Sept. 25, 1923. 1,468,768

J. F. VOGEL ET AL

SPINDLE MOUNTING

Filed Sept. 30, 1921

Fig. 1.

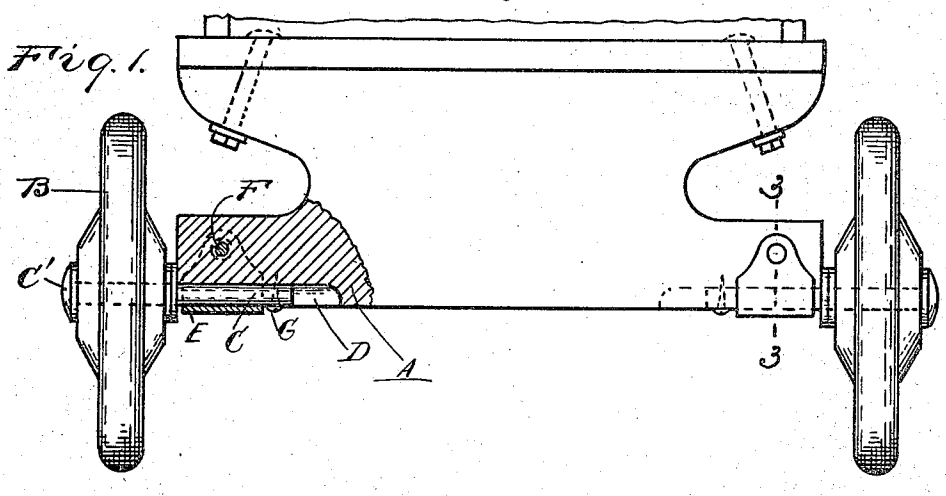


Fig. 2.

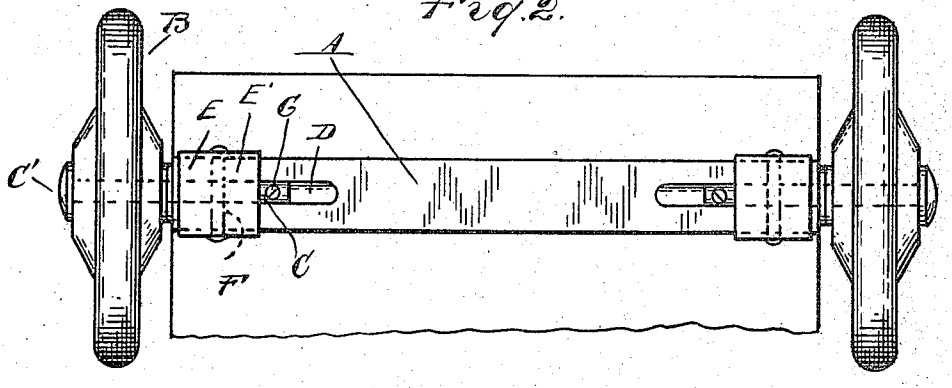
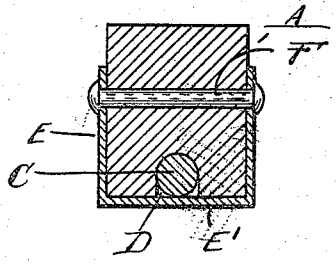


Fig. 3.



Inventors
Joshua F. Vogel
Frank A. Nauts

By Whittemore Hulbert Whittemore
Belknap Attorneys

Patented Sept. 25, 1923. 1,468,768

UNITED STATES PATENT OFFICE.

JOSHUA F. VOGEL AND FRANK A. NAUTS, OF TOLEDO, OHIO, ASSIGNORS TO THE GENDRON WHEEL COMPANY, OF TOLEDO, OHIO, A CORPORATION OF OHIO.

SPINDLE MOUNTING.

Application filed September 30, 1921. Serial No. 504,302.

To all whom it may concern:

Be it known that we, JOSHUA F. VOGEL and FRANK A. NAUTS, both citizens of the United States of America, and both residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Spindle Mountings, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to spindle mountings for toy wagons and it is the object of the invention to provide an improved means for mounting the spindles of the toy wagon upon the bolsters thereof. The improvement consists primarily in facilitating assembly and reducing the manufacturing cost without sacrifice of strength.

In the drawings:

Fig. 1 is a view in elevation of a toy wagon bolster to which wheels are secured by spindles attached in accordance with the present invention.

Fig. 2 is a bottom view of the same; and

Fig. 3 is a cross-section on line 3—3 of Fig. 1.

In these views the reference character A designates one of the bolsters of the toy wagon, the preferred material being wood. Upon the respective ends of said bolster, wheels B are mounted by means of spindles C having at their outer ends large integral heads C′ for retaining the wheels. The bolster may be any shape desired, but is preferably provided with a flat lower face having relatively short longitudinally extending grooves D at the ends thereof to receive the spindles C. These spindles are disposed wholly in the grooves and are retained therein by U-shaped sheet metal clips E which have relatively wide bases E′ that extend across the grooves and that engage the lower flat surface of the bolster. The arms of the clips embrace the lateral faces of the bolster and are rigidly secured thereto by rivets F or other suitable fasteners. To prevent endwise shifting of the spindles C from the grooves D, screws G are extended through the free ends of said spindles upwardly into the bolsters at the inner edges of the clips. The width and depth of the grooves D are such that said spindles fit very snugly in said grooves being restrained securely from either lateral or up and down movement. Preferably the exertion of a moderate pressure will be required to force the spindles into the grooves.

The described construction is one that lends itself to a very rapid assembly and which involves simple and inexpensive machine operations and parts.

What we claim as our invention is:

The combination with a vehicle bolster having a flat lower face provided with relatively short longitudinally extending grooves at the ends thereof, of headed spindles disposed wholly within the grooves and extending outwardly from the ends of said bolster, wheels mounted on said spindles between the heads thereof and said bolster, headed elements extending through said spindles adjacent to the inner ends thereof and securing the same to said bolster, and channel-shaped clips having relatively wide bases engaging the flat lower face of said bolster between said headed elements and said wheels for retaining said pins in said grooves, the sides of said clips engaging the opposite sides of said bolster, and means extending through the bolster and the sides of each clip for securing the latter to said bolster.

In testimony whereof we affix our signatures.

JOSHUA F. VOGEL.
FRANK A. NAUTS.