(No Model.) 3 Sheets—Sheet 1.

J. LAY.

CARRIAGE PROVIDED WITH HEATING APPARATUS FOR TRANSPORTING FOOD, &c.

No. 532,325. Patented Jan. 8, 1895.

Fig. 3.

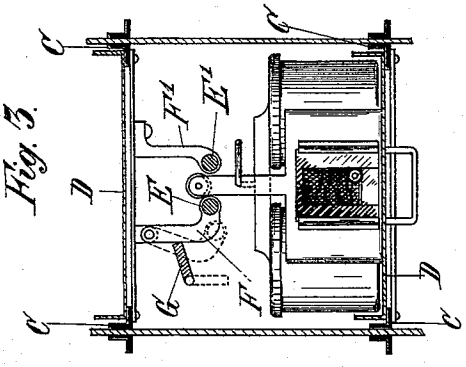


Fig. 4.

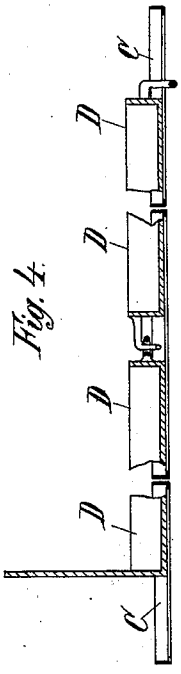
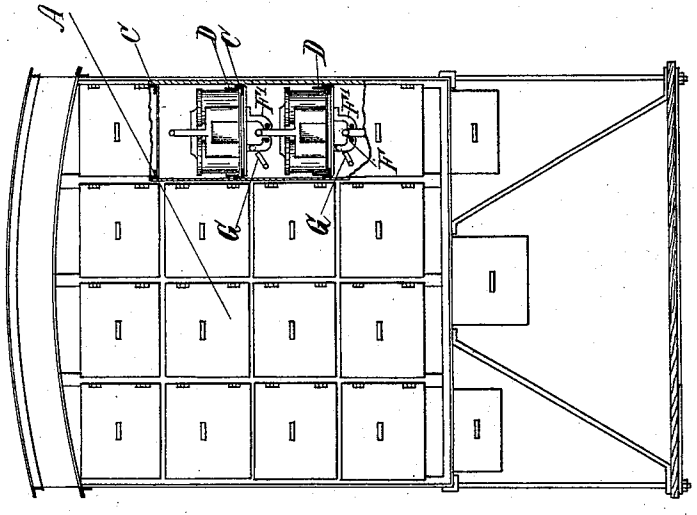


Fig. 1.



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Attorney.

(No Model.) 3 Sheets—Sheet 2.

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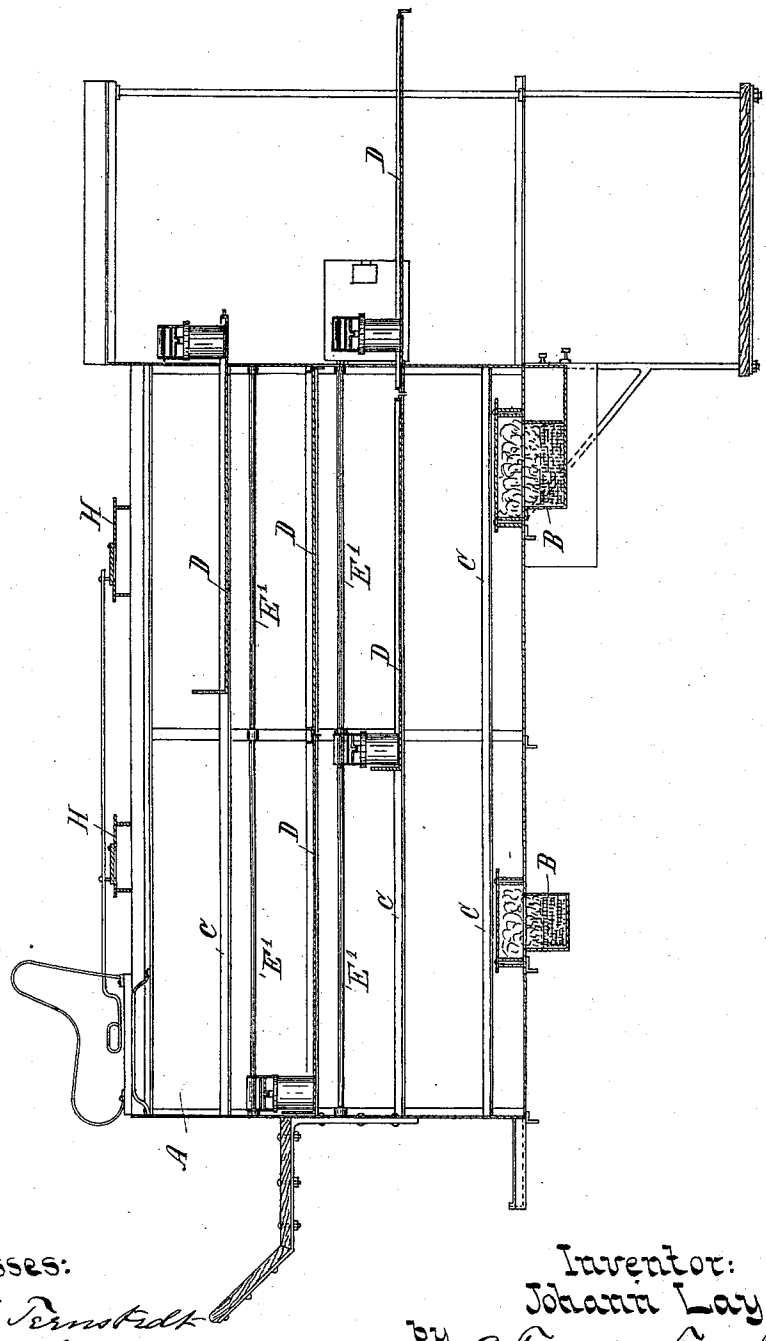

