

E. McDONALD.
PAVEMENTS.

No. 174,737.

Patented March 14, 1876.

Fig 1

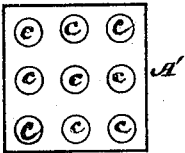
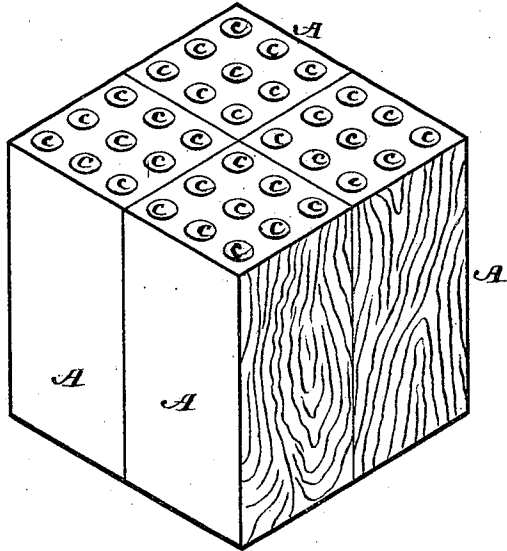
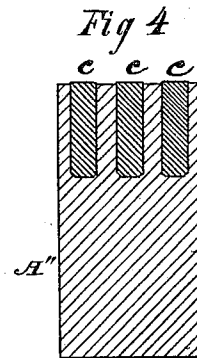


Fig 2



Fig 3



Attest:
C. Patterson
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UNITED STATES PATENT OFFICE.

ERASTUS McDONALD, OF BELOIT, WISCONSIN.

IMPROVEMENT IN PAVEMENTS.

Specification forming part of Letters Patent No. **174,737**, dated March 14, 1876; application filed February 1, 1876.

To all whom it may concern:

Be it known that I, ERASTUS McDONALD, of the city of Beloit, in the county of Rock and State of Wisconsin, have invented certain new and useful Improvements in a Combined Wooden and Iron or other metal Pavement; and I do hereby declare that the following is a full, clear, and exact description thereof, which 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 the letters of reference marked thereon, which form a part of this specification.

Similar letters of reference indicate corresponding parts.

In the drawings, Figure 1 is a perspective view, and represents a detached section of my newly-invented pavement, composed of wood and iron, or other metal, complete. Fig. 2 is a top view of a subdivision of the section shown at Fig. 1. Fig. 3 is a view of one of the metal bolts shown at Figs. 1, 2, and 4, and Fig. 4 is a view of a vertical section of the part shown at Fig. 2, taken through the center of a row of bolts shown at Fig. 3, and also vertically at Figs. 1 and 2.

In the said drawings, A A A A represent a complete section of my improved pavement, provided with metal plugs or bolts *c*. A¹ is a detached subdivision of the section A A A A, A² representing a vertical section of the last-mentioned part, and *c* represents metal plugs or bolts which are let into the face of the paving-sections in the manner shown at Fig. 4.

My invention consists in constructing a wooden pavement formed of sections, or a series of sections, of closely-fitting blocks of suitable timber, and of such vertical length, size, and form as may be found best adapted for forming a strong continuous street pavement of even surface, made equivalent to a compact solid mass by cementing together the vertical sides of each subdivision, section, or blocks, which is accomplished by the employment of a cement compounded of plaster-of-paris and common glue, combined in suitable proportions, by means of which the whole structure is made equivalent to a solid mass and rendered entirely impervious to water.

This pavement is intended to be laid upon a suitably-prepared surface of earth, gravel, broken stone, or concrete, without a prepared

floor of boards or the like. But the chief and most important feature of my invention consists in the employment of metal bolts or plugs *c*, as shown, which renders the face of the pavement practicably indestructible from ordinary wear, and at the same time presents a surface sufficiently rough to prevent the wheels of vehicles from sliding thereon, and also giving enough roughness of roadway-surface to effectually prevent horses or other draft animals, or even pedestrians, from slipping thereon when the street may be sloppy, and even give a safe footing to shod horses, should the pavement be covered with frozen sleet.

The upper ends or faces of the paving sections or blocks are perforated with auger-holes in rows or lines across the entire street, say, about three-quarters of one inch in diameter, two inches deep, and near enough together so that when filled with metal plugs or bolts, having their heads projecting about one-eighth or one-quarter of one inch above the surface of the wooden blocks, the tire of any vehicle cannot in any way touch the surface of the wooden blocks.

These bolts or plugs are in general to be of iron cast on chills, but may be of steel or other suitable metal. They are to fit tightly in the auger-holes in question, and when arranged as hereinbefore described will present a surface which in respect to the wheels of vehicles upon it will be practically level, and cause little or no jolting; and the chilled surfaces of the metal thus presented must be almost everlasting, and may be used upon several relays of wooden blocks.

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

A pavement, formed of blocks of wood A A, perforated to receive the metallic plugs *cc*, which form the wearing-surface, and cemented together by a cement composed of plaster-of-paris and glue, as described, substantially as specified.

In testimony that I claim the foregoing as my own invention I affix my signature in the presence of two witnesses.

ERASTUS McDONALD.

Witnesses:

C. A. TATTERSHALL,
CHARLES NEWBURGH.