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FIRELESS LOCOMOTIVE WITH HIGH
ACCUMULATOR PRESSURE
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Fig. 1

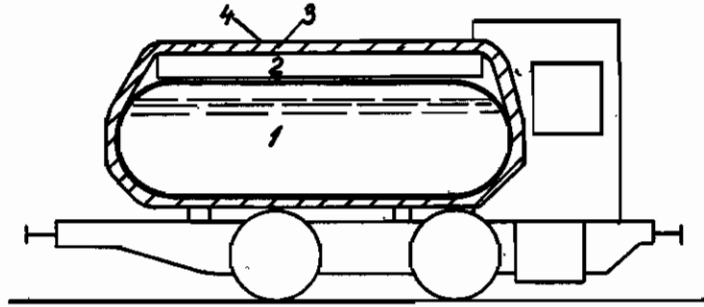


Fig. 2

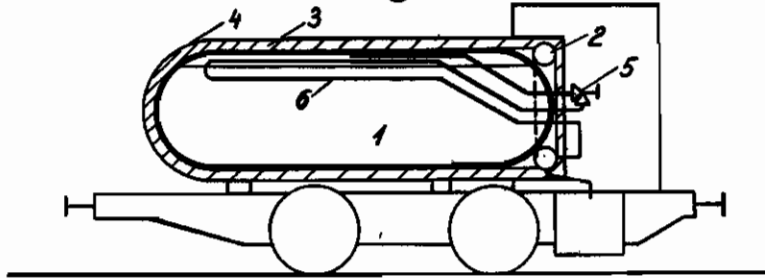
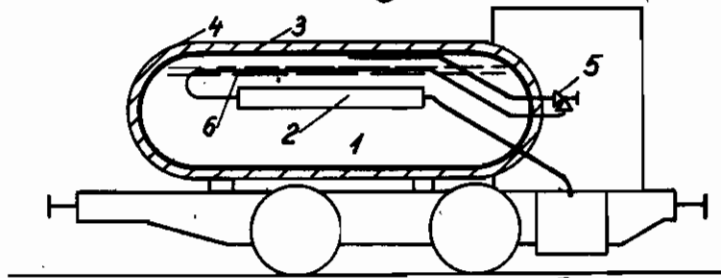


Fig. 3



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ALIEN PROPERTY CUSTODIAN

FIRELESS LOCOMOTIVE WITH HIGH ACCUMULATOR PRESSURE

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The invention relates to fireless locomotives with high accumulator pressure, in which between the accumulating container, and as a rule behind a throttling device and the steam cylinders, an equalization container is mounted, and particularly has for its object the arrangement of the equalization container between the superheater and the steam cylinders in such a manner that the losses of heat of the equalization container are low and that at any time so much heat can be supplied from the accumulating container to the equalization container that the service steam in the equalization container cannot condense.

This is attained according to the invention in that the equalization container is arranged inside the insulation and sheathing of the accumulating container, or that this insulation or sheathing is constructed so that it encloses at the same time the accumulating container and the equalization container. The equalization container may be arranged in or outside the accumulating container itself.

By this arrangement is attained, that the walls of the equalization container are heated at any time, especially, however, after a longer standstill of the locomotive, to approximately the temperature of the accumulating container and that for this reason the low pressure steam contained in the equalization container cannot condense, so that water-hammers in the cylinders are securely avoided and besides a close construction of the locomotive is attained.

Several examples for the arrangement of the equalization container according to the invention are illustrated in the accompanying drawing by way of example.

Fig. 1 shows the equalization container arranged above the accumulating container,

Fig. 2 shows the equalization container on the front side of the accumulating container,

Fig. 3 shows the equalization container arranged inside the accumulating container.

Fig. 1 shows a form of construction of the invention in which the equalization container is carried out as a tube of comparatively short diameter and of approximately the same length as the accumulating container, said tube being arranged above the accumulating container and parallel to the same. The accumulating con-

tainer is designated by 1, the equalization container arranged above the accumulating container is designated by 2, the common heat insulation is designated by 3 and the sheathing by 4. The equalization container may be arranged with the same advantageous result below or obliquely below the accumulating container.

Fig. 2 shows another arrangement or construction of the equalization container according to the invention. 1 is the accumulating container from which the steam can be taken and conducted through the throttle element 5 and the superheater 6 to the equalization container 2. This equalization container 2 is constructed as a ring-shaped tube to utilize the space between the sheathing 4 and the accumulating container 1. With the same effect the equalization container may be constructed as part of a ring or as a tube arc.

The equalization container is preferably mounted according to the invention at that end of the locomotive on which the steam cylinders or the cab are mounted.

Fig. 3 shows a form of construction in which the equalization container 2 as continuation of the superheating surface 3 is arranged inside the accumulating container 1. This arrangement is especially simple, but presents the inconvenience that the water content of the accumulating container is reduced owing to the water displacement by the equalization container, so that the capacity of the accumulator locomotive is reduced. This capacity loss becomes greater with rising accumulating pressure, so that the arrangement of the equalization container in the accumulating container is much better at lower accumulating pressures than when these accumulating pressures are high.

The equalization container can be arranged in the accumulating container so that the whole superheater or a portion of the same is carried out with considerably enlarged throughflow cross-section, in which case the large superheater volume acts as equalization container. In order to obtain an effective equalization, the equalization volume, that is in the present instance the superheater volume, must be at least equal to double the stroke volume of the steam cylinders.

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