Fig. 2.

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(No Model.) 3 Sheets—Sheet 3.

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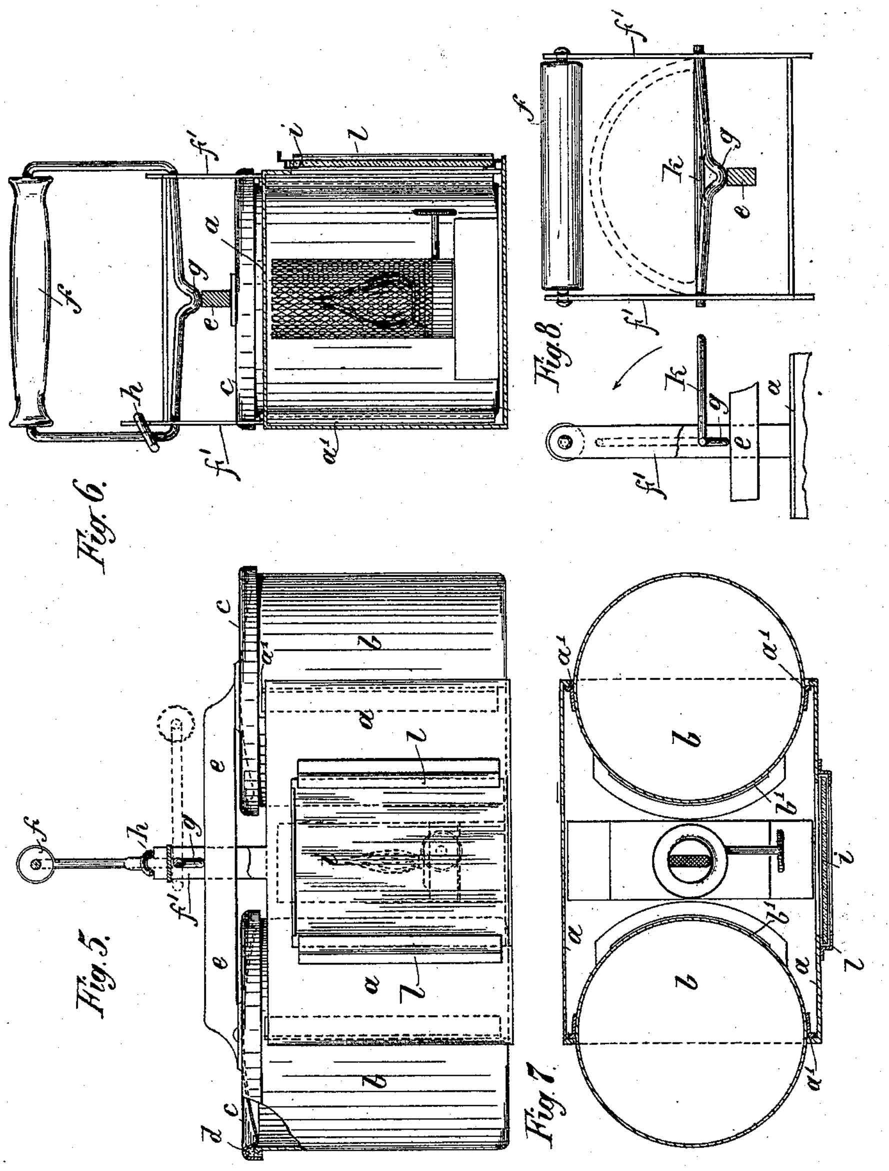

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UNITED STATES PATENT OFFICE.

