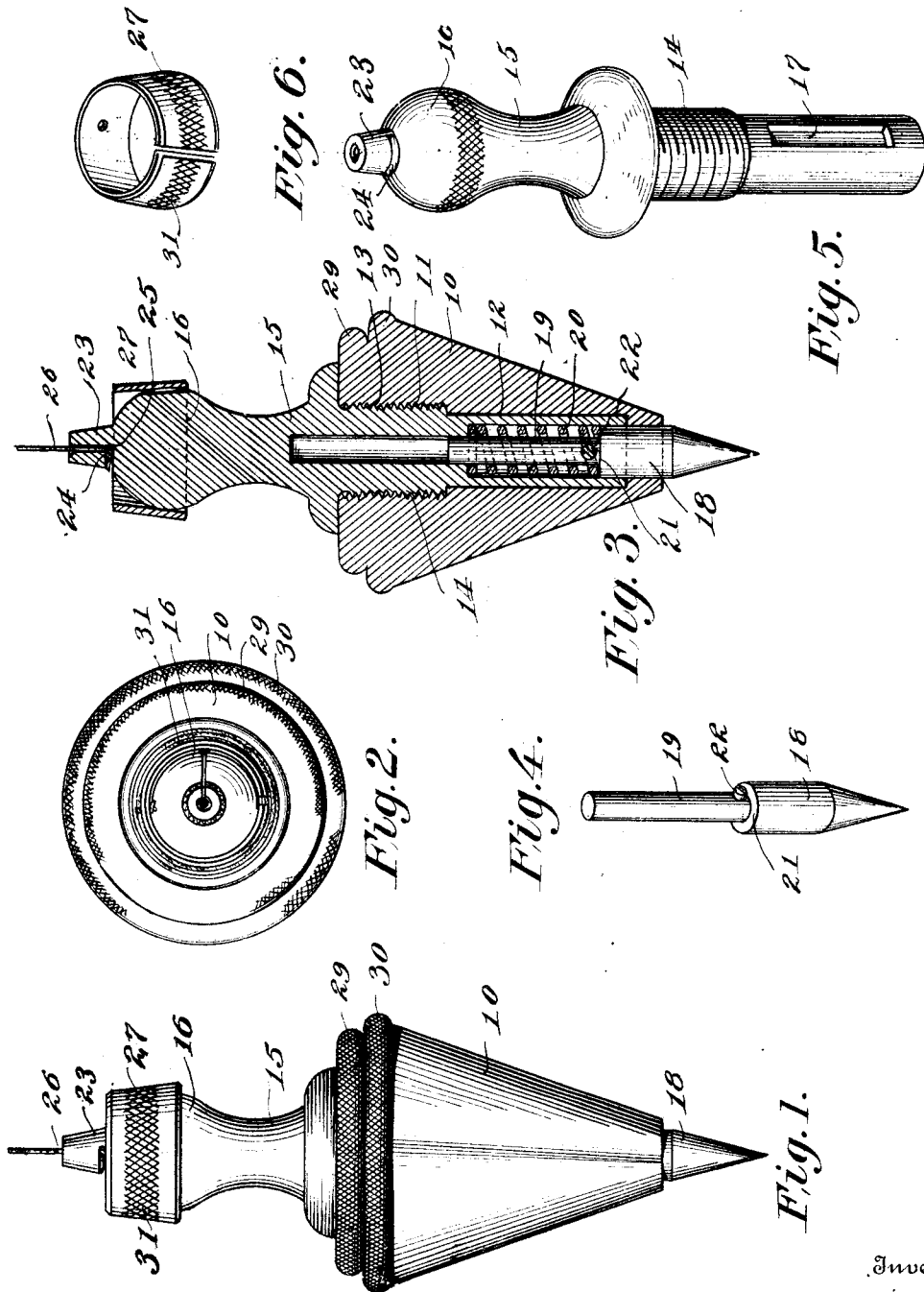


1,025,828.

Patented May 7, 1912



Witnesses

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PLUMB-BOB.

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To all whom it may concern:

Be it known that I, JOHN PAUL, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Plumb-Bobs, of which the following is a specification.

The invention relates to plumb weights, and more particularly to the class of plumb bobs for use by surveyors, carpenters, mechanics, wheel-wrights or the like.

The primary object of the invention is the provision of a plumb bob in which the tip thereof is so mounted that the same may recoil when meeting an obstruction, thus preventing the bending thereof or the breaking thereof, as is ordinarily experienced in the use of rigid tips.

Another object of the invention is the provision of a bob in which the suspension member thereof when not in use is prevented from being snarled or tangled, thus enabling the bob to be readily and quickly suspended for use.

A further object of the invention is the provision of a bob in which the weight and size thereof may be readily increased or decreased according to the character of work with which the same is to be employed, thereby enabling the bob, when reduced in size and weight, to be used in contracted places.

A still further object of the invention is the provision of a bob in which the adjunct parts thereof may be readily assembled and disassembled, thus, by reason of the convenient disassembling thereof, it enables the necessary repairs to be made or the replacing of new parts in lieu of old ones, should the occasion require.

A still further object of the invention is the provision of a bob which is simple in construction, thoroughly reliable and efficient in operation, and inexpensive in manufacture.

