

June 1, 1926.

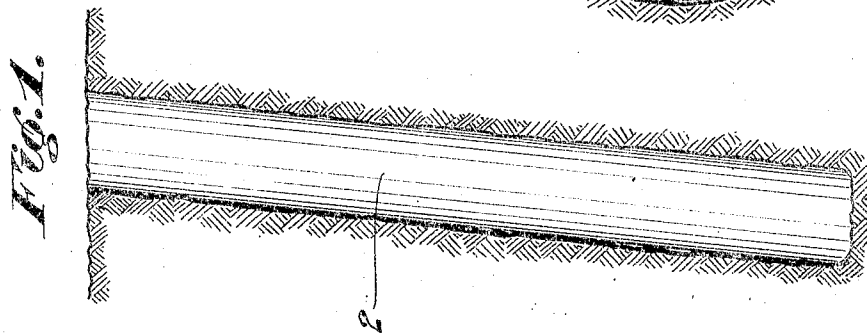
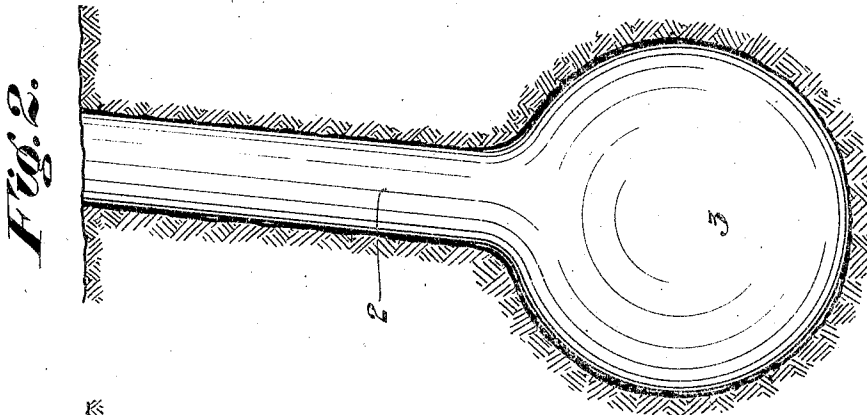
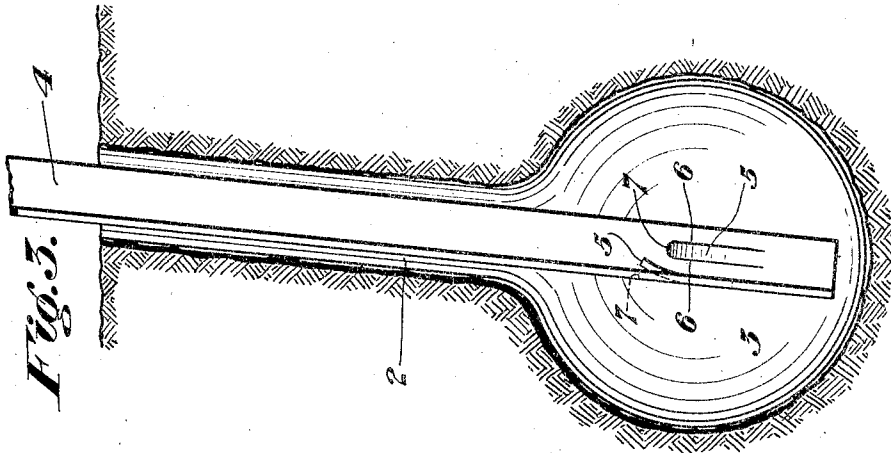
L. C. JONES

1,587,329

GROUND ANCHOR AND METHOD OF FORMING SAME

Filed March 12, 1924

2 Sheets-Sheet 1



Witnesses:

Edwin Truett

Inventor:

LEE C. JONES,

by

D. Anthony Jones

his Attorney

June 1, 1926.