JOHANN LAY, OF ESSEN-ON-THE-RUHR, GERMANY.

CARRIAGE PROVIDED WITH HEATING APPARATUS FOR TRANSPORTING FOOD, &c.

SPECIFICATION forming part of Letters Patent No. 532,325, dated January 8, 1895.

Application filed January 25, 1894. Serial No. 497,962. (No model.)

To all whom it may concern:

Be it known that I, JOHANN LAY, a subject of the King of Prussia, residing at Essen-on-the-Ruhr, in the Kingdom of Prussia, Germany, have invented new and useful Improvements in Carriages Provided with Heating Apparatus for Transporting Food in Closed Receptacles, of which the following is a specification.

My invention has for its object to remedy an inconvenience felt everywhere by workmen, if their homes are too far from the shop, or when the time for lunch is too short to permit them to go home for dinner. In such cases the men must content themselves with cold lunches, and, even when their lunch is brought to them, it is usually in a cold condition. With this object in view I have provided a peculiarly constructed vehicle having a heating chamber and means for receiving the individual pails as collected from the homes of the men, and for delivering the same with their contents in a heated condition.

In the practical operation of the system, the requisite number of vehicles is placed in service for collecting the individual pails from a determined quarter of the town and conveying the same to a central station, where the pails are sorted and the individual vehicles loaded with the pails for one factory, or for several factories in one neighborhood.

The nature of my invention will best be understood when described in connection with the accompanying drawings, in which—

Figure 1 is a rear view of the vehicle with the receptacles contained therein, the back-wall being partly removed. Fig. 2 is a longitudinal section of the vehicle. Fig. 3 shows the arrangement of the food receptacles on a larger scale. Fig. 4 is a detail view of the sliding trays upon which the receptacles are supported. Fig. 5 is a side view of one of the food receptacles. Fig. 6 is a cross-section of the same; Fig. 7, a horizontal longitudinal section. Fig. 8 represents a modified construction for the receptacles.

Similar letters of reference designate corresponding parts.

The body of the vehicle is formed with a chamber A for receiving the food receptacles. This chamber is heated by any suitable means, preferably by small furnaces B distributed at, or near, the four corners of the same, and constructed to burn prepared briquets or the like.

To prevent loss by radiation the walls of the chamber A may be lined with any suitable non-conducting material. In place of the furnaces B, the chamber may be heated by lamps distributed therein between the several food receptacles, or by lamps carried by the receptacles themselves.

C, C are rails arranged in tiers and extending through the whole length of the vehicle. They are preferably made of iron and may be supported centrally by suitable cross pieces. (See Fig. 2.) The rails C serve as guides and supports for the sliding trays D (see Figs. 3 and 4) adapted to receive individual food receptacles.

For holding the food receptacles absolutely steady while the vehicle is in motion I have provided the following means:—Centrally above each pair of rails C C are arranged two parallel rods E and E′ extending throughout the length of the chamber and supported in brackets F and F′ secured preferably to the cross-pieces connecting the supporting rails C with each other. The brackets F′ are stationary, while the brackets F are movable about their pivots. A flat bar G extending throughout the length of the vehicle and hinged in the front wall thereof and in a bracket pendent from the rear wall of the same can be turned to engage the hinged brackets F by a suitable handle. The food receptacles are arranged in such a manner upon the trays D, that the handles come between the rods E and E′. (See Fig. 3.) The bar G is then turned to press against the brackets F, thereby forcing the rod E firmly against the handles of the food receptacles. To withdraw the trays together with the receptacles from the chamber, the bar G is turned back, thereby setting free the handles of the receptacles. (See the position shown in dotted lines in Fig. 3.)

On the back of the carriage a door provided with a snap-lock or the like is arranged opposite each pair of supporting rails.

For easily handling the trays D they are made small enough to permit each set of supporting rails to receive two trays. The outer tray has a hook engaging a link in the inner tray so that the latter is withdrawn together

with the former (Fig. 4). After the outer tray has been withdrawn from the chamber, it is unhooked from the inner one, whereupon the latter is entirely withdrawn, for which purpose it is provided with a suitable handle.

The heated air in the chamber A flows upwardly between the trays preventing the food contained in the receptacles from becoming cold. The temperature may be observed by the use of a thermometer and controlled from the driver's seat by means of dampers H arranged at the top of the chamber.

