

A. F. BUELL,  
 CARRIER FOR RADIATORS,  
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908,740.

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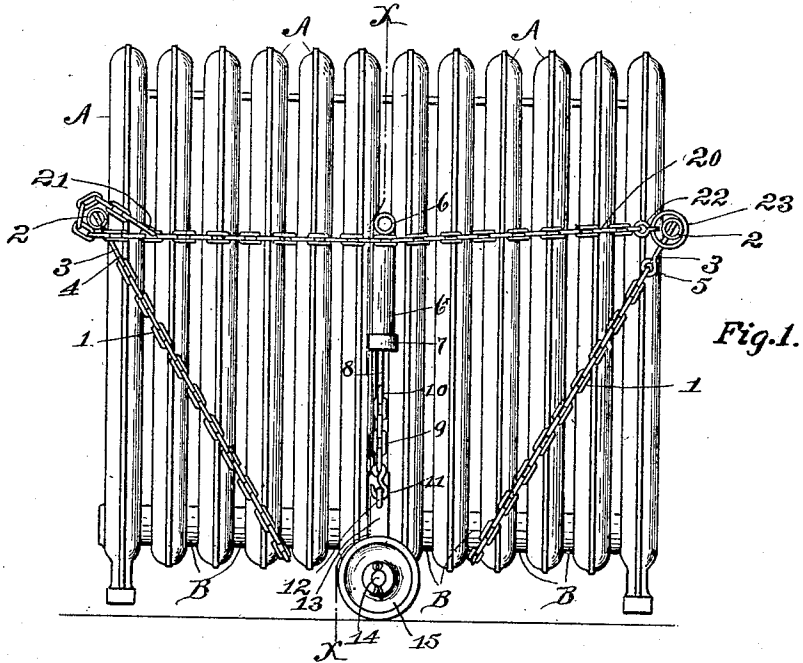


Fig. 1.

Fig. 2.

Fig. 3.

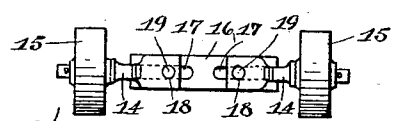
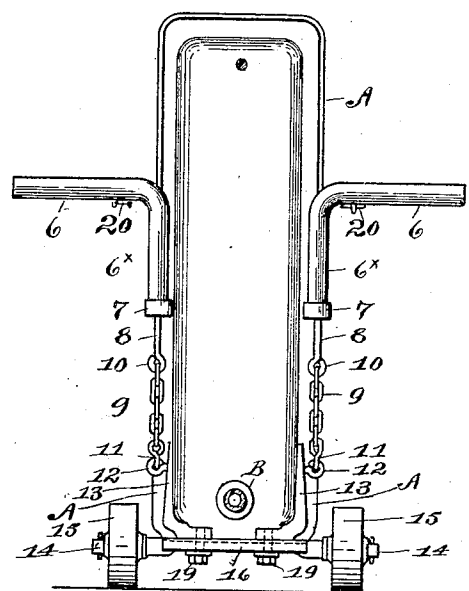
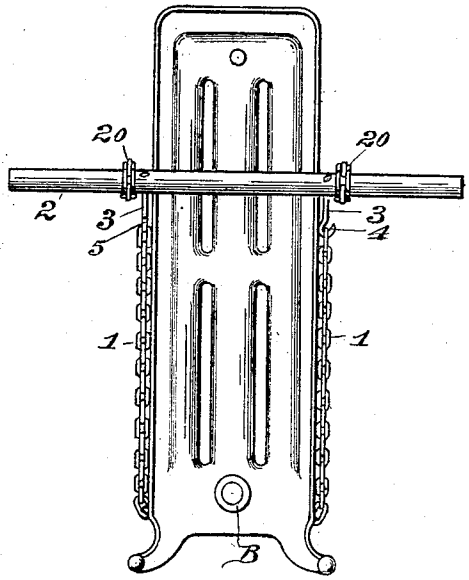


Fig. 4.

Witnesses:  
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# UNITED STATES PATENT OFFICE.

