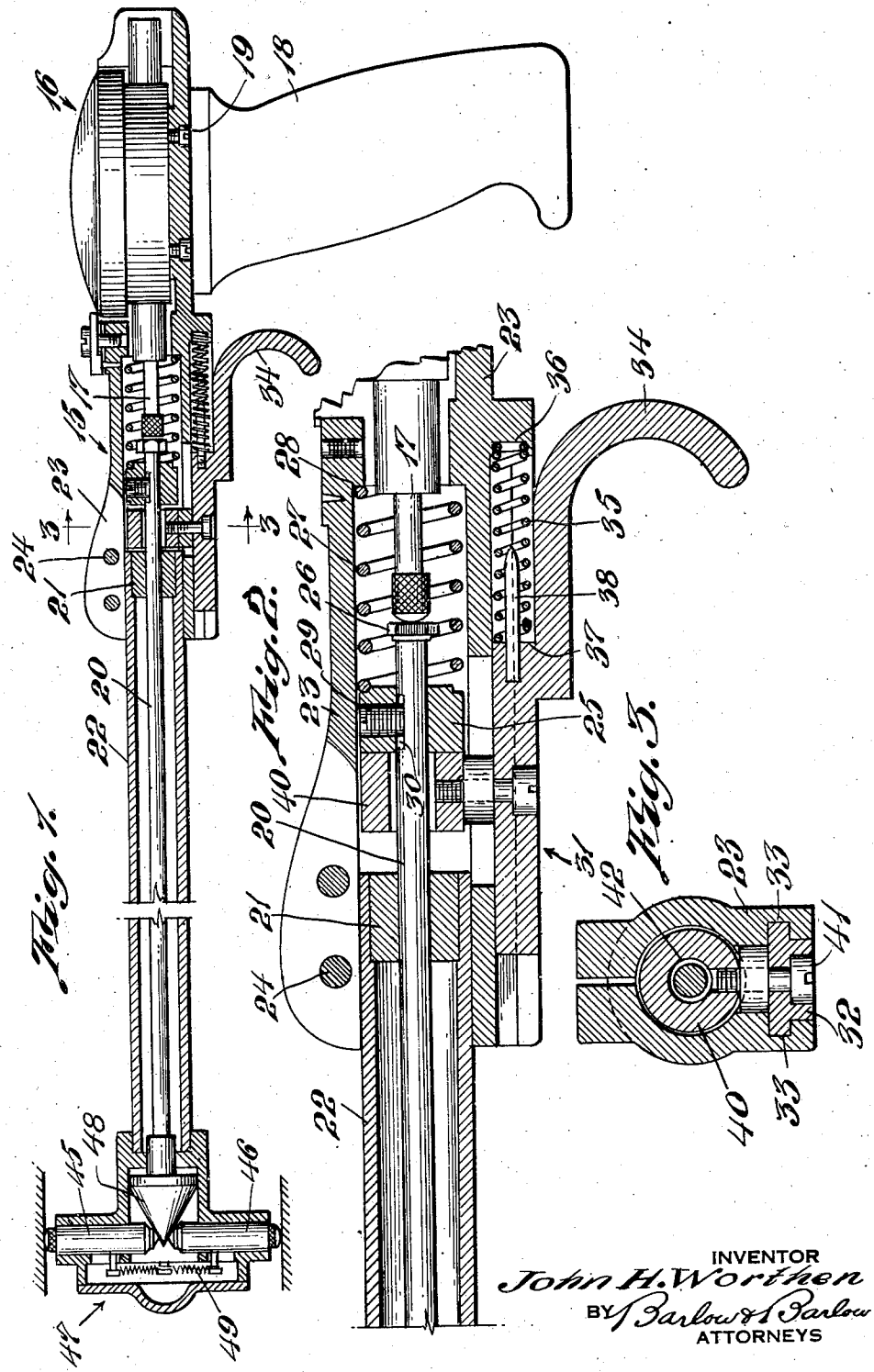
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BORE GAUGE

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INVENTOR
John H. Worthen
BY Barlow & Barlow
ATTORNEYS

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BORE GAUGE

John H. Worthen, Providence, R. I., assignor to Federal Products Corporation, a corporation of Rhode Island

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2 Claims. (Cl. 33—147)

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This invention relates to a bore gage such for instance as is used for gun barrels and the like.

This invention is an improvement upon the bore gage shown in Patent No. 2,312,222 dated February 23, 1943. In the operation of the bore gage in Patent 2,312,222 it is found that the pressure of the finger on the trigger will influence the reading on the dial gage. This may occur at times without the operator suspecting that the hand is influencing the reading.

