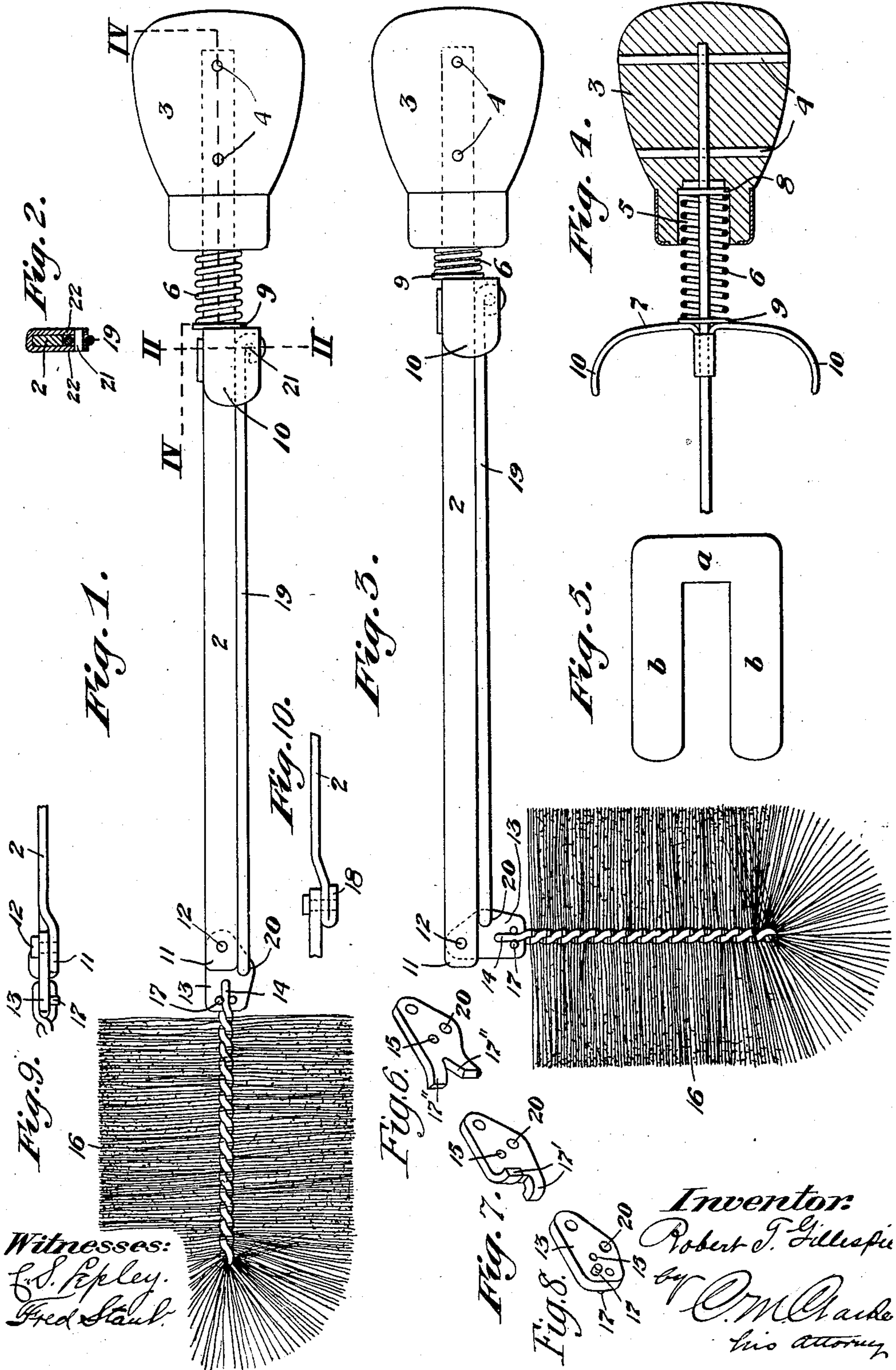


903,186.



Witnesses:
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Fred Staul.

