesses may be utilized in this holder because the link 33 can be moved to the desired position to insure proper engagement of the spring with the marking medium.

In using this holder initially the link 33 is moved to its lowest position and a section of marking medium is quickly and easily inserted into the channel member 21 from the top thereof until the lower end extends outwardly to the desired position. The marking medium will freely pass between the spring 31 and the corrugated surface on the channel member as long as the link 33 is in its lowest position. When the marking medium is properly placed the link 33 is moved upwardly to force the spring into holding engagement with the marking medium, and the link will frictionally hold its position until it is again moved downwardly.

As the lower end of the marking medium wears down in use, the link 33 may be quickly moved downwardly sufficiently to permit the marking medium to be further extended at the lower end of the channel member, after which the link may be quickly moved upwardly again to its proper holding position. Since the spring 31 engages the marking medium near the lower end of the latter, all of the marking medium except a short stub may be used up before it is necessary to insert a new section of such medium. However, when it does become necessary to insert a new section, the stub of the old section can be quickly released at the bottom of the channel member and the new section moved into place.

While I have illustrated and described one form of my invention it will be obvious that the invention is not limited thereto, and that changes and modifications may be made therein without

departing from the spirit of the invention or from the scope of the subjoined claims.

What is claimed is:

1. In a holder for a marking medium of the character described an elongated channel member in which said marking medium is received, an elongated spring member carried by said channel member and adapted to bear against said marking medium to hold the latter in said channel member, and a pressure link surrounding said channel member and said spring to yieldably hold said marking medium between said channel member and said spring.

2. In a holder for a marking medium of the character described an elongated channel member, the sides of which have extensions near the top of said member and taper downwardly toward the bottom of said member, said channel member being adapted to receive said marking medium, an elongated wire spring having its upper ends received in said extensions and its lower end adapted to engage said marking medium, and a pressure link surrounding said channel member and said spring and movable on the tapered sides of said channel member to yieldably hold said marking medium between said channel member and said spring.

3. A device of the character defined in claim 1 wherein the surface of said channel member in engagement with said marking medium is corrugated to prevent slipping of said medium.

4. A device of the character defined in claim 1 wherein said spring is curved inwardly toward said marking medium to insure that more than the mere end of the spring will be in engagement with the marking medium.

5. A device of the character defined in claim 1 wherein said channel member has a portion bent outwardly to prevent said link from becoming completely disengaged from the channel member.

6. A holder for a marking medium of the character described comprising a channel member having a corrugated surface against which said marking medium is adapted to bear, a spring carried by said channel member and adapted to engage said marking medium to urge the same toward said surface, and a pressure link surrounding said channel member and said spring to yieldably hold said spring in engagement with said marking medium.

7. A holder for a marking medium of the character described comprising a channel member having a corrugated surface and downwardly tapering sides which are provided with extensions adjacent their upper ends, said marking medium being adapted to be received between said sides and against said corrugated surface, a wire spring having its upper ends received in said extensions and its lower end adapted to bear against said marking medium, and a pressure link surrounding said channel member and said spring and movable on the tapered sides of said channel member to yieldably hold said marking medium between said channel member and said spring.

8. A holder constructed in accordance with claim 7 wherein said spring is curved inwardly toward said marking medium to insure that more than the mere end of the spring will be in engagement with the marking medium.

9. A holder constructed in accordance with claim 7 wherein said channel member has a portion bent outwardly to prevent said link from becoming completely disengaged from the channel member.

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