May 12, 1925. 1,537,521

A. ASSORATI

BOLT

Filed Sept. 12, 1924

Fig. 1.

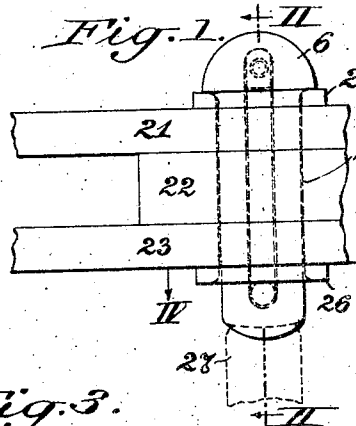


Fig. 2.

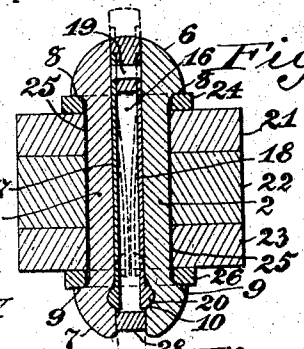


Fig. 3.

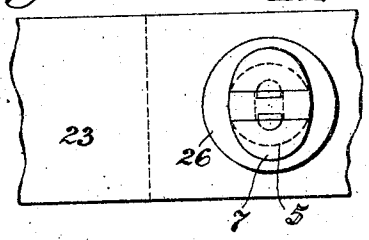


Fig. 5.

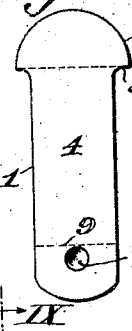


Fig. 6.

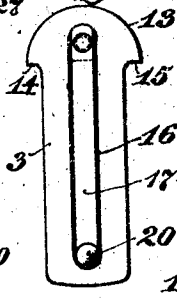


Fig. 7.

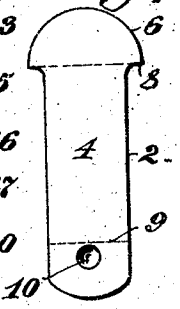


Fig. 4.

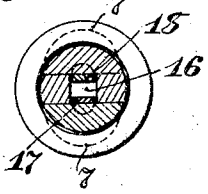


Fig. 8.

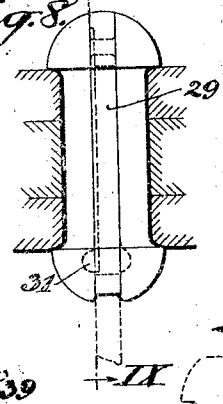


Fig. 9.

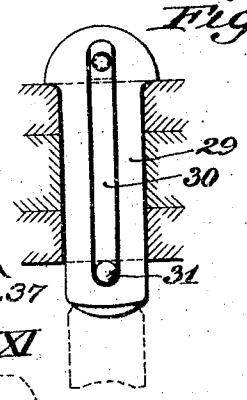


Fig. 11.

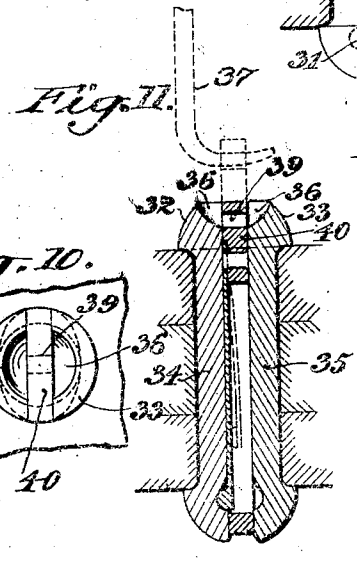
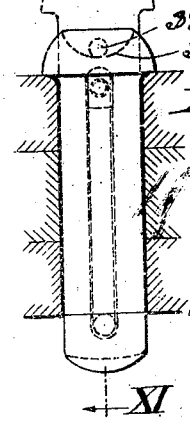


Fig. 10.

Fig. 12.



INVENTOR
Antenor Assorati
BY
ATTORNEYS

Patented May 12, 1925. 1,537,521

UNITED STATES PATENT OFFICE.

ANTENOR ASSORATI, OF LYNBROOK, NEW YORK, ASSIGNOR OF ONE-HALF TO HENRI CHARPENTIER, OF LYNBROOK, NEW YORK.

BOLT.

Application filed September 12, 1924. Serial No. 737,304.

To all whom it may concern:

Be it known that I, ANTENOR ASSORATI, a subject of the King of Italy, and resident of Lynbrook, in the county of Nassau and State of New York, have invented a new and useful Improvement in Bolts, of which the following is a specification.

This invention relates to an improvement in bolts and has for its object to provide a device for rigidly connecting or associating two or more elements in an expeditious, convenient and economic manner.

Another object is to provide a locking bolt which is durable, efficient and inexpensive to manufacture.

Another object is to provide a bolt which may be readily locked in position and easily released when desired.

Another object is to provide certain improvements in the form, construction and arrangement of the several parts whereby the above named and other objects may effectively be attained.

A practical embodiment of my invention is represented in the accompanying drawings, in which

Fig. 1 represents a side elevation of my bolt, arranged in position to lock three elements and washers together, the tool for removing the central or locking member being shown in dotted outline.

Fig. 2 represents a vertical section taken in the plane of the line II—II of Fig. 1, looking in the direction of the arrows, the central member being partly removed and the removing tool in contact therewith, both member and tool being shown in dotted outline.

Fig. 3 represents an inverted plan of the parts as shown in Fig. 1.

Fig. 4 represents a horizontal section taken in the plane of the line IV—IV of Fig. 1, looking in the direction of the arrows.

Figs. 5, 6 and 7 represent elevations of the coacting faces of the three members forming the bolt.

