

W. B. WARREN.
PAVEMENT.

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916,070.

Patented Mar. 23, 1909.

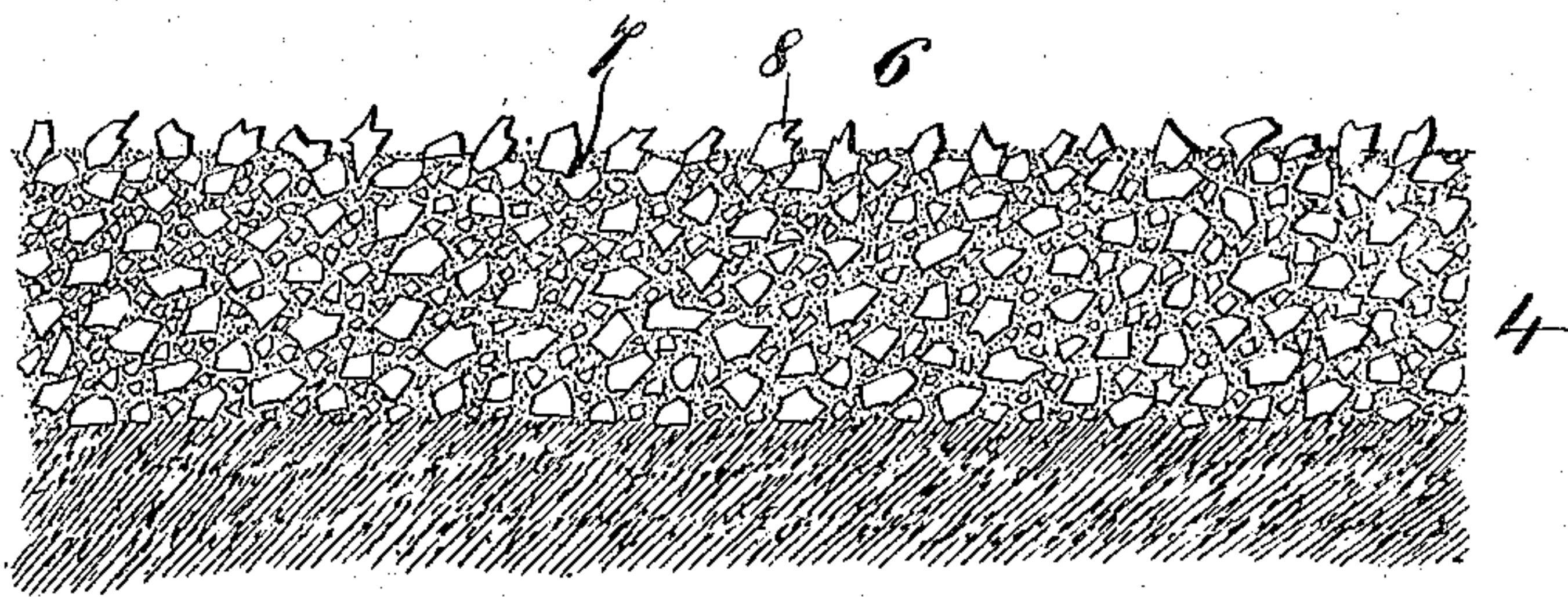


FIG. 1.