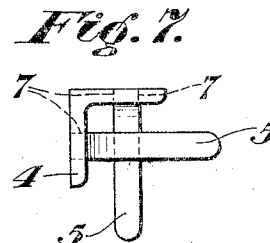
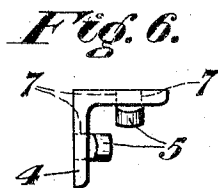
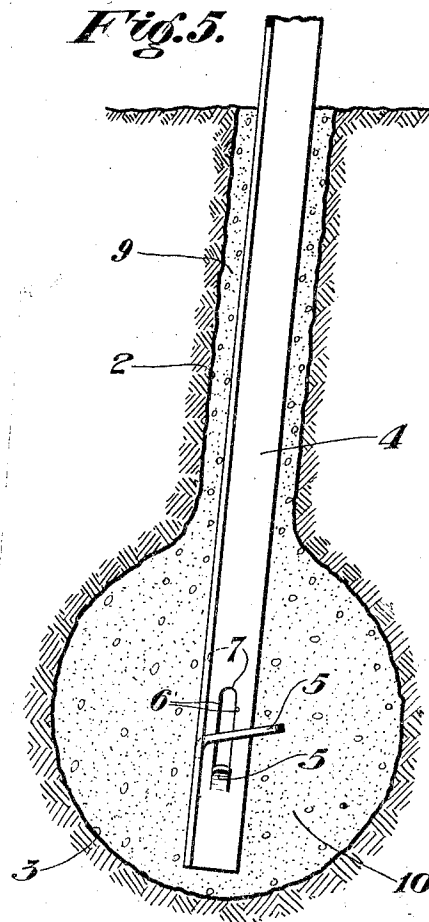
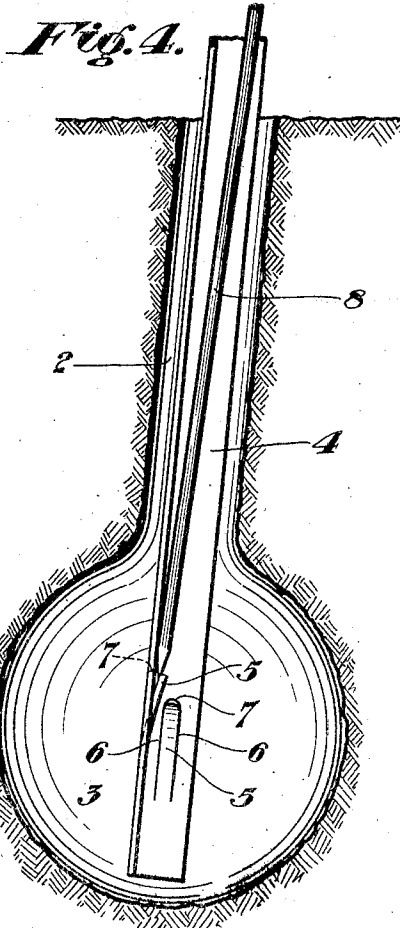
L. C. JONES

1,587,329

GROUND ANCHOR AND METHOD OF FORMING SAME

Filed March 12, 1924

2 Sheets-Sheet 2



Witnesses:

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Inventor:

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UNITED STATES PATENT OFFICE.

LEE C. JONES, OF SEWICKLEY, PENNSYLVANIA.

GROUND ANCHOR AND METHOD OF FORMING SAME.

Application filed March 12, 1924. Serial No. 698,749.

This invention relates to an anchor for towers, derricks, buildings; etc., and the method of forming the same, and has for its object the provision of a novel form of anchor which may be embedded in the ground and securely held so as to resist the strains and stresses of the upright structure supported thereby.

Another object is to provide a novel form of metallic anchor post adapted to be embodied in a surrounding column of cementitious material and to be so formed that it will positively resist movement relative to the cementitious material in either an upward or downward direction.

A further object is the provision of the novel form of ground anchor having the novel construction, design, and combination of parts hereinafter described and illustrated in the accompanying drawings.

In the drawings, Figure 1 is a sectional view through the ground showing the hole into which the anchor is to be placed.

Figure 2 is a similar view showing the lower end of the hole enlarged forming a cavity for the reception of the cementitious material.

Figure 3 is a similar view showing the anchor post in position.

Figure 4 is a similar view showing the anchor post in position and a tool inserted behind one of the tongues to bend it into anchoring position.

Figure 5 is a sectional view through the ground showing the finished anchor.

Figure 6 is a transverse section through the post showing the position of the tongues before they are bent to their anchoring position.

