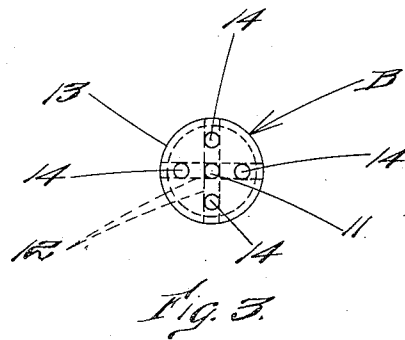
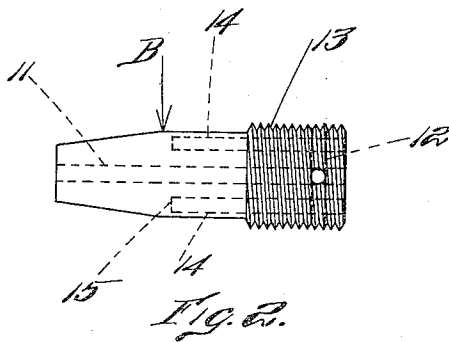
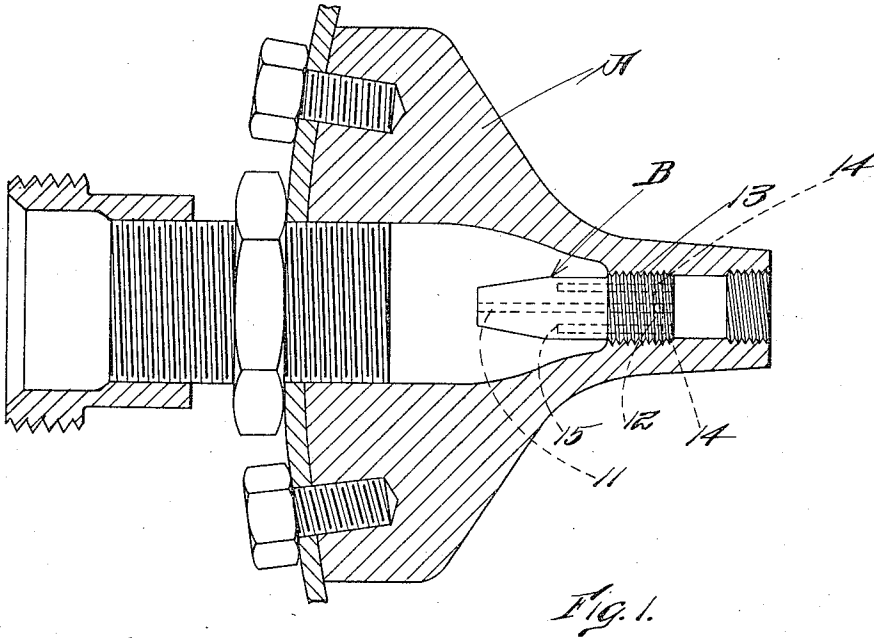


J. H. HANLON.
 TRACK SANDER.
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1,065,044.

Patented June 17, 1913.



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UNITED STATES PATENT OFFICE.

JOHN H. HANLON, OF SOMERVILLE, MASSACHUSETTS.

TRACK-SANDER.

1,065,044.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN H. HANLON, citizen of the United States, residing at Somerville, county of Middlesex, State of Massachusetts, have invented a certain new and useful Improvement in Track-Sanders, of which the following is a specification, reference being had therein to the accompanying drawings.

10 My present invention relates to so-called pneumatic track-sanders and particularly to the air nozzles of such sanders by means of which a jet of compressed air is discharged which impels the sand through the sand discharge pipe.

15 I have found by long observation of the action of pneumatic track-sanders, that interruptions in their operation are due to obstruction of the air nozzle more than to any other single cause. Regardless of the care taken, and even though screens or dirt-traps are used, particles of scale from the pipe, dust from the outer air, oil from the air pump, and similar substances will gradually collect and in time the passage through the air nozzle will become stopped up and the sander rendered wholly useless until the nozzle is removed and cleaned. I have also observed that the accumulation of foreign substances begins first in the bottom of the cavity in the sander body into which the air nozzle is screwed, and gradually builds up until the hole through the air nozzle is stopped up.

