

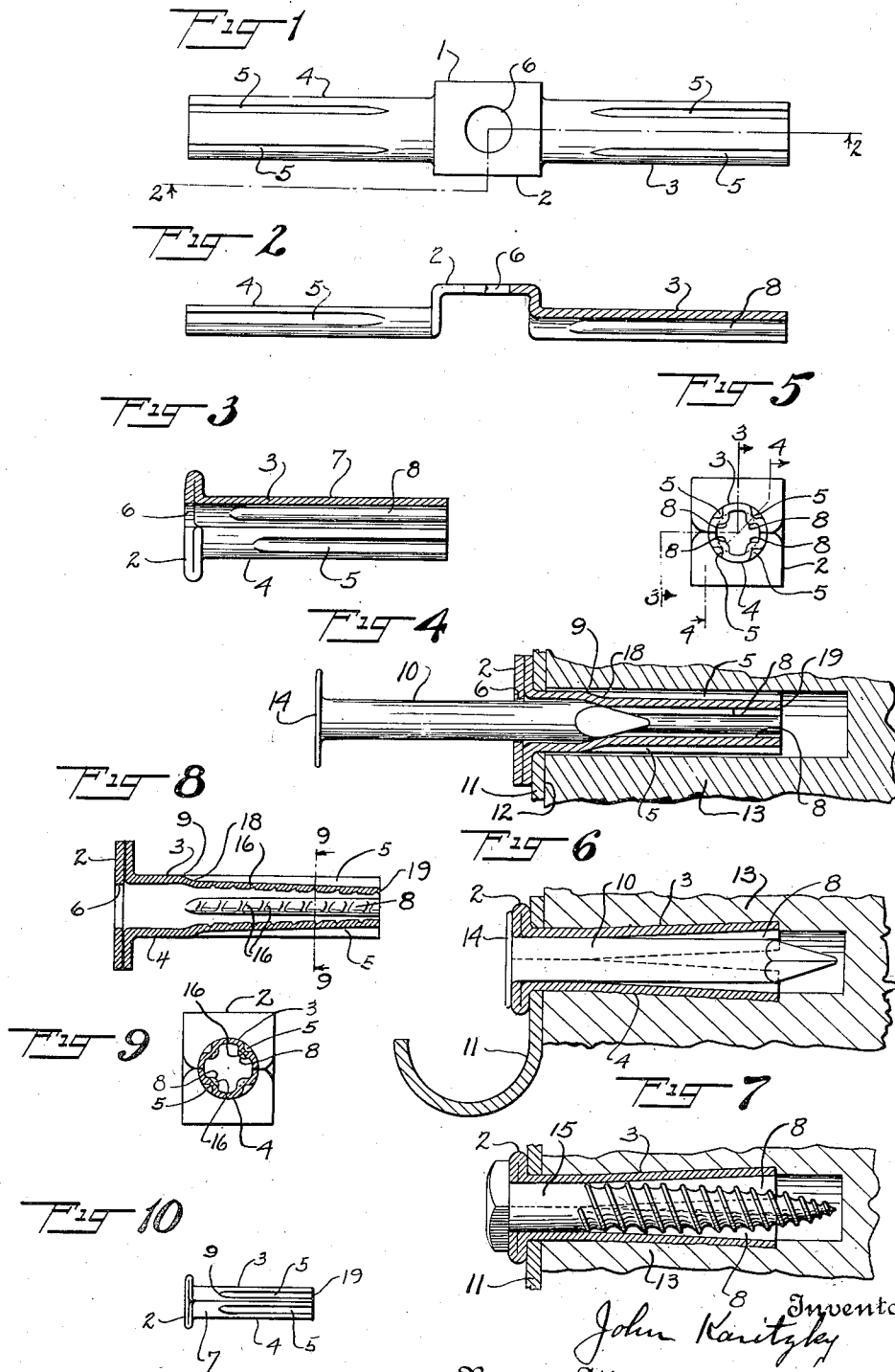
Apr. 24, 1923.

1,452,514

J. KARITZKY

BOLT ANCHOR

Filed July 6, 1922



By

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BOLT ANCHOR.

Application filed July 6, 1922. Serial No. 573,162.

To all whom it may concern:

Be it known that I, JOHN KARITZKY, a citizen of the United States, residing at Garwood, in the county of Union and State of New Jersey, have made certain new and useful Improvements in Bolt Anchors, of which the following is a specification, taken in connection with the accompanying drawings.

My invention relates to bolt anchors and more particularly to an expansion shield formed of sheet metal having an integral head and tines, which can be expanded either by a nail or screw.

My invention further relates to certain combinations, sub-combinations, articles of manufacture and details of construction all of which will be more fully hereinafter described and pointed out in the claims.

In the drawings I have shown two embodiments of my invention but it is of course to be understood that my invention is not to be confined to the embodiments shown by way of illustration.