ALBERT F. BUELL, OF FULTON, NEW YORK.

## CARRIER FOR RADIATORS.

No. 908,740.

Specification of Letters Patent.

Patented Jan. 5, 1909.

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*To all whom it may concern:*

Be it known that I, ALBERT F. BUELL, a citizen of the United States, and resident of Fulton, in the county of Oswego, in the State of New York, have invented new and useful Improvements in Carriers for Radiators, &c., of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention resides in an apparatus designed to be applied to radiators of steam and hot-water systems whereby the radiators can be easily and conveniently handled by persons when they are required to be carried or moved from place to place, and it is especially useful in instances where a heavy radiator is to be transported for a considerable distance, and more particularly when the same is required to be taken either up or down a flight of stairs.

The chief object of the present invention is to provide an apparatus which shall be simple, strong and durable in construction, and very efficient, safe and reliable, and also inexpensive to manufacture, and at the same time can readily be attached to and detached from a radiator.

Other objects of the invention will be apparent from the novel arrangement and combination of the component parts of the apparatus hereinafter fully described and set forth in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a well known style of radiator equipped with the apparatus embodying my invention; Fig. 2 is an end view of the same; Fig. 3 is a vertical section on the line —X—X— in Fig. 1; and, Fig. 4 is a detail plan view of the truck forming part of the apparatus.

Referring to the drawings —A—A— denote the usual upright sections of the radiator which are rigidly coupled together at their lower portions by nipples —B—B— in the well known manner.

My apparatus comprises essentially a pair of main carrying-chains —1—1— of ordinary construction which are designed to be applied to the end portions of the radiator and are connected to suitable handles —2—2—. These main chains are passed between two adjacent sections —A—A— at opposite sides of the center of the length of the radiator so as to extend across the bottoms of the connecting couplings or nipples —B—B—. The two chains extend up-

wardly and divergently and each has its ends detachably connected to a handle —2— consisting preferably of a transverse tubular metal bar extending across the end of the radiator and bearing against the end-section thereof. I prefer to fasten the ends of said chains to short rods —3—3— rigidly secured to the bars —2—2— and extending radially therefrom, and to allow a chain to be readily attached to and detached from its bar or handle, I provide the members with the usual and well known hooks —4—4— and eyes —5—5—. It is obvious that the hooks may be of such construction as to allow them to be removed in the well known manner, whereby they can be applied to different links of the chain, so as to shorten or lengthen the letter and thus accommodate the device to radiators of various heights.

The apparatus thus far described serves very efficiently in the handling of a radiator of moderate size, especially in the operation of carrying the same. When a very large and heavy radiator is required to be handled, I provide an additional pair of handles —6—6— applied to opposite sides of the radiator usually at the center of its length. These handles are preferably arranged in the plane of the aforesaid handles —2—2— and are formed with depending portions —6<sup>x</sup>—6<sup>x</sup>— adapted to be seated between the adjoining sections —A—A— as clearly shown in Figs. 1 and 3. Each of said handles —6—6— is also preferably formed of a metal tube to render the same light in weight, and to the end of the depending portion —6<sup>x</sup>— is rigidly fastened a cap —7— for the fastening of a vertical metal rod —8— to which is detachably connected an auxiliary carrying-chain —9—. The said chain —9— may obviously pass between the lower portions of two sections and under the connecting nipple similar to the chains —1—1—, however, I prefer to provide two auxiliary chains —9—9— connected at one end to eyes —10—10— formed on the respective rods —8—8—, and provide the other ends of the chains with hooks —11—11— by which they are detachably connected to eyes —12—12— provided on a pair of standards —13—13— rigidly attached to a truck placed preferably at the center of the radiator, whereby the radiator can very easily and conveniently be transported from place to place when required, and thus a great deal of lifting may be obviated. The said stand-

ards are designed to fit snugly between two sections so as to retain the truck in position.

