

J. L. WELSHANS.
TRUCK FOR CARRYING RADIATORS.
APPLICATION FILED DEC. 18, 1909.

963,410.

Patented July 5, 1910.

2 SHEETS—SHEET 1.

FIG. 1.

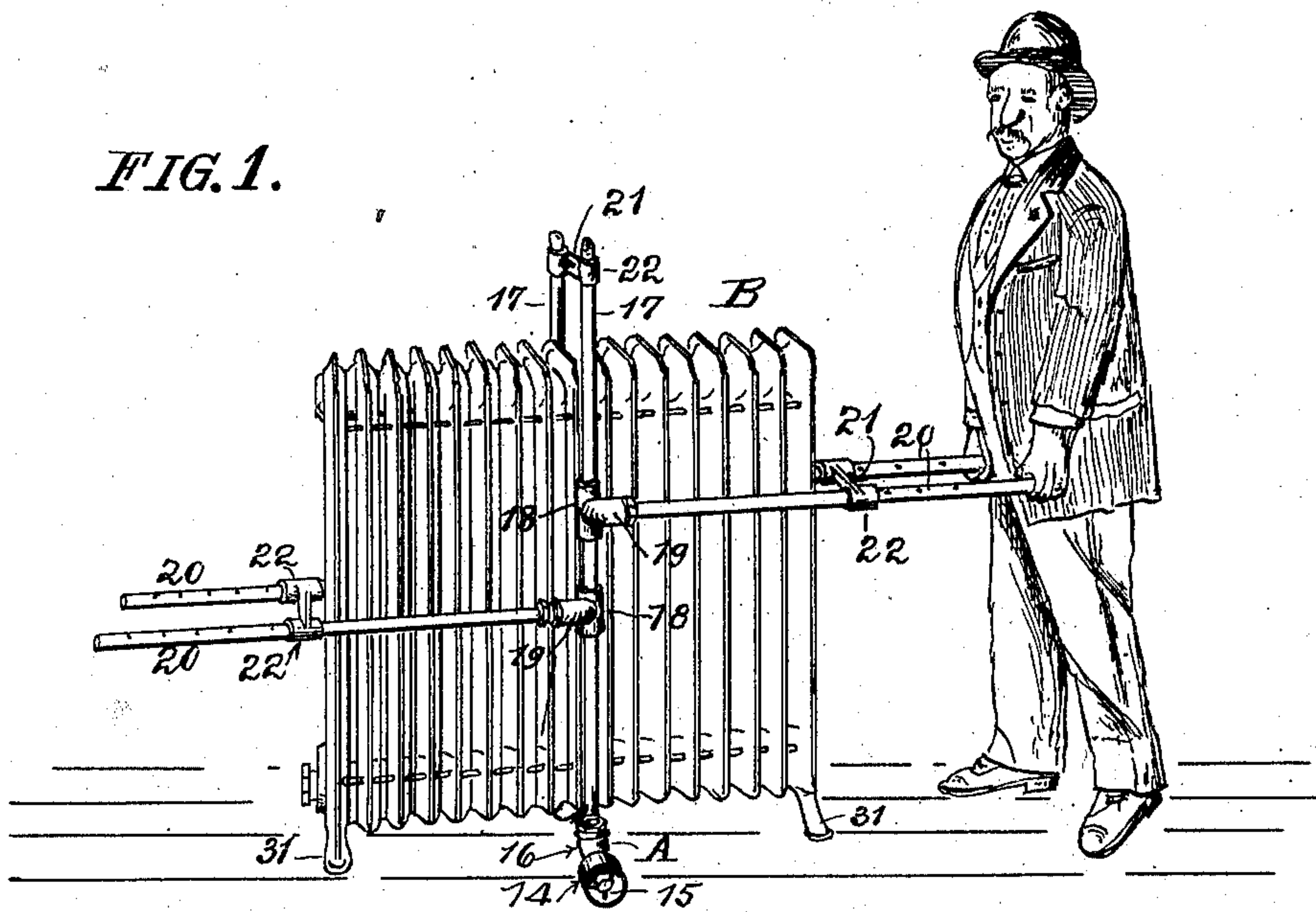
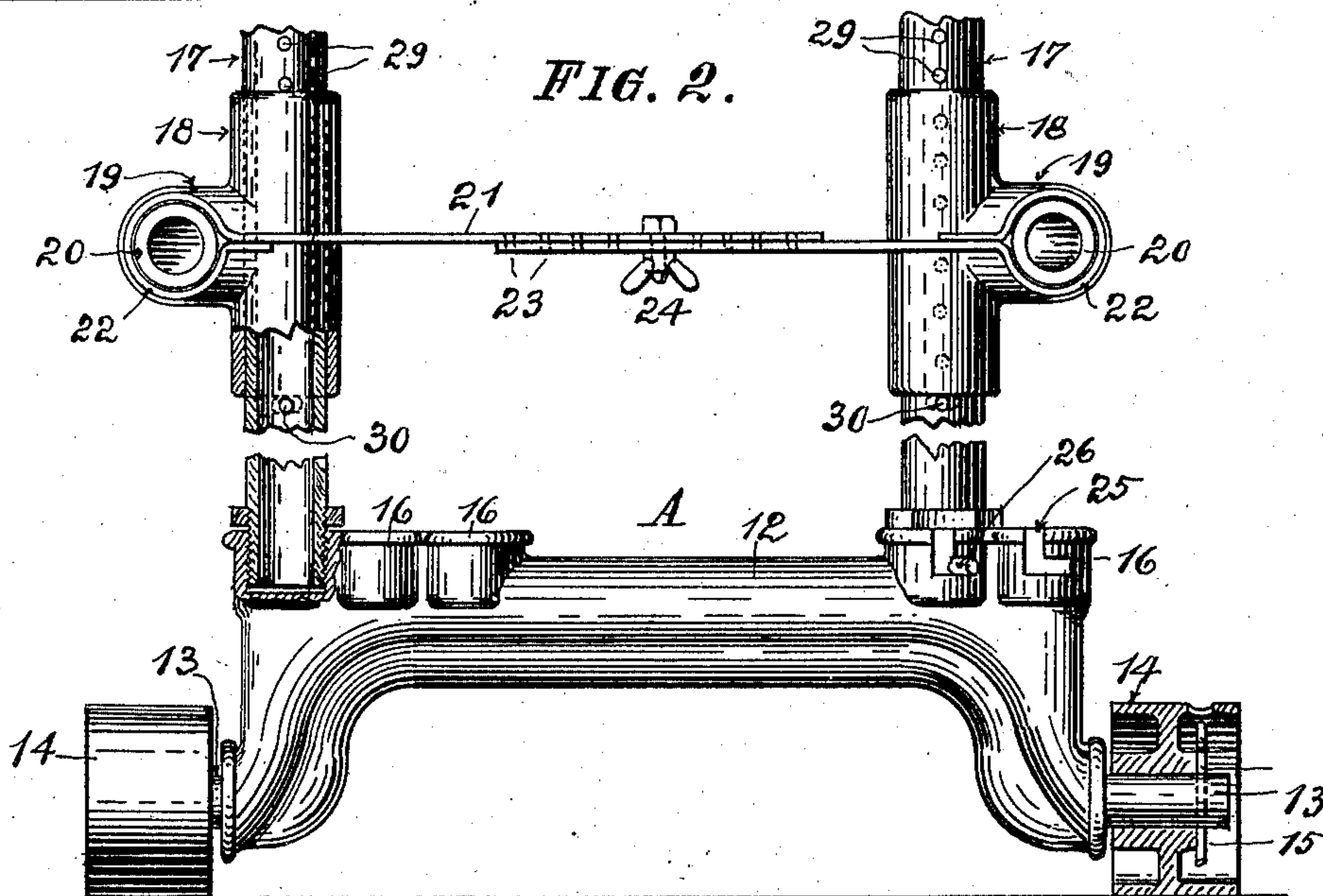


