Dec. 20, 1932. A. OTT 1,891,572

ELECTRIC FILLING FEELER FOR LOOMS

Filed Sept. 30, 1930 3 Sheets-Sheet 1

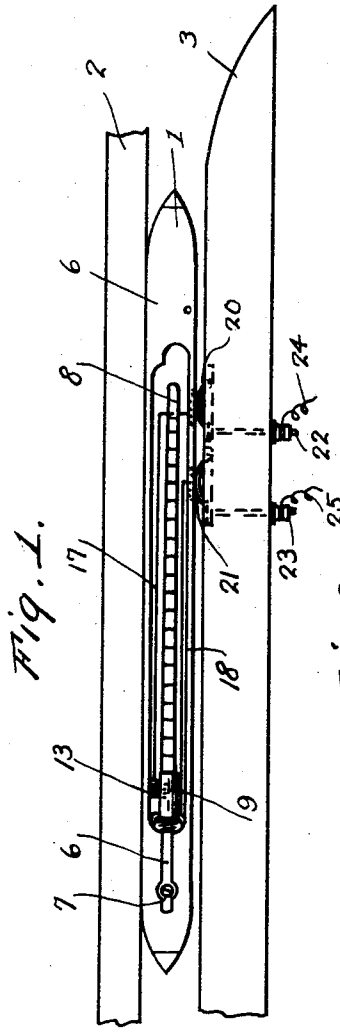


Fig. 1.

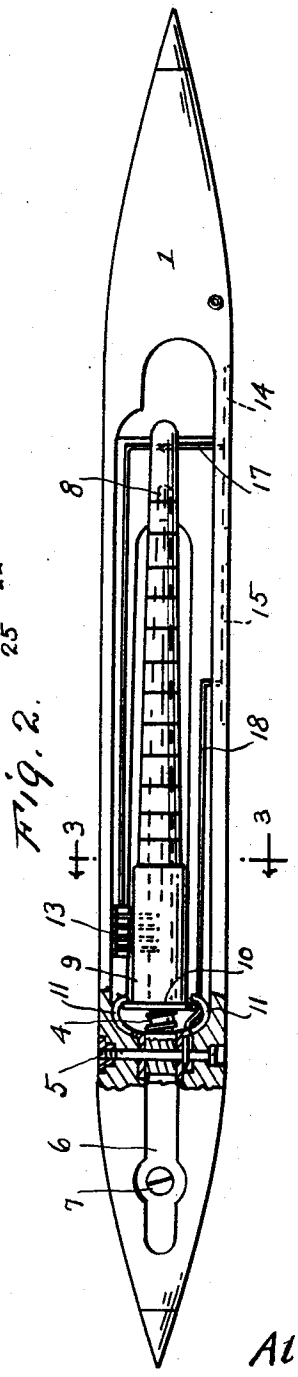


Fig. 2.

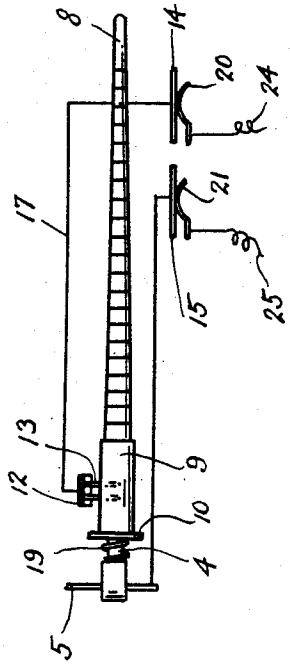


Fig. 4.

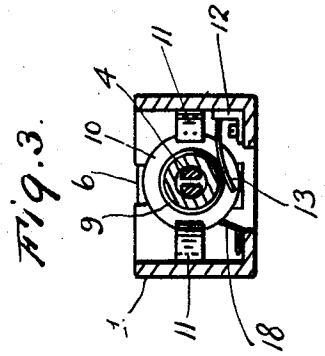


Fig. 3.