Fig. 1 is a plan view of a blank of sheet metal from which my expansion shield is formed;

Fig. 2 is a side elevation and vertical section substantially on the line 2—2 of Fig. 1;

Fig. 3 is a side elevation partly in section of the finished expansion shield on the line 3—3 of Fig. 5;

Fig. 4 is a section, substantially on the line 4—4 of Fig. 5, looking in the direction of the arrows, and showing in addition the wall or support, and the work supported by the bolt anchor;

Fig. 5 is an end elevation of the expansion shield;

Fig. 6 is a vertical section similar to Fig. 4, showing the nail driven home and the tines expanded;

Fig. 7 is a vertical section, similar to Fig. 6, but showing a screw expanding the shield;

Fig. 8 is a longitudinal section of my expansion shield provided with interior screw-threads;

Fig. 9 is a vertical section on line 9—9 of Fig. 8, looking in the direction of the arrows;

Fig. 10 is a plan view, on a smaller scale, of my expansion shield.

The blank 1, Fig. 1, is cut from a sheet of sheet metal, preferably steel, and provided with a head 2, having the opening 6.

At the same time that the head 2 is formed,

or subsequently, the integral tines 3 and 4 are provided with external longitudinally extending grooves 5, 5 giving a fluted appearance to the tines. The blank is then bent back on itself to bring the tines 3 and 4 together. This makes the head 2 of a double thickness of sheet metal, as shown in Fig. 3. Each tine is so shaped that together they form a cylindrical body member 7 of less diameter than the head 2.

When the flutes are employed, the metal on the interior of the tines is forced inward, forming longitudinally extending ribs 8, 8. These ribs and their complementary grooves 5, 5 are not brought up to the head 2, but start at the point 9, Fig. 4. The grooves 5, 5 are preferably formed of progressively increased depth from the point 9 to the end of the shield. This will cause the ribs 8, 8 to taper slightly from the point 18 to the end 19 of the shield.

The expanding member, which may be a nail 10, engages with these longitudinally extending ribs 8, 8, and as the nail is driven into the expansion shield, the tines are forced apart or expanded as shown in Fig. 6, securely holding the work 11, of any form, to the face 12 of the wall or other suitable support 13. By arranging the grooves and ribs as I have just described, the expansion takes place back from the surface 12 of the wall and does not tend to crack or mar the surface of said wall.

Instead of using the nail 10 with a head 14 to expand the shield, I may use a screw 15. Such a screw may be used which will cooperate with and bear upon the longitudinally extending ribs 8, 8, as shown in Figs. 4, 5 and 6.

I may, however, provide the tines 4 and 5 with interrupted screw-threads 16, 16, which may be stamped into the blank, as shown for example in Figs. 8 and 9. These figures are the same as the other figures, except for these internal screw-threads. In this form, the nail 10 may be used as well as the screw 15, the expanding members being interchangeable in both forms.

By making the reenforced head 2 of greater diameter than the body member, formed of the tines 4 and 5, I permit the head to engage on the outer surface of the work 11 and hold it to the wall or other suitable support 13, as shown in Figs. 4, 6 and 7.

Having thus described this invention in

connection with illustrative embodiments thereof, to the details of which I do not desire to be limited, what is claimed as new and what is desired to secure by Letters Patent is set forth in the appended claims.

What I claim is:—

1. An expansion shield formed of sheet metal having a head formed of a plurality of thicknesses of the said sheet metal and integral tines connected to the head, said tines being fluted to form longitudinal internal ribs.

2. The combination in a bolt anchor of a sheet metal expansion shield having an integral head of greater diameter and thickness than the body of the shield, integral tines connected to the head and provided with interior longitudinal ribs and an expanding member adapted to expand the tines by engaging said ribs.

3. An expansion shield formed of sheet metal having a head formed of a plurality of thicknesses of said sheet metal, and integral tines connected to the head, said tines provided with inclined flutes to form inclined interior ribs, said inclined interior ribs progressing in height from the head to the end of the tines to cooperate directly with, and be expanded by, an expanding member as said member progresses into the shield.

4. The combination of an expansion shield formed of sheet metal having a head and integral tines connected to the head, said tines provided with inclined flutes to form inclined interior ribs, said inclined interior ribs progressing in height from the head to the end of the tines to cooperate directly with, and be expanded by, an expanding member as said member progresses into the shield, and an expanding member adapted to engage with and expand the tines as it is forced into the shield.

5. The combination of an expansion shield formed of sheet metal having a head formed of a plurality of thicknesses of said sheet metal and integral tines connected to the head, said tines provided with inclined flutes to form inclined interior ribs, said inclined interior ribs progressing in height from the head to the end of the tines to cooperate directly with, and be expanded by, an expanding member as said member progresses into the shield, and an expanding member adapted to engage with and expand the tines as it is forced into the shield.

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Witnesses:

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