April 25, 1961 W. DABNEY, JR 2,980,942

LUBRICATING AND COATING SLIPPER

Filed Dec. 1, 1959

2 Sheets-Sheet 1

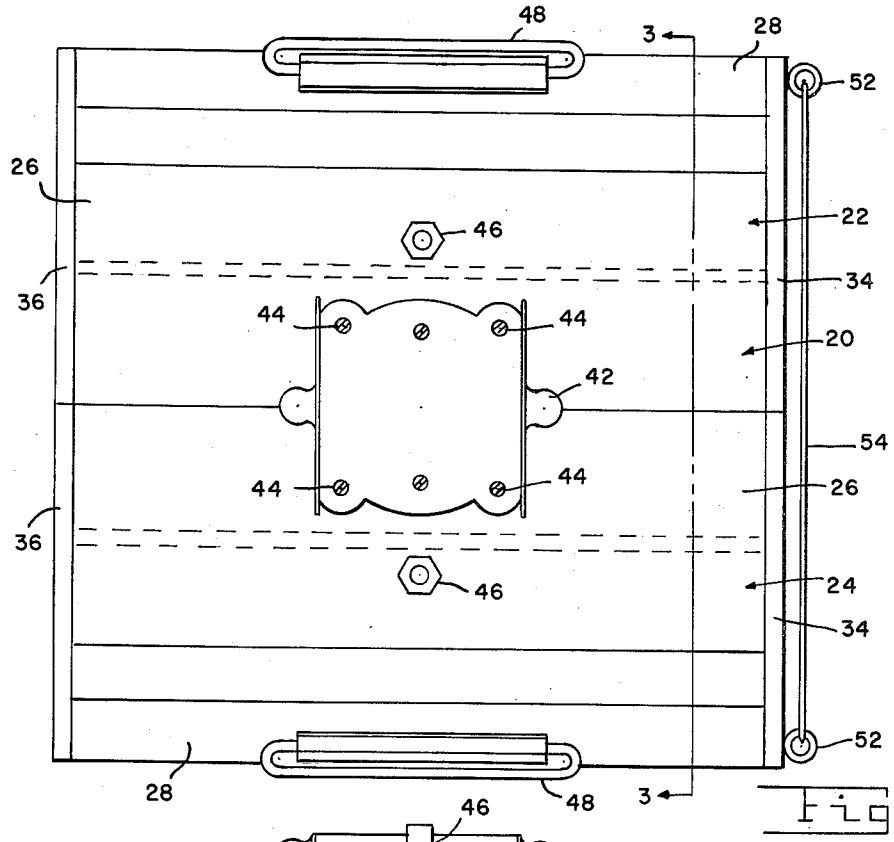


Fig-1

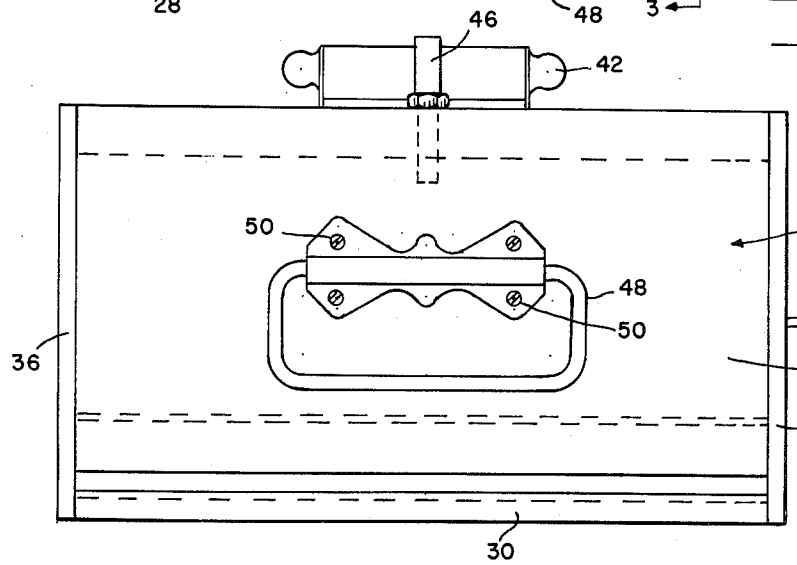


Fig-2

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2 Sheets-Sheet 2

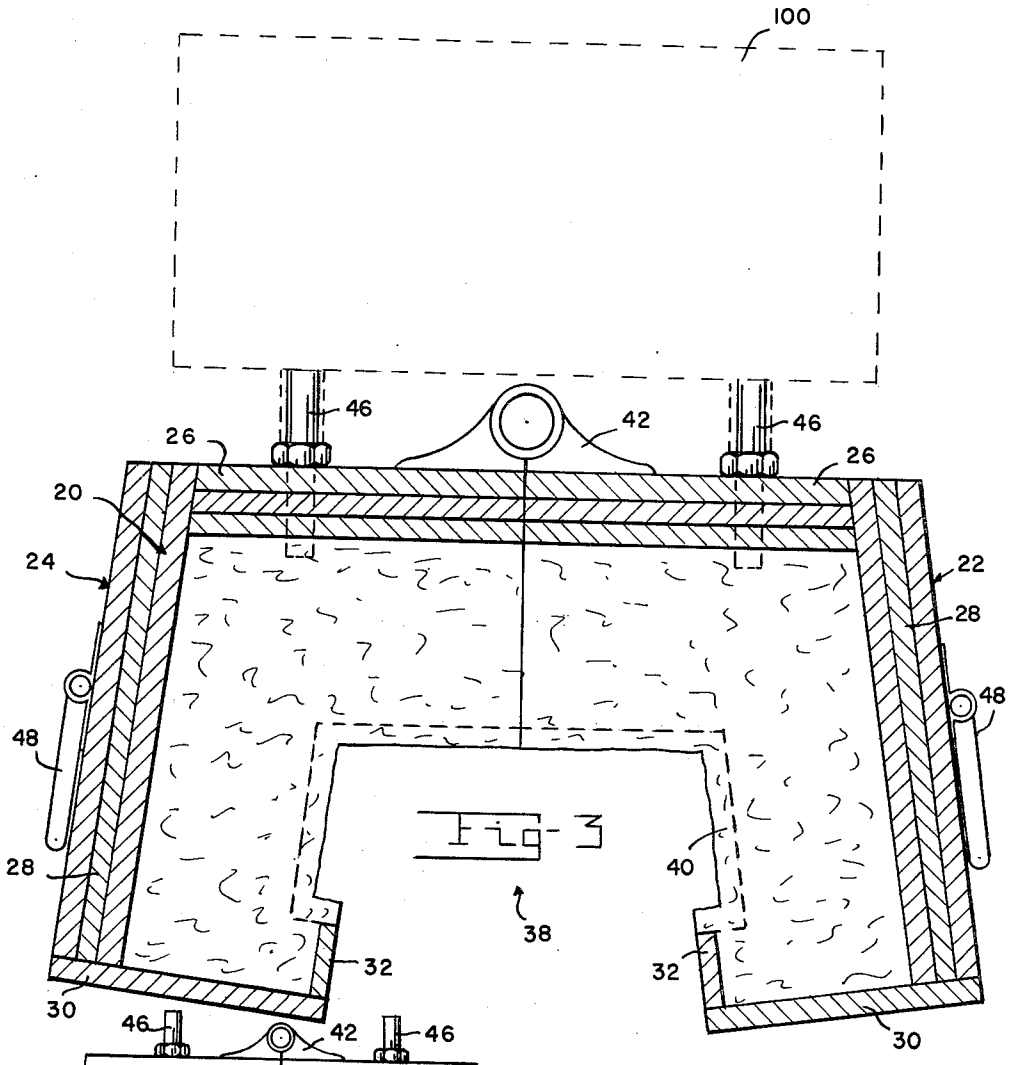


Fig-3

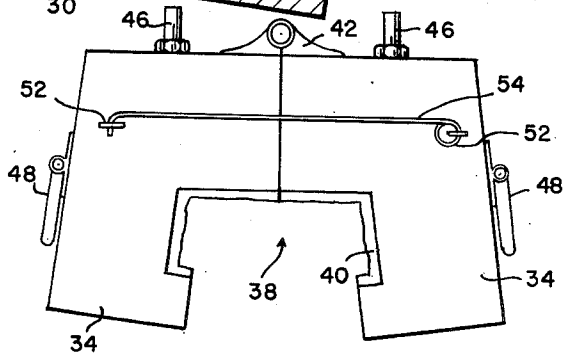


Fig-4

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LUBRICATING AND COATING SLIPPER

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5 Claims. (Cl. 15—512)

(Granted under Title 35, U.S. Code (1952), sec. 266)

The invention described herein may be manufactured and used by or for the United States Government for governmental purposes without payment to me of any royalty thereon.

This invention relates to a lubricating and coating device and more particularly to a device for applying coatings of liquids including lubricants, corrosion preventatives, suspensions or compounds of abrasives to the top, sides and underparts of rail heads or other metal shapes in a continuous process.

An object of the present invention is to provide a lubricating slipper which may be easily affixed to and removed from the rail or shape to be lubricated at any point therealong rather than at its terminus.

A further object of the present invention is to provide a lubricating slipper that matches the contour of the metal shape to be coated and which is especially adapted to apply anti-friction material to all parts of a rail head where velocities are such that a friction shoe must be used to grip the rail head as is the case of high velocity sleds in aircraft and missile research and development.

