

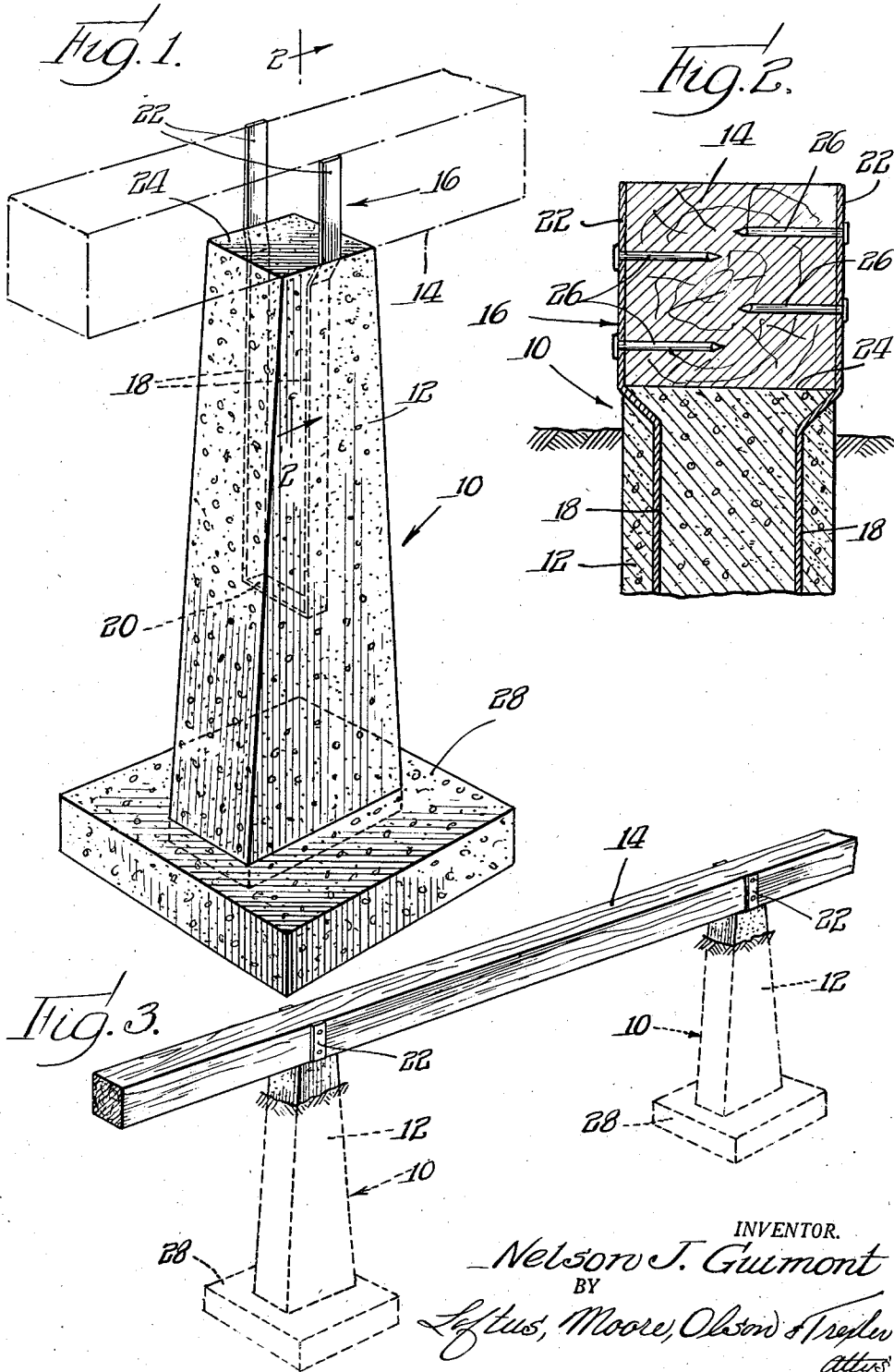
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FOUNDATION BLOCK STRUCTURE

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FOUNDATION BLOCK STRUCTURE

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This invention relates generally to foundation block structures and more particularly to foundation block structures of the preformed or cast type adapted to be mounted or imbedded at the place of installation with a minimum amount of effort and skill.

