

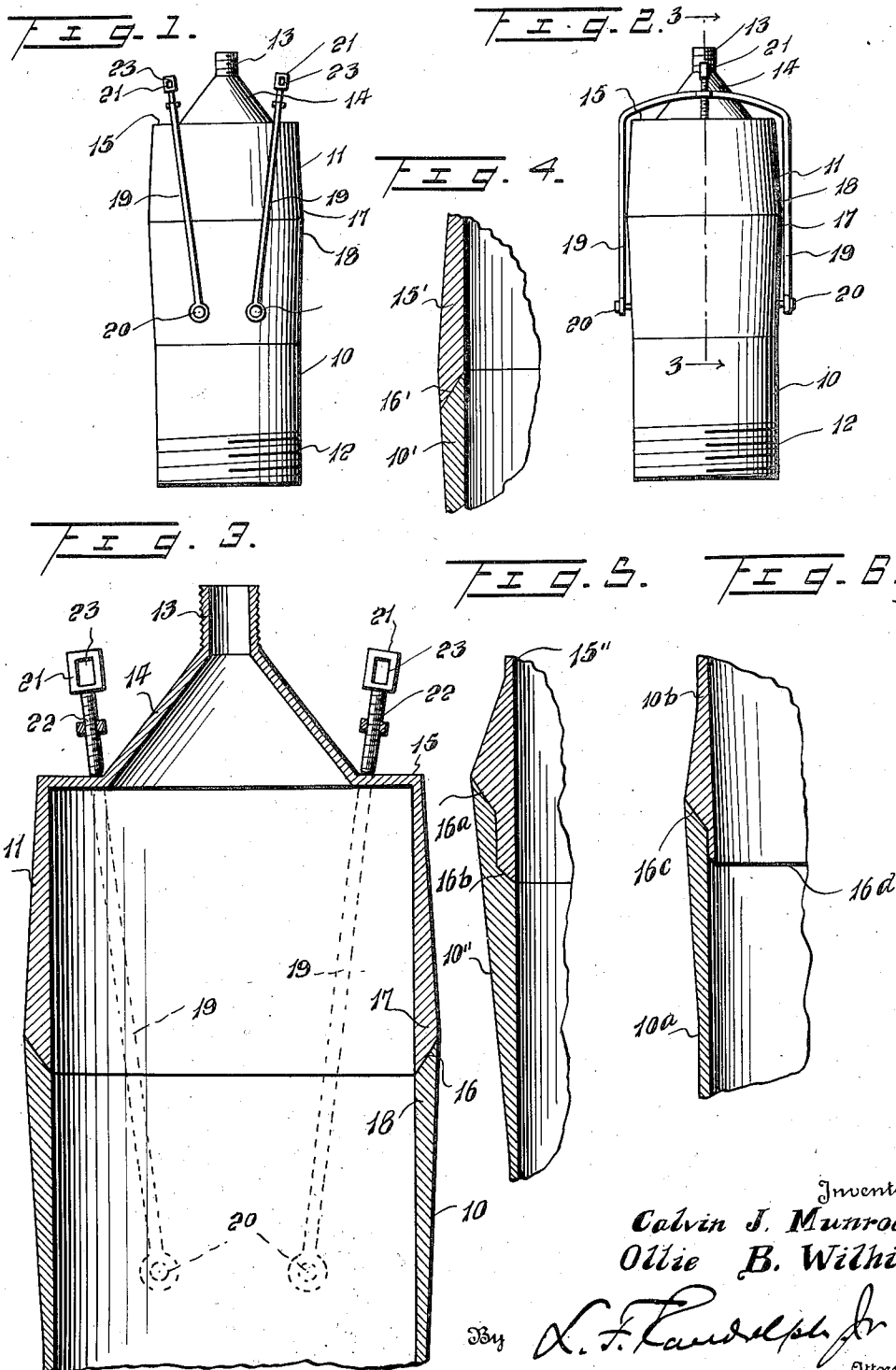
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QUICK CHANGE SWEDGE NIPPLE

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QUICK CHANGE SWEDGE NIPPLE

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3 Claims. (Cl. 285—188)

This invention relates to a quick change swedge nipple and it generally aims to provide a means which will save much time, especially in cementing oil, gas or water wells where a plug is used on top of the cement to keep the mud or water which is pumped down, from mixing with the cement. The structure especially enables considerable time to be saved since the sole detachment necessary is to disconnect cap and body from the swedge nipple and it especially being unnecessary to detach the cap from hose connections through which the material is supplied to the well.

