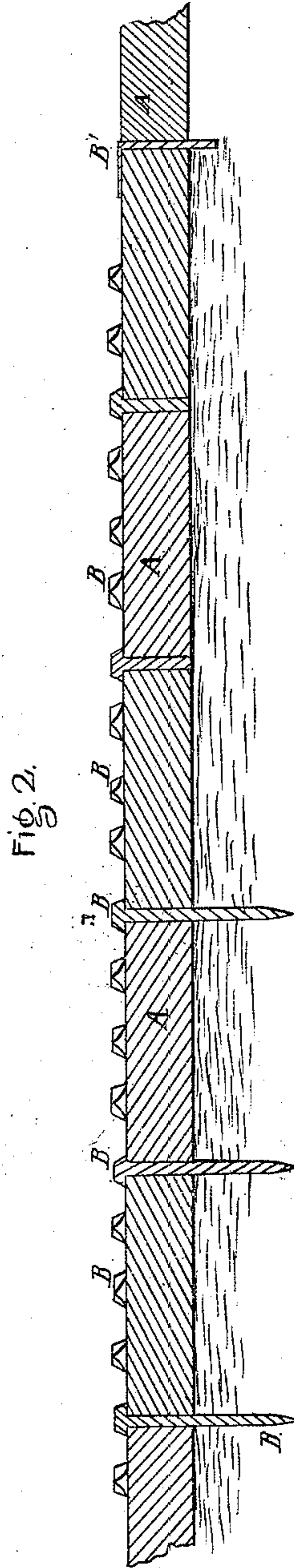
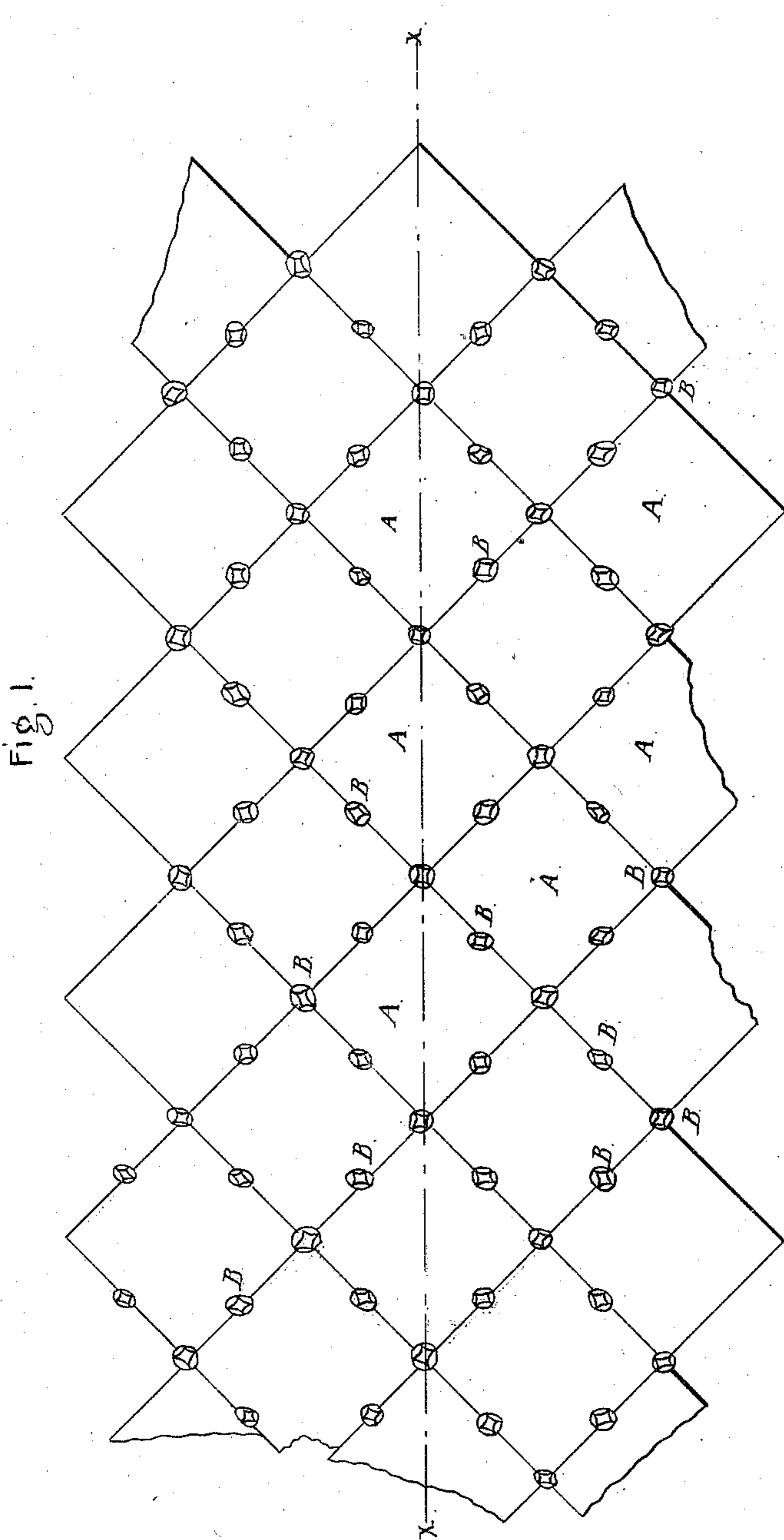