FIG. 2.



Witnesses:

C. B. Knudsen.
A. S. Peterson.

Inventor:

Joseph L. Welshans,

By Michael Stark & Sons

Attorneys.

J. L. WELSHANS.
TRUCK FOR CARRYING RADIATORS.
APPLICATION FILED DEC. 18, 1909.

963,410.

Patented July 5, 1910.

2 SHEETS—SHEET 2.

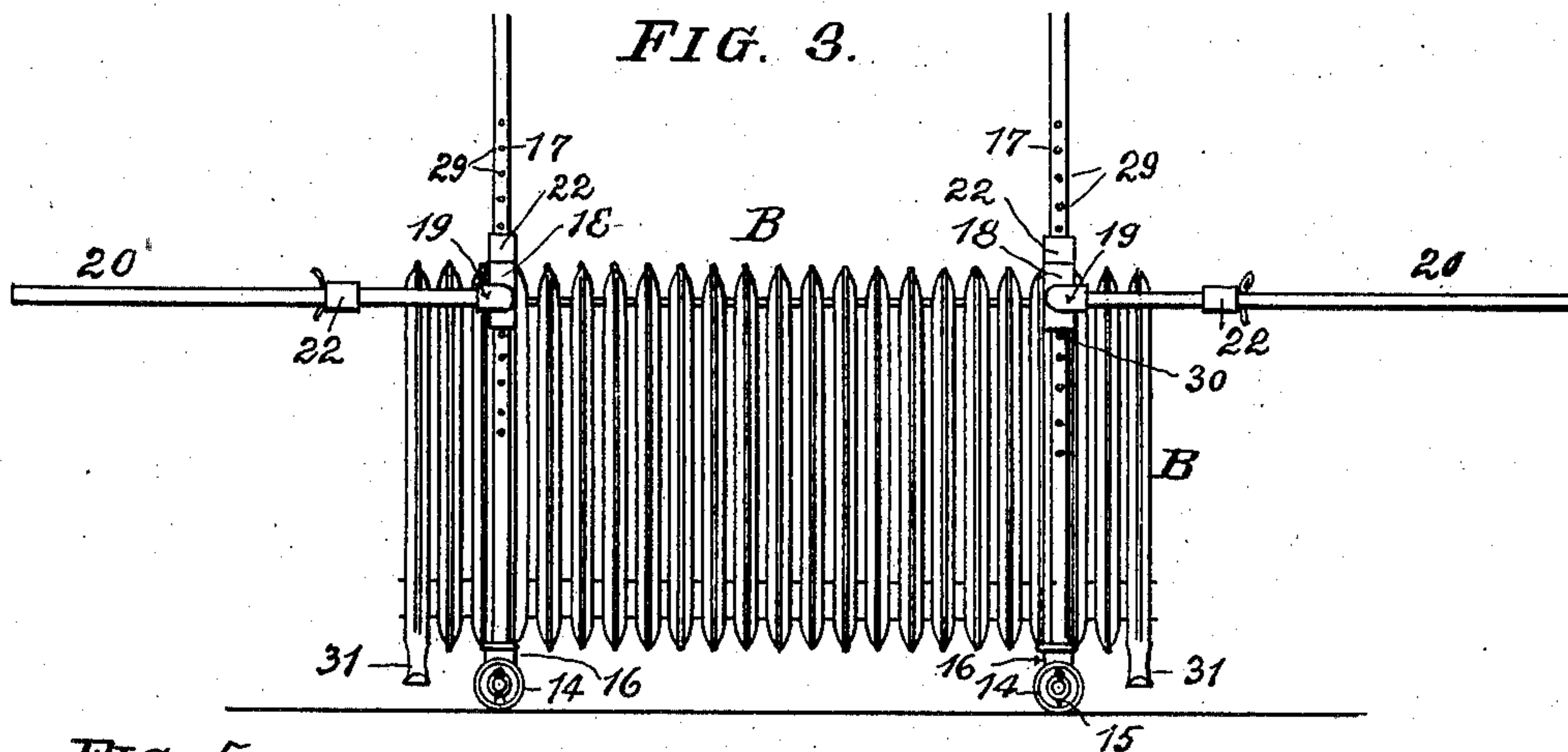


FIG. 5.

FIG. 4.