In the erection of small building structures, such as small homes, garages and the like, the type of foundation employed usually determines the durability of the structure. For many years it was the common practice in the construction of low cost buildings to use wooden foundation structures, such as cedar posts. While the use of cedar posts has proven to be considerably more economical than other foundations, such as concrete piers and the like poured at the place of installation, such economy has not been justified because of their relatively rapid deterioration. The other type of foundation construction which has heretofore been employed is a concrete pier foundation which is usually installed by a cement contractor. Such construction is many times more expensive than the cedar posts and because of this wide difference in cost the wooden foundation is often employed even though it is recognized by the builder that the wooden foundation structure will deteriorate in a relatively short period of time. In other words, in the interest of erecting a building at the lowest possible initial cost the durability of the foundation is sacrificed. The cost of concrete piers for foundation purposes is necessarily quite high because these piers must, as previously mentioned, be installed on the job by a cement contractor. Wooden forms must be made at the place of installation and such operations add considerably to the cost of the foundation. The present invention contemplates a foundation block structure which, though not as cheap in construction as cedar posts and the like, is far less expensive than concrete piers. The present invention contemplates the use of concrete in the form of posts which may be precast and delivered to the point of use.

In addition to the use of precast concrete posts, the present invention proposes a unitary block or post structure having in association therewith a metallic strap protruding from its upper extremity to accurately position a sill.

More specifically, the invention contemplates a precast or formed post structure, as set forth above, wherein the metal strap is so arranged as to greatly facilitate the ease with which a sill may be fastened in position and to this end the invention contemplates a metal strap which elim-

inates the necessity of using threaded bolts and the like and thus the time for fastening the strap to the sill is reduced to a minimum.

It is a further object of the present invention to provide a preformed post device of the type hereinbefore mentioned which is so shaped and formed as to hold the total weight to a minimum and yet insure maximum bearing at the base where needed. Also, the post contemplated hereby is so shaped as to counteract tendencies to heave with frozen ground during cold weather and its shape is such as to enable it to be readily poured wet into forms which are simple in design.

The invention also contemplates foundation structures of the type previously referred to which may be made in various sizes to accommodate a wide range in sizes of sills and which may be made of various lengths depending upon the required foundation depth. A further object of the present invention is to provide a preformed post device which may be used as a single unit, or which may be used in combination with a base footing in instances where the ground is soft or where the building structure, because of its weight, requires additional support.

Generally speaking, it is an object of the present invention to provide a neat, workman-like preformed post unit which is extremely economical to produce, which will positively insure a life-time support for the building structure and which requires a minimum amount of effort and skill to install.

The foregoing and other objects and advantages will be more apparent from the foregoing detailed description when considered in connection with the accompanying drawing wherein

Figure 1 is a perspective view of a foundation block structure constructed in accordance with the teachings of the present invention, a sill being shown by dot and dash lines positioned along the upper extremity of the post;

Figure 2 is an enlarged transverse fragmentary section taken substantially along the line 2-2 of Figure 2; and

Figure 3 is a perspective view illustrating the manner in which sills may be supported by preformed post structures of the present invention spaced along the bottom thereof.

Referring now to the drawing more in detail wherein like numerals have been employed to designate similar parts throughout various views, it will be seen that one embodiment of the present invention is designated by the numeral 10. The foundation block structure 10 includes a precast concrete block or post 12 which tapers

from its upper smaller extremity to a larger cross section at its base. The upper surface of the post 12 is preferably of a size to accommodate a wooden frame or sill 14. The sill 14, as illustrated, may be of any conventional type commonly employed to support the superstructure of a building. For purposes of illustration, the post 12 is illustrated as supporting a horizontal member, such as the sill 14, but obviously the post may be employed to support vertical members as well.

By employing the tapered construction the base is of sufficient width to afford a firm footing and the upper extremity is reduced in size thereby maintaining the weight of the post to a minimum. In order to secure the supported members, such as the sill 14, in proper aligned relation with the upper extremity of the post 12, a U-shaped strap designated generally by the numeral 16 is employed. This U-shaped strap includes side or leg sections 18 and a connecting section 20 which are preferably imbedded within the post 12. Extensions 22 of the legs 18 project above the supporting surface 24 of the post 12 at opposite sides thereof. The degree to which the extensions 22 project above the surface 24 is, of course, determined by the size of the building member or sill 14 which is to be supported by the post. In the disclosed embodiment the extensions 22 are of a length which is substantially equal to the width of the sill 14. I prefer to employ metallic strap material which is sufficiently strong to withstand tendencies for the sill and post to relatively shift laterally and yet sufficiently pliable to enable fastening elements such as nails 26 to pierce the strap and be driven into the sill. This method of securing the sill to the post is extremely simple and eliminates the necessity of using bolts and the like.

