

UNITED STATES PATENT OFFICE.

EUGEN BOERMEL, OF BERLIN-GRUNEWALD, GERMANY.

YIELDING SUPPORT FOR SAFING BUILDINGS AGAINST ROCKING OF THE GROUND.

No. 896,431.

Specification of Letters Patent.

Patented Aug. 18, 1908.

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To all whom it may concern:

Be it known that I, EUGEN BOERMEL, sculptor, a subject of the King of Prussia, residing at Berlin-Grunewald, in the Kingdom of Prussia, German Empire, have invented a certain new and useful Yielding Support for Safing Buildings Against Rocking of the Ground, of which the following is a specification.

The present invention relates to an earthquake-safe construction of a yielding support for buildings.

The substance of this invention consists in strongly connecting the building with a bottom-plate having an under surface like a segment of a sphere, which bottom-plate bears laterally upon yielding buffers and rests upon a basement correspondingly formed at its upper surface in such a manner that the bottom-plate, on rocking of the ground, rolls upon the basement and thereby safes the building against inburst. The bottom-plate is provided with a half-spherical pivot catching in a correspondingly formed bearing of the basement, in order to secure the bottom-plate against lateral displacement on the basement.

I attain the object of the invention by the support illustrated in the accompanying drawing, which shows a view partly in vertical section.

The free-standing building *a*, which preferably has a steel-skeleton or iron-framing (not shown) is securely connected with a bottom-plate *b*, the under surface of which is formed like a segment of a sphere. This bottom-plate is provided at the middle with a half spherical pivot *d*, fitted in a corresponding cavity of the basement *c* and serving to avoid lateral displacements of the bottom-plate resting upon the basement. For laterally bearing the bottom-plate *b* of the building there are elastic buffers *e* in the basement *c* in equal distances from the pivot *d*. Suitable connections between the movable bottom-plate *b* and the firmly grounded basement *c*,

capable of being walked over, may be made by movable bridges *f*. The advantage of the new construction consists in the fact, that such a building, because of its movable bottom-plate *b*, on rocking of the ground, rolls upon the basement *c*, thereby compressing the buffers *e*. By these means it should be attained that on earthquakes also the building does not suffer such deformations as would cause its inburst.

What I do claim as my invention, and desire to secure by Letters Patent is:

1. A support for buildings comprising a base plate on which the building rests, said base plate having a semispherical form, a foundation of concave form, said base plate having a smaller radius than the curvature of the foundation so that said base plate will roll on the foundation upon rocking of the ground.

2. A support for buildings comprising a base plate on which the building rests, said base plate having a semispherical form, a foundation of concave form, said base plate having a smaller radius than the curvature of the foundation whereby the base plate will roll on the foundation upon rocking of the ground, and a pivot connecting the base plate with the foundation.

3. A support for buildings comprising a base plate on which the building rests, said base plate having a semispherical form, a foundation of concave form, said base plate having a smaller radius than the curvature of the foundation whereby the base plate will roll on the foundation upon rocking of the ground, a pivot connecting the base plate with the foundation, and yielding buffers between the base plate and the foundation adjacent the circumference of the base plate.

In testimony whereof I affix my signature in presence of two witnesses.

EUGEN BOERMEL.

Witnesses:

WOLDEMAR HAUPT,
HENRY HASPER.