

Dec. 17, 1935.

W. M. BROCK

2,024,909

FOOTING FOR TOWERS

Filed June 25, 1932

Fig. 1.

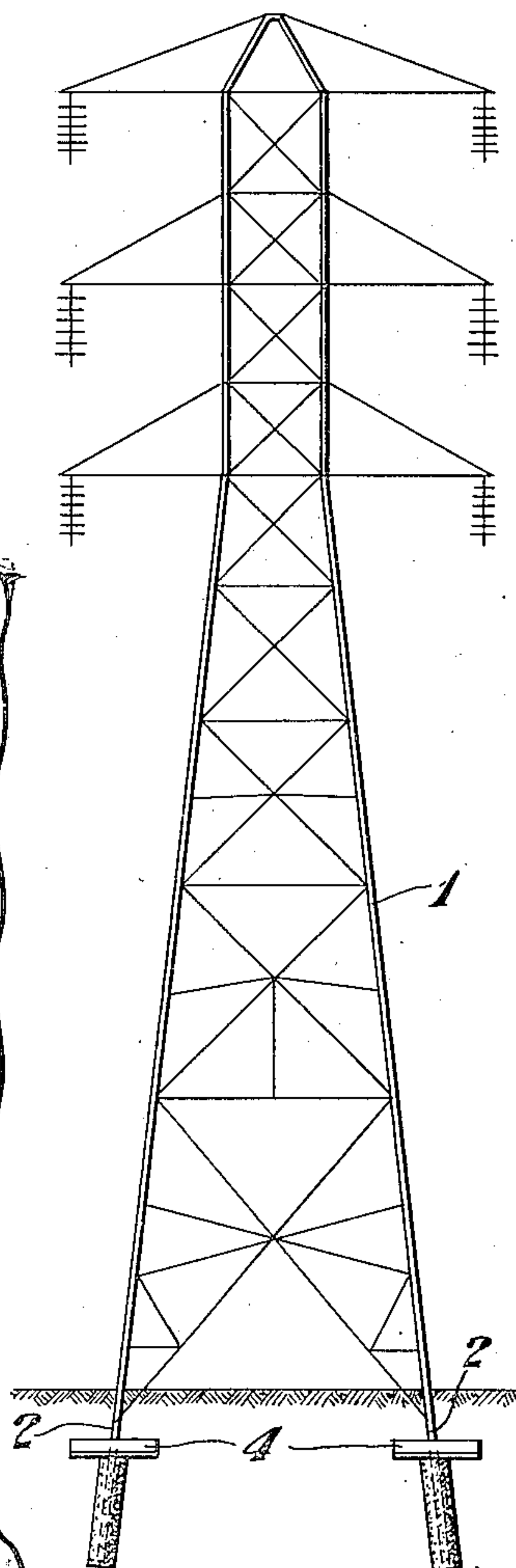
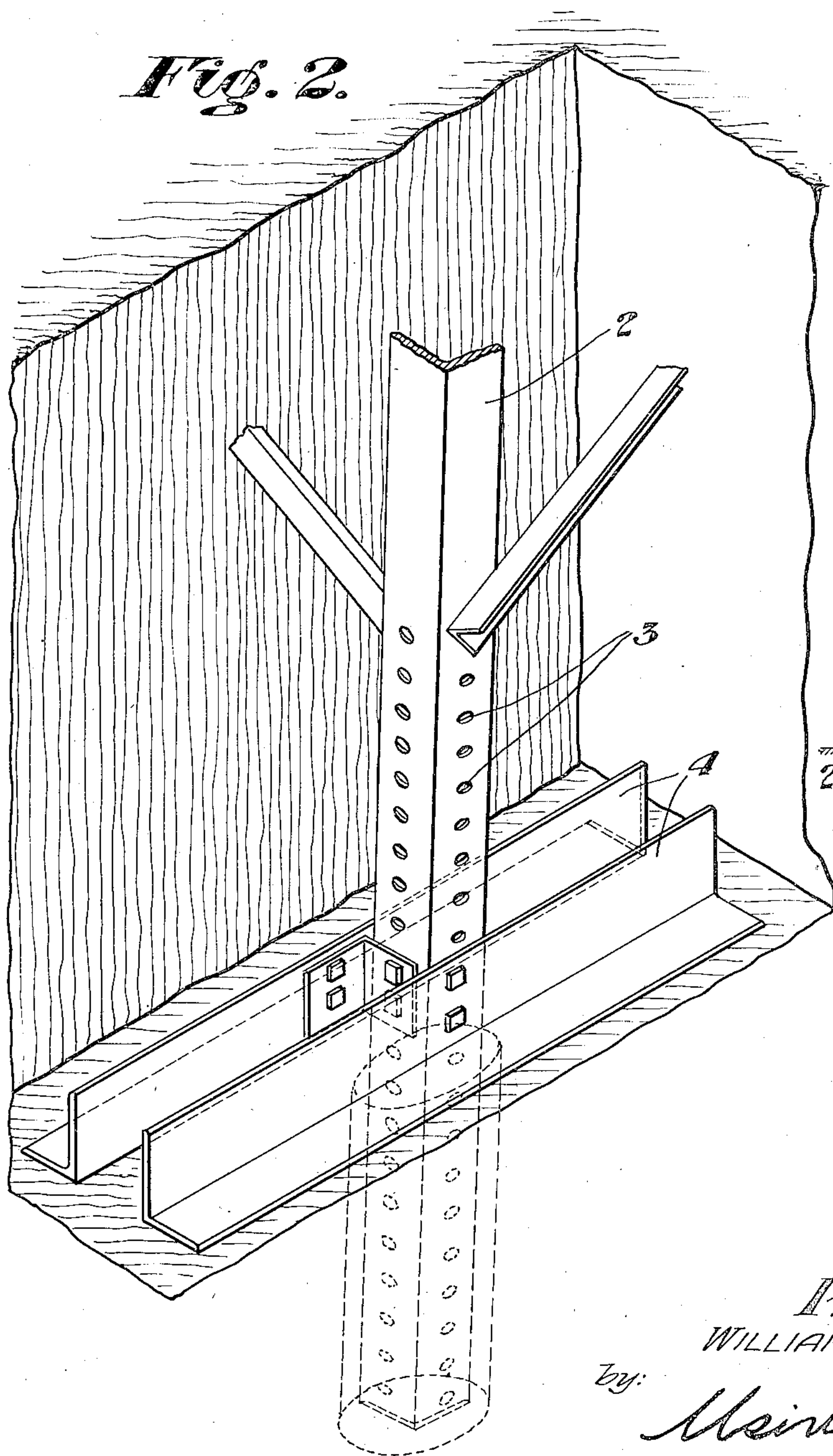