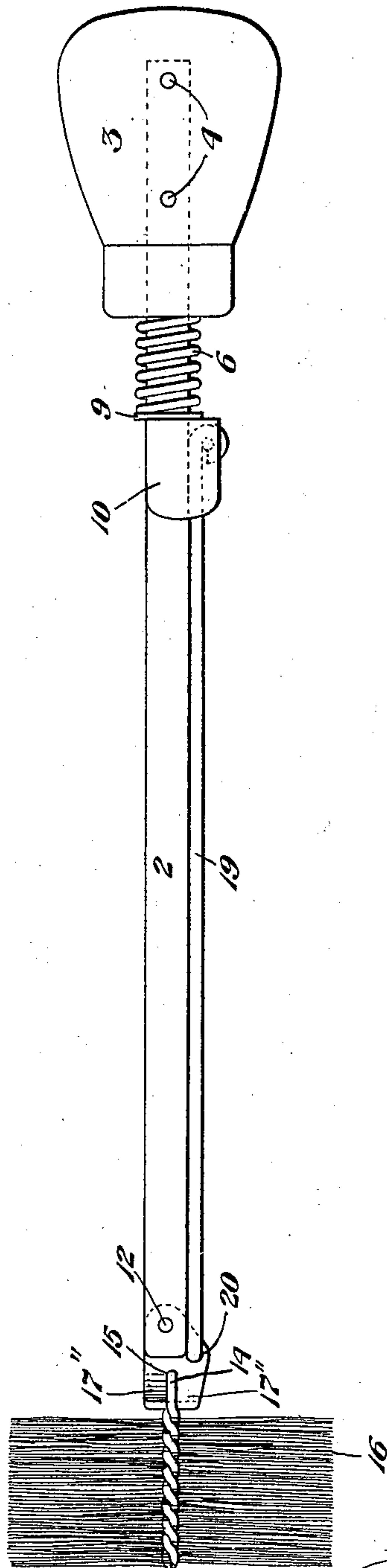
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903,186.

R. T. GILLESPIE.
CLEANING BRUSH.
APPLICATION FILED DEC. 2, 1907.

Patented Nov. 10, 1908.
2 SHEETS—SHEET 2.

Fig. 11



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UNITED STATES PATENT OFFICE.

ROBERT T. GILLESPIE, OF SOUTH ORANGE, NEW JERSEY.

CLEANING-BRUSH.

No. 903,186.

Specification of Letters Patent.

Patented Nov. 10, 1908.

Application filed December 2, 1907. Serial No. 404,786.

To all whom it may concern:

Be it known that I, ROBERT T. GILLESPIE, a citizen of the United States, residing at South Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Cleaning-Brushes, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention refers to improvements in cleaning brushes for cleaning the interior of bottles, cruets, jars or other similar vessels, and relates particularly to the mechanism for actuating the pivotally-mounted cleaning brush, the pivoted brush-holding block, and to other features of construction herein-after described.

Referring to the drawings:—Figure 1 is a longitudinal side view of the complete device, showing the brush erected in alinement with the holding stem. Fig. 2 is a cross sectional view on the line II—II of Fig. 1. Fig. 3 is a view similar to Fig. 1 showing the brush-operating rod retracted and the brush in adjusted position. Fig. 4 is a longitudinal horizontal sectional view on the line IV—IV of Fig. 1. Fig. 5 is a plan view of the blank for making the retracting finger terminal. Figs. 6, 7 and 8 are detail views showing different forms of the brush-holding block. Fig. 9 is a detail view of the joint between the end of the holding rod and the brush-holding block. Fig. 10 is a similar view showing a modified construction. Fig. 11 is a view similar to Fig. 1 showing the use of the brush holding block in Figs. 6 and 7.

In the drawings 2 is the main shank or stem of the device provided at one end with a holding handle 3, preferably pear-shaped, adapted to be gripped against the palm of the hand by the operator, into which handle the stem 2 is inserted and secured by cross-pins 4, as shown in Fig. 4, or in any other suitable manner.

At its forward end the handle is provided with a cylindrical recess 5, into which projects a coiled spring 6, which embraces the rear portion of the stem and against which the finger terminal 7 bears when pressed backwardly to actuate the brush.

Washer bearings 8, 9, are preferably provided for each end of the spring 6 to insure effective operation, although the spring may be, if desired, merely seated against the in-

ner end of the cylindrical socket 5 and against the wings of the finger terminal.

