

Feb. 5, 1929.

1,700,799

A. H. INGLIS ET AL

LOCKING MECHANISM

Filed Oct. 7, 1925

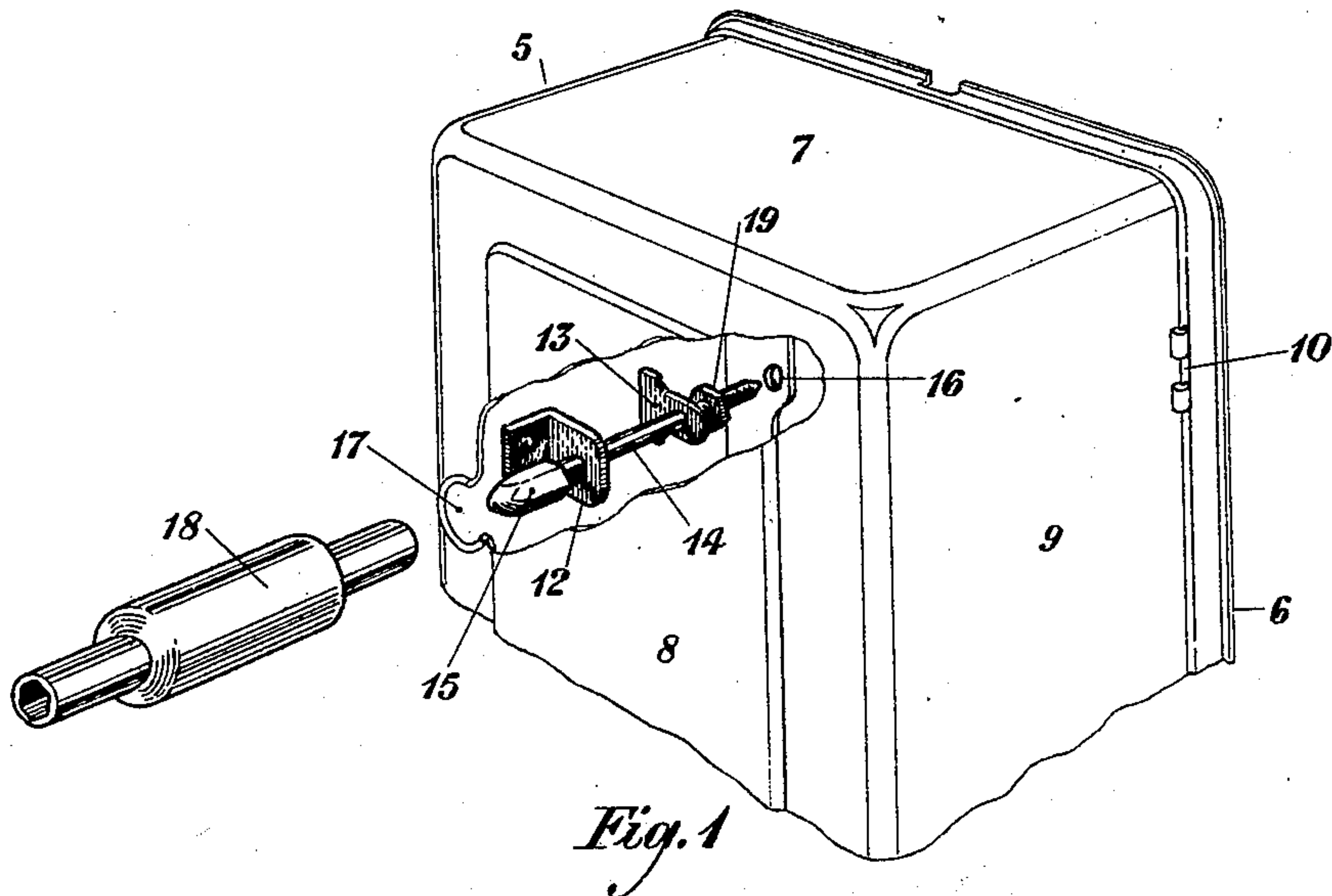


Fig. 1

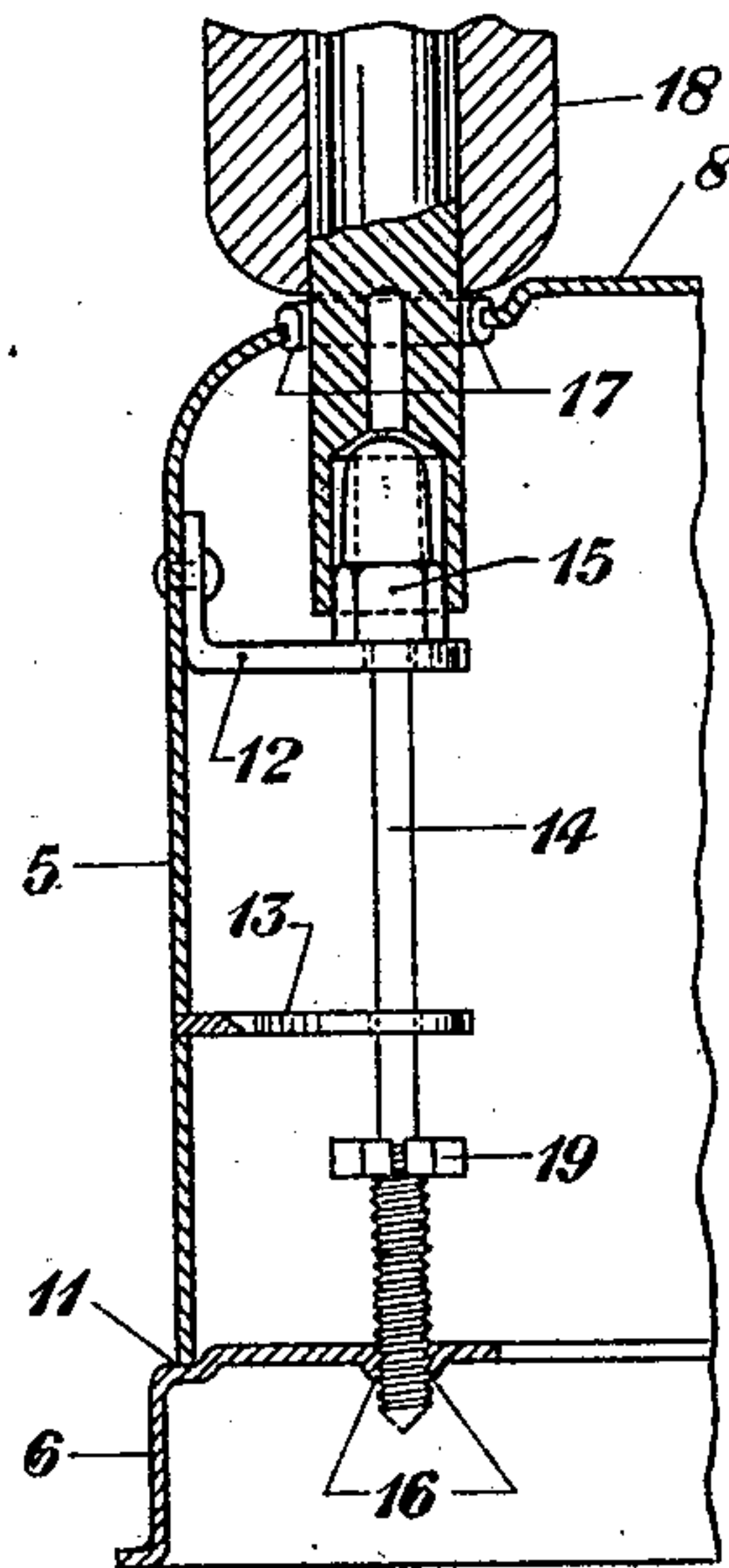


Fig. 2

INVENTORS
A. H. Inglis and
BY *L. G. Bostwick*
g & h
ATTORNEY

UNITED STATES PATENT OFFICE.

ALFRED H. INGLIS, OF ORANGE, AND LEE G. BOSTWICK, OF EAST ORANGE, NEW JERSEY, ASSIGNORS TO AMERICAN TELEPHONE AND TELEGRAPH COMPANY, A CORPORATION OF NEW YORK.

LOCKING MECHANISM.

Application filed October 7, 1925. Serial No. 61,147.

This invention relates to locking mechanisms more particularly adapted to use in connection with covers of cases and the like.

An object of this invention consists in the provision of a locking arrangement for cases and the like, which will readily permit access thereto by authorized persons, but will present difficulties in the opening thereof by others.

Another object of the invention is to provide a device of simple construction for this purpose, which may be easily applied to a casing.

These and further objects will be apparent from the following description, when considered in connection with the accompanying drawing, in which one embodiment of the invention is illustrated.

Referring to the drawing, Figure 1 is a perspective view of a type of casing, with its bottom portion broken away, to which the improved locking arrangement is adapted to be attached in the manner indicated; and Fig. 2 is a sectional view of the casing, with a part broken away, showing the locking arrangement and a form of wrench or key adapted to be engaged therewith.