*L. F. Noe.*

*Stone Pavement.*

*N<sup>o</sup> 42,218.*

*Patented Apr. 5, 1864.*



Witnesses:

*Chas E Hove*  
*James T. Graham*

Inventor:

*Lewis F Noe*  
*By Thomas J. Lewis*  
*Att'y*

# UNITED STATES PATENT OFFICE.

LEWIS F. NOÉ, OF NEW YORK, N. Y.

## IMPROVEMENT IN STREET PAVEMENTS.

Specification forming part of Letters Patent No. 42,218, dated April 5, 1864.

*To all whom it may concern:*

Be it known that I, LEWIS F. NOÉ, of the city, county, and State of New York, have invented a certain new and useful Improvement in Street-Pavements; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, in which—

Figure 1 is a plan of my improved pavement. Fig. 2 is a vertical longitudinal section through the line *x x*.

My invention and improvement consists in the application of nails or spikes to a Russ or block pavement, for the purpose of giving greater security of footing to the horses which necessarily traverse the street.

A are the stones or blocks of which the pavement is composed, and may be of any shape. B are the nails or spikes which are inserted at the corners where two or more stones or blocks, and also in the seams between the stones when the size of the stones or blocks renders it necessary. The nails or spikes B are made of iron, and may be round, square, oblong, or any other shape. Their length also is immaterial. They may be longer than the pavement is thick, and thus extend into the bedding of the pavement, or their length may equal the thickness of the pavement, or they may be still shorter, all that is required being that they should be of sufficient length to be firmly and securely embedded between the stones. The heads of the nails should project above the pavement from three-quarters of an inch to an inch in height, and should be of sufficient size to prevent them from being forced down between the stones or blocks, and also to prevent their being too quickly worn away by the feet of the horses and the wheels of the vehicles passing over them. The shape of said nail or spike heads is entirely immaterial, all that is essential being that they should have a sufficient shoulder to rest upon the surface of the stones, be such as to afford a foot-hold to the horses

passing over the pavement, and to enable them to get up if by any accident they may have fallen. A collar or washer may be placed between the heads of the nails and the stones or blocks to still further protect them from being forced down below the surface of the pavement.

Instead of having a head formed on the nails, the body of the nails may be bent over, as represented at B', Fig. 2, into the form of a hook, or any other suitable form may be adopted.

This invention will also have a beneficial effect in keeping or helping to keep to stones or blocks of the pavement in their places.

The want of some device to secure the result which I claim to have accomplished by my invention has been severely felt, especially where the travel is so great as to keep the pavement worn smooth. It has even been proposed to cut off the corners of the stones or blocks of which the pavement is composed and to drill a hole into or through the center of the stones or blocks, and thus furnish a foot-hold for the horses by supplying places or holes where their toe or heel corks may enter and be held from slipping; but in winter, when they would be most required, and when the entire surface of the pavement may be covered with ice, these holes would also be filled with ice, and be as smooth as the rest of the pavement; but my invention furnishes projections above the surface of the pavement, and thus they will always protrude through the ice, and give a sure and reliable foot-hold to the horses.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is—

The combination and arrangement of the nails or spikes B with the stones or blocks A of a Russ or block pavement, substantially as and for the purpose set forth.

LEWIS F. NOÉ.

Witnesses:

LIT. ROBERTS,  
JAMES T. GRAHAM.