

(No Model.)

F. E. PUFFER.
PAVING ROLLER.

No. 572,447.

Patented Dec. 1, 1896.

Fig. 1.

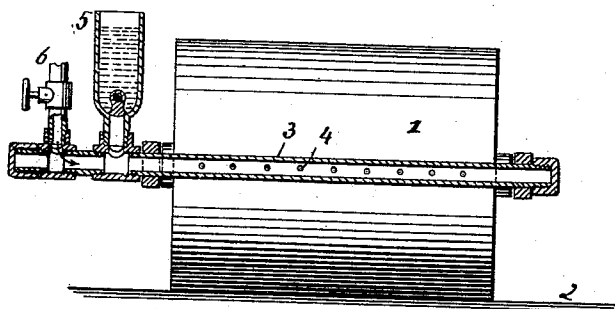


Fig. 2.

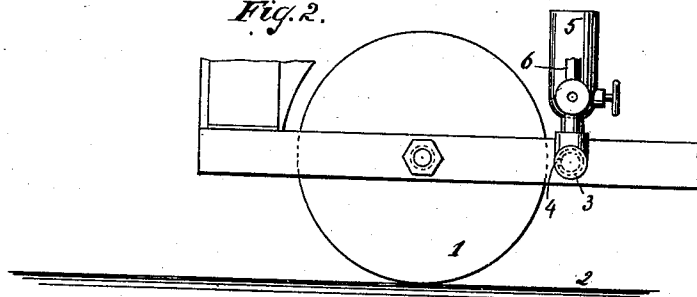
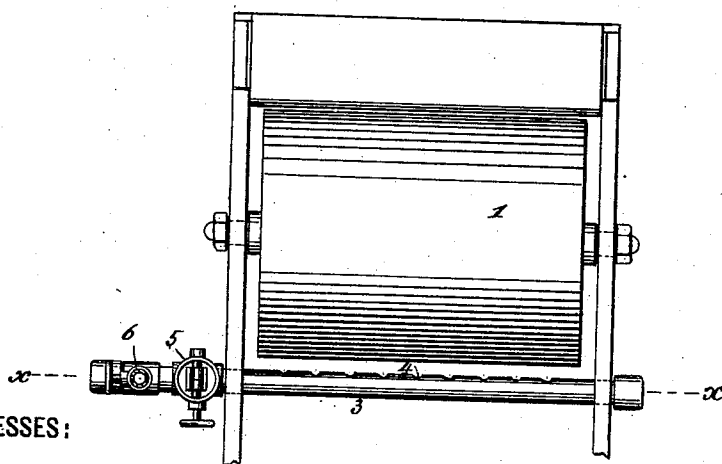


Fig. 3.



WITNESSES:

E. Wolff

Chas. E. Poerger

INVENTOR:

Frederic E. Puffer

BY

Hauff & Hauff

ATTORNEYS.

UNITED STATES PATENT OFFICE.

FREDERIC E. PUFFER, OF NEWTON, MASSACHUSETTS, ASSIGNOR TO THE
WARREN-SCHARF ASPHALT PAVING COMPANY, OF NEW YORK, N. Y.

PAVING-ROLLER.

SPECIFICATION forming part of Letters Patent No. 572,447, dated December 1, 1896.

Application filed June 4, 1896. Serial No. 594,338. (No model.)

To all whom it may concern:

Be it known that I, FREDERIC E. PUFFER, a citizen of the United States, residing at Newton, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Paving-Rollers, of which the following is a specification.

In smoothing and finishing asphalt pavements the rollers used contact with heated paving materials, and the latter sticking to the roller cause difficulty or imperfection. Oil applied to the roller-surface will prevent such sticking, but difficulty has been encountered in uniformly distributing the oil, and if in excess or unevenly distributed the oil is not only wasted, but an excessive supply of oil or occasional excessive spots of oil will soften the pavement or cause soft spots in the pavement. Water has been tried, but to prevent sticking liberal supplies of water must be used, which tend to excessively or prematurely cool the pavement and prevent satisfactory work.

By this invention oil-jets are thrown by steam-pressure or mingled with steam against the roller-surface, whereby even distribution of oil and moisture is secured and a comparatively minute quantity of oil and steam effects a satisfactory result and the pavement is satisfactorily finished.

The invention is set forth in the following specification and claims, and illustrated in the annexed drawings, in which—

Figure 1 shows a rear elevation of a roller. Fig. 2 is a side elevation of Fig. 1. Fig. 3 is a plan view of Fig. 1.

The roller 1, being driven over the asphalt pavement 2 while the latter is still soft or hot, will smooth the pavement. Extending across the roller is a tube 3 with fine spray or outlet openings 4. Into this tube flows oil from cup 5 and the steam from pipe 6 enters pipe 3 and forces out the oil through openings 4 in a spray or jets against the roller 1. The steam and oil together enable a slight quantity of such oil and steam to prevent sticking,

actual test having shown that for satisfactory work not more than one pint of oil per working-day of ten hours is required for a roller having a length or contact-line with the pavement of thirty inches. The steam admitted to jet-pipe 3 is just sufficient to cause the jets to strike the roller-face, and the jet-openings 4 are so small and numerous that the entire surface of the roller is lubricated or moistened by the jets from outlets 4. Furthermore, the hot steam mingled with the oil aids in keeping the roller warm, or at least avoids cooling of the roller, so that the contact of the roller with the pavement will not prematurely cool the latter to prevent satisfactory smoothing or leveling. Live steam for the inlet-pipe 6 has been found most satisfactory.

As the rollers are generally driven by or form part of a steam-engine, steam for the pipe 6 is readily obtained.

What I claim as new, and desire to secure by Letters Patent, is—

1. A roller combined with a jet-tube extended across the roller and having its jet-opening facing the same, said jet-tube having an oil cup or reservoir leading into the tube and a steam-pipe or pressure-inlet leading into the tube for expelling the oil therefrom through the jet-openings substantially as described.

2. The combination with a roller, of a jet-tube arranged in proximity to and provided with a plurality of jet-openings facing the periphery of the roller, means for feeding oil to said tube, and means for introducing steam to the jet-tube for expelling the oil therefrom through the jet-openings onto the periphery of the roller, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

FREDERIC E. PUFFER.

Witnesses:

WM. C. HAUFF,
E. F. KASTENHUBER.