Fig. 8 represents a side elevation of a modified form of bolt, the elements locked thereby being shown in section.

Fig. 9 represents a vertical section taken in the plane of the line IX—IX of Fig. 8, looking in the direction of the arrows.

Fig. 10 represents a plan view of another form of bolt.

Fig. 11 represents a vertical section taken in the plane of the line XI—XI of Fig. 12, looking in the direction of the arrows, the central member being shown partly removed and the tool for removing the same in dotted outline, and

Fig. 12 represents a side elevation of the same, the elements being shown in section.

The bolt comprises three members denoted by 1, 2 and 3. The clamping members 1 and 2 are similar in construction, each being provided with a flat straight inner face 4, a cylindrical outer face 5, a head 6 formed upon one end of the cylindrical face 5 and a head 7 at the opposite end. The head 6 is semi-circular in cross section and extends beyond the cylindrical face 5 to form a shoulder 8, the peripheral edge of which is concentric with the cylindrical face 5. The head 7 is also semi-circular in cross section, and is offset from the cylindrical face 5, so that the peripheral edge is disposed eccentrically with respect to the face 5 to form a shoulder 9.

The flat straight face 4 of each member has a recess 10, the purpose of which will be hereinafter explained.

The central or locking member 3 is provided with oppositely disposed flat, straight faces and is substantially of equal thickness throughout its length and breadth. One end of this member 3 has a head 13 which extends beyond the side walls of the member to form shoulders 14, 15, the contour of which head and shoulders coincides with the peripheral contour of the heads 6, of the members 1, 2, when assembled. A central longitudinal slot 16 is formed in the locking member 3, which slot is arranged to house yielding tongues 17, 18, which are secured at one end to the member 3 by a rivet 19 or other suitable fastening means. These tongues are disposed on the opposite sides of the member 3, and each tongue is provided with an outwardly projecting teat 20 which is arranged to rest in the recess 10 in the face 4 of the members 1, 2 when the members are assembled in locked position.

To connect the elements 21, 22 and 23 in locked engagement, the clamping members 1, 2 are placed with their flat straight faces 4 together or approximately so and the head 7 of both members passed into and through the washer 24, circular holes 25 in the elements and washer 26 after such holes have

been brought into register. The disposition of the members 1, 2 having been accomplished, the central or locking member 3 is introduced between the inner flat straight faces 4 of the clamping members 1, 2 and forced therebetween until the shoulders 14, 15 of the head 13 engage the washer 24, at which point the teats 20 on the yielding tongues 17, 18 will register with and enter the recesses 10 in the faces of the clamping members 1, 2. While the member 3 is passing between the members 1, 2, the teats 20 will, of course, slide upon the flat straight faces 4 and cause the free ends of the tongues to yield inwardly and toward each other. When the teats enter the recesses, the tongues will then assume a normal position.

To remove the bolt from the holes 25 in the elements I insert a tool 27, in the form of a flat bar, shown in dotted outline in Figs. 1 and 2, in the recess 28, between the head 7 of the members 1, 2, until it engages the member 3, and by striking the tool a sharp blow with a hammer or other instrument, the teats 20 will be caused to recede or ride from the recesses 10 at the same time the member 3 moves upwardly. After the teats are removed from their recesses, the member 3 may be readily removed from between the members 1, 2 by the further progress of the tool therebetween. When the member 3 is disposed of, the members 1 and 2 may approach each other until the flat straight faces 4 are together, when the heads 7 may then be passed through and from the washer 26, holes 25 in the elements, and washer 24.

In the form shown in Figs. 8 and 9 the locking member 29 is provided with a single yielding tongue 30 and teat 31.

In the form shown in Figs. 10 to 12 inclusive, heads 32, 33 of the clamping members 34, 35 are each provided with a cut-away portion 36, which portions, when the members are assembled, will form a cavity to allow a hook shaped tool 37, shown in dotted outline in Figs. 11 and 12, to enter a hole 39 in the central locking member 40, by which means the member 40 may be withdrawn from its locked position between the clamping members 34, 35.

It is evident that various changes may be resorted to in the construction, form and arrangement of the several parts without departing from the spirit and scope of my invention; hence I do not wish to limit myself to the particular embodiment herein shown and described, but

What I claim is:—

1. A lock bolt comprising clamping members having a recess, an intermediate member provided with laterally movable yielding means arranged to enter said recess for interlocking said members.

2. A lock bolt comprising clamping members having a recess, an intermediate member provided with a yielding tongue arranged to enter said recess for interlocking said members.

3. A lock bolt comprising clamping members having a recess, an intermediate member provided with a yielding tongue having a teat arranged to enter said recess for interlocking said members.

4. A lock bolt comprising clamping members having a recess, an intermediate member formed with a longitudinal slot therein, a yielding tongue secured to said member and movable in said slot, said tongue being provided with a teat arranged to engage said recess for interlocking said members.

5. A lock bolt comprising clamping members having recesses, an intermediate member formed with a longitudinal slot therein, a plurality of yielding tongues secured to said member and movable in said slot, each of said tongues being provided with a teat arranged to engage the adjacent recess for interlocking the members.

6. A lock bolt comprising clamping members having recesses and offset heads, a cavity in said heads, an intermediate member having a hole disposed in register with said cavity when the members are assembled, a yielding tongue secured to said member and provided with a teat arranged to engage the adjacent recess for interlocking the members.

7. A lock bolt comprising clamping members having recesses and offset heads, a cavity in said heads, an intermediate member having a hole disposed in register with said cavity when the members are assembled, yielding tongues secured to said member, each of said tongues being provided with a teat arranged to engage the adjacent recess for interlocking the members.

In testimony, that I claim the foregoing as my invention, I have signed my name this 9th day of September 1924.

ANTENOR ASSORATI.