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A. E. SCHUTTE.

APPARATUS FOR SPREADING BITUMEN OR MATERIAL OF A SIMILAR CHARACTER.

APPLICATION FILED JULY 30, 1904.

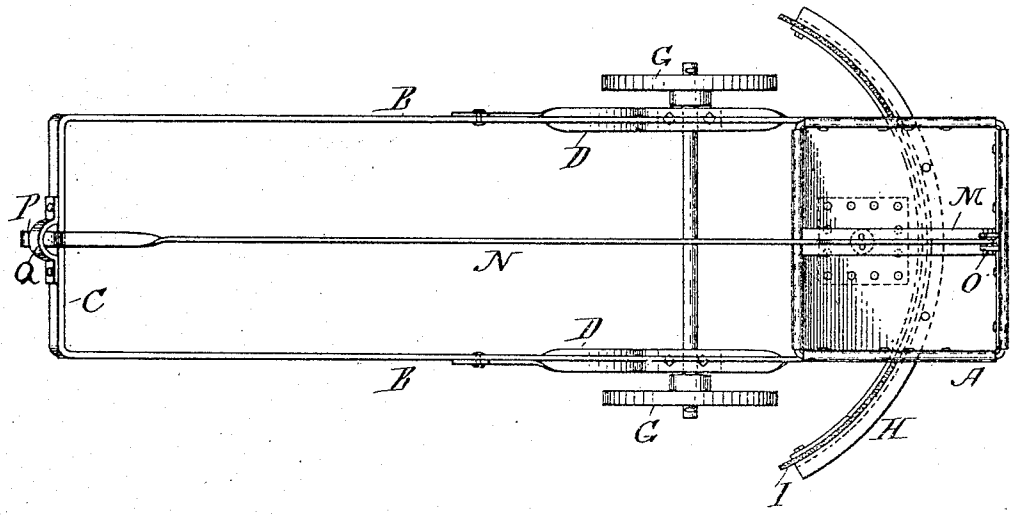


Fig. 1

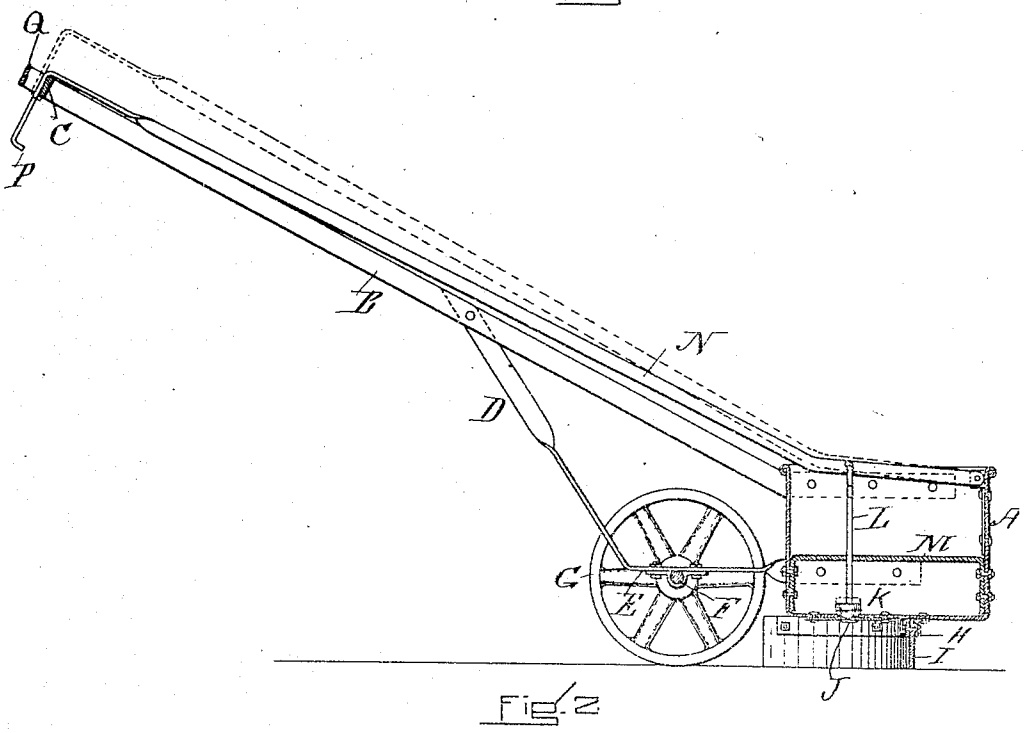


Fig. 2

WITNESSES.

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No. 791,726. Patented June 6, 1905.

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UNITED STATES PATENT OFFICE.

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APPARATUS FOR SPREADING BITUMEN OR MATERIAL OF A SIMILAR CHARACTER.

SPECIFICATION forming part of Letters Patent No. 791,726, dated June 6, 1905.

Application filed July 30, 1904. Serial No. 218,834.