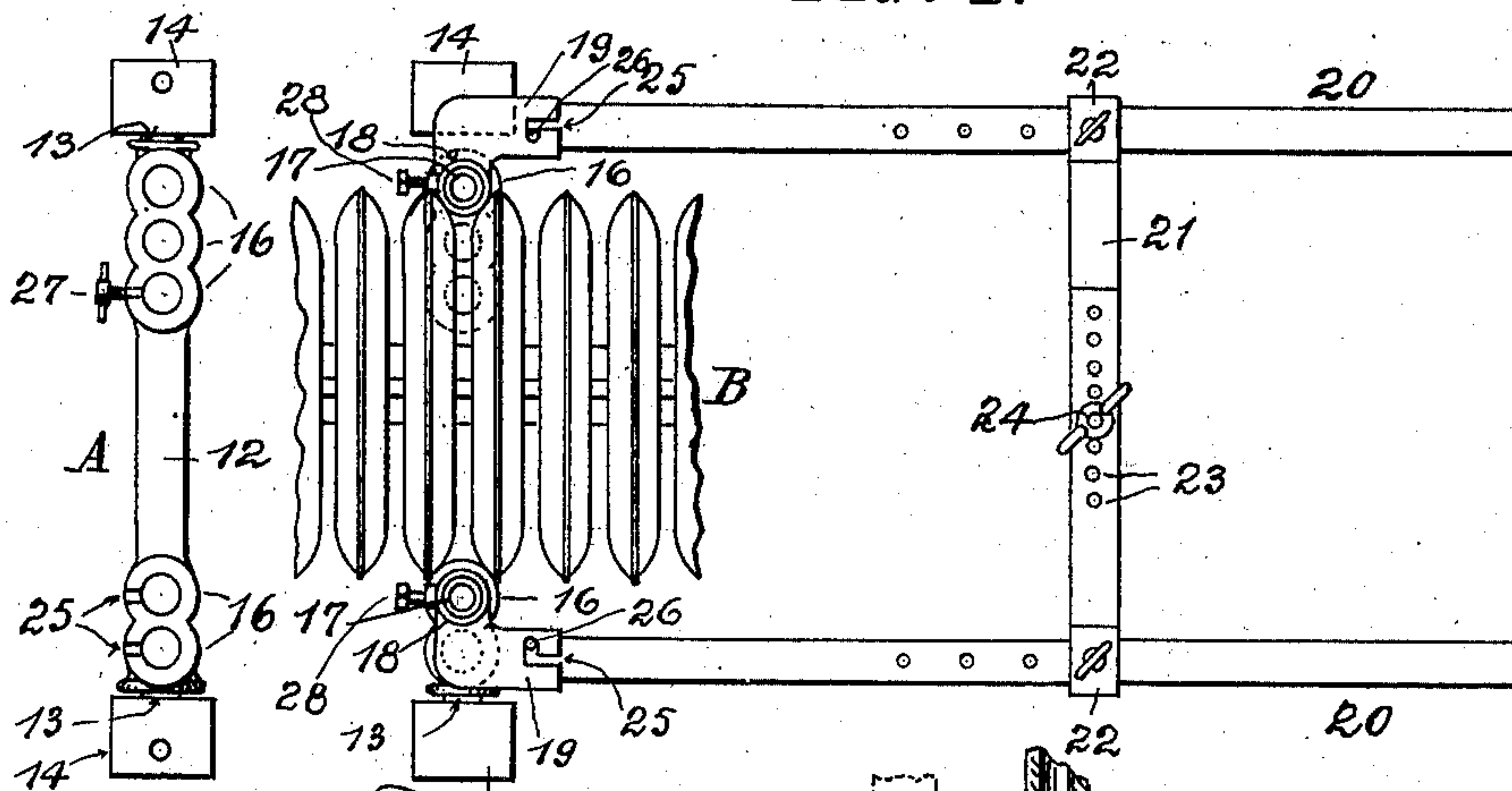
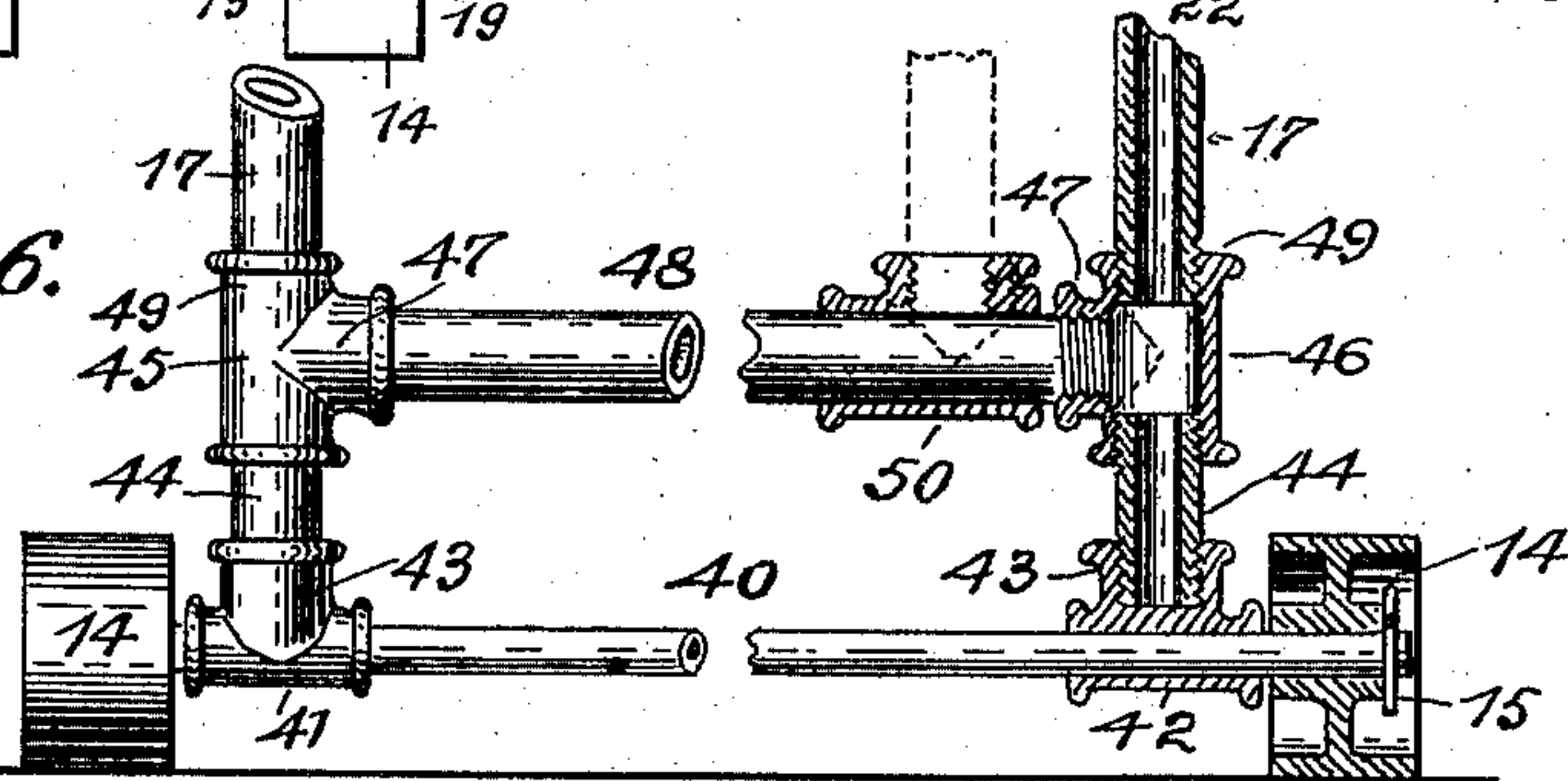


