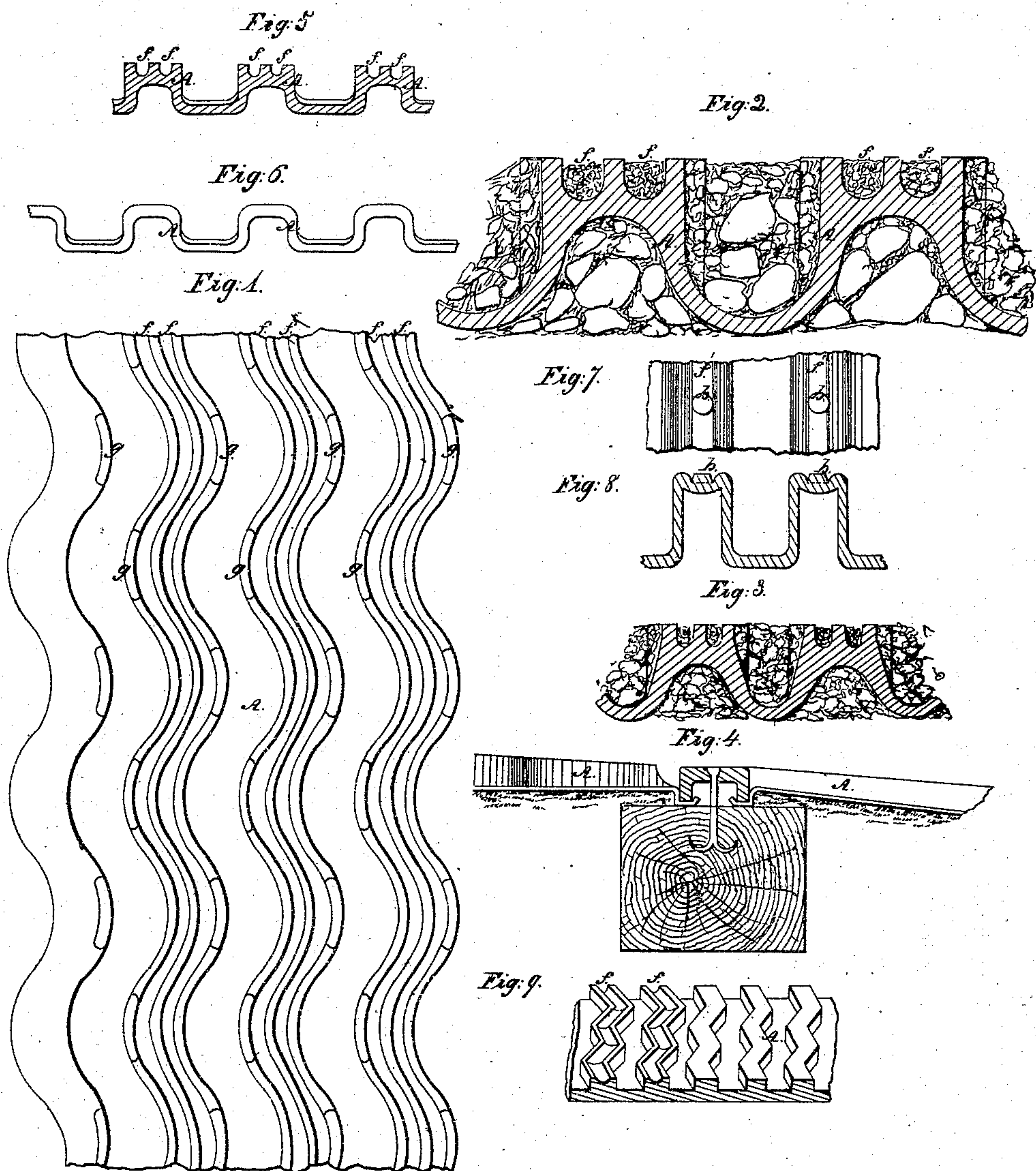


J. Montgomery.

Iron Pavement.

N^o 23,189.

Patented Mar. 8, 1859.



Witnesses:

*Octobright
P. Henning*

Inventor:

James Montgomery

UNITED STATES PATENT OFFICE.

JAMES MONTGOMERY, OF NEW YORK, N. Y.

IRON PAVEMENT.

Specification of Letters Patent No. 23,189, dated March 8, 1859.

To all whom it may concern:

Be it known that I, JAMES MONTGOMERY, of the city, county, and State of New York, have invented a new and useful Improvement in Pavements; and I hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification.

The subject of the present invention is a pavement, so constructed as to present on its upper surface a series of serpentine or winding ribs.

In the accompanying drawings, Figure 1 is a plan of a portion of a paving plate. Figs. 2 and 3 are fragmentary sections longitudinally of the street and transversely of the pavement. Fig. 4 is a fragmentary section transversely of the street. Figs. 5, 6, and 8 are sections. Fig. 7 is a plan, and Fig. 9 a perspective view exhibiting modifications to be hereafter referred to.

A, is a metallic plate which is rolled or cast (with a chill or otherwise) in the represented ribbed or corrugated form, the vertical ribs having imparted to them a series of horizontal sinuosities as represented in Figs. 1 or 9. The sides of the said ribs may be vertical as represented in Fig. 2, or inclined as seen in Fig. 3. In Fig. 6 the upper surface of the ribs is represented plain; but it is preferred to produce longitudinal cavities *f, f*, as shown in Figs. 1, 2, 3, and 5, which as well as the main cavities between the ribs will be filled with concrete in order to present a very small metallic surface and that little in such form as by its well defined angles to afford in connection with the sinuous form above referred to proper foot hold for horses. *g g* are additional shallow cavities which may be formed in convex bend of the ribs. The concrete is also beneficial in preserving the metal from corrosion.

An inferior modification is represented in Figs. 7 and 8, in which *f'* is a shallow groove destitute of concrete and provided at intervals with vertical studs *b*.

In Fig. 9 is exhibited a fragment of a pav-

ing plate with a plain base and angular ribs the intervals between which ribs are to be filled with concrete as before stated.

In Fig. 5, *c*, represents one rail of a street railway which may engage with suitably formed edges *a*, of the metallic plates A. D, is a sleeper to which the said rail is fastened by spikes E.

The foundation of the pavement may be of sand, concrete, mastic or other material.

From an examination of Figs. 1 or 9 of the accompanying drawings it will be seen that a horse's foot cannot be placed in any part of the surface of this pavement or strained in any direction without finding instantaneous and secure hold to a degree unattainable with a ribbed surface in which the horizontal sinuosities are omitted.

The iron plates represented in Figs. 1, 2, and 3 are also of peculiarly advantageous form for casting, inasmuch as the corrugations in two different directions preserve them from all liability to injury in cooling.

It is proposed to lay pavement thus constructed on streets already paved by simply reducing the inequalities in the existing pavement by ramming by steam or other power.

Paving blocks may be advantageously constructed of concrete alone by molding with serpentine ribs as shown.

The vertical corrugations are not essential to the present invention but are serviceable in affording greater strength with a given amount of metal than a pavement with a plain base would possess.

I claim as new and of my invention herein—

A street paving presenting on its upper surface a series of ribs corrugated or winding in a horizontal plane substantially as and for the purposes set forth.

In testimony of which invention, I hereunto set my hand.

JAMES MONTGOMERY.

Witnesses:

OTIS KNIGHT,
EDW. F. BROWN.