March 13, 1962 R. K. DYER 3,024,512

DISPOSABLE CONCRETE FORM FOR POSTS AND COLUMNS

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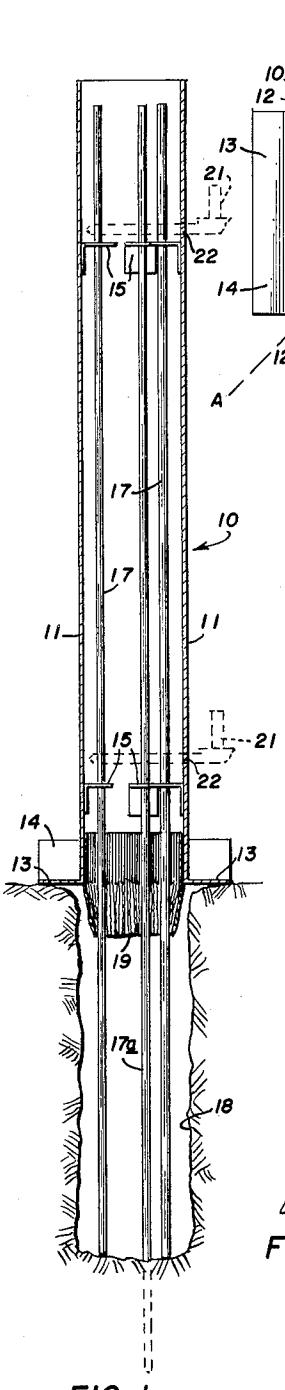


FIG. 1.

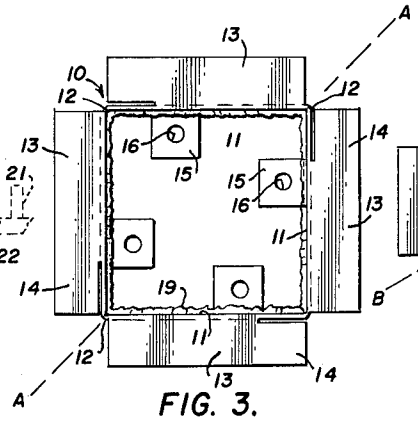


FIG. 3.

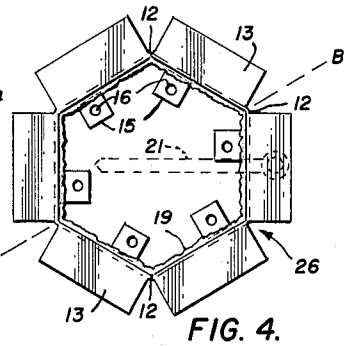


FIG. 4.

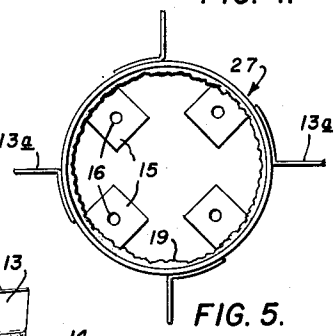


FIG. 5.

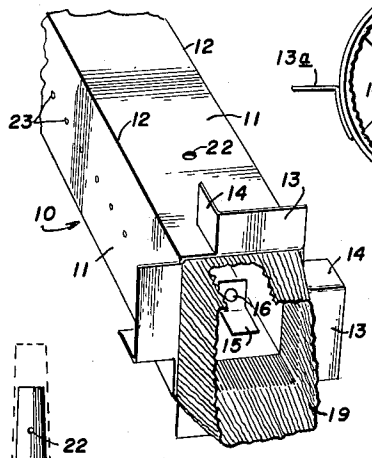


FIG. 2.

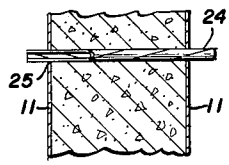


FIG. 8.

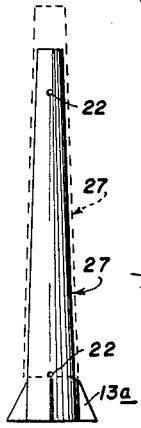


FIG. 6.

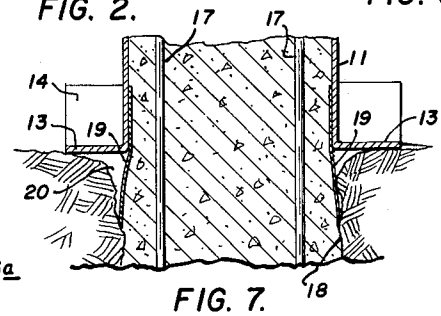


FIG. 7.

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DISPOSABLE CONCRETE FORM FOR POSTS AND COLUMNS

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5 Claims. (Cl. 25—118)

This invention relates to disposable forms for concrete fence posts, columns and the like, and is directed to a disposable form which can be stocked in a minimum of storage space and which can be easily transported to and set up in the field. A feature of this invention is to provide means to prevent concrete from leaking out around the base of the form where it rests on the ground. Another feature of this invention is a means of holding the reinforcing rods in place while the concrete is being poured. Provision is also made for introducing gate hooks and other hardware into the soft concrete through the form so that they will be incorporated in the finished post or column. A concrete fence post which is poured into a form set up over a post hole so that the buried lower portion of the post is cast directly into the ground will be much more firmly set, in most cases, than one which is precast and set up in the hole and then backfilled and tamped. The former method also requires less labor if the forming of the part of the post above ground is easily accomplished as the use of this invention.

Other novel advantages will be apparent from the following description and the drawing which is a part hereof, and in which:

FIGURE 1 is a vertical sectional view of one embodiment of the invention set over a post hole.

FIGURE 2 is a perspective view of the lower end of the form.

