L. DUTERTRE.

Pavement.

No. 163,168. Patented May 11, 1875.

FIG. 1.

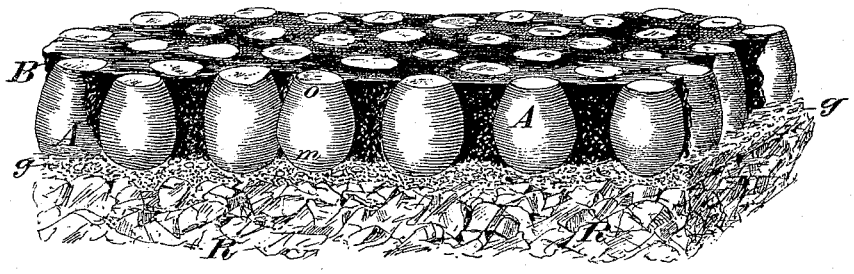


FIG. 2.

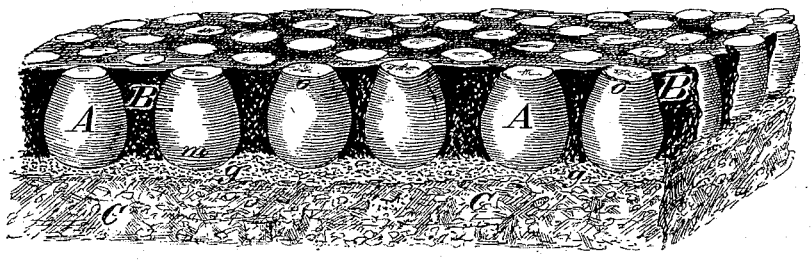


FIG. 3.

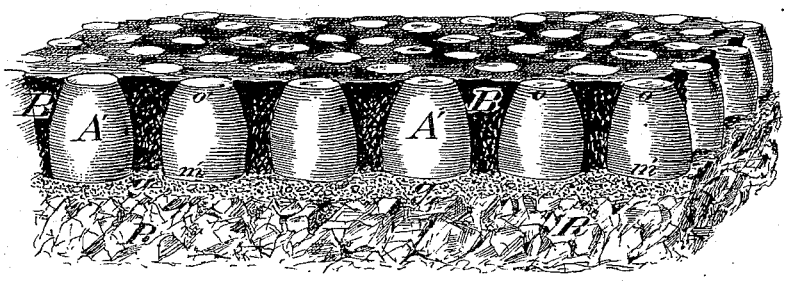
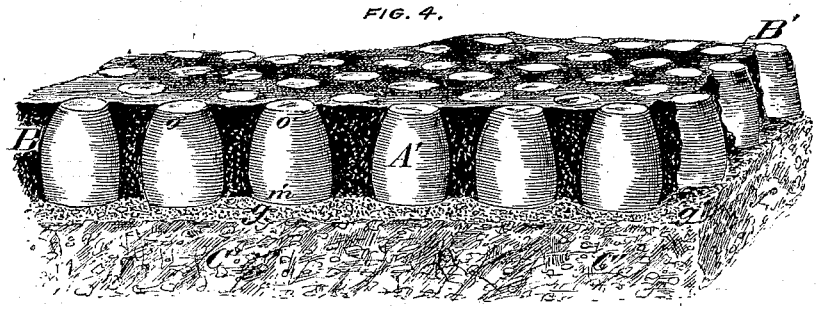


FIG. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

LOUIS DUTERTRE, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN PAVEMENTS.

Specification forming part of Letters Patent No. **163,168**, dated May 11, 1875; application filed February 15, 1875.

To all whom it may concern:

Be it known that I, LOUIS DUTERTRE, of the city and county of San Francisco, State of California, have invented an Improved Pavement, of which the following is a specification:

My invention consists of a pavement made up of cobble-stones, having the smaller top ends clipped off, and the broad bottoms either left in their natural state or also clipped, and embedded in a layer of gravel, which rests on a thick foundation of either broken rock or concrete, while a preparation of asphaltum, which is poured in between the intervals left during the adjustment of these cobbles, joins them together in one solid piece.

Figure 1 is a perspective view of a section of a pavement embodying my invention, wherein the smaller ends of the cobbles have been clipped off, and the sound broad bottom ends embedded in a layer of gravel, which rests on a broken-rock foundation. Fig. 2 is a perspective view of a section of a pavement similar to that of Fig. 1, but having a concrete foundation in place of one made of broken rock. Fig. 3 is a perspective view of a section of a pavement embodying my invention, wherein both the tops and bottoms of the cobbles have been clipped off, and the broader clipped ends embedded in a gravel and broken-rock foundation. Fig. 4 is a perspective view of a pavement similar to that shown in Fig. 3, having, however, a concrete in place of a broken-rock foundation.

With reference to the drawing, the first pavement, as shown in Fig. 1, is constructed by laying a foundation of broken rock or rubble, R R, to a depth of from six inches to a foot, according to the durability required. This rock is well rammed down or rolled till it has attained as solid and even a surface as possible. Onto the foundation thus constructed a layer of from two to three inches of gravel, *g g*, is placed, and in this are carefully embedded the broad bottom ends *m m* of cobble-stones A A, which have had the smaller ends *o o* clipped. The gravel layer *g g* thus provided allows for the difference in height of the cobbles cut as described; for, as some cobbles will naturally be somewhat longer than others, this gravel depth of two or three inches will admit, more or less, of their being depressed, so as to give the clipped and exposed ends the regular flat and even appearance so well adapted for a roadway. In the intervals between these cobbles thus arranged in position a preparation of asphaltum, hereinafter described, is poured up to the level of the clipped cobble ends *o o*, so as to cause these stones to form with it a solid stratum, impervious to water, the whole constituting a hard, durable, even, and elastic pavement.

In some cases, as shown in Fig. 2, a concrete foundation may be more advantageously used than one of rubble, accordingly as the cost is not so much an object as the construction of a superior pavement.

With reference to Figs. 3 and 4, the cobble-stones have both the tops and bottoms clipped off, and the broad clipped ends *m' m'*, which are termed the bottoms, embedded in the gravel layer *g g*, so as to leave the exposed top ends *o' o'* level with one another. In that of the former, Fig. 3, a foundation of broken rock is made similar to that shown in Fig. 1, and in the latter one of concrete, as in Fig. 2, and in both, as before, the asphaltum preparation is poured in between the stones, so as to join them firmly together for securing an even, solid, and flat surface.

I do not confine myself to any particular preparation of asphaltum for uniting these clipped cobbles, but prefer the compound designated in the drawing as B B or B B', which consists of the following ingredients in about the proportions named: Petroleum, two per centum, pulverized limestone, five per centum; gravel, ten per centum; and the balance asphaltum of the best quality.

I disclaim clipped cobbles rammed down either by themselves or with loose material as a pavement, as this does not actually unite them, and as I am aware that this is not new; but

I claim as my invention—

A pavement constructed of cobble-stones clipped at the top, set in a bed of gravel or sand spread on a prepared foundation of concrete or broken stone, and cemented together by an asphaltum preparation, all substantially as specified.

LOUIS DUTERTRE.

Witnesses:

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LIONEL VARICAS.