

(No Model.)

J. A. CHANLER.
PAVEMENT.

No. 475,235.

Patented May 17, 1892.

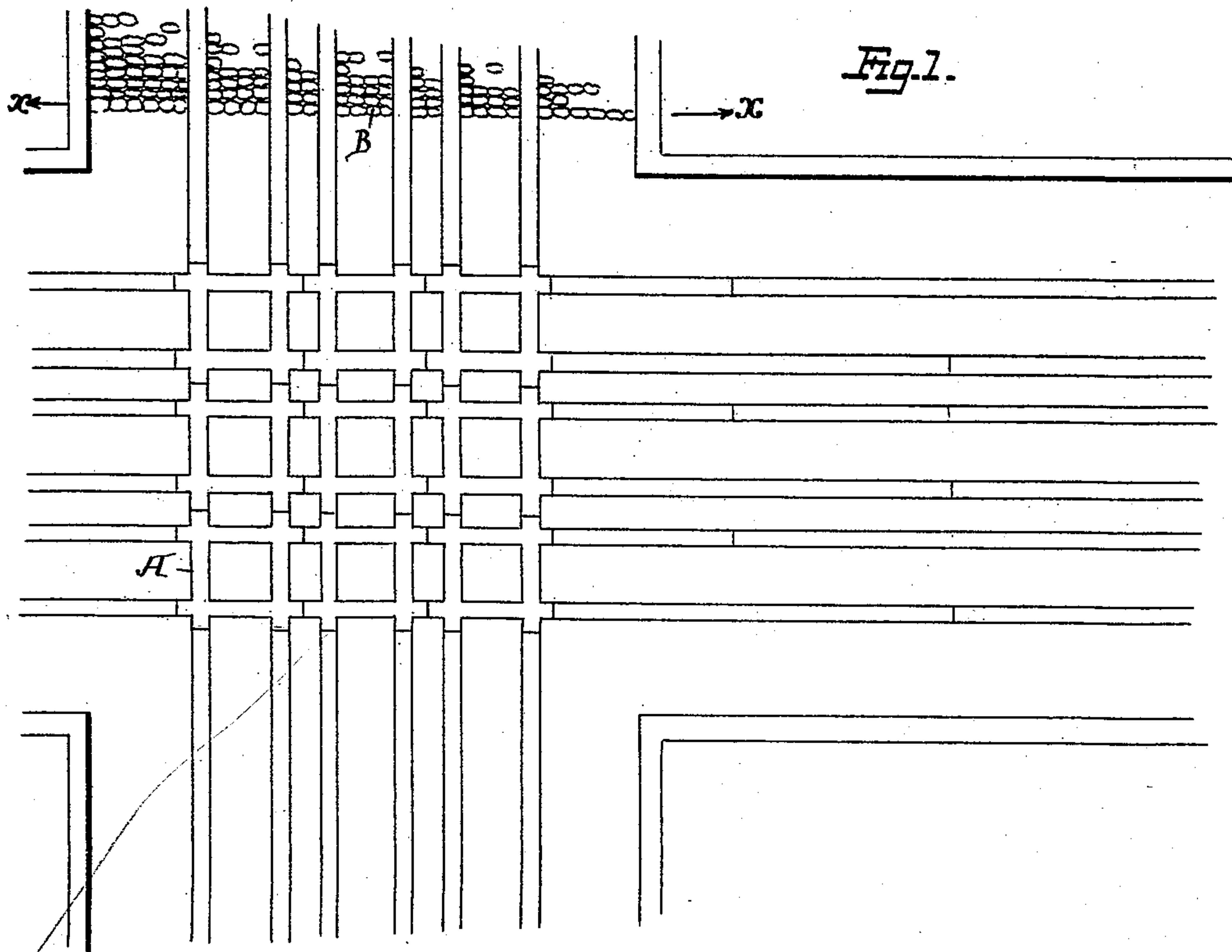


Fig. 2.

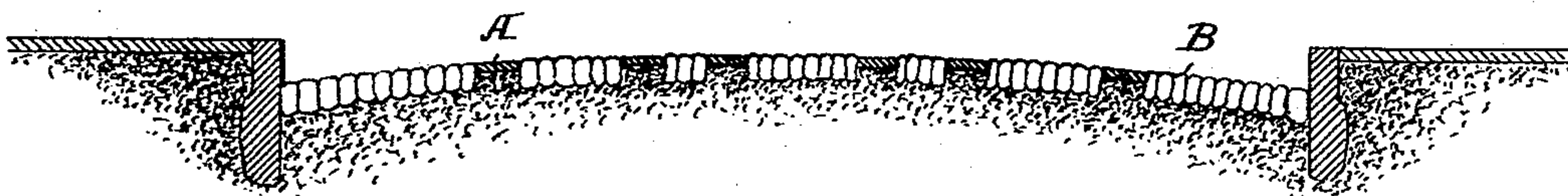


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN ARMSTRONG CHANLER, OF NEW YORK, N. Y.