With these and other objects in view, the invention consists in the construction, combination and arrangement of parts, as will be hereinafter more fully described, illustrated in the accompanying drawings, and pointed out in the claims hereunto appended.

In the drawings: Figure 1 is a side elevation of a bob and its suspension means constructed in accordance with the invention. Fig. 2 is a top plan view thereof when the

suspension means is wrapped-upon the bob when not in use. Fig. 3 is a vertical longitudinal sectional view through the bob. Fig. 4 is a detail perspective view of the displaceable tip or point. Fig. 5 is a detail perspective view of the removable barrel of the bob. Fig. 6 is a perspective view of the knurled binding collar removed from the end of the barrel.

Similar reference characters indicate corresponding parts throughout the several views of the drawings.

Referring to the drawings by numerals, the bob comprises a body 10, the same being preferably conical-shaped, and is provided with a central bore opening through opposite ends thereof, the bore being formed with stepped diameters 11 and 12, respectively, of varying sizes to each other, the diameter 11 being formed with screw threads 13, with which engage external screw threads 14 formed on the barrel 15 removably fitted within the bore in the body 10, the barrel 15 being of cylindrical shape and hollow, and is provided at one end with a spool-like knob 16, for a purpose as will be hereinafter more fully described.

Formed in the wall of the barrel 15 is an elongated slot 17 and working within this barrel is a displaceable or recoiled point or tip 18, the latter normally protruding outside of the body 10 through the contracted end of the central bore therein, the tip or point 18 being provided with a reduced stem 19 which extends into the barrel 15, and surrounding this stem is a coiled expansion spring 20, one end of which has its bearing upon a shoulder 21 formed on the stem 19 of the tip or point, the opposite end of the spring 20 being engaged with a suitable seat formed in the barrel. Engaged in the stem 19 is a guide screw 22, the head thereof protruding into the slot 17 in the barrel 15, thus the said screw 22 will move in the slot 17, thereby preventing the turning of the tip or point 18 but allowing the same to recoil within the body 10 of the bob. Also this guide screw 22 will limit the outward and inward movement of the tip or point, when recoiled within the body or protruding outside of the same.

Formed on the spool-like knob 16 is a tapered lug 23, the same being provided with a notch 24 in which is engaged the knotted end 25 of a suspension cord 26, the latter being threaded through a suitable

opening located centrally in the lug 23 and intersecting the said notch 24, the knob 16 being surrounded by a split collar 27, the latter being provided with a central opening adapted to receive the end of the knob 16, whereby the said collar 27 may be wedged on the knob 16 for holding the suspension cord 26 and preventing it from unwinding, after the latter has been wound upon the barrel 15, and in this manner obviating the possibility of the said cord 26 becoming tangled or snarled when the bob is not in use.

The body 10, at its larger end, and the knob 16 are provided with external knurled surfaces 29 and 30, respectively, so that the said body 10 may be unscrewed from its engagement with the barrel 15, when it is desired to remove the barrel from the said body. Thus it will be seen that the bob may be lightened by removing the body 10 whereupon the barrel 15 may be utilized as a plumb bob in contracted places. Also the collar 27 is provided with a knurled external surface 31 which permits the turning thereof for the wedging or unwedging of the same on the knob 16 to hold the suspension cord wrapped about the barrel, or permit it to be unwound for the suspension of the bob.

When the bob is suspended by the suspension cord 26, and should the tip or point 18 contact with an obstruction, the said tip or point will move inwardly within the barrel 15, thus obviating injury thereto, nor will the device get out of true when in use. What is claimed is:

1. A bob of the class described, comprising a body having a bore therethrough, a barrel removably fitted in the bore, suspension means connected with the barrel, and a spring controlled tip carried by the barrel.

2. A bob of the class described, comprising a body, a barrel removably fitted therein and having a spool-like knob, a tapered lug formed on the knob, suspension means engaged with the lug, binding means adapted to be wedged upon said knob for holding

the suspension means when wrapped upon the barrel, and a recoiled point carried by the barrel, and normally protruding outside of the body.

3. A bob of the class described, comprising a conical-shaped body, a barrel detachably fitted in the body, a point detachably connected with the barrel and normally protruded outside of the body, a knob on the barrel, and suspension means connected with the knob and having a split collar engageable with said knob when said means is wrapped about the barrel.

4. A bob of the class described, comprising a conical-shaped body, a barrel fitted in the body, a point connected with the barrel and normally protruded outside of the body, a knob on the barrel, a cord connected with the knob on the barrel for suspending the same with the body, and a split collar removably engaged with the knob when said cord is wrapped about the barrel.

5. A bob of the class described, comprising a conical-shaped body, a barrel detachably fitted in the body, a point detachably connected with the barrel and normally protruded outside of the body, means connected with the barrel for suspending the same with the body, and spring means acting on the point for holding it in its protruded position.

6. A bob of the class described, comprising a conical-shaped body, a barrel detachably fitted in the body, a point detachably connected with the barrel and normally protruded outside of the body, means connected with the barrel for suspending the same with the body, spring means acting on the point for holding it in its protruded position, and a clamping collar carried by the barrel for engagement with the suspension means when wrapped upon the barrel.

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

JOHN PAUL.

Witnesses:

H. M. STOWE,

JAMES D. CANTILLON.