J. S. BRADLEY, JR.

METHOD OF LOADING PIN TUMBLER LOCKS AND TOOL THEREFOR.

APPLICATION FILED OCT. 3, 1921

1,437,832. Patented Dec. 5, 1922.

Fig. 1.

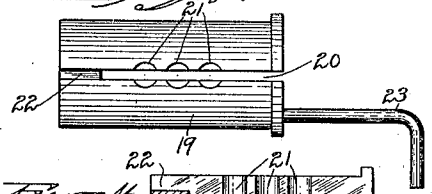


Fig. 2.

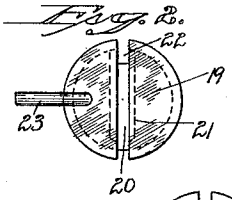


Fig. 3.

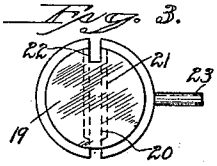


Fig. 4.

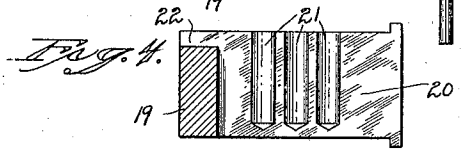


Fig. 5.

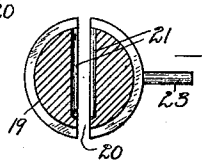


Fig. 6.

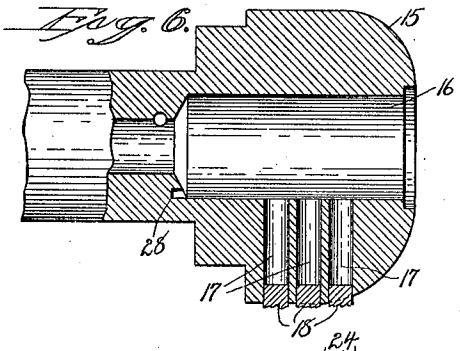


Fig. 9.

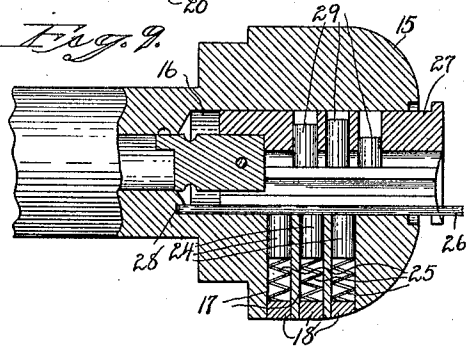


Fig. 7.

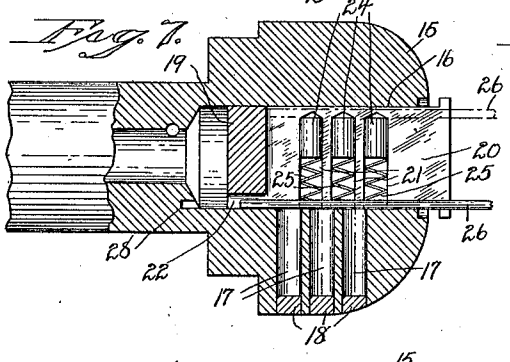


Fig. 10.

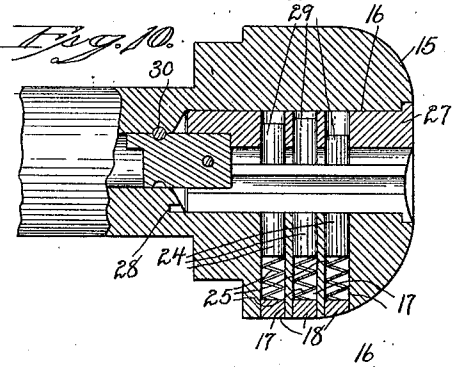


Fig. 8.

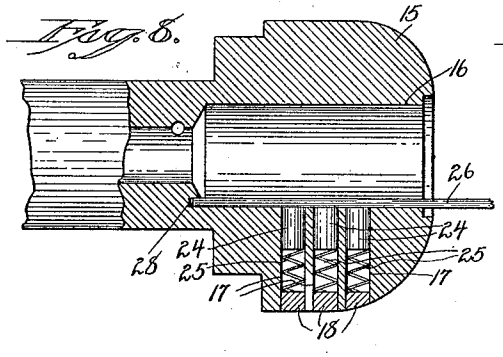
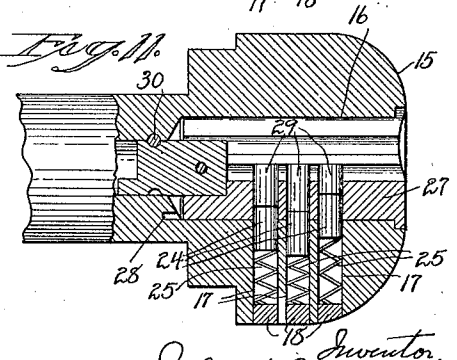


Fig. 11.



