UNITED STATES PATENT OFFICE.

WALTER E. HASSAM, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO THE HASSAM PAVING COMPANY, OF WORCESTER, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

PROCESS FOR LAYING PAVEMENT.

No. 851,625. Specification of Letters Patent. Patented April 23, 1907.

Application filed November 14, 1906. Serial No. 343,459.

To all whom it may concern:

Be it known that I, WALTER E. HASSAM, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Processes for Laying Pavement; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a process of constructing stone or gravel roads or pavements and it is designed particularly as an improvement on my previous invention patented May 1, 1906, No. 819,652. The process of laying the pavement as described in said patent consists in first laying a layer of uncoated stone, compressing said stone until the voids therein are small, then grouting with a mixture of cement, sand and water until said voids are filled and lastly adding a suitable surface to the foundation thus made. In laying the pavement according to this process, great difficulty has been experienced in distributing the grout in such manner that it will run into and fill all the voids of spaces in the stone layer. This is due to the air which is compressed or imprisoned in said voids and the dust which accumulates on the stone. It has also been found that the imprisoned air has a tendency to force its way through the grouting with the result that the surface thereof is covered with small air holes.

The object of the present invention is to lay the pavement and particularly the grout in such a manner that all the voids in the stone layer will be filled therewith and no holes will be left in the surface.

The invention consists primarily in agitating the grout as and after it is placed upon the stone whereby any air holes that may appear are closed up, the air is forced out of the voids and said voids are filled with the grout. A solid and homogeneous mass is thereby obtained which will last indefinitely. To properly agitate the grout, I preferably employ a steam roller which may be the same used for compressing the stone. Whereas in the old manner of laying the pavement the rolling was stopped after the stone had been compressed, in the present process the rolling is continued during and after the grouting is added. It has been found that said rolling may be continued until the grout has percolated the stone layer before said grout sets.

The present process consists in constructing a foundation by laying a layer of uncoated stone, compressing said stone layer until the voids therein are small, grouting the same with a mixture of cement, sand and water, agitating the mass by rolling or otherwise compressing it until the stone layer is compact and the grout flushes up to the surface showing that all the voids or spaces between the stone have been filled with the grout. Similarly constructed layers of stone and grout may be added to the first one until the desired thickness is reached. Any suitable surface may be placed on the foundation thus formed but I prefer to use another layer of grout, preferably thicker, with fine stone in its surface. The fine stone may be mixed with said layer of grout or the latter may be laid first and the fine stone spread upon and pressed into its surface before it has become set. The surface may be smoothed, preferably by brooming, to the desired contour before the grout sets.

I claim:

1. The process of constructing a road or pavement which consists in laying a layer of uncoated stone, compressing said stone layer until the voids therein are small, grouting with a mixture of cement, sand and water, agitating the mass to expel the air and fill the voids between the stone with said grout and repeating said process of laying layers of stone and grout and agitating the same until the desired thickness is reached.

2. The process of constructing a road or pavement which consists in laying a layer of uncoated stone, compressing said stone layer until the voids are small, grouting with a mixture of cement, sand and water, agitating the mass to expel the air and fill the voids between the stone with said grout, and placing a surface on the mass thus formed.

3. The process of constructing a road or pavement which consists in laying a layer of uncoated stone, compressing said stone layer until the voids are small, grouting with a mixture of cement, sand and water, agitating the mass to expel the air and fill the voids between the stone with said grout, adding an-

other layer of grout and fine stone and smoothing the surface to the desired contour before it is set.

4. The process of constructing a road or pavement which consists in laying a layer of uncoated stone, compressing said stone layer until the voids are small, grouting with a mixture of cement, sand and water, agitating the mass to expel the air and fill the voids between said stone with the grout, adding another layer of grout, spreading fine stone upon said grout and smoothing to the desired contour before it has set.

5. The process of constructing a road or pavement which consists in laying a layer of uncoated stone, compressing said stone layer until the voids therein are small, grouting with a mixture of cement, sand and water, agitating the mass to expel the air and fill the voids between said stone with the grout, repeating said process of laying layers of stone and grout and agitating the same until the desired thickness is reached, adding another layer of grout, spreading fine stone upon said grout and smoothing to the desired contour before it has set.

In testimony whereof, I affix my signature, in presence of two witnesses.

WALTER E. HASSAM.

Witnesses:

CHAS. K. PEVEY,

EDITH M. TOLLEY.