

W. N. McDUFFEY & B. F. JAKUES.
Coupling for Steam-Heating Apparatus for Railroad
Cars.

No. 135,137.

Patented Jan. 21, 1873.

Fig.1.

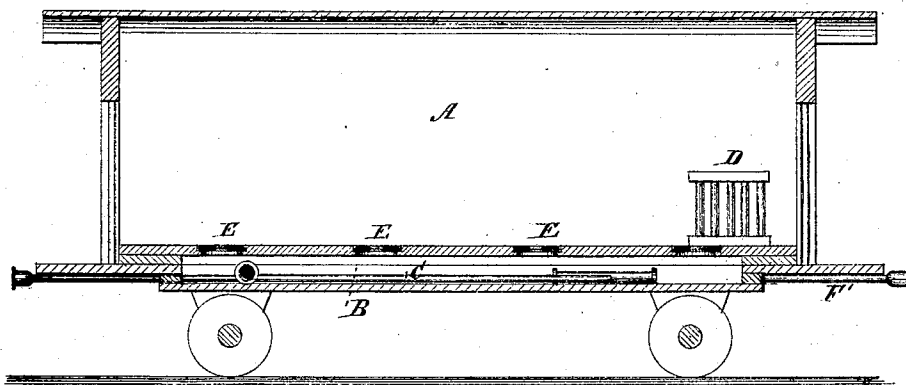


Fig.2.

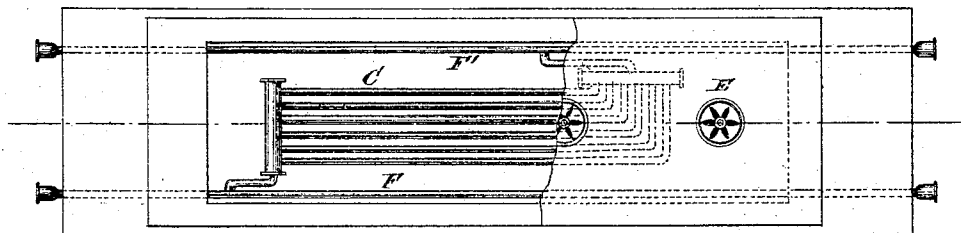


Fig.3.

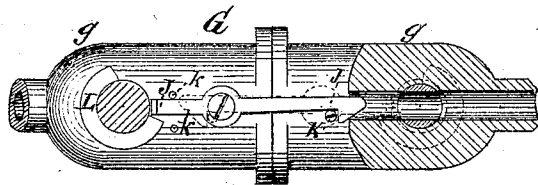
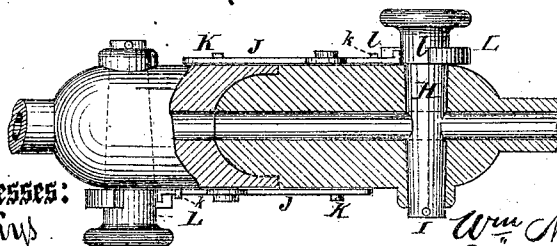


Fig.4.



Witnesses:
G. Watkins
Jolou & Kemou

Inventor:

Wm. N. McDuffey

Benj. F. Jaques

PER

Wm. N. C.
Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM N. McDUFFEY AND BENJAMIN F. JAQUES, OF PETERSBURG, VIRGINIA, ASSIGNORS OF ONE-THIRD THEIR RIGHT TO D. W. LASSITER, OF SAME PLACE.

IMPROVEMENT IN COUPLINGS FOR STEAM HEATING APPARATUS FOR RAILROAD CARS.

Specification forming part of Letters Patent No. 135,137, dated January 21, 1873.

To all whom it may concern:

Be it known that we, WILLIAM N. McDUFFEY and BENJAMIN F. JAQUES, of Petersburg, in the county of Dinwiddie and State of Virginia, have invented an Improved Heating Apparatus for Railroad Cars, of which the following is a specification:

The invention consists in a two-part steam-pipe coupling, held together by latch-levers and studs, and in the means for closing the valves whenever the two sections of coupling are uncoupled.

Figure 1 is a longitudinal vertical section. Fig. 2 is a top view of car-floor, partly broken out; and Figs. 3 and 4 are detail views of the coupling.

A represents a car having under the floor a hot-air chamber, B, in which is placed the heater C. This heater may be a coil of pipes, as shown, or a series of vertical pipes arranged above the floor of car, as shown at D. We claim no novelty in the heater. As shown in the drawing, the floor is apertured and provided with dampers or registers E, by which the supply of heat may be graduated. F is a pipe connected with the heating-pipes on one side, and passing under the cars to the tender, so as to connect with the feed-water chamber, water-tank, or some vessel connecting therewith. The warm water which results from the condensation of steam is conducted through this pipe, in its heated state, to either of these receptacles, and the remainder of its heat thus utilized. It is unimportant whether the receptacle is above or below the pipes, as that agent will force the condensed steam up into it. F' is a steam-supply pipe which passes under each car, while the pipes of two cars are connected by the pipe-coupling G with steam-space of boiler. The latter is formed of two parts, *g g*, in each of which is a valve, H, operated by a shaft, I, and also a pivoted lever-

latch, J, which locks over a stud, K. *k k* are stops to limit the lever movement in either direction. To the valve-shafts I I are rigidly attached sections of collars L L, and in the interval between the ends *l l* of these collars plays one end of each lever J. The valve is so arranged on the shaft, with respect to the intervals between the ends *l l* of the collars, that when the valves are closed the levers will be held up from the studs, and the coupling will be allowed to part; but when the valves are opened the levers will be made to latch over the studs and lock the two parts of coupling together. These couplings are adjusted on the pipes F F' with joints that admit of the lateral and vertical movements incident to cars.

It will be observed that the grapples or latches are lifted by the bearing of the studs against their inclined faces until the shoulder is passed, when they drop. The opening of the valve has then the effect of also locking the latches.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The pipe-coupling G in two parts, *g g*, held together by latch-levers J J on one and studs *k k* on the other, as described.

2. The combination, with valves H and levers J, of the hand-shafts I having sectional collars L L, as described, so that the valves will be closed whenever the latches are lifted.

WM. N. McDUFFEY.
B. F. JAQUES.

Witnesses as to WM. N. McDUFFEY:

F. J. TAPPEY,
THOS. BROWN.

Witnesses as to B. F. JAQUES:

SOLON C. KEMON,
THOS. D. D. OURAND.