UNITED STATES PATENT OFFICE.

JOHN TAYLOR, OF LIVERPOOL, ENGLAND.

TRACK-RAIL SAND.

No. 924,202. Specification of Letters Patent. Patented June 8, 1909.

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To all whom it may concern:

Be it known that I, JOHN TAYLOR, a subject of the King of England, residing at 7 Strand street, Liverpool, in the county of Lancaster, England, have invented a new and useful Improved Manufacture of Track-Rail Sand, of which the following is a specification.

This invention has reference to the material generally called "sand" used in connection with street or road and other railways, for promoting adhesion or binding between the vehicle or locomotive wheels and the rails for the purpose mainly of preventing them skidding in going down hill when braked, or up hill; and it has primarily for its object to provide an improved manufacture of sand which shall have a greater frictional or adhesive effect, than natural sands at present used.

According to this invention, the sand consists of ordinary sand material such as is used for sanding rails, and resin or pitch or equivalent material, mixed together under heat, and treated in the particular following manner, that is, the sand is artificially heated, and while hot—say between 100° and 200° Fahr.—the resinous material in a powdered state is applied to and thoroughly mixed with it; the effects being that the particles of sand become coated with resin or equivalent material more or less, the resin or equivalent material becoming mechanically superficially combined with the sand. The "sand" thus produced has the improved frictional or adhesive qualities above referred to, and when the wheels of the vehicle have passed over it, it adheres to the rail and the wheels, and does not blow away, as does the ordinary dry sand at present in use.

The amount of sand in the product should be much in excess of the resin or equivalent material, namely many times that of the resin or equivalent material. For instance, if the proportion 1 of resin to 40 of sand be employed, a sand compound would be produced which would be rather "weak" as regards its adhesion or binding quality for the purposes of the invention; while if the proportion be 1 of resin to say 15 of sand, the sand compound would be "strong" in the respect referred to. Probably, therefore, some proportions between these limits will be suitable in most cases of its application and use.

What is claimed is:—

1. A new granular sanding material for permanent way and rail tracks, comprising disassociated sand particles coated with an adhesive compound.

2. A new granular sanding material for permanent way and rail tracks, comprising particles of sand separately enveloped in a film of resinous material.

3. A new granular sanding material for permanent way and rail tracks, comprising disassociated particles of sand coated with resinous material.

4. A new granular sanding material for permanent way and rail tracks, comprising disassociated particles of sand coated with powdered resin.

5. A new granular sanding material for permanent way and rail tracks, comprising in proportion 15 to 40 parts of disassociated sand and one part of resin.

6. A method of preparing a new granular sanding material for permanent way and rail tracks, comprising reducing a solid adhesive material to a powder form, heating disassociated sand and intermingling the powdered adhesive and sand while the latter is in a heated condition.

7. A method of preparing a new sanding material for permanent way and rail tracks, comprising reducing resin to a powder form, heating disassociated sand, intermingling the powdered resin and heated sand, and heating the mixed materials while they are agitated to maintain the sanding material in a disassociated condition.

8. The method of preparing a new granular sanding material for permanent way and rail tracks, comprising reducing resin to a powder form, heating disassociated sand granules to a temperature between 100° and 200° F. intermingling the powdered resin with the sand while it is in a heated condition, and agitating the mixed materials to prevent the granules adhering to each other.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN TAYLOR.

Witnesses:

SOMERVILLE GOODALL,

WALTER MONTAGU HARRISON.