FIGURE 3 is a bottom view of the form shown in FIGURES 1 and 2.

FIGURE 4 is a bottom view of a second embodiment of the invention.

FIGURE 5 is a bottom view of a third embodiment of the invention.

FIGURE 6 is a reduced elevational view of the form shown in FIGURE 5.

FIGURE 7 is an enlarged vertical sectional view taken where the concrete form meets the surface of the ground.

FIG. 8 is a vertical sectional view of the form and concrete with a tube therethrough for making a passage in the post.

A concrete fence post which is poured into a form set up over a post hole so that the buried lower portion of the post is cast directly into the ground will be much more firmly set, in most cases, than one which is precast and set up in the hole and then backfilled and tamped. The former method also requires less labor if the forming of the part of the post above ground is easily accomplished as with the use of this invention.

Referring to the accompanying illustration, this invention consists of a sleeve **10**, of relatively cheap and light weight, but rigid, sheet material, such as cardboard or plastic, with just sufficient strength to contain the concrete mix for one pouring after which it can be stripped off and discarded. As shown in FIGURES 1, 2 and 3, one embodiment of this invention is constructed of four equal flat sides **11** connected along their edges with foldable joints, preferably in the form of score lines, that allow the sleeve **10** to be flattened as along line A—A in FIGURE 3, for storage and transportation. Along the bottom end of each of the sides **11**, also connected by a folding joint, is a flap **13** which is left flat during storage and transportation but which is folded outwardly as shown in the drawing to form a base on which the sleeve can rest when it is placed in position for pouring

the concrete. Optional tabs **14** at the ends of the flaps **13** can be turned up to provide a web to strengthen the flaps **13** if the weight of the sleeve is carried on their outer edges as shown in FIGURES 1 and 7.

Aligned foldable brackets **15**, having holes **16** therethrough, of the same or similar sheet material, are secured to the inner surface of the sides **11** near the top and bottom and remain flat until the sleeve is opened for use. At this time the free portions of these brackets are bent out to the position shown in the drawings, thus aligning the holes **16** so that reinforcing rods **17** can be inserted inside the sleeve **10** and through the holes **16** and into the post hole **18** where the brackets **15** will hold them in place while the concrete is poured. If soil conditions are right, one of the rods **17***a* can be cut longer than the others and driven into the soil at the bottom of the post hole **18** to hold the sleeve **10** erect until the concrete has hardened. Otherwise, any of several types of temporary bracing, not shown, can be attached to the outside of the sleeve by wire, staples or fiberglass tape.

A cuff **19** made of creped, water resistant paper or plastic is glued or stapled inside the lower end of the sleeve **10** so that about half its length extends beyond the fold of the flaps **13**. During storage and shipment this cuff **19** is preferably tucked into the sleeve **10** and, due to the creping and folding when it is pulled out to the position shown in FIGURES 1 and 2, it remains somewhat funnel shaped. This facilitates its insertion into the post hole **18** when the sleeve **10** is erected, but when the concrete is powered its pressure spreads the cuff **19** out against the sides of the hole **18**, as shown in FIGURE 7, and effectively seals the joint between the sleeve **10** and the ground. This gives a smooth surface to the finished post at this point, and the remaining voids **20** can be backfilled after the sleeve **10** is removed.

If the post is to be used for hanging a gate, the hooks **21** which support the gate can be placed as the concrete is poured by inserting them through punched holes **22** in the side **11** of the sleeve **10** or they can be driven through the sleeve material at the desired location. Clips, not shown, for attaching the fence wire can also be punched through the side **11** into the soft concrete or inserted through pre-punched holes **23**.

In cases where it is desirable to string wire through the finished post or to attach fencing by the wires strung through the post, tubes **24** can be inserted in holes **25** in the sides **11** prior to pouring the concrete, which tubes can be cut off flush with the surface of the concrete.

FIGURE 4 shows a bottom view of a six sided sleeve **26** of the invention which can be used in exactly the same way as the four sided sleeve **10** and which can be folded flat along the line B—B.

FIGURE 5 shows a bottom view of a round sleeve **27** embodying most of the features of the four and six sided versions except that it does not readily lend itself to being folded flat. It is recommended that the round sleeve **27** be made slightly conical in shape so that the units can be stacked one within the other as indicated by dotted lines in FIGURE 6. The supporting flaps **13***a* remain flattened against the sleeve **27** during storage and shipping and the internal brackets **15** also remain flat until used, the material having sufficient yield to allow them to be folded inwardly as illustrated even though they are bonded to the curved lower surface of the sleeve **27**.

The invention is not limited to the exemplary construction herein shown and described, but may be made in many ways within the scope of the appended claims.

What is claimed is:

1. A concrete post form of semi-rigid disposable sheet material comprising a sleeve the size and length of the above ground portion of the post, and a cuff of water resistant flexible sheet material bonded to the inner sur-

face of said sleeve and extending a short distance beyond the lower end of said sleeve.

2. A concrete post form of disposable sheet material comprising a sleeve the size and length of the above ground portion of the post, flaps folding outwardly at the end of said sleeve where it rests on the ground, perforated brackets secured to the inner surface of said sleeve near its top and bottom with said perforations aligned to receive at least one reinforcing rod parallel to said sleeve, and a cuff of water resistant flexible material bonded to the lower surface of said sleeve and extending a short distance beyond the lower end thereof.

3. A disposable concrete post form as described in claim 1 in which said sleeve consists of at least four flat sided flaps foldably connected along their respective edges.

4. A disposable concrete post form as described in claim 1 in which said sleeve consists of a cone tapered sufficiently to allow one said form to nest within another of like size.

5. A disposable post form as described in claim 1 and wherein said sleeve is circular in transverse cross section.

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