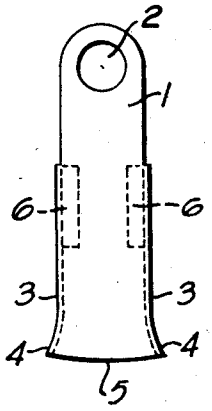
Nov. 11, 1958 J. A. H. TAYLOR ET AL 2,860,028

PEN MOUNTINGS FOR RECORDING INSTRUMENTS

Filed June 25, 1954

FIG. 1.



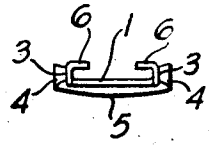


FIG. 2.

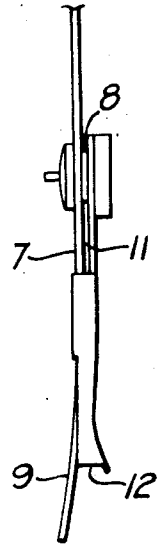


FIG. 3.

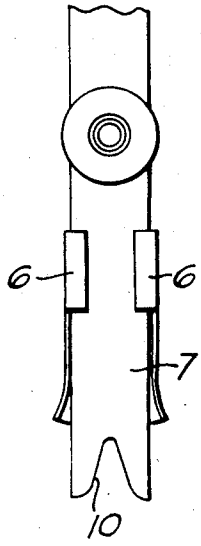


FIG. 4.

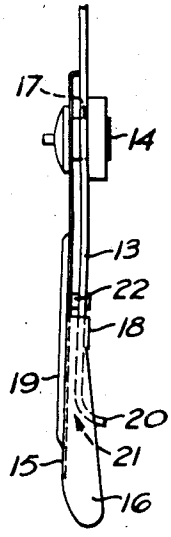


FIG. 5.

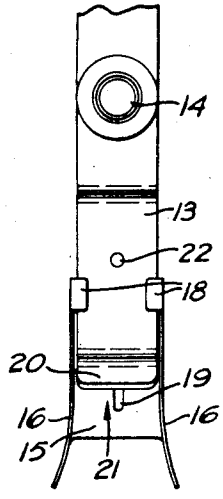


FIG. 6.

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PEN MOUNTINGS FOR RECORDING INSTRUMENTS

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Application June 25, 1954, Serial No. 439,364

Claims priority, application Great Britain June 29, 1953

6 Claims. (Cl. 346—139)

This invention relates to the mounting of pens on instruments which record the value of some variable for instance temperature, flow, pressure or the like on a chart.

With such instruments, it becomes necessary, from time to time, to replace the pens and in the past this has been a very troublesome operation, due to the disposition of the pen mounting stub and the pen locating means employed thereon.

The object of the invention is to provide such a mounting for the pens that they may be easily changed.

According to this invention, a mounting for the pen arm blade of a pen of a chart recording instrument comprises a pen mounting stub and means for locating the blade thereon and is characterised by a shroud, attached to the pen mounting stub so as to leave a passage between these parts for the insertion and guiding of the blade on to its locating means.

To facilitate the entry of the blade the shroud may be flared at the mouth of the passage.

Two embodiments of the invention will now be described by way of example with reference to the accompanying drawings in which

Figure 1 is a front elevation of a shroud,

Figure 2 is an end elevation of the shroud,

Figure 3 is a side elevation of a shroud in position on a pen mounting,

Figure 4 is a front elevation of the mounting of Figure 3.

Figure 5 is a view similar to Figure 3, showing a modified form of shroud and pen mounting stub, and

Figure 6 is a front elevation of the mounting of Figure 5.

Referring now to Figures 1 to 4, a shroud, preferably made from thin sheet metal, is bent to the shape shown in Figures 1 and 2. It comprises a substantially straight sided strip **1** furnished at one end with a hole **2**. Side walls **3** extend from halfway along the strip to the end furthermost from the hole. At this remote end, the walls are flared outwards as at **4** and the strip **1** is flared upwards at **5**.