To all whom it may concern:

Be it known that I, AUGUST E. SCHUTTE, a subject of William, German Emperor, but having taken out my first naturalization-papers as a citizen of the United States, residing in Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Apparatus for Spreading Bitumen or Material of a Similar Character, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improvement in apparatus for spreading bitumen or material of a similar character over a surface; and it consists, essentially, in a receptacle or reservoir for the bitumen and a spreading means, which comprises a spreader having a peculiar shape and construction, which insures economy of spreading material and an even distribution over the surface being treated.

In laying bituminous pavements it is necessary that a thin layer or film of viscous bitumen should be applied to the partially-finished surface and that this film should be applied in such a manner that the crevices between the particles of crushed stone should be entirely filled and that the protruding stones or high places should receive as little of the bitumen as possible in order that the material may not be unnecessarily wasted. This result is accomplished by the apparatus hereinafter described, and shown in the accompanying drawings, in which like letters of reference refer to like parts in the different views.

Figure 1 is a plan view of a spreader embodying my invention, showing the segmental spreader. Fig. 2 is a longitudinal vertical section of the same, more particularly adapted to show the regulating-valve.

Referring to the drawings, A is a receptacle or supply-tank for the bitumen, of any suitable size and form, but preferably constructed in the shape of a rectangular box. Attached to the sides of this box and extending forward and upwardly [illegible] joined at their ends by the cross-bar C. Running from the shafts to the receptacle are the braces D, carrying straps E, which serve to hold the axle F firmly in place.

G represents wheels mounted on the axle F, which serve to support the apparatus when the spreader is not in use.

Mounted on the bottom of the receptacle A is the segmental flange H, to which is fastened the flexible segmental spreader I, constructed, preferably, of rubber or other resilient material. Located in the bottom of the receptacle and in front of the spreader I is the valve-opening J, which is adapted to be closed by the valve K.

L is a stem sliding in the guide M, having the valve K mounted on one end thereof, the other end being pivotally connected to the lever N. The lever N, pivoted to the side of the receptacle at O, is extended outward between the shafts B and is bent at right angles at a point near its end to form an arm P, which extends through the opening formed by the strap Q and frictionally engages the cross-bar C. The arm P serves as a handle to operate the lever N and at the same time to hold the lever firmly in any desired position.

The operation of the apparatus is as follows: The operator after having filled the receptacle with liquid bitumen from the heating-kettle grasps the cross-bar *c* and by pressing down lifts the spreader clear from the ground, when he may push or drag the apparatus to the surface to be covered. The cross-bar is then raised until the spreader takes the weight of the apparatus, the wheels being clear of the ground. The lever N now being raised, the valve is lifted the required amount and the liquid flows in front of the spreader, which, owing to its curved or segmental character, is enabled to catch and distribute the bitumen over the surface without permitting any of the fluid to escape around the ends. At the same time the weight of the apparatus is sufficient to press the spreader [illegible]ite firmly toward the ground [illegible] very little of the material to

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remain on the protuberances of the surface, but allowing the crevices to be completely filled.

My invention is more particularly adapted to be used in the laying of asphalt or bituminous pavements; but I do not wish to limit its use to that alone, as it is equally applicable in the waterproofing of roofs and cellars or in any art or process wherein it is required that a film of material should be spread over either a smooth or rough surface.

While I have shown and described a curved spreader, I do not wish to limit myself to that construction, as it is apparent that any spreader having forward-projecting wings or arms would accomplish the same function as that accomplished by my device.

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

1. In an apparatus of the kind described, a supply-tank, a spreader rigidly attached thereto, and adapted to support the tank, in combination with a feed located in front of said spreader, as and for the purposes set forth.

2. In an apparatus for spreading a substance, a curved flexible spreader, and means whereby it may be drawn over the surface to be spread.

3. In an apparatus for spreading a substance, a curved spreader, and means whereby it may be drawn over the surface to be spread.

4. In an apparatus for spreading substances on a surface, a supply-tank, a support for said tank comprising a flexible spreader rigidly attached to said tank, in combination with a feed located in front of said spreader, and adapted to deliver material thereto, as described.

5. In an apparatus of the kind described, a supply-tank, and means to support said tank comprising a curved spreader.

6. In an apparatus of the kind described, a supply-tank, and means to support said tank comprising a curved, flexible spreader.

7. In a spreading apparatus of the kind described, comprising a supply-tank, and a curved spreader, means for delivering the material to be spread in front of said spreader, as described.

8. In a spreading apparatus of the kind described, a tank, one or more shafts for moving said tank provided with a cross-bar to serve as a draft-handle, a feed-opening for said tank, a valve for closing said feed-opening, and a lever connected to said valve and adapted to operate it, one end of said lever being located at and adapted to frictionally engage said draft-bar whereby the operator may change the position of said valve without removing his hands from said draft-bar, and said valve will be frictionally retained in position until again moved by the operator, as set forth.

9. In a spreading apparatus of the kind described, a tank, wheels adapted to support said tank when not in use, a spreader located below said tank and at approximately the level of the supporting-surface of said wheels, to support said tank when in use, and means for dragging said apparatus as described.

AUGUST E. SCHUTTE.

In presence of—
J. E. R. HAYES,
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