

(No Model.)

J. W. MIX.

COMBINED LIQUID CEMENT RECEPTACLE AND SCRAPER.

No. 546,073.

Patented Sept. 10, 1895.

Fig. 1.

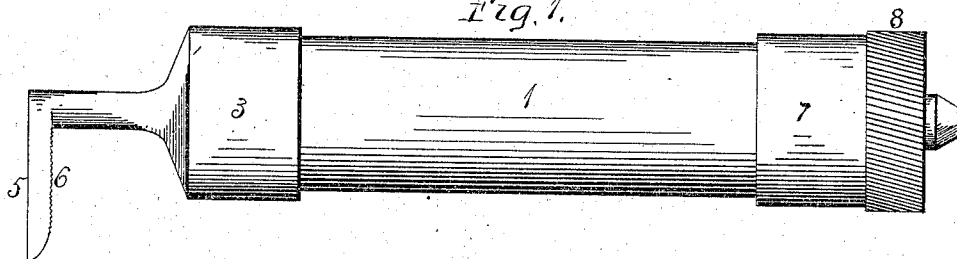


Fig. 2.

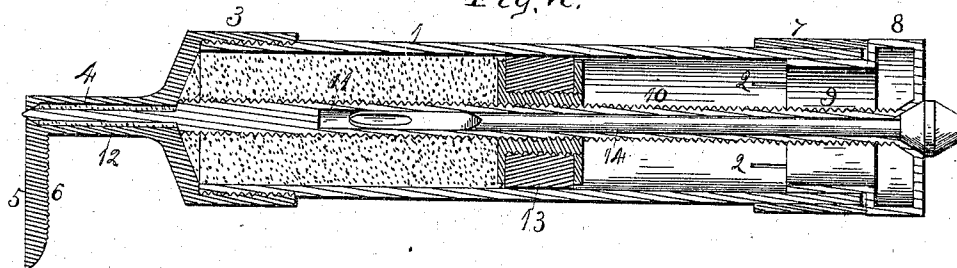


Fig. 3.

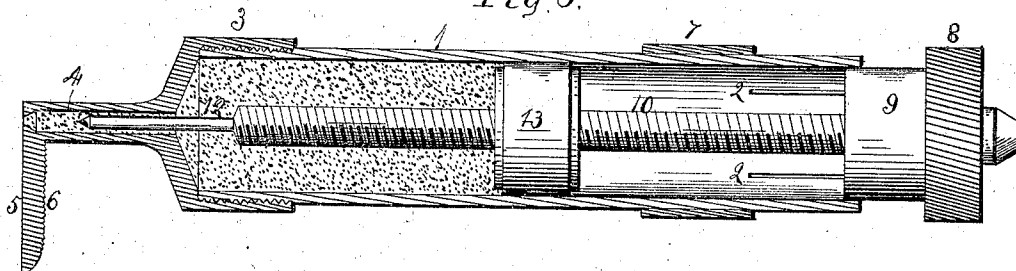


Fig. 4.

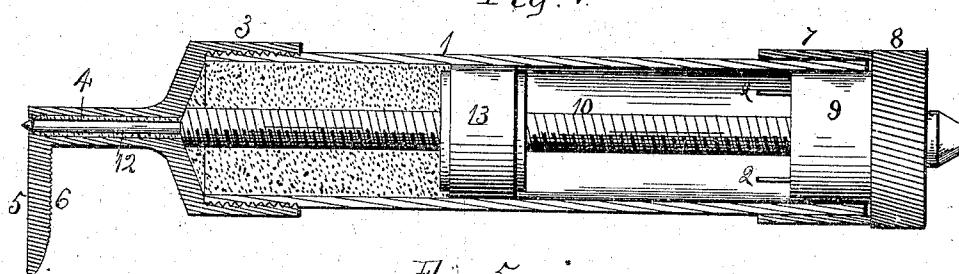


Fig. 5.

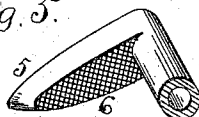
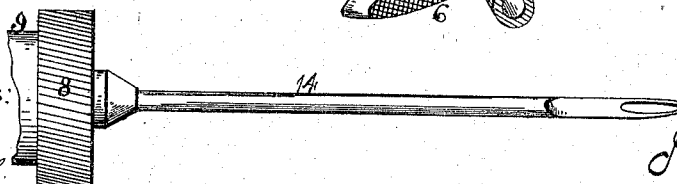


Fig. 6.



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COMBINED LIQUID-CEMENT RECEPTACLE AND SCRAPER.

