

UNITED STATES PATENT OFFICE.

FRED J. HOYT, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE HOYT MACADAM GRAVEL ROAD COMPANY, OF ILLINOIS.

GRAVEL ROAD.

SPECIFICATION forming part of Letters Patent No. 478,862, dated July 12, 1892.

Application filed September 9, 1891. Serial No. 405,205. (No specimens.)

To all whom it may concern:

Be it known that I, FRED J. HOYT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have
5 invented certain new and useful Improvements in Gravel Roads; 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 ap-
10 pertains to make and use the same.

My invention relates to the making of gravel roads; and it consists of an improvement in the method of making such roads, as hereinafter described and particularly
15 claimed.

The object of my invention is to construct a cheaper, more durable, and for many purposes a more efficient road than has hitherto been constructed of broken stone, or mixed
20 stone and gravel, or of gravel and dirt, or of mixed gravel alone, or of those materials when used either alone or with other ingredients.

The ordinary way of making a macadam-
25 ized stone road is to first lay a course of quite large or coarsely-ground stone and cover this with a "metal" or surface covering of finer stone. The objections to such a road are numerous, the chief of which are the disintegration of the top layer by wear and atmospheric influences, the working up of the larger stone from below, and the production of a ground powder on top which is dust when dry and mud when wet. These objections
30 and additional ones exist as to what are commonly known as "gravel roads." In such roads mixed gravel of various sizes are put on a prepared road-bed and rolled; but the larger gravel soon works to the top, the smaller sinks
40 in the ground, or all becomes so mixed with the earth as to require frequent renewal and alterations. Gravel is often used, too, with stone as a foundation rolled thereon, a coat of tar applied, and cement and asphalt used as
45 a top dressing. This produces a hard unelastic pavement.

There are other kinds of paving compositions, too numerous here to mention, in which gravel enters as an important feature; but

my plan is to construct a road or paving composed substantially entirely of gravel in the following manner: After excavating, grading, and preparing the road-bed, I apply thereto a uniform grade of coarse gravel—say from one-half to two and one-half inches in size
55 and to a depth of about twelve inches—then cover the same with a light covering of washed sand, and then roll the same hard. I then apply to this bottom layer a second and finer grade of gravel—say three-sixteenths to one-half inch size to the depth of about ten inches—
60 and hard-roll the same, as before. Then I apply as a top layer a still finer grade of gravel—say from one-twentieth to three-sixteenths of an inch in size—first mixing it with
65 a small portion of cement to make it pack solid, and the whole mass is again rolled. With some kinds of gravel the cement with the top dressing would not be required, and, if desired, a slight covering of washed sand
70 can be used over the second layer. Thus while I produce a solid road, still it is much more elastic for horses, perfectly smooth, always clean, easily to cut out or repair, one that is unaffected by frost or heat or wear.

By the use of a good gravel grading and screening machine, and in a locality where gravel abounds one of the cheapest and most economical roads may be thus constructed. The gravel used of course should be first
80 thoroughly cleaned or washed, screened, and graded.

Having thus described my invention, what I claim is—

A gravel road or pavement consisting of a
85 first or bottom layer of hard-rolled clean coarse gravel covered with a slight dressing of washed sand, a second layer of hard-rolled clean gravel of a finer grade, and a top layer of still finer grade of hard-rolled clean gravel,
90 said top layer mixed with cement, substantially as described.

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

FRED J. HOYT.

Witnesses:

E. MAY STOUGH,
A. DANIELS.