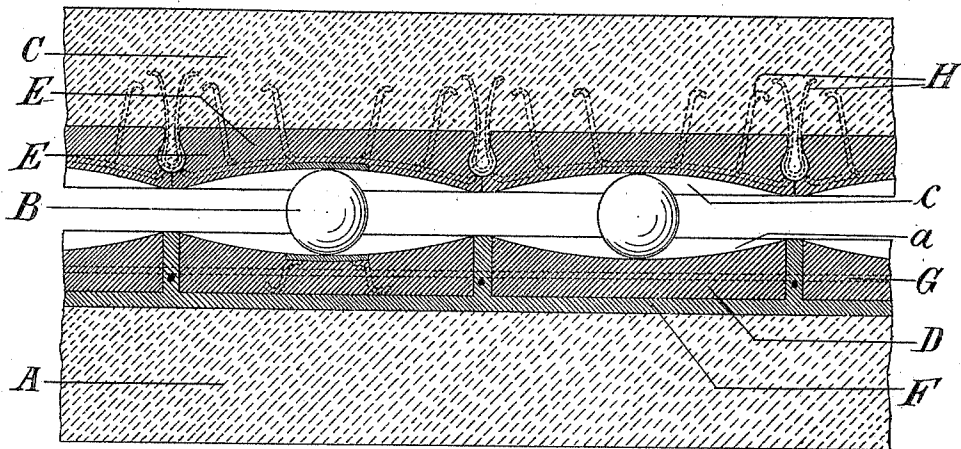


F. SCHÄR.  
 FOUNDATION FOR BUILDINGS.  
 APPLICATION FILED JULY 27, 1909.

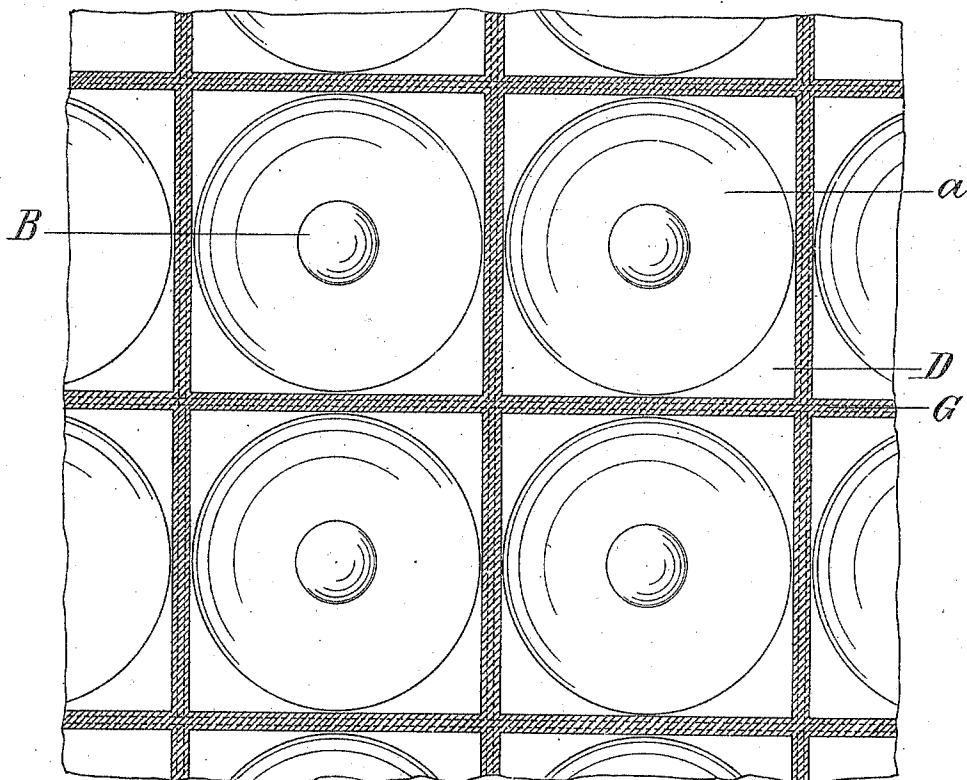
951,028.