One of the objects of this invention is to provide a construction in which the hand will not influence the reading on the dial indicator.

Another object of this invention is to provide a trigger which is so mounted that when pressure is released the trigger will positively move to a position so that no influence may be had on the dial indicator.

More specifically this invention consists in independently mounting the trigger and the actuating mechanism for the dial indicator bore gage.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings:

Fig. 1 is a longitudinal sectional view of the bore gage;

Fig. 2 is a sectional view of a fragmental portion on a larger scale; and

Fig. 3 is a section on line 3—3 of Fig. 1.

In proceeding with this invention instead of utilizing a spring which moves the actuating rod toward released position and which also moves the trigger to released position I mount the trigger completely independently of the actuating rod permitting this trigger to move or slide relative to the actuating rod and I utilize an additional and separate spring for moving the trigger away from the dial indicator so that when pressure is released on the trigger the trigger will be moved a distance beyond any connection which it may have with the actuating rod whereby influence on the dial indicator may be noticed.

The details of this bore gage are shown in the above-mentioned Patent No. 2,312,222 except for the trigger actuation and therefore reference may be had generally for the construction of the gage to the above-mentioned patent.

The body portion is designated generally 15 and consists of a section having a circular recess for the reception of a dial indicator designated generally 16 having an operating plunger 17 extending therefrom. Upon movement of this

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plunger 17 the dial indicator is actuated. A handle 18 is secured to the body 15 by bolts 19 so that the device may be held by the operator.

An actuating rod 20 is slidably mounted in bearing 21 which is supported in the section 22 held in the section 23 by the tightening bolts 24. An abutment 25 is secured upon the rod 20 adjacent its end 26 which contacts the plunger 17. A spring 27 engages abutment 28 formed on the bore of the section 23 and engages abutment 25 to urge the actuating rod 20 away from the plunger 17. The set screw 29 engages the bottom of a recess 30 in the actuating rod 20 so as to hold the abutment firmly in position on the rod.

A trigger member designated generally 31 consists of a portion 32 which is T-shape in cross section to fit within the channels 33 in the body section 23 so as to slidably mount this trigger member in the body. A handle portion 34 may be engaged by the finger for actuation of the trigger. Spring 35 engages abutment 36 on the section 23 and also an abutment 37 on the trigger so as to urge this trigger in a direction away from the plunger 17. The guide pin 38 carried by the trigger member may extend through the center of the helical coil spring 35.

A collar 40 is secured by bolt 41 to the trigger 31 and is provided with an opening 42 to encircle the rod 20. This opening or bore 42 is of a size so as to permit this collar to move axially along the actuating rod 20 without touching the same. The collar is designed to engage the abutment 25 which is secured to the rod 20 so that further movement of the collar in the direction toward the plunger 17 will cause the actuating rod 20 to move for the purpose of withdrawing the feeler contacts 45, 46, which are in the gaging head designated generally 47. When the rod 20 and any extensions thereof are withdrawn the conical end 48 moves to the right as shown in Fig. 1 which will permit the feelers 45 and 46 to be drawn inwardly by the springs 49 connected to these feelers and tending to move the same inwardly.

It will be readily apparent that after the feelers are moved inwardly and the gaging head inserted in the bore pressure may then be released from the trigger 31 permitting the rod 20 to move inwardly to expand the feeler fingers to the amount permitted by the bore and the trigger to move by spring 35 so that collar 40 disengages abutment 25 whereupon the dial gage may be read for the correct reading without influence of the trigger.

I claim:

1. In a bore gage, a body member, a dial indicator carried thereby having an operating plunger, a slidably mounted actuating rod engageable with said plunger, a trigger slidably mounted on the body member, means connecting said trigger to said rod including an abutment secured on said rod, an abutment secured on said trigger and extending about said rod and free thereof, one in the path of sliding movement of the other, a spring urging said rod away from said plunger and a spring urging said trigger away from said plunger.

2. In a bore gage, a body member, a dial indicator carried thereby having an operating plunger, a slidably mounted actuating rod engageable with said plunger, a trigger slidably mounted on the body member to be moved in directions parallel with said rod, a spring urging said rod away from said plunger, a spring urging said trigger away from said plunger, an abutment on said rod and a collar carried by said trigger extending about said rod and free thereof to engage said abutment and move the rod toward the plunger when the trigger is moved toward the plunger.

JOHN H. WORTHEN.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,312,222	Tanner	Feb. 23, 1943
2,338,190	Loxham	Jan. 4, 1944

FOREIGN PATENTS

Number	Country	Date
14,582	Great Britain	Oct. 15, 1915