J. HEIMER.

CARRIER.

APPLICATION FILED FEB. 5, 1909.

980,523.

Patented Jan. 3, 1911.

Fig. 1.

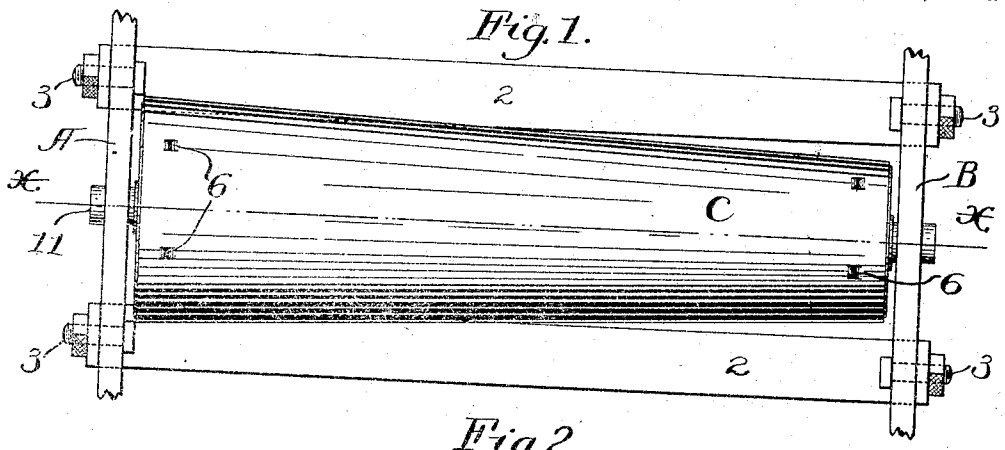


Fig. 2.

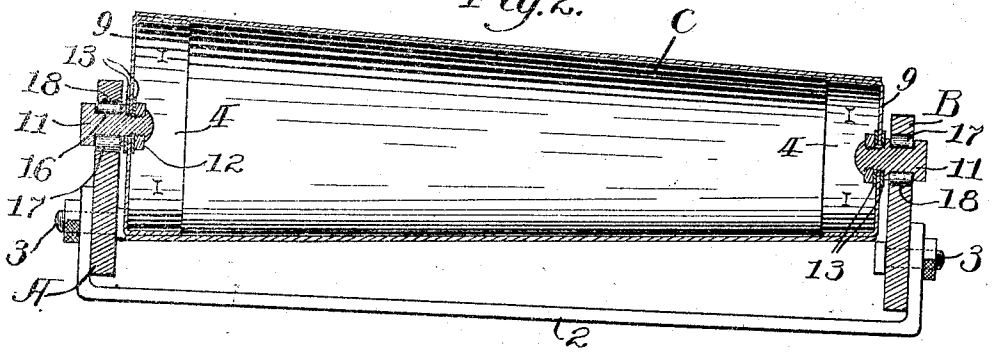


Fig. 3.

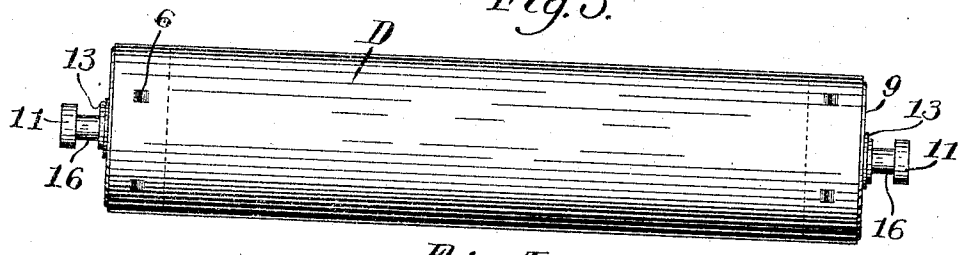
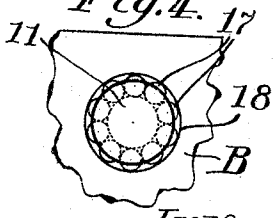


Fig. 4.



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UNITED STATES PATENT OFFICE.

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CARRIER.

980,523. Specification of Letters Patent. **Patented Jan. 3, 1911.**

Application filed February 5, 1909. Serial No. 476,299.

To all whom it may concern:

Be it known that I, JOHN HEIMER, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented new and useful Improvements in Carriers, of which the following is a specification.

My invention relates more particularly, although not exclusively to that class of carriers used for conveying articles of merchandise by gravity from a high to a lower level and has for its primary object, simplicity of construction and less friction between its journal parts and greater effectiveness in use.

In the accompanying drawings, forming part of this specification Figure 1 is a plan view of a detail portion of gravity carrier employing my invention, the roller shown being tapered; Fig. 2 is a longitudinal section of Fig. 1 taken on the line X—X; Fig. 3 is a side view of a cylindrical roller which is adapted to be used with my invention and, Fig. 4 is a side view of a detail portion of one of the side rails showing one of the journal bearings.

In the drawings A and B represent two parallel side rails which may be straight as shown or curved when desired. In the usual manner these rails are spaced apart and rigidly supported by means of the transverse bars 2, the ends of which are bent up and secured to the side rails by means of the bolts 3. Between the side rails are freely journaled tapering or cylindrical rollers, C representing one of the tapering rollers in Figs. 1 and 2 and D one of the cylindrical rollers in Fig. 3. Each of these rollers consists of a shell having its ends provided with cups 4 the sides of which are secured to the shell by means of the indents 6 as illustrated in Fig. 1. To the ends 9 of the cup are centrally secured gudgeons 11, the inner ends of which are secured by means of the nuts 12 and washers 13. As illustrated in Fig. 2 the gudgeon is formed with an annular raceway 16 in which run a series of rollers 17 or their equivalent such as balls. The side rails are provided with openings 18 to admit the gudgeons and their rollers as illustrated in Figs. 2 and 4.

In the claims following this specification, where I use the term roller-shell, I mean it to include any kind of roller such as that form which resembles a wheel in design and which is commonly employed for carrier purposes.

In accordance with the patent statutes, I have described the principle of operation of my invention, together with the apparatus which I now consider to represent the best embodiment thereof, but I desire to have it understood that the construction shown is only illustrative and that the invention can be carried out by other means and applied to uses other than those above set forth, within the scope of the following claims.

Having described my invention, what I claim as new and desire to protect by Letters Patent, is:—

1. In a gravity carrier, a roller shell, a cup fitting telescopically within each end of the shell, and secured therein by means of indents, a gudgeon passing through the outer wall of each cup and having an annular race way, a series of balls or rollers in said race way, and a stationary supporting member having an opening in which said rollers or balls are adapted to turn.

2. In a gravity carrier, a stationary supporting member, a tapering roller shell, a cup fitting telescopically into an end of said shell and having its outer wall perpendicular to the axis of the shell, a gudgeon passing centrally through the outer wall of said cup and suitably secured thereto, the outer end of the gudgeon having journal support in the stationary member.

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

JOHN HEIMER.

Witnesses:
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