FIG. 6.



Witnesses:

C. R. Knudsen
A. S. Peterson.

Inventor:

Joseph L. Welshans,
By Michael Stark & Sons,
Attorneys.

UNITED STATES PATENT OFFICE.

JOSEPH L. WELSHANS, OF CHICAGO, ILLINOIS.

TRUCK FOR CARRYING RADIATORS.

963,410.

Specification of Letters Patent.

Patented July 5, 1910.

Application filed December 18, 1909. Serial No. 533,823.

To all whom it may concern:

Be it known that I, JOSEPH L. WELSHANS, a citizen of the United States, and resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Trucks for Carrying Radiators and Similar Articles; and I do hereby declare that the following description of my said invention, taken in connection with the accompanying sheet of drawings, forms a full, clear, and exact specification, which will enable others skilled in the art to which it appertains to make and use the same.

This invention has general reference to trucks for handling radiators; and it consists, essentially, in the novel and peculiar combination of parts and details of construction, as hereinafter first fully set forth and described, and then pointed out in the claims.

In the drawings already referred to, Figure 1 is a perspective view of a radiator and the truck by means of which the former is handled and transported. Fig. 2 is an end-elevation of the truck, a portion thereof being shown in section. Fig. 3 is a side-elevation of a radiator, illustrating the application of two trucks thereto. Fig. 4 is a plan of one of the trucks. Fig. 5 is a plan of the truck-axle detached. Fig. 6 is an elevation of a truck-bolster slightly modified.

Like parts are designated by corresponding symbols of reference throughout the various figures.