The truck preferably comprises a pair of spindles —14—14— on which are journaled 5 carrying-wheels —15—15—, and which are formed integral with the lower ends of the standards, said spindles being secured to a transverse-bar —16—. To allow the stand- 10 ards to be set a greater or less distance apart to accommodate radiators of different width, I provide the bar —16— with longitudinal-slots —17—17— and provide the lower por- 15 tions of said standards with vertical screw-threaded apertures —18—18—, through which slots pass screws or bolts —19—19— which engage said apertures and serve to clamp the standards adjustably to the said bar —16—, as clearly shown in Figs. 3 and 4 of the drawings.

When the truck is used, I prefer to provide supplemental chains —20—20— which extend substantially horizontally along oppo- 20 site sides of the radiator and are detachably connected at their ends to the aforesaid end- 25 handles —2—2— and have their intermediate portions bearing against the undersides of the side-handles —6—6—.

One end of each supplemental or side chain —20— is preferably attached to a handle 30 —2— by looping the chain therearound and providing the end with a suitable hook —21—, adapted to be inserted into one of the links, while the other end of each of said chains is provided with a hook —22— for at- 35 taching it to a ring —23— slipped over the corresponding handle —2—, however, these chains may be otherwise fastened.

While I prefer to employ chains, at the same time it is obvious that ropes, wire- 40 cables or straps may be used instead.

What I claim is:—

1. An apparatus for handling radiators comprising a pair of main carrying-chains embracing opposite end portions of the radi- 45 ator and each provided with a handle consisting of a transverse bar bearing against the end, and supplemental chains disposed longitudinally at opposite sides of the radi- ator and detachably connected to the said 50 handles as set forth.

2. An apparatus for handling radiators comprising a pair of main carriers disposed at opposite ends of the radiator, a pair of 55 auxiliary carriers disposed at opposite sides thereof, means connecting the main carriers and engaging the auxiliary carriers as set forth.

3. An apparatus for handling radiators comprising a pair of main carrying-chains 60 passing under the radiator at opposite sides of the center of its length and disposed divergently, and each chain having its ends attached to a handle extending across the end, a pair of vertical auxiliary carrying-

chains disposed at opposite sides of the 65 radiator between the main carrying-chains and connected to handles, and a pair of supplemental chains extending longitudinally at opposite sides of the radiator and connected at their ends to the handles of the main 70 carrying-chains and having their intermediate portions bearing on the undersides of the side-handles as set forth.

4. An apparatus for handling radiators com- 75 prising a truck adapted to be placed under the radiator and provided with standards arranged to embrace opposite sides thereof, and a pair of carrying-chains connected to said standards as set forth.

5. An apparatus for handling radiators 80 comprising a pair of end carriers, a truck placed under the radiator, a pair of auxiliary carriers connected to the truck, and means connecting the end-carriers and engaging the auxiliary carriers as set forth. 85

6. An apparatus for handling radiators comprising a pair of main carrying-chains passing under the radiator at opposite sides of the center of the length, and disposed 90 divergently, handles disposed across the ends of the radiator to which the ends of said chains are connected, a truck disposed under the radiator between the chains and pro- 95 vided with a pair of standards embracing the opposite sides of the radiator, a pair of vertically arranged auxiliary carrying-chains connected at one end to the standards, han- 100 dles connected to the other ends of the latter chains, and a pair of supplemental chains extending longitudinally along oppo- 100 site sides of the radiator and connected at their ends to the end-handles and passing under the handles of the auxiliary carrying-chains as set forth.

7. In combination with a radiator com- 105 posed of vertical sections, an apparatus for the purpose specified comprising a truck adapted to be placed under the radiator and provided with a pair of adjustable standards adapted to fit between two adjacent sections 110 as set forth.

8. In combination with a radiator com- 115 posed of vertical sections, an apparatus for the purpose specified comprising a truck adapted to be placed under the radiator and having a pair of standards seated between two ad- 120 jacent sections, a pair of vertical carrying-chains disposed at opposite sides of the radiator and connected to the standards, and a pair of transversely arranged bars at op- 120 posite sides and provided with depending portions seated between two adjoining sections and connected to said chains as set forth.

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