The novel lubricating slipper of the present invention comprises hinged-together halves of a box-like structure having a rail-receiving opening therein, said halves being filled with a spongy lubricant absorbing material, said lubricant absorbing material forming the inner configuration of the rail-receiving opening and said inner configuration being adapted to match the contour of the rail to be lubricated.

These and other objects and features of the present invention will be readily apparent in light of the following description when viewed in connection with the accompanying drawings in which:

Fig. 1 is a top view of the lubricating slipper of the present invention;

Fig. 2 is a side view of the lubricating slipper of the present invention; and

Fig. 3 is a sectional view of the present invention taken along the line 3—3 of Fig. 1; and

Fig. 4 is a front end view of the present invention.

Referring now in detail to the drawings wherein like reference numerals designate like parts there is shown the lubricating slipper of the present invention generally designated 20. The lubricating slipper 20 is generally in the form of an outer case comprising a pair of hinged-together halves 22 and 24. This outer case may be constructed of any of a number of materials such as wood, metal or plastic and the pieces thereof may be glued, cemented, nailed or screwed together or the entire case may be cast. In the preferred embodiment disclosed herein, however, the outer case is constructed of plywood and the individual parts thereof are joined by a strong commercial glue.

Each half is identical to the other and as such are interchangeable prior to the addition of the outer hardware thereto. When hinged together these identical halves will be associated in an opposing manner to form a rail or shape-receiving opening therein. These opposing

halves each have top panels 26 with downwardly and outwardly sloping side panels 28 extending therefrom. The side panels 28 terminate at a juncture with the bottom or base panels 30 which extend downwardly and inwardly from the side panels. The side panels 28 and the bottom panels 30 are joined in such a manner as to permit the angle formed thereby to be approximately 90°. Narrow brace panels or inside panels 32 extend inwardly and upwardly from the bottom panels at an angle of approximately 90° from said bottom panels.

The panels 26, 28, 30 and 32 thus comprise the outer periphery of each of the halves of said container. The ends of each half are closed by a front panel 34 and a back panel 36 which are identical in shape and are so formed as to provide for a rail or shape-receiving opening 38 in the lubricating slipper 20.

The internal cavity formed by the associated panels is filled with an absorbent, spongy material 40 such as felt, cellulose, perforated neoprene or any other material which will both contain and spread the coating material evenly on the rail or shape to be treated. In the preferred embodiment of the present invention felt is the absorbent spongy material 40.

The halves 22 and 24 are joined together by a spring-loaded hinge 42. A set of six screws 44 secure the hinge 42 to the top panels 26 of the respective halves 22 and 24 thus forming the outer case of the lubricating slipper 20. A brass fitting 46 is screwed into each of the top panels 26 near the centers thereof to provide for the addition of lubricant to the felt 40 as needed.

A handle 48 is attached to each of the side panels 28 by means of a set of screws 50. The handles 48 are so positioned to facilitate the opening of the slipper 20 against the action of the spring-loaded hinge 42. An eye screw 52 is disposed in each of the front panels 34 near the outer edges thereof. A latch member 54 is secured to one of said eye screws 52 and is adapted to engage the other of said eye screws 52 to positively lock the lubricating slipper onto the rail or shape to be lubricated.

In operation the lubricating slipper of the present invention has a box-shape outer configuration constructed from a pair of identical halves 22 and 24. The rail or shape-receiving opening 38 extending through the slipper is substantially of the same size and shape as the rail to be lubricated. When it is desired to lubricate a rail the halves 22 and 24 of the slipper 20 are separated by applying oppositely directed forces to handles 48 thus causing the halves 22 and 24 to revolve around the spring-loaded hinge 42. The slipper 20 is then placed over the rail or shape to be lubricated and the halves 22 and 24 are permitted to come together to encase the rail under the action of the spring-loaded hinge 42. The latch member 54 affixed to one of the eye screws 52 is then hooked through the other eye screw 52 to positively lock the slipper onto the rail.

The felt 40 within the slipper will extend slightly beyond the internal edges of the front and back panels 34 and 36, as shown in Fig. 4, thus preventing the actual contact of any rigid part of the slipper with the rail or shape to be lubricated.

If it is desired to lubricate long sections of the rail or shape the brass fittings 46 are readily adaptable to receive a lubricant reservoir (as indicated by the reference number 100 in Fig. 3) after the slipper has been placed on the rail, to allow for the continuous flow of lubricant to the felt 40.

The present invention has been described in detail above for the purpose of illustration only and is not intended to be limited by this description or otherwise except as defined in the appended claims.