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ELECTRIC FILLING FEELER FOR LOOMS

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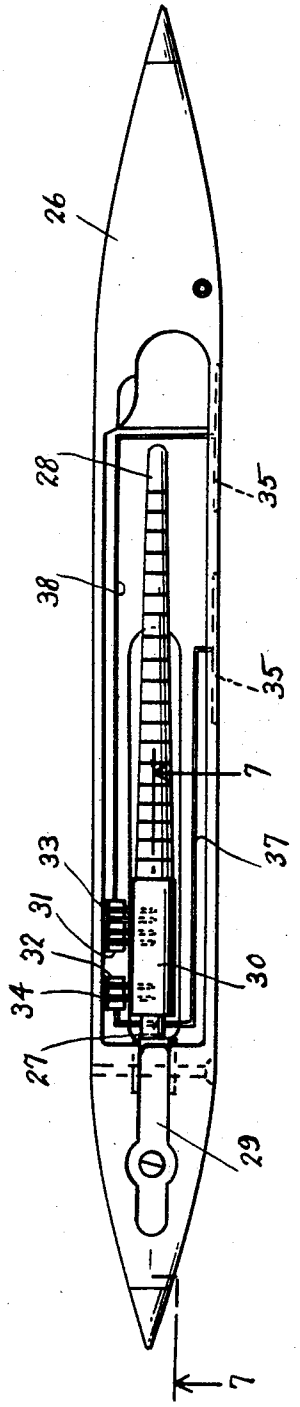


Fig. 6.

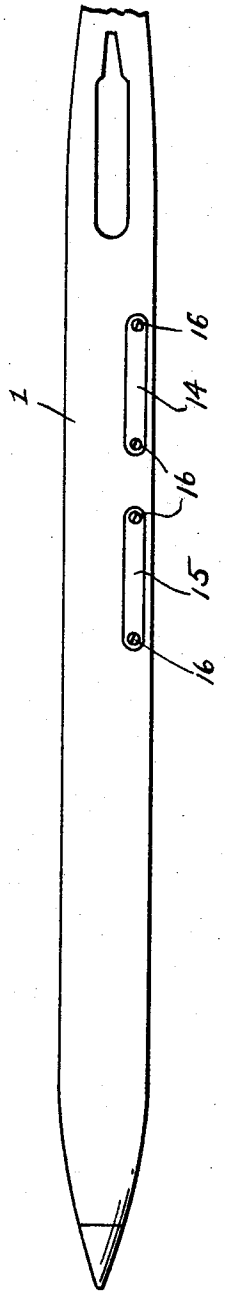


Fig. 5.

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ELECTRIC FILLING FEELER FOR LOOMS

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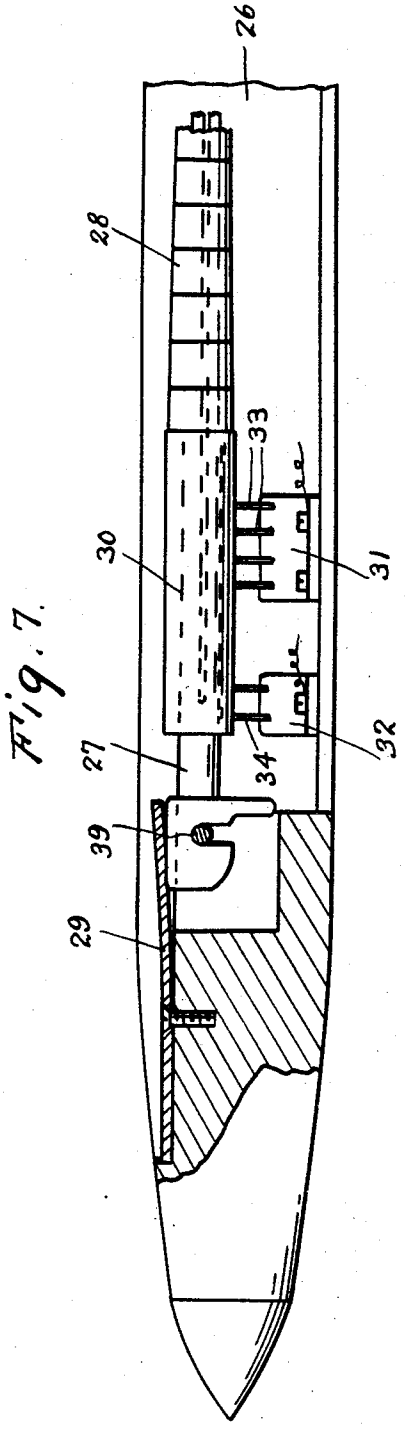


Fig. 7.