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UNITED STATES PATENT OFFICE.

JOHN S. BRADLEY, JR., OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO C. COWLES & CO., OF NEW HAVEN, CONNECTICUT, A CORPORATION.

METHOD OF LOADING PIN-TUMBLER LOCKS AND TOOL THEREFOR.

Application filed October 3, 1921. Serial No. 505,212.

To all whom it may concern:

Be it known that I, JOHN S. BRADLEY, JR., a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Methods of Loading Pin-Tumbler Locks and Tools Therefor; and I do hereby declare the following, when taken in connection with the accompanying drawings and the characters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this application, and represent in—

Fig. 1 a plan view of a loading-tool for pin-tumbler locks constructed in accordance with my invention.

Fig. 2 a front view of the same.

Fig. 3 a rear view of the same.

Fig. 4 a longitudinal sectional view of the same.

Fig. 5 a transverse sectional view of the same.

Fig. 6 a sectional view of a vehicle-handle lock showing pockets therein closed by plugs.

Fig. 7 a similar view, showing the pocket-plugs made flush with the outer surface, and a loading-tool and pick inserted into the cylinder-chamber.

Fig. 8 a similar view, with the spring-pins inserted into their pockets and held in place by the pick with the loading tool removed.

Fig. 9 a similar view with the key-cylinder partially entered into the key-cylindered chamber.

Fig. 10 a similar view, with the key-cylinder in its final position, and unlocked.

Fig. 11 a similar view, showing the key-cylinder in its locked position.

This invention relates to improvement in and method of loading pin-tumbler locks and tool therefor. In assembling pin-tumbler locks and particularly locks with blind pockets and dead end cylinder chambers, the holes which are to form pockets for the spring-pins are closed at their outer ends by plugs, and this is done before the casing is plated or otherwise finished, so as to present a neat appearance, but after the holes have been plugged, difficulty is experienced in locating the spring-pins therein, and to overcome this difficulty a sleeve has been employed which is adapted to closely fit the interior of the key-cylinder chamber and formed with holes registering with the spring-pin pockets and within which the key-cylinder turns, but the use of this sleeve is objectionable. The object of this invention is to load pin-tumbler locks without the use of a sleeve, and the invention consists in the method of loading pin-tumbler locks and a tool therefor, as hereinafter described and particularly recited in the claims.

In illustrating my invention, I have shown a portion of a vehicle handle 15 of usual construction, which is formed with the usual key-cylinder chamber 16 and with a series of spring-pin pockets 17 more or less in number, these pockets being closed by plugs 18, the outer ends of which are ground flush with the surface of the handle, so that, when the handle is finished, the plugs will not appear. The loading-tool 19 corresponds in form to an ordinary key-cylinder and is partially divided longitudinally by a transverse-slot 20, which is intersected by pin-pockets 21 and at the rear the slot is extended by a groove 22 through the end of the loading-tool. This tool is also provided with a forwardly-projecting handle 23.

In carrying out my method for loading pin-tumbler locks, after the handle or casing is finished, pins 24, with springs 25, are placed in the loading-tool 19 and held in place by a pick-wire 26, and the tool, with the pick-wire, is inserted into the chamber 16, so that the spring-pins stand in line with the pockets 17. The pick is then removed and inserted above the pins 24, as shown by broken lines in Figure 7, and those pins and the springs 25 are forced into the pockets 17, in which they are held by the pick 26, the inner end of which may enter a steadying-hole 28 formed for it in the inner end of the cylinder chamber. The loading-tool is then withdrawn, which is made possible by providing it with the groove 22. A key-cylinder 27 of usual construction, loaded with its pins 29, is inserted into the chamber 16, riding upon the pick 26, as shown in Figure 9 of the drawings. The pick may then be removed. The cylinder is then secured in the usual manner, as herein shown, by locking-pin 30. When the cylinder is turned so that the pins 29 come in line with the pins 24 they allow the pins 24 to enter the key-cylinder and lock it in the usual manner.

With this method, cylinder-locks having so-called "blind" pockets and dead end cylinder chambers are conveniently and rapidly loaded, and the use of a sleeve is avoided.

I claim:

1. A method of loading pin-tumbler locks having blind pockets, consisting in placing pins and springs in a loading-tool, compressing the spring-pins with a pick, inserting the loading-tool and pick into the key-cylinder chamber, forcing the pins and springs into the casing pockets, and holding them therein by the said pick, withdrawing the loading-tool and placing the key-slot of a loaded key-cylinder upon the said pick and inserting it into the cylinder-chamber, and withdrawing the pick.

2. A loading-tool for pin-tumbler locks comprising a cylinder formed with a transverse slot and intersecting pockets, the said loading-tool also formed with a groove entering the rear end in line with the said slot.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

JOHN S. BRADLEY, JR.

Witnesses:

M. S. BOTHUNE,

J. L. BROCKETT.