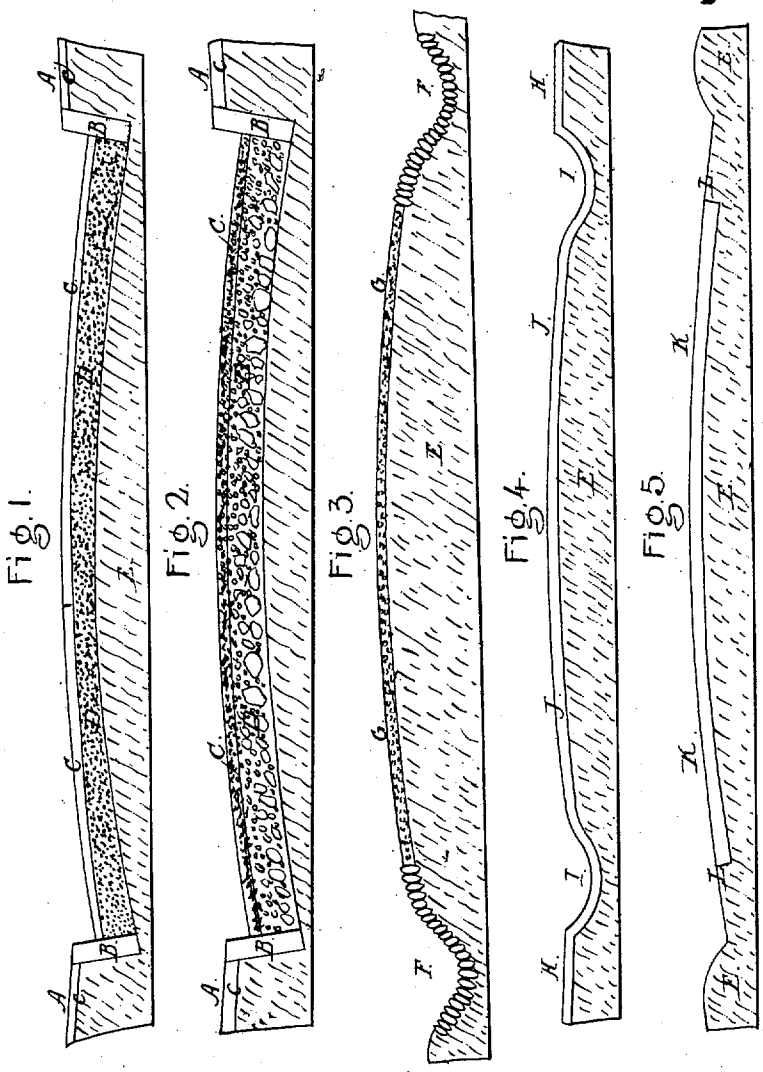
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J. Martineau,

Stone Pavement,

Patented Aug. 11, 1834



N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C

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John Martineau. Elbridge N York

Letters Patent

The schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said John Martineau himself of his improvement being a composition of matter designed for and is applicable to the construction of Roads Streets &c &c which he calls the American plan of Road making.

To whomsoever these presents shall come

Be it known that I John Martineau of the Town of Elbridge County of Onondaga and State of New York have invented a new and useful composition of matter designed for and applicable to the construction of roads streets and highways which it is believed constitutes a valuable improvement on the Mc Adam plan and others now in use. The following is a full description of the composition of matter and mode of using the same in the construction of Roads Streets &c. as invents by me. The composition consists of Lav either alone simply or combined with the substance or other substances of a cohesive nature and sand of different degrees of coarseness combined together as the composition may consist of one quality of sand with Lav or other cohesive cement. other varieties of combination may be used according to the exigencies of the case presented by the section of country where a Road on this principle is proposed to be constructed. The materials may consist of gravel coarse or fine or with the exception of the substances filled by sand. It may however be observed that in all cases the combination of hard substances to be cemented with the Lav or other cohesive cement should present the smallest amount on the aggregate of interstices or minute cavities to be filled by cement. Cobble stones may be used or broken stone such as is used on a McAdam road whatever kind or variety of materials are selected in any particular case the whole should

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be rounded as compact and uniform as possible. If coarse materials enter into the composition in any case fine materials should be combined therewith to fill the vacancies render the mass solid and compact and the upper surface smooth and even so as that after it has been gauged with Tar or other cohesive cement it may present a surface quite smooth and uniform

Having described what constitutes the composition intended to be used in this improved mode of constructing Roads Streets &c over those now in use which improved mode for the sake of distinction I will designate as the American plan of Road making. I now proceed to describe the mode of construction — The same or similar suitable modes are to be followed in this case as for the McAdam Road. It is first to be staked out then graded or graduated. The necessary precautions taken by Culverts Side ditches and drains to collect and carry off the water. The bed of the road is to be rounded firm and compact by Rolling or other suitable process preserving the shape the face of the road is intended to have. Tho it may be remarked as this combination is impervious to water much more perfectly than a McAdam covering it is not necessary to be so much raised or convex to shed the water as his plan renders proper and necessary