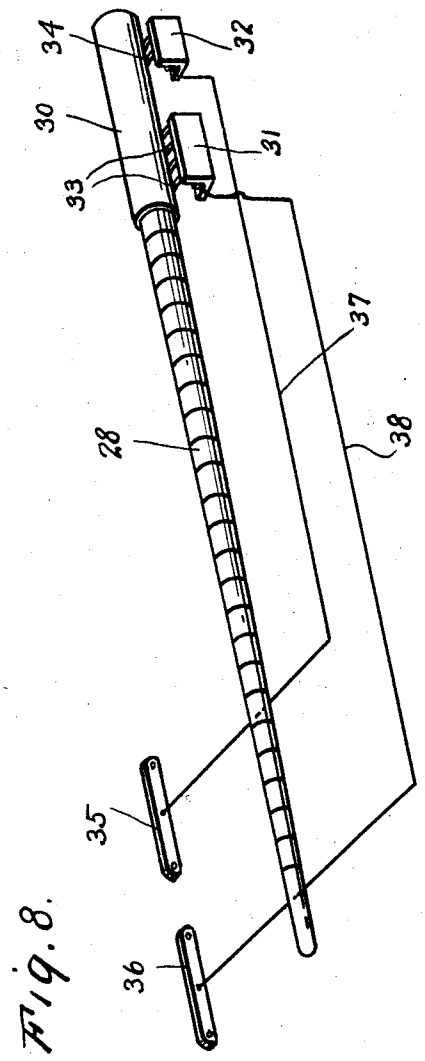


Fig. 8.

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Patented Dec. 20, 1932 1,891,572

UNITED STATES PATENT OFFICE

ALEXANDER OTT, OF SCRANTON, PENNSYLVANIA

ELECTRIC FILLING FEELER FOR LOOMS

Application filed September 30, 1930. Serial No. 485,514.

This invention relates to an electric filling feeler for looms and has for one of its important objects to provide, in a manner as hereinafter set forth, a device of this character embodying a novel construction and arrangement whereby the necessity of providing comparatively large slots or openings in one side of the shuttle and the adjacent box plate is eliminated.

Other objects of the invention are to provide an electric filling feeler for looms of the character which will be simple in construction, strong, durable, efficient in operation and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention may become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:—

Figure 1 is a view in top plan showing a shuttle and portions of a shuttle box equipped with an electric filling feeler in accordance with this invention.

Figure 2 is a view principally in top plan and partly broken away in section of the shuttle.

Figure 3 is a cross sectional view taken substantially on the line 3—3 of Figure 2 looking in the direction indicated by the arrows.

Figure 4 is a diagrammatic view showing the electric circuit and the contacts.

Figure 5 is a view in side elevation of the shuttle showing the contact plates mounted thereon.

Figure 6 is a top plan view of a shuttle showing a slightly modified form of the invention.

Figure 7 is a fragmentary view partly in longitudinal section and taken substantially on the line 7—7 of Figure 6.

Figure 8 is a diagrammatic view of the electric circuit embodied in the modified form of the invention illustrated in Figures 6 and 7.

Referring to the drawings in detail, it will be seen that the reference numeral 1 designates a shuttle adapted for reception between the box plates 2 and 3 of a loom (not shown). A spindle 4 is mounted for swinging movement in the usual manner in the shuttle 1 on the transverse pin 5 and the usual flat, metallic spring 6 is secured on one end portion of the shuttle 1 by the screw 7 and is engaged with the pivoted end portion of the spindle 4 for yieldingly retaining said spindle in operative position in the shuttle. A filling carrier such as a cop, quill, tube, spool or the like 8 is removably mounted on the spindle 1 and has mounted on one end the metallic ferrule or tubular contact member 9. A flange 10 is formed integrally on one end of the tubular contact 9 for engagement by the resilient metallic retaining fingers 11 which releasably retain the cop or the like 8 in position on the spindle 4.

Mounted in the shuttle 1 adjacent the tubular contact 9 is an angular metallic bracket 12 (see Figure 3) from which the resilient metallic feeler fingers 13 extend for electric engagement with the tubular contact 9 when the thread or yarn is nearly exhausted from the cop or the like 8. A pair of longitudinally spaced elongated contact plates 14 and 15 are countersunk in the outer side wall of the shuttle 1 which is adjacent the box plate 3, said contact plates being secured in any suitable manner, as by the screws 16. The contact plate 14 is electrically connected with the metallic bracket 12 by the conductor wire 17 which passes through the side wall of the shuttle 1 for engagement with said contact plate 14. A current conducting wire 18 has one end connected with the pivot pin 5 and its other end extending through the side wall of the shuttle 1 and connected to the contact plate 15. A coiled spring 19 encircles the spindle 4 and is engaged with the cop 8 in