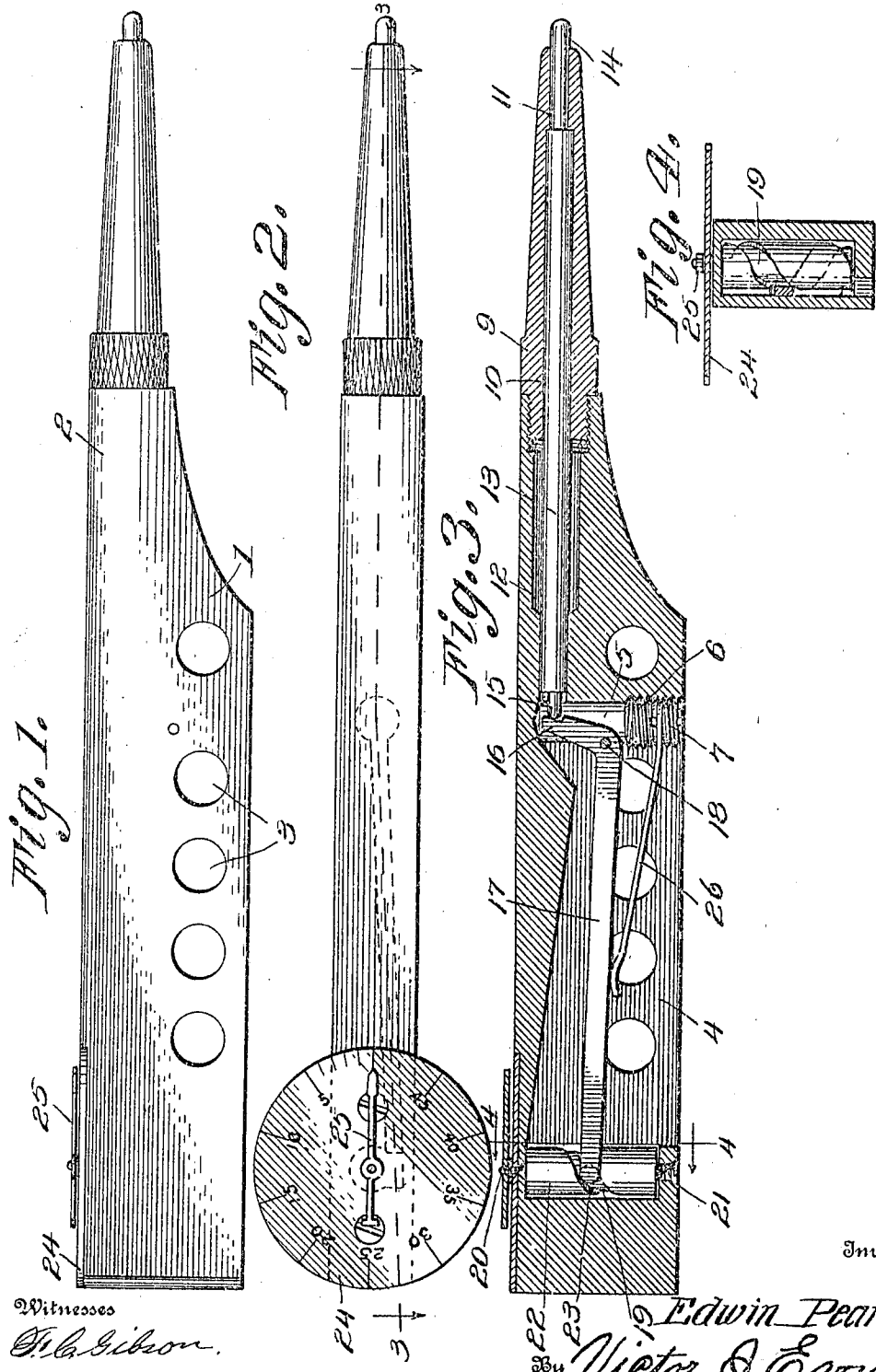


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INDICATOR.
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Patented Apr. 5, 1910.



Witnesses
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INDICATOR.

954,338.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWIN PEARSON, a citizen of the United States, residing at Rock Island, in the county of Rock Island and State of Illinois, have invented new and useful Improvements in Indicators, of which the following is a specification.

This invention relates to micrometer-indicators for machinists' and watch makers' use, and has for its object to provide a compact and convenient indicator adapted to a variety of uses and which is readily adjustable, comparatively cheap to manufacture and thoroughly accurate in its workings.

With the above and other objects in view, which will appear as the description progresses, the invention resides in the novel construction and arrangement of parts, hereinafter fully described and claimed.

In the accompanying drawing there has been illustrated a simple and preferred embodiment of the invention, and in which:

Figure 1 is a side elevation of a device constructed in accordance with my invention. Fig. 2 is a top plan view of the same. Fig. 3 is a longitudinal sectional view upon the line 3—3 of Fig. 2. Fig. 4 is a vertical transverse sectional view upon the line 4—4 of Fig. 3.