In the drawing, the numeral 5 represents a casing, for instance, of the type used in connection with telephone substation sets which are commonly composed of steel. The casing comprises a base 6 on which is mounted a hollow cover having a top portion 7 with a corresponding bottom portion, a face portion 8 and side portions 9. The cover may be pivotally mounted on the base 6 in any suitable manner, as shown for instance at 10, and the edges of the cover may rest in the depressed portion 11 provided about the base near its periphery, so that the base and cover when placed together form a box or casing which may be of substantially rectangular form.

A bracket 12 is affixed to the interior wall of one of the side portions 9 of the cover in such a manner that one of its arms projects inwardly away from the surface of said wall. A lug 13 is spaced a suitable distance from and in alinement with the member 12 on the inner wall of the side portion 9, and may be affixed thereto or integral with the wall. Although the members 12 and 13 are shown as of certain configuration, it will be understood that they may be otherwise suitably formed. The members 12 and 13 have openings pro-

vided in their extended portions which are in alinement with each other and form a support to receive a bolt 14. The bolt 14 is reciprocally mounted in alined openings in the member 12 and 13 in a horizontal plane and lies at substantially right angles to the base 6. The bolt is preferably provided with a hexagonal head 15 having a beehive top, and is located within the casing under the cover. A flange 16 extends inwardly from the base 6 and is provided with an opening which is in alinement with the openings in the members 12 and 13, and which is adapted to receive the threaded end of the bolt 14, as is more clearly shown in Fig. 2.

The face portion of the cover is provided with a rounded opening 17 which is of sufficient dimension to permit the entrance therethrough of an end of a socket wrench 18 so that it may engage the hexagonal head of the bolt member. The socket wrench 18 has a particularly long counter bore which will extend through the opening 17 into the casing a sufficient distance to engage the hexagonal head of the bolt. The ordinary socket wrench, not having as deep a counter bore, will be prevented from engaging the head of the bolt by the beehive top, and therefore can not operate the bolt. A lock-nut 19 is positioned on the threaded end of the bolt 14 on the side of the member 13 nearest the opening 16 to limit the movement of the bolt so that it will be prevented from becoming disengaged from its supports.

To operate the improved locking arrangement, an end of the socket wrench is applied through the opening in the cover so that it engages the hexagonal head of the bolt to turn it in a direction toward the aperture provided in the flange of the base or in the opposite direction away from said flange opening. In the first-mentioned movement, the end of the bolt will engage the threaded opening in the flange and secure the base and cover together in locking engagement, and movement, of course, in the opposite direction at this time causes the disengagement of the end of the bolt from said flange opening, and permits the cover to be opened in an obvious manner.

From the foregoing, it will be apparent that as the locking structure is confined within the enclosure of the casing, it is practically impossible to determine by inspection the ex-

act method by which the cover is fastened. The interior of the casing will, therefore, be practically inaccessible to unauthorized persons, so that the contents thereof will not be tampered with. On the other hand, an authorized person may readily obtain access to the interior of said casing.

It will be appreciated that considerable annoyance and damage either by the tampering with or removal of the contents of the casing is prevented by the use of this improved arrangement. For instance, in telephone service where a box or casing of the type above outlined is used in connection with substitution sets, certain instrumentalities are included within the said box or casing, which if tampered with or removed, would seriously affect the service. As these boxes were formerly fastened with an ordinary nut and bolt, which permitted access to the boxes by the use of a screw driver, pliers or the like, considerable difficulty detrimental to the service was experienced because of tampering with or removing certain of the parts by unauthorized persons. In the present arrangement, this difficulty is obviated because the locking device provided for the box or casing is entirely enclosed, and it is practically impossible to determine by inspection just how it is fastened. Furthermore, by suitably proportioning the relative dimensions of the opening 17 of the hexagonal head and bee-

hive top 15, and of the distance between these, the difficulty of opening the casing with any common implement, except one made for the purpose, can be made very great, even to a person familiar with the locking mechanism. By the use of a standard implement such as a special socket wrench, access can be readily had to the boxes or casings by authorized persons such as inspectors and repairmen.

What is claimed is:

A casing comprising a base having a threaded opening, a cover mounted on said base, supporting members mounted on the cover within said casing, a screw-threaded bolt member reciprocally positioned in said supporting members in a plane at right angles to said base, a head member for the bolt lying entirely beneath the surface of said cover and inaccessible to an ordinary tool, said cover having an opening in alinement with the opening in said base and with said bolt, whereby an implement may be applied to said head member through the opening in said cover to screw the bolt member into the opening in said base and thereby provide a locking engagement between the base and cover.

In testimony whereof, we have signed our names to this specification this 1st day of October, 1925.

ALFRED H. INGLIS.
LEE G. BOSTWICK.