SPECIFICATION forming part of Letters Patent No. 546,073, dated September 10, 1895.

Application filed May 13, 1895. Serial No. 549,112. (No model.)

To all whom it may concern:

Be it known that I, JUDD W. MIX, a citizen of the United States, residing at Byron, in the county of Ogle and State of Illinois, have invented certain new and useful Improvements in a Combined Liquid-Cement Receptacle and Scraper for Applying Patches to the Inner Surfaces of Pneumatic Tires, of which the following is a specification.

The object of this invention is to construct a receptacle for holding liquid cement in which a predetermined quantity of cement may be forced out; and the further object of this invention is to form a scraper having one face serrated and adapted to enter a puncture in a pneumatic tire and scrape the inner surface thereof adjacent the opening.

In the accompanying drawings, Figure 1 is a side representation of my improved cement-receptacle and scraper. Fig. 2 is a lengthwise central section of the same. Fig. 3 is a lengthwise central section showing the valve in its open position. Fig. 4 is a lengthwise central section showing the valve closed and the piston moved toward the outlet-opening. Fig. 5 is an isometrical representation of the scraper portion. Fig. 6 is a representation of the probe, having a connection with the movable end of the cement-receptacle.

In mending punctures in single-tube pneumatic tires it is absolutely necessary to scrape off the inner coating of the tire, and the lack of means for accomplishing this has been the failure of this class of tires; and my object is to provide means whereby the inner face of the tire can be scraped and the scraped surface thoroughly covered with cement before the patch is placed in position.

The cement-receptacle consists of a section of tubing 1, having one end screw-threaded and its other end provided with lengthwise slits 2. Upon the screw-threaded end is screwed a nozzle 3, having a central opening 4, its outer end being contracted, and at the outer end of the nozzle extends a foot 5, its inner face provided with serrations 6. Over the tubular section is placed a collar 7, capable of sliding thereon.

Within the open end of the tubular section is located a cap 8, having a tubular extension 9, and from the center of the cap extends an

externally-screw-threaded rod 10, having a central opening 11 extending a portion of its length. The free end 12 of this rod is reduced in diameter, forming a needle-valve. A piston 13 is located within the tubular section and fits very closely. With the parts in the position shown at Figs. 1 and 2 the piston is located about midway of the length of the tubular section, and the screw-threaded rod is seated against the inner end of the nozzle portion and the end of the needle-valve seated in the end of the nozzle, closing the outlet, the cap being against the end of the tubular section, and in such position the receptacle is closed.

When it is desired to force cement from the receptacle, the collar 7 is moved into the position shown at Fig. 3, which will liberate the cap by allowing the end of the tubular section to expand. The cap is then turned to the left hand, which will cause the screw-threaded shaft to move outward, the piston remaining stationary. This movement will withdraw the end of the shaft from its seat against the inner face of the nozzle, also the needle-valve from its seat, and when the required distance has been attained the cap, screw-threaded rod, and piston are moved toward the discharge end of the receptacle until the valves come in contact with their seats, when the parts will appear as shown at Fig. 3. This movement will force cement out of the outlet, and the quantity discharged will depend upon the movement of the piston. The piston is held from rotation by frictional contact with the inner surface of the tubular section, and the valves are held against their seats by the collar compressing the end of the tubular section against the cap extension.

The central lengthwise opening 11 in the screw-threaded shaft is formed to receive a probe 14, used to insert patches through an opening in the tire, said probe forming the subject-matter of a separate application. The probe may be withdrawn from the opening and held in connection with the cap, as shown at Fig. 6, thereby forming a handle for the probe. The foot 5 is inserted through the puncture in the tire and is rotated in contact with the inner surface of the tire adjacent the opening, the serrated surface removing

the inner coating of the tire. The cement is then discharged from the receptacle onto the foot and the foot again inserted through the opening and rotated therein, which will spread the cement over the inner surface of the tire, and the serrated surface will cause it to work into the fiber of the tire, the foot being removed and the patch placed into position by the employment of the probe. To fill the receptacle, the nozzle portion is removed.

I claim as my invention—

1. A device for holding liquid adhesive consisting of a shell, a movable piston located therein, means for moving the piston, the end of the receptacle having a foot extending transversely thereof, the discharge opening

for the adhesive extending through the heel portion of the foot.

2. A device for holding liquid adhesive consisting of a shell having a discharge opening at one end, its other end provided with lengthwise slits, a piston located within the shell, a screw threaded shaft having a screw thread connection with the piston, one end seated against the discharge opening, a head or knob secured to the shaft and a ring located outside of the shell adapted to compress the slotted end of the shell.

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