The vehicle, the springs of which must be of a particularly good quality, has at its back a roofed platform for the attendant, and on each side of the platform a hinged table leaf is provided for receiving the food receptacles. The latter are advantageously constructed as follows: In a frame *a*, two or more pails *b* are arranged in such a manner that they are held therein by grooves *a'* arranged on the sides, and by rails *b'* secured to the bottom of the frame, so that they may easily be removed from above. (See Fig. 6.) These pails are closed by lids *c*, having packing rings *d* of cork, india rubber or the like in order to obtain an absolutely tight closure. (See Fig. 5.) To close the lids tightly, pressure is applied to them by any suitable means. This pressure may be produced, for instance, by the device represented in Figs. 5 and 6 of the drawings. To the lid of one of the pails is fastened a cross-bar *e* extending over the lid of the other pail. The bail *f* is movable in two ears *f'* of sheet metal, so that it can be turned over. With the bail *f* is firmly connected a rod *g* arranged in the axis of revolution of the bail and bent above the cross bar *e*. (See Fig. 6.) If the handle is turned over, as shown in dotted lines in Fig. 5, the bent portion of the rod *g* does not press on the cross-bar *e*. In this position of the bail the lid is put on the pails. If the handle is turned up, the bent bar *g*, acting as an eccentric, presses firmly against the cross-bar *e*, and in consequence, upon the lids of the pails. To fix the bail in this position a ring *h* sliding on the side of same is pushed over the ear *f'*.

In Fig. 8 another device is shown for pressing the lids upon the pails. In this construction the handle *f* is fixed, but a movable bail *k* is arranged therein, the lower cross-bar *g* of which has a bent portion as above described. In this case the bar *g* is bent in such a manner, that it presses upon the cross bar *e* if it is turned to one side, while it does not exert any pressure if it is turned to the other side, or even upward, as shown in dotted lines in Fig. 8.

To heat each food receptacle independently of the heating device of the vehicle, a lamp is placed in the frame *a* between the pails. The lamp is accessible by means of a slide *i* arranged in the wall of the frame *a* and moving in guides *l*. The slide *i* has sufficient play for freely admitting air. The air of combustion can escape through openings provided laterally in the upper cover of the frame *a*. These openings are arranged in such a manner that in carrying the apparatus the hand is protected against the escaping heat. Back of the slide is held in guides a glass plate *m*, which in place of the slide may be pushed in front of the lamp. By this means it is possible to use the food receptacle as a lantern, which is of great advantage, for instance, for workmen who go home late in the evening. To permit the food receptacles to be used in coal mines, a wire netting is arranged around the lamp, so as to prevent the ignition of mine gas.

When more than two pails are used they are preferably arranged in a circle and may be closed by a common lid. The lamp is placed in the central space.

The purpose of the above described arrangements is to deliver to the work-people in a hot condition food prepared at home and, if necessary, to heat the latter during conveyance.

What I claim as new is—

1. The combination with the chamber A and means for heating the same, of supporting rails secured in the chamber, trays adapted to slide on said rails and to receive the individual food receptacles, means for securing the food receptacles in position, adapted to be operated from the exterior of the chamber, and doors for the insertion and removal of the trays, substantially as described.

2. A vehicle for the distribution of food in a heated condition, comprising in its structure a chamber, means for heating the same, supporting rails secured in the chamber, and extending throughout the length of the same, and trays adapted to slide on said rails, and provided with longitudinal separable connections, substantially as described.

3. A vehicle for the distribution of food in a heated condition, comprising in its structure a chamber, means for heating the same, supporting rails secured in the chamber, trays adapted to slide on said rails and to receive the individual food receptacles, and clamping rods arranged in the chamber parallel to the rails and adapted to engage the handles of the food receptacles, substantially as described.

4. A vehicle for the distribution of food in a heated condition, comprising in its structure a chamber, means for heating the same, supporting rails secured in the chamber, trays adapted to slide on said rails, and to receive the individual food receptacles, and means for holding the pails steady by the handles, consisting of two rods extending parallel to the rails, one of which is suspended by hinged brackets, a hinged actuating bar engaging said movable rod and a handle for turning the same to actuate the movable rod, substantially as described.

5. In a food receptacle, the combination of a frame provided with lateral openings, and longitudinal sockets, two or more pails having longitudinal tongues engaging the sockets in the frame, a pressure bar extending across the

lids of the pails, a cam or cams engaging said bar, means for operating said cam or cams, and a lamp arranged between the pails, substantially as and for the purpose set forth.

6. The combination with a frame provided with lateral openings and longitudinal sockets, of two or more pails having longitudinal tongues adapted to engage the sockets in the frame, a pressure bar extending across the lids of the pails, and a bail pivoted to said frame and provided with a transverse bar having a downwardly bent portion adapted to engage and force the pressure bar down on the lids when turned upward, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHANN LAY.

Witnesses:
WILHEM OTTO,
REINHARD SHWABE.