Finger terminal 7 is conveniently formed from the blank shown in Fig. 5, of sheet metal, having a middle portion *a*, and laterally arranged wings *b*, *b*, adapted to be bent at its middle portion downwardly around the top edge and sides of stem 2 as shown in Fig. 2 and then outwardly rounded at the terminals 10, 10, to provide finger-gripping extremities, as clearly shown in Fig. 4. When so bent the finger terminals may be pressed backwardly against spring 6 and will be retracted outwardly thereby, as will be readily understood. At its other end the holding stem 2 is provided with the pivoting terminal 11, which may be off-set from alinement with the main body portion of the stem, as shown in Fig. 7, and to which is secured, by screw or rivet 12, the brush-holding block 13. This block is so designed that it provides means for connection therewith of the bristle-holding wires 14, which pass through the hole 15 at the forward end of the block and extend forwardly thereof and are spirally twisted together, as shown, in engagement with the brush bristles 16, as will be readily understood.

Block 13 is provided in front of the wire hole 15 with laterally extending projections 17, adapted to form abutments against which the bristle-holding wire 14 will engage so as to insure rigid attachment, and these abutments may be conveniently made in the form of studs as shown in the principal figures of the drawings and in the detail view, Fig. 8. They may also be otherwise made by bending the integral metal of the block outwardly at opposite sides above and below as indicated at 17' or 17'', as shown in Figs. 7 and 6.

With either construction, when the wire 14 is introduced through the hole 15 and then spirally twisted in tight engagement with the front end of the block, it will engage said abutments and be drawn together between them, thus tightly connecting it, so as to form a rigid connection between the pivoted block 13 and the cleaning brush.

In mounting the block 13 on its pivot 12 I may employ the screw construction shown in Figs. 1, 2 and 9. If desired, the stem 2 may be redoubled upon itself at the pivoting end, as indicated at 18, Fig. 10, so as to provide sufficient metal for tapping of the screw

2, or for counter-sinking of the rivet head, if a rivet is employed, and either construction may be used with good results.

The operation of the cleaning brush is effected through the connecting operating rod 19 pivotally attached at 20 to the brush-holding block 13 at one side of its pivotal mounting 12. The other end of the connecting rod is pivotally attached as at 21, between the double cheeks 22 of the middle bent portion of the finger terminal, by the rivet pin or screw. As thus constructed it will be seen that as the finger terminals 7 are grasped by the fingers and depressed backwardly against the spring 6, the brush will be thrown out laterally of the shank to any desired angle. Upon releasing the finger terminals the spring will extend it into alinement with the shank 2, thereby permitting easy entrance or exit into or from the vessel.

The operation of the device will be readily understood from the foregoing description and it will be found to provide a convenient, easily adjusted construction for the purpose, capable of manufacture at a small cost, not liable to get out of order and will be found in practice to give excellent results, while the manipulation is rendered easy and convenient.

Having described my invention, what I claim is:—

1. In a cleaning brush, a combination of a main stem having a pivotally-mounted brush portion, an operating rod pivotally connected to the brush portion, a holding handle having a front recess, a coiled spring seated in said recess and surrounding the main stem, and a finger terminal slidably mounted on the main stem said terminal being pivotally connected with the operating rod and bearing backwardly against said spring, substantially as set forth.

2. A cleaning brush of the character described comprising a holding handle provided with a front spring-receiving socket and main shank inserted centrally into said handle and secured therein, a coiled spring, a pivotally-mounted brush-holding block at the front end of the shank provided with an

attached brush, a slidably mounted finger terminal device mounted on the main shank, and an operating rod pivotally connected at one end of the brush-holding block and at the other end to said finger terminal, substantially as set forth.

3. In a cleaning brush, the combination with the main stem, its attached handle provided with a coiled spring encircling the stem and seated in a recess in the handle, the pivotally-mounted brush-holding block having the connected brush, and connecting rod pivotally attached to the brush-holding block, and a double-ended finger terminal bent around to embrace the main stem and adapted to bear backwardly against said spring and pivotally connected with the other end of said operating rod, substantially as set forth.

4. In a cleaning brush, the combination with a holding handle, of a flat stem connected therewith, a cushioning spring embracing the stem and seated in a recess in the handle, a pivotally-mounted brush-holding block and brush, and the pivotally attached operating rod therefor; of the finger terminal formed of sheet metal bent around and slidably embracing the main stem and pivotally connected between its sides with the other end of the operating rod, substantially as set forth.

5. The combination with a main stem, its finger terminal and operating rod; of a brush holding block pivotally mounted at the end of the stem and pivotally connected with the operating rod and provided with a brush holding wire passing through the block and engaging the brush bristles, said block having laterally extending abutments adapted to engage the brush holding wire formed by bending separated portions of the metal of the block outwardly in opposite directions, substantially as set forth.

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

ROBERT T. GILLESPIE.

Witnesses:

GEO. L. MCCLOUD,
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