PAVEMENT.

SPECIFICATION forming part of Letters Patent No. 475,235, dated May 17, 1892.

Original application filed March 4, 1892, Serial No. 423,689. Divided and this application filed April 4, 1892. Serial No. 427,596. (No model.)

To all whom it may concern:

Be it known that I, JOHN ARMSTRONG CHANLER, a citizen of the United States, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Pavements, the said invention having formed a part of the invention described in an application for United States Letters Patent filed by me March 4, 1892, Serial No. 423,689, this application being a division of said application Serial No. 423,689, by reference to which this will fully appear.

The following is a specification of my invention, reference being had to the accompanying drawings.

Prior to my invention pavements for streets of a durable character have been constructed in a variety of ways, the principal of which are as follows: first, of blocks of stone set closely together from curb to curb upon a suitable foundation; second, blocks of wood similarly set; third, continuous surface of asphalt; fourth, surface of broken stone, commonly known as "macadam;" fifth, surface composed of asphalt for wheel-tracks, combined with a cheaper and softer cemented surface for horse-tracks; sixth, uneven or obstructed surfaces composed of sunken tracks of stone or iron, combined with raised surfaces of stones for horses. All these forms of pavements present certain features of inferiority. The pavements made of blocks of stone are rough, disagreeable to ride over, and easily become uneven by depression of individual blocks or sections. The wooden pavements are found to be pleasant to ride over, but lacking in durability, owing to the permeation of moisture. The asphalt surfaces are convenient to travel over for the occupants of vehicles, but are exceedingly slippery and dangerous for horses. The macadam or broken-stone pavement, while excellent as a holding-surface for horses' feet, is difficult to keep clean, especially if of an extended character. The combination of asphalt and other cemented compositions and of sunken stone or iron and raised stones present such obvious defects that they never have come into general use.

My invention is that of an improved pave-

ment which will combine the good features of former pavements and obviate the difficulties or many of the difficulties incident to each of them.

In the drawings annexed hereto, in which similar letters of reference refer to similar parts throughout the various views, Figure 1 is a plan or top view of my improved pavement or roadway. Fig. 2 is a cross-section thereof, enlarged. Fig. 3 shows a modification.

I have found that in cities already paved with some one of the usual pavements—such as granite or wooden blocks or asphalt—a very large proportion of the expense of laying down the pavement embodying my invention may be saved by simply applying to such pavements already laid the broad flat iron rails A, laid with their top surfaces flush with the general surface of the roadway for wheel-tracks without substituting macadam or similar composition for the old pavement in the horse-track, which combination of rails and macadam is the preferred form of my invention and which forms the subject-matter of my said former application.

I construct my pavement or roadway as follows: I lay upon suitable ties or stringers, or both, a series of parallel flat iron rails A, sufficient to accommodate the travel of the street or road. I have illustrated in my drawings three parallel lines of travel and three pairs of such rails, and in most cities the streets are wide enough for three or four lines of travel and three or four parallel lines of such rails. These rails I preferably make of Bessemer steel of suitable thickness—say one-half inch in thickness—and very much broader than ordinary rails for street-cars. I recommend a breadth of from eight to twelve inches. This breadth of the rail is one of the features of my invention. Heretofore when rails have been used for vehicles said rails have been provided with ridges or grooves operating, in conjunction with flanges on the wheels of the vehicles, to keep said wheels on said tracks, or said rails have been sunk below the general surface of the roadway to accomplish this result. The annoyance caused by the roughness and ruts of such pavements is well known. I have discovered that by making the rails

sufficiently broad to allow ordinary deviation of the vehicle, and yet not so broad as to interfere with the footing of the horses, no ridges, grooves, or sunken rails are necessary to keep
5 the wheels upon these rails, and the general even surface of the roadway may be maintained. Horses naturally will avoid the smooth surface of the rails. The remainder of the roadway, whether of granite or wooden
10 blocks B, Figs. 1 and 2, or of asphalt C, Fig. 3, or any other ordinary road-bed, I leave unchanged. If the original road-bed is of stone, its comparative roughness serves to keep travel upon the rails. Thus my pavement
15 comprises a roadway having a surface composed of flat iron rails for the wheels of vehicles and filled in with a pavement or roadway of one of the ordinary styles, the whole having a surface substantially plane.
20 The use of my improved pavement will re-

sult in great economy, both in the wear and tear of vehicles and in the expenditure of force in drawing the same.

What I claim, and desire to secure by Letters Patent, is—

In a roadway, the tracks or ways for the wheels of vehicles, which consist of flat iron rails laid with their top surfaces flush with the general surface of the pavement and broad enough to accommodate the wheels of vehicles throughout the ordinary deviations of the horses between said rails, substantially as and for the purposes described. 25 30

In witness whereof I affix my signature, in presence of two witnesses, this 2d day of April, 1892. 35

JOHN ARMSTRONG CHANLER.

Witnesses:

I. Y. KNIGHT,

H. U. N. PHILIP.