It is further aimed to provide a construction wherein the wall of the cap and body at the zone of engagement are thickened so as to effectively form seats, and a construction wherein ball clamps are used and may have flat engagement with the caps, regardless of the relative positions in which the cap and body are engaged.

The more specific objects and advantages will become apparent from a consideration of the description following taken in connection with accompanying drawing illustrating an operative embodiment.

In said drawing:—

Figure 1 is a view in elevation of a swedge nipple constructed in accordance with the invention;

Figure 2 is a side elevation taken at a right angle to Figure 1;

Figure 3 is a vertical sectional view taken on the plan of line 3—3 of Figure 2;

Figure 4 is a fragmentary sectional view taken through a modified form;

Figure 5 is a fragmentary longitudinal sectional view taken through a modified form; and

Figure 6 is a fragmentary longitudinal sectional view taken through a modified form.

Referring specifically to the drawing, wherein like reference characters designate like or similar parts, the swedge nipple is provided with a body 10 and a cap 11. The body 10 is adapted to be connected to piping or casing by means of screw threads 12 and hose connections for the supply of material to the interior of the swedge nipple and made with an exteriorly screw threaded sleeve 13, extending from a conical portion 14, rising from the top 15 of the cap. It will be noted that such top 15 is exteriorly plane and unobstructed completely around the cap.

The cap 11 and body 10 have separable seating engagements on an inclined plane as at 16. Also, it will be noted that at the zone of engagement, both the wall of the cap and the body are

enlarged or thickened as at 17 and 18 respectively.

Said body and cap are held in engagement by a plurality of bails 19 which are pivoted to the body as at 20. Its screw members 21 are threaded at 22 through the bridge portion of the bail and are tightened against the plane portion 15. Screws may be operated by any suitable tool but preferably have openings 23 therethrough to accommodate rods or the like.

As a result of the invention, the cap and body may be quickly detached through the loosening of the screws 21 and swinging of the bail 19 downwardly. This saves considerable time in the cementing of oil, gas and water wells, since it will be realized that the body is connected to the pipe or casing and that the cap is connected to hose. The invention is especially used in such wells where a plug is used on top of the cement which is supplied through the hose to retain the mud and water which is pumped down, from mixing with the cement. The under sections are detached from each other but not from the casing and hose, plug is inserted in the body following which the body and cap are again attached and pressure is applied through the hose. Thus it will be realized that the cap does not have to be detached from the hose and that the swedge nipple will take the place of a unit, saving time and expense.

It is obvious that any type of joint or seat may be employed at 16, with or without gaskets, and that the parts may be made of any desired metal, with the seats hardened or of a different metal from the body and cap if preferred. For instance, in Figure 4, a body 10' in cap 15' is seated as at 16' on an angle reversed to that of the previous form.

Again in Figure 5, the body 10'' and cap 15'' have double seating engagements as at 16 (a) and 16 (b).

In Figure 6, the body 10 (a) and cap 10 (b) are seated by means of a two stage joint as at 16 (c), a portion thereof 16 (d) serving as a guide in the connection of the body and cap.

Further changes may be made within the spirit and scope of the invention.

I claim as my invention:—

1. A swedge nipple comprising a body section attachable to casing, a cap section seated at the upper end of the body section, bails pivoted to the body section and extending over the cap section, said bails being in upwardly diverging relation, screw members carried by the bails, said cap section having a plane surface engageable by

said screw members, and an inverted conical portion extending above and surrounded by said plane surface and terminating in a tube for connection of a hose thereto.

- 5 2. A swedge nipple comprising a body section attachable to casing, a cap section seated at the upper end of the body section, bails pivoted to the body section and extending over the cap section, said bails being in upwardly diverging relation, screw members carried by the bails, said
10 cap section having a plane surface engageable by said screw members, and an inverted conical portion extending above and surrounded by said plane surface and terminating in a tube for connection of a hose thereto, the seating of the body
15 and cap being along an inclined plane.

3. A swedge nipple comprising a body section attachable to casing, a cap section seated at the upper end of the body section, bails pivoted to the body section and extending over the cap section, said bails being in upwardly diverging relation, screw members carried by the bails, said cap section having a plane surface engageable by said screw members, and an inverted conical portion extending above and surrounded by said plane surface and terminating in a tube for connection of a hose thereto, the seating of the body and cap being oblique and at a plurality of zones.

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