The Road or Street being laid out graded and rendered compact and firm is now ready to receive the covering to be composed The cheapest material in a large section of the United States is Sand which at the same time forms the best foundation free of subjacent. The sand is spread over uniformly to the required thickness. Say three inches in ordinary cases. The proper thickness will somewhat depend on the nature of the soil constituting the bed of the Road. If it is firm and homogenious not holding water easily then the covering may be thin reduced to a minimum — If a road the Stone to be prepared may be in thickness of from one inch to six according to circumstances the stone being put on and shaped correctly according to the side ditches if necessary and even to form side walls it is proper to be

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cemented. Fair weather should be selected for this operation
& tar alone is used and in a warm Latitude it may be expe-
ie to boil it a little to diminish its fluidity, and prevent its
yielding to ordinary weights. Though it is believed that raw
pure tar will with the sand & sand combined with other
hard material form a sufficiently firm hard compact mass to
resist injurious impression from the impinging force of wheels without
yet fail and leave unimpaired its character for great durabi-
lity of wear still it may be found useful to boil or heat the
tar to a suitable degree as a means of making it pervade the
whole mass to be cemented more readily and effectually than
when cold or in its natural raw state. Among others the method
may be employed to distribute the cement over the face of the road
viz. a cart may be provided with a reservoir of tar and a
perforated Cylinder laying near the face of the Road horizontally
connected with the reservoir. The communicating tube between
the reservoir and the perforated Cylinder provided with a cock
or stopper. Now the reservoir being supplied it may be moved
by a horse to a suitable place to begin the process of cementing
the face of the Road. Then the cock being turned the fluid
descends to the perforated cylinder and passing out of the numer-
ous orifices or holes is let on to the face of the road in the required
quantity the whole cement moving gradually along depositing
as much as the face of the Road will absorb like clean sand
till quite to the external upper surface. If after having gone
over once any part on examination is found to be deficient it
must be supplied. The perforated Cylinder may be long enough
to extend across the Road if it be narrow, or the whole width of
the road may be divided into several spaces or swaths and each
in succession be cemented. The wheels of the cart may rest on
Planks to prevent them from indenting the surface. Other
methods may be adopted to put on the cement. Powder some
thing like the Nothing Set carried by hand may be made

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use of — others may suggest themselves. It is by no means a difficult operation.

Side walks in Cities and Towns and footways in villages and Country places walks in pleasure ground and parks may also be made on this plan. The accompanying drawing shews some of the modes in forms according to which roads and streets may be constructed. In Fig 1. & Fig 2. AA are side walks supposed to be made of the same materials as the covering of the carriage way. B.B are curb stones C in fig 1. represents a thin covering over the broken or rubble stone of a M^c Adamized Street E represents the natural earth in all the Figures CC in Fig 2. represents the covering to consist of pebbles gravel and sand all cemented over D.D a mass of cobble stone gravel and sand forming the Bed of the Street. In Fig 3. G.G represent the cemented covering to consist of pebbles gravel and sand about three inches thick F F represents side gutters paved with common cobble stone. The road in this fig is raised pretty high and is supposed to be located on a spungy or wet soil. Fig 4 may represent a Street or Road H.H the side walks I I gutters J J the carriage way of the Street or Road covered continuously with cemented sand Fig 5. represents a common Road where the carriage way only is covered with the cemented composition represented by K K and terminating at L L. In this case the side ditches are formed in the common soil which overlaps a little the ends of the cemented covering to protect it from abrasion at the edges. This is the cheapest form of Road. It is proper to remark that in some situations such as Cities the bed or substratum of the Street or road may be made of cemented materials such as sand and Gravel cemented with Hydraulic lime or any other common cement none of which will answer well for the covering surface of the road being of a nature too friable, but by being covered in the way here proposed may form a road of addition al value and durability — What I claim as my invention and improvement is the application of the suspension or any of the modes of location wherein materials cemented before use is applied

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State and that State used as a cement to apply to and combine with Sand Gravel Pebble Pulverized Stone such as used for a Mc Adam Road or cobble stone the interstices of coarser materials being in all cases filled as well as may be with Sand and gravel and cemented with tar or turpentine to form the wearing face or surface of Metal Roads &c in the manner described in this specification how ever the same may be modified or varied in practice

I also claim the application of the before mentioned Cohesive substances combined with Sand or other material to the lining of Canals raceways flooring reservoirs Cisterns &c &c in all of the varied forms which practice may suggest however modified or varied

Witnesses
James Colley
H Martineau

John Martineau

Rec'd
N.J.C.

[illegible]