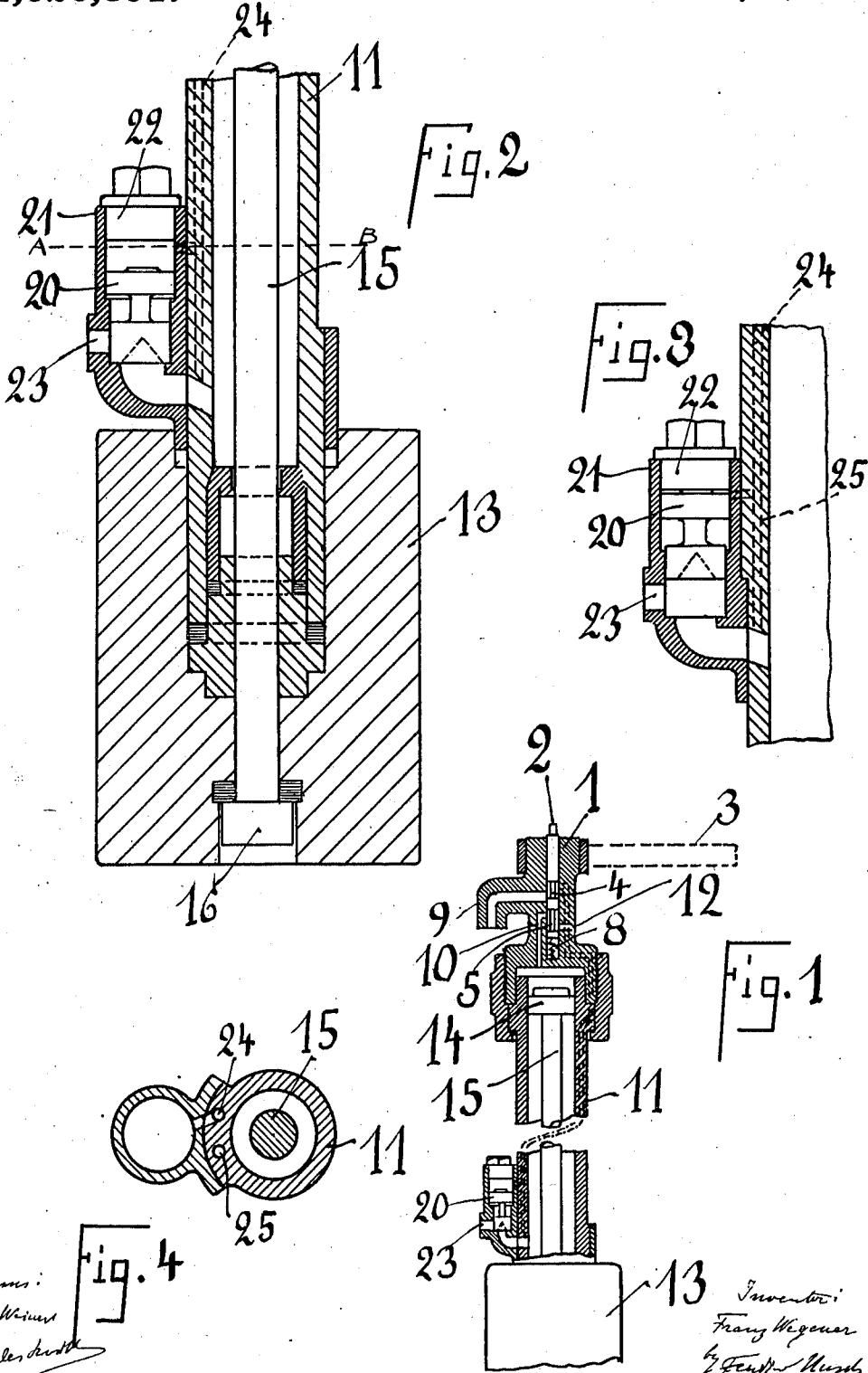


F. WEGENER.
HAND RAMMER.

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1,026,891.

Patented May 21, 1912.