In the drawings the numeral 1 designates the body of the device. This body 1 is of the usual formation of instruments of this character comprising a substantially rectangular member having a reduced forwardly extending portion 2. The body 1 is also provided upon its sides with transversely arranged openings 3 which are adapted for the reception of the thumb screw of a surface gage. The body 1 is also provided with an interior chamber 4 and has its vertical wall provided by the chamber provided with a circular opening or hole 5 threaded for a certain distance as at 6, and adapted for the reception of a threaded plug 7.

The numeral 9 designates the forwardly projecting arm of the device. This arm is provided with a threaded reduced portion adapted to engage with similar threads provided within the projecting reduced extension 2 of the body 1. The arm 9 is provided with a longitudinally extending slot or bore 10 communicating with a reduced bore 11 positioned near the outer extremity

of the arm. The body 1 is also provided with a bore or channel 12 communicating with the bores 10 and 11 and extending to the vertical hole 5 provided by the body. The bores 12, 10 and 11 are adapted for the reception of a needle 13 which is provided with a reduced forwardly projecting portion 14, the reduced portion 14 extending through the bore 11 while the shoulder formed upon the needle at its point of connection with the portion 14 is adapted to contact with the shoulder formed between the bores 10 and 11, thereby providing an effective stop for limiting the outward movement of the needle 13. The rear portion of the needle 13 is provided with a reduced finger 15, and this finger is adapted to contact with the substantially vertical arm 16 of an L-shaped operating arm 17. The arm 17 is pivotally connected between the walls formed by the slot or cut away portion 4 through the medium of a pintle 18, and this pintle is positioned approximately at the point of connection with the offset arm 16 of the operating member.

The slot or pocket 4 has its end opposite that of the hole 5 provided with a cylindrical recessed portion 19, and this recessed portion is provided with a top and bottom wall, both of which being provided with a centrally arranged opening adapted for the reception of suitable trunnions 20 and 21 carried by a roller member 22. The roller member 22 is provided with a spirally arranged slot or cut away portion 23, and the arm 17 is provided with a suitable roller adapted to engage between the walls of this spirally cut away portion.

The numeral 24 indicates a dial plate provided with a suitable scale and detachably secured to the top of the body portion 1. This dial plate 24 is constructed in the form of a disk and is provided with a central opening adapted for the reception of the projecting pintle 20 of the roller 22, which is adapted to extend above the dial plate and to engage a suitable indicator hand 25.

Pivotally mounted upon the threaded plug 7 is a suitable spring member 26, which has its free end contacting with the arm 17 and which is adapted to exert upward pressure thereon so as to force the offset portions 16 of the operating arm into engagement with the projecting finger 15 and thereby force the shoulder of the needle 13 against

the shoulder formed within the bore 10 of the arm 9, and at the same time retain the indicator finger 25 at a neutral position with regard to the scale upon the dial plate 24.

5 It will be apparent that by pivotally connecting the spring member 25 with the threaded plug 7, and centrally thereof, the said plug may be freely rotated within its threaded bore 16 without rotating the said
10 spring 25, and at the same time effectively adjusting the pressure of the spring in relation to the arm 17.

From the above description, taken in connection with the accompanying drawing it
15 will be noted that I have provided an extremely simple and effective micrometer indicator of the class described, one wherein the operating arm may be readily adjusted as desired and one which can be manufactured at a comparatively low cost.

20 Having thus fully described the invention what is claimed as new is:

1. In a device for the purpose set forth, a body member, a needle rotatably and slid-
25 ably mounted within the body member, an L-shaped arm pivotally connected with the body and normally contacting the inner end of the needle, means for limiting the outward movement of the needle, a resilient element contacting the L-shaped lever and
30 adapted to force the needle outwardly from the body, a roller member provided with a spiral groove, an offset upon the longitudinal

arm of the L-shaped lever engaging within the spiral groove, a dial plate upon the body, and an indicating hand carried
35 by the roller positioned directly above the dial.

2. In a device for the purpose set forth, a body, a needle member rotatably and slid-
40 ably mounted within the body and having one of its ends projecting therefrom, means for limiting the sliding movement of the needle, an L-shaped lever pivotally connected with the body and having one of its
45 arms reduced and contacting the inner end of the needle, a resilient element normally contacting the longer arm of the lever to force its shorter arm against the inner end
50 of the needle, to project the outer end of the needle from the body, means for adjusting the tension of the resilient element, a roller provided with trunnions within the body, said roller having its outer face provided
55 with a spiral groove, the inner arm of the L-shaped lever having an offset engaging within the spiral groove, a dial plate upon the body, and an indicating hand secured to one of the trunnions of the roller and
60 positioned directly above the dial.

In testimony whereof I affix my signature in presence of two witnesses.

EDWIN PEARSON.

Witnesses:

A. W. HATCH,
AUG. HANSON.