A in the drawings designates the axle of my improved truck. It is, by preference, a casting comprising a bar 12, the ends of which are downwardly formed and provided with laterally projecting trunnions or axles 13, upon which are located truck-wheels 14, retained upon said axles by, preferably, cotter-pins 15. Upon the upper surface of the bar 12 there are a series of tubular bosses 16, bored or screw-threaded to receive tubular posts 17, said posts being of a length sufficient to fully accommodate the highest radiator now made or in use. The bosses 16 are spaced a distance apart, the two outer bosses being so far apart that the widest radiator can be placed between them, while the innermost bosses are adapted to receive the narrowest radiator, the intermediate bosses, in combination with one of the outer bosses, being adapted to accommodate all remaining sizes of standard radiators.

Upon the posts 17 there are located movable sockets or sleeves 18, which sleeves have right-angled elbows 19, preferably formed integral with the sleeves, the outer ends of said elbows being bored or screw-threaded to receive tubular rods 20, serving the purpose of handles for the truck. Upon these posts 17, and the handles 20, there are placed connecting-bars 21, to prevent said posts and the handles from spreading, these connecting-bars 21 being made adjustable in length so as to accommodate the rods and handles respectively in their different positions, as will hereinafter more fully appear. Each of these connecting-bars comprises two similar members, said members being, preferably, flat bars of iron having on one end an eye 22, adapted to engage the tubular posts 17 and the tubular handles 20 respectively. These flat bars have a series of bolt-holes 23, spaced a distance apart corresponding to the spacing of the tubular bosses 16 on the bolster A, one or more bolts 24, being provided to securely fasten the two members of the connecting-bars 21 together.

The tubular posts 17 and the handles 20 are screw-threaded on one end to enter into screw-threaded engagement with one or the other of the bosses 16, and the ends of the elbows 19, respectively, but if desired, the bosses and the ends of the elbows may be smooth-bored and their walls slotted with right-angled slots, as shown in Figs. 2, 3, 4, and 5, and the ends of the posts and the handles left smooth and provided with pins 26, adapted to engage the slots 25, bayonet-lock-fashion, the latter construction being perhaps the more desirable one owing to the rapidity with which the tubular posts and the handles may be caused to engage, or be disengaged from their respective receiving members. As a further modification of this construction I suggest the employment of set-screws 27, to hold the tubular members to their receiving members, such a construction being illustrated in Fig. 5.

In order to retain the sleeves 18 upon the posts 17, I provide the sockets or sleeves with set-screws 28, as shown in Fig. 4, or I may drill a series of holes 29 in the posts and locate cotter-pins 30, below said sleeves, as depicted in Fig. 2, it being understood that any effective means for retaining the sleeves upon the posts being suitable for this purpose.

In order to move a radiator from place to place or carry it up or down a flight of stairs, I remove one of the posts with its handle from the axle and pass the latter underneath the radiator B, the post remaining in the axle together with its handle lying flat upon the floor. Now the handle is raised to bring the post in the axle into a vertical position, the axle engaging a space between two adjacent sections of the radiator. Then the remaining post with its handle is placed into the socket on the axle nearest to the radiator, and finally the connecting braces 21 placed upon the posts and the handles. In this position, the posts will engage the spaces between two adjacent radiator-sections and so firmly grasp the same that it can be easily and readily moved about, it being understood that the distance from the top of the axle to the floor is greater than the length of the legs 31 of the radiator B so that the latter will be perfectly free from the floor. When it is desired to carry a radiator up or down stairs, I locate upon the posts 17 two sets of sleeves with their handles, as shown in Fig. 1, so that two persons may manipulate the radiator and carry it conveniently about.

When a radiator is of medium length, I use only one of these trucks and place it in approximately the middle of the radiator so as to balance the same, but in cases where radiators of considerable length are to be handled and their weight is considerable, I shall use two of the trucks, one near each end of the radiator, as illustrated in Fig. 3.

I have heretofore described the preferred embodiment of my invention and the best method of carrying the same into effect, but I desire it understood that changes in the construction may be made by persons skilled in the art to which my said invention appertains, without departing from the scope thereof. For instance: instead of making the truck-axle integral in the process of casting, I may construct the same from iron pipe and iron pipe fittings, as shown in Fig. 6. In this figure the axle for the truck wheels 14 is assumed to be one piece of iron pipe 40, which passes through iron pipe tees 41, 42, in the branches 43 of which there are short nipples 44, engaging one end of tees 45, 46, the branches 47 of which are connected by a tube 48. The opposite ends of the said tees, designated by the reference numeral 49 are adapted to receive the posts 17 in the manner heretofore described.