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UNITED STATES PATENT OFFICE.

FRANZ WEGENER, OF HALLE, GERMANY.

HAND-RAMMER.

1,026,891.

Specification of Letters Patent.

Patented May 21, 1912.

Application filed January 18, 1912. Serial No. 671,996.

To all whom it may concern:

Be it known that I, FRANZ WEGENER, a subject of the King of Prussia, German Emperor, residing at Halle, in the Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Hand-Rammers, of which the following is a specification.

This invention relates to improvements in pavement rammers of that type which is described in my prior application of 5th December, 1910. According to this invention air under pressure is used as resistancy for the piston.

In the accompanying drawings the improved pavement rammer is shown by way of example.

Figure 1 is a vertical section of the improved pavement rammer. Fig. 2 is a vertical section of the monkey and of the lower part of the piston rod of the valve for the admission of air under pressure. Fig. 3 is a vertical section showing a modified construction of the air valve. Fig. 4 is a horizontal section on line A—B of Fig. 2.

The paving rammer essentially consists of the valve body 1 in the central boring of which the distributing piston 2, operated by the hand lever 3, is mounted, of the cylinder 11 with the monkey 13, and of the working piston 14 with the piston rod 15. The distributing piston 2 is maintained in its normal position by means of a spiral spring 8. The air under pressure is supplied to the valve body 1 through the conduit 9. When the distributing piston 2 is lowered, said conduit 9 communicates through the inlet 4 with the channel 10 leading to the upper end of the cylinder 11. An outlet channel 12 is further provided in the valve-body which can be brought in communication with the channel 10 by means of the outlet port 5.

The monkey 13 is fixed upon the lower end of the cylinder 11. In said cylinder 11 the working piston 14 is located, the rod 15 of which carries at its lower end the support 16 for the monkey 13. In order to lift the support 16 rapidly before the monkey begins to fall, a suitable resistance is inserted between the monkey and the piston 15. This resistance is supplied by air under

pressure which arrives below the piston 14 at the moment when the motor fluid escapes through the outlet channel 12.

The distributing valve for the compressed air shown in Figs. 2 and 3, consists of the valve proper 20 inclosed in a casing 21 preferably mounted at the lower end of the cylinder 11. Said casing is closed at its upper end by a lid 22 and it communicates with the outer air by means of the exhaust 23. The channel for the supply of the compressed air is arranged in the wall of the cylinder 11. The channel 24 communicates with the valve casing by means of a lateral branch which leads the compressed air above the valve body 20. An extension 25 of the channel 24 communicates with the cylinder 11 and serves for conducting the compressed air below the working piston 14.

The mechanism operates as follows:—When the hand lever 3 is pressed against the hand rammer the distributing piston 2 is lowered so that compressed air can flow through the channel 10 into the cylinder 11, wherefrom results the lifting of the monkey 13. At the same time a considerable pressure is exerted upon the support 16 which rests upon one of the paving stones and thus presses the same into the ground while the monkey is being lifted. As soon as the monkey 13 has been sufficiently lifted, the hand lever 3 is released so that the compressed air can escape through the outlet channel 12. The piston 14 moves rapidly upward in the cylinder 11 and pulls along the support 16 which is thus lifted before the monkey begins to fall through the action of the compressed air which has in the meantime arrived through the channel 24 below the piston. At this moment the hand rammer can be easily transported from one point to the other.

I claim:

An improved paving rammer comprising in combination a supply valve for the motor fluid, a cylinder having a vertical channel in its wall and having said valve fixed upon its upper end and a monkey fixed at the lower end of said cylinder, said monkey having a cavity in its lower end, a working piston in said cylinder, a piston rod, an enlarged lower end of said piston rod located

in said cavity of the monkey and serving as
support for the monkey, and buffer means
between said working piston and said mon-
key and designed to lift the support for
5 the monkey before the monkey begins to
fall, substantially as described and shown
and for the purpose set forth.

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

FRANZ WEGENER.

Witnesses:

RUDOLPH FRICKE,
EMIL HENSEL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