Patented Mar. 1, 1910.

*Fig. 1*



*Fig. 2*



WITNESSES

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1774

# UNITED STATES PATENT OFFICE.

FERDINAND SCHÄR, OF LUCERNE, SWITZERLAND.

FOUNDATION FOR BUILDINGS. •

951,028.

Specification of Letters Patent.

Patented Mar. 1, 1910.

Application filed July 27, 1909. Serial No. 509,917.

*To all whom it may concern:*

Be it known that I, FERDINAND SCHÄR, a citizen of Switzerland, residing at Lucerne, in the Canton of Lucerne, Republic of Switzerland, (whose post-office address is 22 Horwerstrasse, Lucerne,) have invented certain new and useful Improvements in Foundations for Buildings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in foundations for buildings and has for its object the improved construction of such foundations whereby lateral vibrations caused by seismic or other shocks will have no injurious effect on the building.

In the accompanying drawings which illustrate the invention Figure 1 is a sectional elevation while Fig. 2 is a plan of one form of the invention given by way of example.

According to the invention the basement consists of two foundation plates arranged horizontally one above the other, the lower of which forms the special basement while the upper forms the supporting floor of the building. These two foundation plates are separated from one another by an intermediate ball bearing. Each ball is arranged between two ball bearing surfaces. By this arrangement of balls the upper foundation plate which is intended to be connected rigidly with the building may yield to lateral shocks and to their action on the lower foundation connected therewith no matter in which direction they move. In other words according to the physical law of inertia the lower foundation takes part in the motions of the vibrating earth while the freely mounted upper parts retain their position except for small vertical motions which are proportional to the amount of lateral motion of the shocks and to the radius chosen for the ball bearing surfaces. By means of these surfaces rolling of the upper foundation as also unintentional alteration of the position of the balls is pre-

vented and the construction of the whole foundation simplified.

Referring to the drawings A (Fig. 1) is a concrete block constructed on the building site which may be reinforced if desired. On this concrete block the concrete plates D formed in separate pieces with concave faces on their upper sides are set in concrete F and connected by transverse reinforcements G. On the concave surfaces *a* are then placed the metal balls B so that they are then given their predetermined position. On the balls B are then placed the armored plates E with their concave faces *c* downward. These plates are provisionally secured while wedges are driven into the openings formed by the plates abutting. The concrete block C is then formed and is connected rigidly with the reinforcements H of the plates. This concrete may itself be reinforced in conjunction with the buildings to be constructed thereon.

Fig. 2 in the drawing shows a plan of the lower foundation plate with the balls arranged thereon.

What I claim is:—

1. In a construction of the class described, in combination, a lower foundation member provided with upwardly extending partitions, concrete plates interposed between said partitions, said plates having concave upper surfaces, an upper foundation member comprising a plurality of concrete plates having concave lower surfaces, and a series of balls interposed between said lower and upper foundation members for maintaining them in spaced relation to one another, each of said balls being positioned between an upper and a lower concave surface.

2. In a construction of the class described, in combination, a lower foundation member provided with two series of upwardly extending partitions, the partitions forming one series extending at an angle with the partitions forming the other series, metal reinforcing members positioned within said partitions, concrete plates interposed between said partitions, said plates having concave upper surfaces, an upper foundation member comprising a concrete block, a plurality of concrete plates in juxtaposition to the lower surface of said block, metal reinforcing members embedded within said

block and said plates for assisting in holding  
the latter in position, said plates being pro-  
vided with concave lower surfaces, and a  
series of balls interposed between said lower  
5 and upper foundation members for maintain-  
ing them in spaced relation to one another,  
each of said balls being positioned between  
an upper and a lower concave surface.

In testimony whereof, I have signed my  
name to this specification in the presence of 10  
two subscribing witnesses.

FERDINAND SCHÄR.

Witnesses:

HERMANN HUBER,  
CARL CUBLER.