For some portion of their length, the side walls **3** are widened and bent as shown to form flanges **6**.

The shroud is located on a pen mounting stub **7**, by the flanges **6** which embrace the stub and by the hole **2**, which fits around a spindle **8** on the stub. At its free end the pen mounting stub has a bent portion **9** (as shown in Figure 3) and is formed with a V slot **10** (Figure 4).

A passage **11** is left between the shroud and the stub and this passage has a flared mouth **12** between the shroud and the portion **9** of the stub.

In one way of locating and fixing a pen on the mounting stub the pen arm blade is preferably shaped at its end remote from the nib partially to surround the stub

spindle and is formed with a depending tag to engage the stub slot. The end of the pen arm blade is inserted into the flared mouth **12** and pushed up the passage **11** until its shaped end grips the spindle **8**, at the same time the depending tag on the blade engages in the narrow end of the V slot **10** and locates the blade laterally.

Referring now to Figures 5 and 6, a pen mounting stub **13** is mounted on a spindle **14**. A shroud **15** having flared side walls **16** is located in position on the stub by a hole **17** which fits around the spindle **14** and by flanges **18**. The top surface of the shroud is formed with a groove **19** of rounded cross-section. The pen mounting stub is cut straight at its end and is bent away from the top surface of the shroud at **20**. This bent portion **20** together with the walls **16** make a flared mouth **21**. A locating pin **22** is fixed in the pen mounting stub and has a rounded end which engages with the groove **19** in the shroud.

The pen is located and fixed on the mounting stub by inserting the end of the pen arm blade remote from the nib into the flared mouth **21** and pushing it up the passage between the stub and the shroud. The end of the pen arm blade is shaped so as partially to surround the the stub spindle and is formed with a V shaped recess to engage the locating pin **22**. To fix the pen the blade is pushed up the passage until the shaped end grips the spindle and at the same time the locating pin **22** engages the bottom of the V shaped recess and locates the blade laterally.

What is claimed is:

1. A mounting for the pen arm blade of a pen of a chart recording instrument including a pen mounting stub, means for locating said blade on said stub longitudinally of the latter and for fixing said blade against lateral movement relative to said stub, and a shroud attached to said stub and including a flat strip parallel to and spaced from said stub so as to leave a passage between said stub and said flat strip for the insertion and guiding of said blade on to said locating and fixing means.

2. A mounting for the pen arm blade of a pen of a chart recording instrument including a pen mounting stub, means for locating said blade on said stub longitudinally of the latter and for fixing said blade against lateral movement relative to said stub, and a shroud attached to said stub and including a flat strip parallel to and spaced from said stub so as to leave a passage between said stub and said flat strip for the insertion and guiding of said blade on to said locating and fixing means, said shroud being flared at the mouth of said passage to facilitate the entry of said blade.

3. A mounting for the pen arm blade of a pen of a chart recording instrument including a pen mounting stub, means for locating said blade on said stub longitudinally of the latter and for fixing said blade against lateral movement relative to said stub, and a shroud attached to said stub and including a flat strip parallel to and spaced from said stub so as to leave a passage between said stub and said flat strip for the insertion and guiding of said blade on to said locating and fixing means, said shroud being flared and said stub being bent away from said shroud at the mouth of said passage to facilitate the entry of said blade.

4. A mounting according to claim 1 in which said locating and fixing means includes a V shaped slot in the end of said stub adapted to receive a tag on said blade.

5. A mounting according to claim 1 in which said locating and fixing means includes a pin fixed to said stub and adapted to engage with a V shaped recess in said blade.

6. A mounting according to claim 1 in which said locating and fixing means includes a spindle on said stub adapted to be gripped by a shaped end of said blade.

References Cited in the file of this patent

UNITED STATES PATENTS

1,648,227	Heesch et al.	Nov. 8, 1927
1,754,503	Dwelle	Apr. 15, 1930
1,906,514	Back	May 2, 1933
2,436,971	Moore	Mar. 2, 1948