I claim:

1. A headed rail lubricating device comprising a pair of identical complemental box inclosure like halves having end walls, forming internal cavities facing each other, spongy absorbent material filling each cavity, hinge means connecting the two halves together along one edge, said end walls having complemental rail receiving openings therein contoured for receiving a headed rail therein to be lubricated, said spongy absorbent material in each half having complemental headed rail receiving opening therethrough from one end wall to the other end wall, to match the contour of the headed rail to be lubricated, handle means on the outer sides of said complemental halves remote from said hinge means to facilitate the opening of said complemental halves about said hinge means to receive a headed rail in said headed rail receiving openings in said end walls and in said absorbent material and additional means separably connected between said complemental end walls to positively lock said complemental halves together around a headed rail to be lubricated.

2. A lubricating slide device for a T headed rail comprising a pair of oppositely disposed complemental box-like halves, each of said halves having three sides closed, two closed ends and one side open forming a box-like cavity, spongy absorbent material, adapted to receive and contain a lubricant, filling said box-like cavities facing each other through said open sides of said complemental box-like halves, a spring loaded hinge in operative connecting relation with said halves joining the halves together along one edge for separation along an opposite edge, said absorbent material contoured to form the inner configuration of said headed rail receiving opening between said ends, said end walls having complemental openings therein contoured to match the head of the headed rail to be lubricated, handles on opposite sides of said box-like structure for facilitating the separation of said halves in rotation about said spring loaded hinge to receive the head of a headed rail therebetween, a tubular fitting on the top of each half in communication with the spongy absorbent material to receive the addition of lubricant to the spongy material, and releasable locking means comprising a hook-type latch and a pair of eyes connecting the end walls together around the T head of the rail to be lubricated.

3. A T headed rail lubricating device comprising a pair of oppositely disposed identical complemental box-like halves having spaced end closure walls, hinge means in operative association with said halves joining said halves together along one edge, said end closure walls both having complementary headed rail receiving openings formed therein to receive and fit the head contour of a T headed rail, a spongy absorbent material filling the interior of each of said complemental box-like halves having a rail-receiving opening formed therein to match the contour of half of the head of the T headed rail to be lubricated and extending between the end closure walls of each of the halves, handle means on the outer sides of each of the box-like halves remote from said hinge means to facilitate the separation of said halves in rotation around said hinge means, a tubular lubricant entrance fitting on the top of each of said halves in communication with the absorbent material therein for supplying a lubricant thereto, and locking means connecting the end closure walls together to prevent separation of said halves while disposed on a rail to be lubricated.

4. A lubricating device of the type described adapted to be affixed to or removed from a headed rail to be lubricated, at any point therealong, comprising a pair of identical oppositely disposed elongated hollow box-like complemental halves, a spring-loaded hinge joining the longitudinal edges at one side together, a spongy absorbent filling each of said halves, said halves having abutting complemental end closure walls formed with complementary oppositely disposed rail receiving recesses therein contoured to receive the head of a headed rail to be lubricated, said spongy material in said halves having complemental rail head receiving opening therein contoured to snugly receive and contact the entire surface of the head of the rail to be lubricated thereby between said end closure walls, locking means connecting the complemental end closure walls together to prevent separation of said complemental halves and removal of the head of the rail to be lubricated therefrom, and a pair of handles on the opposite longitudinal sides of the halves to facilitate separation of the halves by rotation thereof about said hinge and removal of said device from the head of a rail being lubricated when said locking means is unlocked, to thereby permit removal of said halves from the head of the rail.

5. In a lubricating slide device for lubricating the head portion of an elongated headed track rail comprising, a closed elongated box-like device having side walls, a top wall, spaced bottom walls extending toward each other from said side walls to receive the web of a T headed rail therebetween and end walls forming the box-like device, said end walls each having a T shape opening therein extending upwardly from the adjacent edges of said spaced bottom walls contoured to fit the head and web portion of a T headed rail therein; spongy absorbent material packed in said box-like device between said top-bottom and side and end walls, said material having a T headed opening formed therein for snugly engaging and surrounding the head of a T headed rail when disposed in the aforesaid T shape openings in the aforesaid end walls and extending between the last mentioned openings in the end walls for lubricating contact with the surface of the head of the rail to be lubricated, said box-like device and said spongy absorbent material being longitudinally divided and separable along a median plane normal to said top wall passing longitudinally midway between the T shape openings separating the box-like device into two complemental sections for inclosing the opposite sides of the head of a T headed rail to be lubricated thereby, hinge means for hinging the two sections together longitudinally along the top wall, separable means connected between the sections for connecting the same together around the head of a headed rail to be lubricated, and means for introducing a lubricant into each of the sections for absorption by said spongy absorbent material and lubricating the head of a T headed rail when the same is inclosed therein and the device is moved longitudinally along the rail.

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