35 The air nozzle embodying my present invention is so constructed that the accumulation of foreign substances may build up and almost fill the central cavity in the sander body before the air discharge nozzle ceases to operate. This result is accomplished by providing a series of auxiliary air passages through the nozzle, all connecting with the central or main passage. These passages have orifices on the back or rear surface of the air nozzle, and as near as possible to the periphery so that in any position which the air nozzle may occupy when it is screwed in place, there will be at least one passage as far as possible from the point where foreign substances accumulate.

50 The nozzle embodying my invention is very simple and hardly more expensive than the nozzle heretofore usually employed but it is found, that, in actual operation, the nozzle constructed as described will continue to operate for much longer periods of time

without becoming clogged than will the ordinary nozzle which has a single central passage.

The invention will be fully understood 60 from the following description taken in connection with the accompanying drawings, and the novel features thereof are pointed out and clearly defined in the claims at the end of this specification.

65 In the drawings: Figure 1 is a view of a sander body and nozzle embodying my present invention. Fig. 2 is a side view of the nozzle. Fig. 3 is a rear view of the nozzle.

70 Referring to the drawings, at A is shown the sander body which is of any well known form. Into this body, is screwed the air discharge nozzle B, having the usual central passage 11 extending through it longitudinally. This central passage 11 is intercepted 75 near its rear end by two or more passages 12 extending through the air nozzle from one side to the other and emerging at the surface at a point at which the nozzle is screw threaded as shown at 13. These cross 80 passages 12 are themselves each intercepted by a longitudinal side passage 14 which emerges on the rear end of the air nozzle at a point as near the periphery of the nozzle as possible. The side passage 14 and cross 85 passage 12 together form a continuous passage leading to the central passage 11 so that if the central passage becomes clogged at a point back of the cross passage 12, air will still be discharged by the nozzle for it 90 will enter through one of the side passages 14. The side passages 14 are preferably extended beyond the point of interception with the cross-passage 12 to form a blind end or pocket 15 which will act as a dirt 95 trap, since any dirt which enters the passage 14 will tend to travel in a straight line past the interception of the cross-passage and will lodge in the said blind end 15.

100 When the air nozzle B is screwed in place in the sander body A, the ends of the cross passages 12 are closed, the only object in extending these cross passages to the outside of the air nozzle being for convenience of construction because this arrangement makes 105 it possible to drill these holes through from one side to the other of the air nozzle.

110 By making a number of the side passages 14, and arranging them symmetrically about the central passage 11, the nozzle may be screwed into place and left in any position because, in whatever position it is left, one

of the said side passages 14 will be at the top and therefore at the greatest possible distance from the point where the accumulation of foreign substances begins.

5 In the use of my improved nozzle, it is found that the bottom hole clogs first and the top hole last.

What I claim is,—

10 1. The air nozzle for track sanders having a central longitudinal air passage, and an auxiliary air passage entering through the rear face and intercepting said central passage, said auxiliary passage being located eccentrically of the central passage.

15 2. The air nozzle for track sanders having a central longitudinal air passage, and a plurality of auxiliary air passages entering through the rear face and intercepting said central passage, said auxiliary passages being located eccentrically of said central passage and symmetrically about it.

20 3. The air nozzle for track sanders having a plurality of air passages entering through the rear face and uniting with the passage to the nozzle orifice and having their rear orifices arranged near the periphery of the rear face of the nozzle.

25 4. The air nozzle for track sanders hav-

ing a central longitudinal air passage, a cross air passage intercepting it, and a side 30 air passage intercepting said cross air passage.

5. The air nozzle for track sanders having a central longitudinal air passage, a cross air passage intercepting it, and a side 35 air passage intercepting said cross air passage and having a blind end beyond the point of interception with said cross passage.

6. The air nozzle for track sanders having a screw threaded rear end, a central longitudinal air passage, a cross air passage intercepting said central air passage, and a side air passage intercepting said cross passage, said cross air passage passing through 45 said air nozzle from one side to the other, and being located in said screw threaded portion so that its end is closed when the nozzle is in place.

In testimony whereof I affix my signature, 50 in presence of two witnesses.

JOHN H. HANLON.

Witnesses:

GEORGE P. DIKE,

CHARLES W. BLOOD.