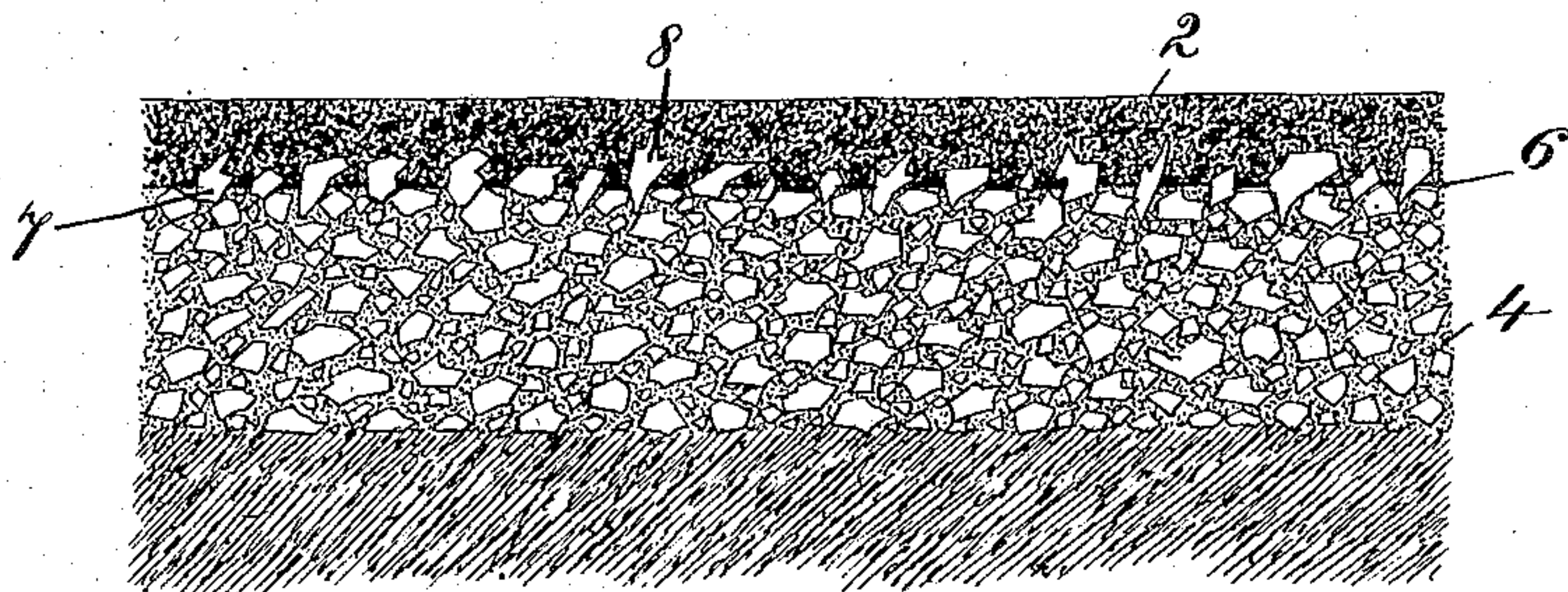


FIG. 2.

WITNESSES=

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WALTER BURGESS WARREN, OF NEWTON, MASSACHUSETTS, ASSIGNOR TO WARREN BROTHERS COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF WEST VIRGINIA.

PAVEMENT.

No. 916,070.

Specification of Letters Patent.

Patented March 23, 1909.

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To all whom it may concern:

Be it known that I, WALTER B. WARREN, of Newton, in the county of Middlesex and State of Massachusetts, a citizen of the United States, have made certain new and useful Improvements in Pavements, and do hereby declare the following to be such a full, clear, and exact description of my invention as will enable those skilled in the art or science to which said invention relates to make and use the same.

My invention relates to a pavement the wearing surface of which has in itself inherent stability, for example,—such a wearing surface as is described in U. S. Letters Patent No. 727,505. This pavement comprises in addition to the wearing surface a foundation and a layer of coarse broken stones or other materials so laid as to penetrate somewhat into the foundation whereby they are held firmly in place, the projecting portion thereof projecting into the topping or wearing surface, which, being in its nature firm and stable, unites to form a pavement of great wearing possibilities.

My invention will be understood by reference to the drawings, in which—

Figure 1, represents a similar view of a pavement embodying my invention, the wearing surface not being shown. Fig. 2, represents a similar view of my completed pavement.

My improved means for preventing relative movement of the topping and foundation differs in principle from any of the expedients known to the art. I do not rely upon the "adhesiveness" of any composition forming a layer intermediate of the topping and the foundation, such as the "cushion coat" hereinbefore mentioned. Neither do I rely upon the combined adhesiveness and immobility of an intermediate layer, as for instance, the "binder course." In my pavement there is no necessity for an intermediate layer, the sole function of which is to prevent creeping between foundation and topping. In lieu of such a layer I use coarse broken stone or other material, so placed that a lower portion of each element of such material penetrates and is fixed in the concrete or other foundation, while the upper portions of such elements interlock with the topping or wearing surface. The

elements thus act as numberless dowel pins, securely locking together, and preventing the slightest displacement of the adjacent surfaces.

In Fig. 1, which represents my invention, the intermediate layer is seen to be omitted, and in its place is found the broken stone 6, one portion, 7, of which is securely held by the foundation, while the other portion, 8, interlocks with the topping.

In constructing my pavement the ingredients composing the hydraulic concrete or other foundation, 4, are thoroughly mixed, and well tamped while wet or soft so as to be compact, and so as to have the voids in the mineral aggregate filled with the mortar or binding element. Then while the foundation is still plastic, the coarse stone or other material is scattered over its surface, and gently tamped so as to partially penetrate the same. The subsequent setting or hardening of the concrete or other foundation will cause the stone to be so securely held in place as to be substantially an integral part of such foundation, and the foundation so treated will present an extremely rough surface. Upon this rough surface the topping is laid in any desired manner, and by its interlocking with the protruding stone, is prevented from creeping or from being displaced, no matter how heavy the traffic.

While I have described my invention chiefly in connection with a hydraulic concrete foundation, it is obvious that the invention itself is independent of the nature of the particular foundation or course upon which the topping is to be supported. It is merely necessary that the stone be tamped into such supporting course while the course is yet flexible or before it has set or hardened. Of course in repairing old pavements wherein the foundation has already become hardened, it is necessary to soften the foundation to some extent before tamping in the stone or other material.

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

An improved pavement consisting of a suitable foundation, coarse broken stone or other material tamped into such foundation and partially protruding therefrom, and a

bituminous wearing surface interlocking
with the protruding ends of such material,
such wearing surface being composed of
mineral ingredients of several grades so pro-
5 portioned to each other as to possess an in-
herent stability and a bituminous cement
or binder said bituminous wearing surface

being rolled in place upon said foundation
when said foundation has become dry and
hard.

WALTER BURGESS WARREN.

In presence of—

J. E. R. HAYES,

SAUL SIPPERSTEIN.