In instances where the ground is relatively soft, or the building is especially heavy, I prefer to employ a concrete base member or slab 28 which is preferably provided with a central recess to accommodate the lower or base portion of the post 12, as illustrated in Figure 1. The slab and the post are precast separately and brought into interlocking relation at the place of use. However, where the ground is firm and the building structure not especially heavy the use of the slab 28 may be dispensed with.

In Figure 3 I have disclosed the manner in which a plurality of foundation posts, constructed in accordance with the teachings of the present invention, may be mounted within the ground, a sufficient portion thereof projecting above the ground in position to receive the sills. This is representative of only one of many uses of foundation blocks or posts contemplated by the present invention.

It will be apparent from the foregoing description that the invention contemplates posts of masonry material which may be very economically produced. The straight line characteristics of the post enable it to be cast or poured with minimum effort. That is to say, the forms into which the wet concrete is poured are of simple, straight line construction. As previously mentioned, the tapered arrangement of the posts or blocks serves to increase the area at the base where it is needed, and to reduce the area at the top to a width just sufficient to accommodate the building frame members. This not only serves to provide a very firm base but also reduces the total weight of the post to a minimum and counteracts tendencies for the post to heave from

changes in atmospheric temperatures. The trouble and expense of pouring concrete piers at the place of building erection is avoided. It is common practice when piers are poured at the place of installation to make them of a size considerably larger than the width of the sills or building frame members. The present invention contemplates precast concrete posts of a size conforming exactly with the size of the sill. In fact, the posts can be made in a wide variety of sizes and lengths, kept in stock and transported directly to the building site. This makes for increased economy in building costs, at the same time assuring an unusually firm foundation structure. By employing a continuous metallic strap member extending through the post, as shown, said strap not only provides an effective fastening for the building sill but also serves as a reinforcement for the concrete. By having the extensions of the strap positioned at the margin of the sill receiving surface any lateral movement of the sill is positively precluded. By having the slab member centrally recessed alignment of the post with the slab is positively assured and this provides maximum and uniform bearing at all points.

While for purposes of illustration certain specific structural details have been disclosed herein it will be understood that the invention is capable of other modifications and changes without departing from the spirit and scope of the appended claims.

The invention is hereby claimed as follows:

1. A foundation structure including a post of masonry material having a base portion capable of being imbedded within the ground, the upper extremity of the post having a surface providing a rest for a building frame structure, and a U-shaped metallic strap fastening device carried as a unit embedded in the post and having extremities extending upwardly beyond said frame accommodating surface, said strap being formed of a gauge sufficiently light to be readily pierced by fastening elements, the distance between said fastening extremities being such as to accommodate a complementary building frame structure, said strap extremities being adapted to be pierced by elongated fastening elements for securing said extremities to a building frame structure.

2. A foundation structure including a post of masonry material having a base portion capable of being embedded within the ground, the upper extremity of the post having a surface providing a rest for a building frame structure, and a U-shaped metallic strap fastening device formed of a metal of such gauge as to be readily pierced by elongated fastening elements and carried as a unit by the post, said metallic strap having extremities extending upwardly beyond said frame accommodating surface, the connecting portion of said U-shaped strap and portions of the legs thereof being imbedded within the post, the distance between said fastening extremities being such as to accommodate a complementary building frame structure, said strap extremities being adapted to be readily pierced by elongated fastening elements for securing said extremities to a building frame structure.

3. A foundation structure including a post of masonry material having a base portion capable of being imbedded within the ground, the upper extremity of the post having a surface providing a rest for a building frame structure, and a light-gauge metallic strap fastening device carried as a unit embedded in the post and having extremities

extending upwardly beyond said frame accommodating surface, the distance between said fastening extremities being such as to accommodate a complementary building frame structure, said strap extremities being formed of sufficiently light-gauge to be pierced readily by fastening devices such as nails when a building frame structure such as a sill is mounted between said extremities.

4. A foundation structure including in combination a post of masonry material having a base portion adapted to be embedded within the earth, the upper extremity of the post having its surface providing a rest for a building frame structure, a U-shaped light-gauge metallic strap fas-

tening device formed within said post and having extremities extending upwardly beyond said frame accommodating surface, the distance between said fastening extremities being such as to accommodate a complementary building frame structure, said distance being greater than the distance between the trap portions within said post, said strap extremities being formed of sufficiently light-gauge to be pierced readily by fastening devices such as nails when a building frame structure such as a sill is mounted on said rest-providing surface between said strap extremities.

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