Fig. 2.



Inventor:

WILLIAM M. BROCK,

by:

Meina & Rauber,

his Attorneys.

UNITED STATES PATENT OFFICE

2,024,909

FOOTING FOR TOWERS

William M. Brock, East Windsor, Ontario, Canada

Application June 25, 1932, Serial No. 619,331

3 Claims. (Cl. 189—21)

This invention relates to tower footings and particularly to anchoring grillages for electric power transmission towers.

Such grillages generally consist of bars right angularly fixed to the ends of a tower's legs and are used when an installation is made on loose ground. This is done by digging holes in the ground to receive the grillages and replacing the removed material.

Now it sometimes happens that shale or solid rock is encountered and, because of the large size of the grillages, it becomes necessary to do a good deal of blasting and drilling to sink them to the required depth. This is expensive, and if the rock is stratified the grillages may rest on the loose ground below and be deprived of any sustaining effect exerted by this relatively solid base.

One of the present inventor's objects is to provide a grillage construction that will eliminate a considerable part of the above mentioned blasting and drilling and will enable the effective use of any solid material encountered, as a sustaining base for the tower. Other objects will be made apparent by the following disclosure.

A specific example of the invention is illustrated by the accompanying drawing, Figure 1 being a tower incorporating the new footing or grillage and, Figure 2 a detailed perspective thereof.

This drawing shows an electric transmission tower 1 having its stub legs 2 provided with a plurality of apertures 3. The grillages each consist of a pair of angle bars 4 bolted through the apertures 3 to these stub legs and are adjustable because of the option afforded by the plurality of holes.

In the second figure of this drawing a layer of rock has been encountered and, if the grillages are fixed to the end of the stub legs in the usual manner, it will be necessary to blast a large hole through it. In the present instance, however, it is only necessary to drill a

hole down through it sufficiently large to accommodate the leg itself, the grillage bars 4 being adjusted on the legs so as to rest on this rock base. The material removed from the loose ground over this base is then replaced to anchor the grillages in place.

This specific form of the grillage is shown and described in accordance with the patent statutes and not with the intention of limiting the scope of the invention thereto, except as defined by the appended claims.

What is claimed is,

1. The method of installing a tower on loose ground having a hard subsurface consisting in removing sufficient loose ground to form holes that can receive grillages, forming holes through the hard subsurface of sufficient size to receive the tower's stub legs and fixing grillages to these stub legs at points where they rest on the hard subsurface while allowing the legs to project down into said holes therein.

2. A tower installation on relatively soft ground where there is a harder subsurface, including the combination of a leg extending down into said ground and through said subsurface and a grillage fixed to said leg and resting on said subsurface, said relatively soft ground being replaced about said leg and above said grillage where it was necessary to remove the same to position the latter.

3. A tower footing including the combination of a leg, a grillage and means for fastening said grillage to said leg at various positions, said leg being of sufficient length to permit said grillage to be positioned beneath the level of the ground when fastened thereto and its end being free so that its end portion can be accommodated by a smaller hole than is required by said grillage, whereby the latter can be supported on a hard subsurface by forming a hole through the same of sufficient size to accommodate said end portion but of insufficient size to accommodate said grillage.

WILLIAM M. BROCK.