Upon the tubular connecting member 48 there is movably placed a tee 50, the branch 51 of which is likewise adapted to receive one of the posts 17. By adopting this construction, and making the tee 50 movable upon the tubular connecting member 48, I am enabled to dispense with the equivalent of two of the branches 16 on the axle as

shown in Fig. 2, and at the same time attain the further advantage that any radiator having a width less than the maximum space between the two posts 17 can be accommodated by simply sliding the movable tee with its post 17 against the side of the radiator and adjusting the connecting member 21 to accommodate the posts. I have also described this truck with special reference to its being adapted for handling radiators, but it is evident that the same may also be usefully employed in handling other articles of a narrow nature.

Having thus fully described my invention, I claim as new and desire to secure to me by Letters Patent of the United States—

1. A truck for handling radiators and analogous articles, comprising an axle, spindles on said axle, and truck-wheels upon said spindles, there being on said axle a series of bosses, posts, removably secured to said bosses, and handles, removably secured to said posts and laterally projecting therefrom.

2. A truck for handling radiators and analogous articles, comprising an axle, spindles on said axle, and truck-wheels upon said spindles, there being on said axle a series of bosses, posts, removably secured to said bosses, handles, removably secured to said posts and projecting laterally therefrom, and connecting bars upon said posts and said handles, said connecting bars being changeable in length, as set forth.

3. A truck for handling radiators and analogous articles, comprising an axle, spindles on said axle, and truck-wheels upon said spindles, there being on said axle a series of bosses, posts, removably secured to said bosses, handles, removably secured to said posts and projecting laterally therefrom, a connecting-bar upon said posts, said connecting bar being movable upon said posts and adjustable in length, said posts being interchangeable in said bosses.

4. A truck for handling radiators and similar articles, comprising an axle, spindles projecting laterally from said axle, and truck-wheels upon said spindles, there being on said axle a series of upwardly-projecting tubular bosses, posts secured to said bosses, sleeves upon said posts, elbows on said sleeves, and handles secured to said elbows, the posts being interchangeable in said bosses.

5. A truck for handling radiators and similar articles, comprising an axle, spindles projecting laterally from said axle, and truck-wheels upon said spindles, there being on said axle a series of upwardly-projecting tubular bosses, two posts secured in said bosses, sleeves upon said posts, elbows on said sleeves, and handles secured to said elbows, the said posts being removable from and interchangeable in said bosses, and a

connecting-bar on said posts, said connecting-bar being movable upon said posts and changeable in length.

5 6. A truck for handling radiators and similar articles, comprising an axle, spindles projecting laterally from said axle, and truck-wheels upon said spindles, there being on said axle a series of upwardly-projecting tubular bosses, two posts secured to said 10 bosses, sleeves upon said posts, elbows on said sleeves, and handles in said elbows, the said posts being removable from and interchangeable in said bosses, a connecting bar upon said posts, and a connecting bar upon 15 said handles, said connecting bars being removable from the posts and handles, respectively, and changeable in length.

20 7. A truck for handling radiators and similar articles, said truck including an axle, said axle comprising a bar having its ends downwardly bent, spindles projecting laterally from the lower end of said bar, and truck-wheels upon said axle, there being on the top of said bar a series of receiving 25 members, two posts, adapted to engage the

said receiving members removably and interchangeably, and movable handles upon said post, said handles projecting laterally from and at right angles to said posts.

8. A truck for handling radiators and 30 similar articles, said truck including an axle, said axle comprising a bar having its ends downwardly bent, spindles projecting laterally from the downwardly-projecting ends of said axle, and truck-wheels upon said 35 spindles, there being on said bar a series of upwardly-projecting tubular bosses, two posts, adapted to engage said bosses removably and interchangeably by a bayonet-catch, and handles upon said posts, said handles 40 projecting laterally and at right angles from said posts.

In testimony that I claim the foregoing as my invention, I have hereunto set my hand in the presence of two subscribing witnesses. 45

JOSEPH L. WELSHANS.

Attest:

D. W. ROCKEY,
NEIL F. BOYLE.