Figure 7 is a similar view showing the position of the tongues after they are bent into anchoring position.

In carrying out the invention, I prefer to first drill or otherwise provide an elongated hole 2 in the ground, then I enlarge the lower end of the hole 2 in any suitable manner to form the cavity 3. Preferably I enlarge the hole 2 to form the cavity 3 by introducing a charge of explosive and exploding the same, so that the ground adjacent to the bottom of the hole will be bulged out to form the cavity 3.

I then introduce the anchor post 4 into the hole 2 so that its lower end extends into the cavity 3.

The post 4 may be formed from any suitable

metal shape or bar. However, I prefer to use an angle shape, due to its strength. The post 4 is provided adjacent its lower end with integral anchor tongues 5 which are formed by cutting through the post with two parallel side cuts 6 and a cross cut 7, the narrow strip of metal within or surrounded by the cuts forming a tongue. The tongues 5 are bent slightly outward at their upper or free ends so as to facilitate the insertion of a suitable tool between the body of the post and the tongue to bend the tongues into a position at right angles to the longitudinal axis of the post. When the post is formed from an angle shape as shown in the drawings, the tongues 5 are preferably formed in the opposite flanges, one slightly above the other, and are adapted to be bent across each other.

After the post 4 is positioned in the hole 2 with its lower end extending into the cavity 3, a suitable tool such as the bar 8 is inserted between the tongues 5 and the body or flanges of the post and the tongues are bent down into a position at right angles to the longitudinal axis of the post.

After the tongues 5 have been bent to position I introduce a cementitious mixture, such as concrete, which is flowed around the post 4 and into the cavity 3 filling the cavity and the hole 2. The cementitious material will conform to the shape of the hole and cavity and form a column 9 terminating at its lower end in an enlargement or ball 10. The tongues 5 will be firmly embedded in the ball 10, thus formed, and will resist any movement of the post 4 in either an upward or downward direction relative to the column 9 of cementitious material.

The column 9 and ball 10 of cementitious material will combine with the post 4 to form an integral anchor which is efficient, inexpensive and durable.

While I have shown and described only one preferred embodiment of my invention it will be expressly understood that I do not wish to be limited to the specific details of such embodiment, since various modifications may be made without departing from the scope of my invention as defined in the appended claims.

I claim:—

1. The method of providing ground anchors, which consists in providing a hole in the ground with an enlarged cavity at its lower end, introducing an anchor post into

the cavity, said post having a plurality of tongues cut along three sides and bent slightly out from the side faces of the post adjacent its lower end so as to permit the insertion of a suitable tool between the side faces of the post and the tongues, inserting a suitable tool between said tongues and the side faces of said post to force said tongues outwardly and downwardly, and finally filling said cavity and the space between the post and the side wall of the hole with cementitious material.

2. The method of providing ground anchors, which consists in providing a hole in the ground, setting off an explosive charge in the bottom of the hole to form an enlarged cavity and to compact the walls thereof, introducing an angle-shaped anchor post into the cavity, said post having a plurality of tongues cut along three sides and bent slightly out from its flanges adjacent their lower ends so as to permit the insertion of a suitable tool between the side faces of the flanges and the tongues, inserting a suitable tool between said tongues and the side faces of said flanges to force said tongues outwardly and downwardly at substantially right angles to the longitudinal axis of said post, and finally filling said cavity and the space between the post and the side wall of the hole with cementitious material.

3. A ground anchor comprising in combination a column of cementitious material having an enlarged lower end suitably mounted in the earth and a metallic anchor post extending substantially centrally through said column and into its enlarged lower end, said post being provided with a plurality of integral tongues bent outwardly at substantially right angles to the longitudinal axis of said post to resist movement of said post in either an upward or downward direction relative to said column of cementitious material.

4. A ground anchor comprising in combination a column of cementitious material having an enlarged lower end suitably mounted in the earth, and an angle-shaped metallic anchor post extending substantially centrally through said column and into its enlarged lower end, said post being provided adjacent its lower end with a plurality of integral tongues bent outwardly at substantially right angles to the longitudinal axis of said post, to resist movement of said post in either an upward or downward direction relative to said column of cementitious material.

In testimony whereof I have hereunto signed my name.

LEE C. JONES.