

L. LOWENSTEIN.
WIGGLER.
APPLICATION FILED MAY 16, 1918.

1,300,428.

Patented Apr. 15, 1919.

Fig. 2

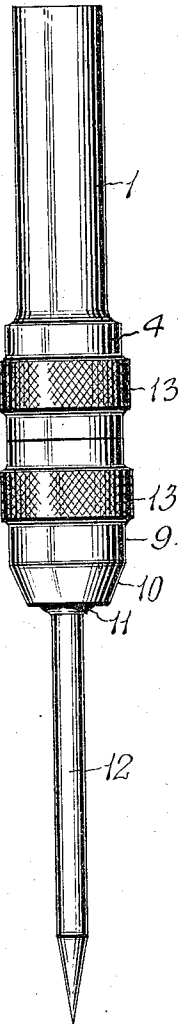


Fig. 3.

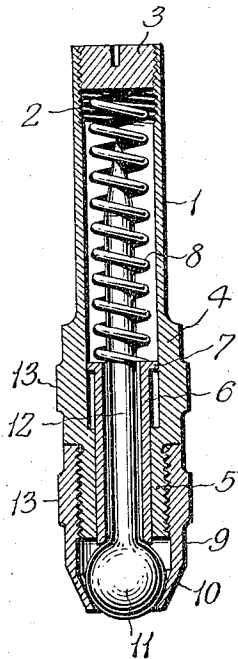
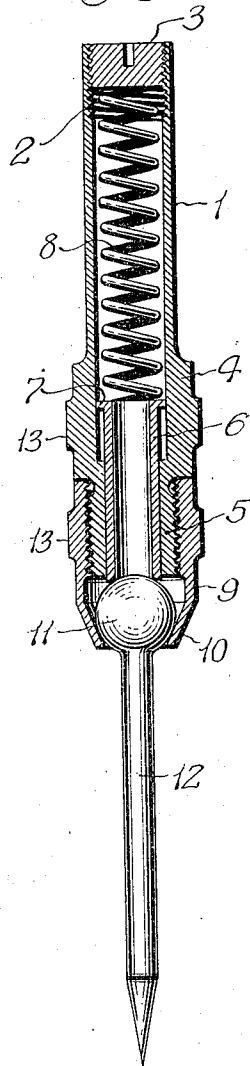


Fig. 1.



Witness

Chas. W. Stauffer
Charles H. Butler

Inventor

Louis Lowenstein

By

Laurel Wadsworth

Attorney

UNITED STATES PATENT OFFICE.

LOUIS LOWENSTEIN, OF DETROIT, MICHIGAN.

WIGGLER.

1,300,428.

Specification of Letters Patent.

Patented Apr. 15, 1919.

Application filed May 16, 1918. Serial No. 234,866.

To all whom it may concern:

Be it known that I, LOUIS LOWENSTEIN, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Wigglers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to wigglers, and has special reference to that type of machinists' tool wherein a spring pressed tubular bearing is employed for holding a needle, indicator or wabblor normally stationary. In this type of tool, as heretofore designed, it was impossible to easily increase or decrease the tension of the spring bearing against the tubular bearing, and even after being adjusted, there was a possibility of the adjusting means slipping and releasing the tension on the tubular bearing. Then again, it was possible for the tubular bearing to become displaced relative to the spindle of the tool, and my invention now aims to obviate these defects by a simple construction that will be hereinafter considered and then claimed.

Referring to the drawing,

Figure 1 is a longitudinal sectional view of a wiggler in accordance with my invention; Fig. 2 is a plan of the same, and

Fig. 3 is a longitudinal sectional view of the wiggler showing the needle reversed and housed within the spindle of the tool.

The wiggler comprises, a tubular spindle 1 having the inner end thereof interiorly screwthreaded, as at 2, to receive a detachable and adjustable plug 3.

The outer end of the tubular spindle 1 has an enlarged portion 4 terminating in a reduced exteriorly screwthreaded end 5 that communicates with the bore of the spindle 1.

Slidable in the reduced end 5 is a tubular bearing 6 and the inner end of said bearing has a peripheral flange or collar 7 adapted to prevent the bearing from being ejected from the end 5 of the spindle.

Interposed between the tubular bearing 6 and the plug 3 is a coiled compression spring 8, and the tension or expansive force of this spring tends to constantly shift the bearing 6 outwardly, while the tension of the spring may be increased or decreased by adjusting the plug 3 in the end of the spindle 1.

Screwed on the reduced end 5 is a retaining sleeve 9 having a contracted end 10 adapted to engage the inner spherical end

or ball 11 of a needle 12 and retain the ball 11 on the outer end of the tubular bearing 6. By tightening the retaining sleeve 9 the needle 12 may be fixed or with proper adjustment of the retaining sleeve 9, the needle 12 may wobble relative to the spindle. To facilitate adjusting the sleeve 9, said sleeve and the enlarged portion 4 of the spindle 1 have knurled or roughened portions 13.

The tubular bearing 6 permits of the needle 12, as shown in Fig. 1, being reversed and extended through the tubular bearing into the coiled spring 8 and held by the retaining sleeve 9, as shown in Fig. 3.

The operation of the wiggler is similar to any mechanic's tool of this type, and it is thought that the utility of the structural features of my tool will be apparent without further description.

What I claim is:—

1. A wiggler comprising a tubular spindle, a tubular bearing slidable in the outer end thereof, an adjustable plug in the inner end of said spindle, a coiled spring interposed between said plug and the inner end of said tubular bearing, a needle having a spherical end bearing against the outer end of said tubular bearing, and a retaining sleeve on the outer end of said spindle retaining the spherical end of said needle in engagement with said tubular bearing.

2. The combination with a wiggler spindle, having a needle adjustably mounted therein, of a tubular bearing in said spindle abutting against the inner end of said needle, a spring in said spindle maintaining said bearing against said needle, means at the inner end of said spindle adapted for regulating the tension of said spring, and means in connection with said bearing adapted to prevent its ejection from the outer end of said spindle.

3. A wiggler comprising a tubular spindle having the outer end thereof reduced, a tubular bearing slidable in the outer reduced end of said spindle and provided with a flange to prevent its ejection from the outer end of said spindle, a retaining sleeve on the outer end of said spindle, a needle having the inner end thereof held against the outer end of said tubular bearing by said retaining sleeve, and tension means in the greater part of said spindle bearing against the inner end of said tubular bearing adapted to hold said bearing in frictional engagement with the end of said needle.

4. The combination of a spindle, a needle, a connection between said spindle and needle permitting of relative movement therebetween, said connection allowing the needle to be detached from the spindle, means carried by the spindle yieldably holding the needle against movement relative to the spindle, and means retaining said yielding means from disengagement from the spindle when the needle is detached.
5. The combination of a spindle, a needle adjustably and removably connected thereto, a bearing in said spindle engaging the inner end of said needle, a spring in the spindle yieldingly holding said bearing in engagement with said needle, and means in connection with said bearing adapted to retain it against engagement from the spindle when the needle is disengaged from the spindle.
- In testimony whereof I affix my signature in the presence of two witnesses.
- LOUIS LOWENSTEIN.
- Witnesses:
KARL H. BUTLER,
ANNA M. DORR.

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