No. 729,246. PATENTED MAY 26, 1903.

J. C. WELLS.

WHEEL FOR TOYS.

APPLICATION FILED AUG. 27, 1902.

NO MODEL.

Fig. 1

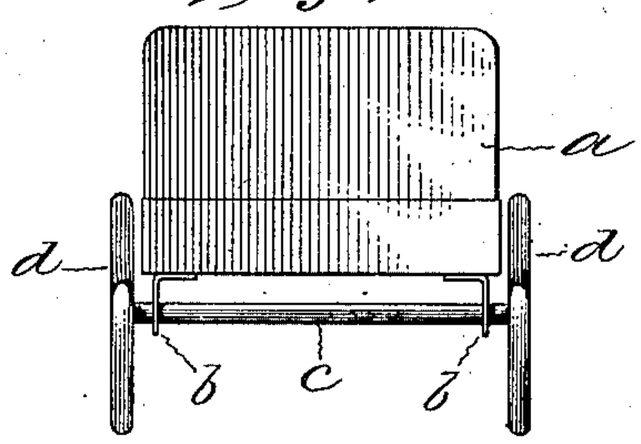


Fig. 2

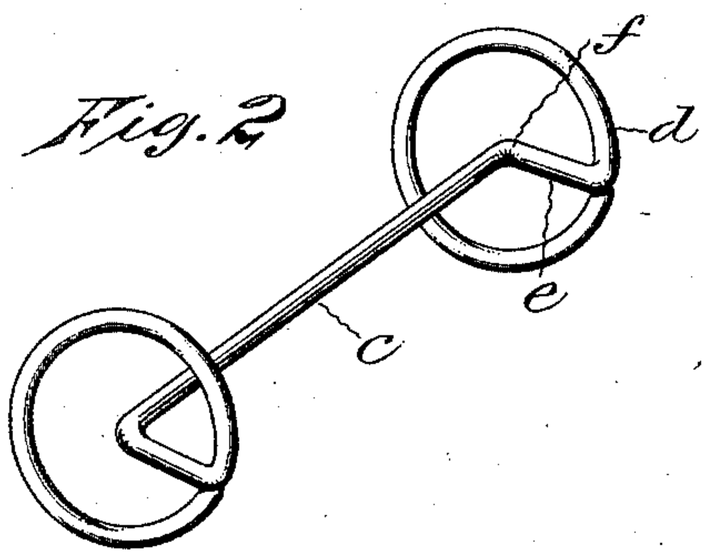


Fig. 3

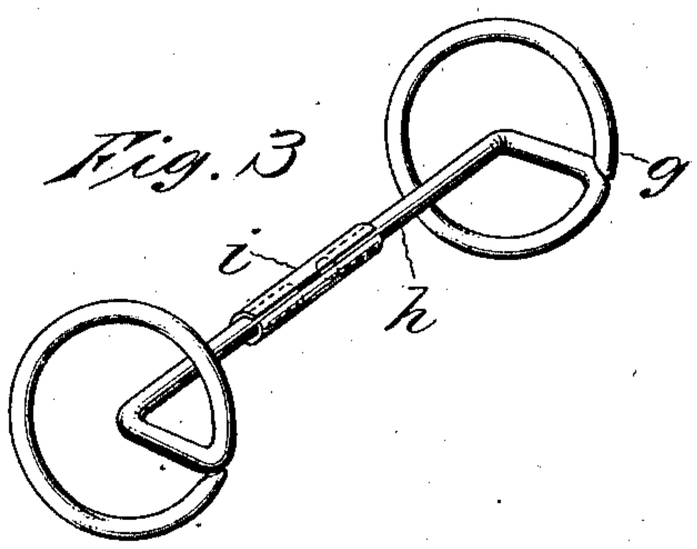


Fig. 4

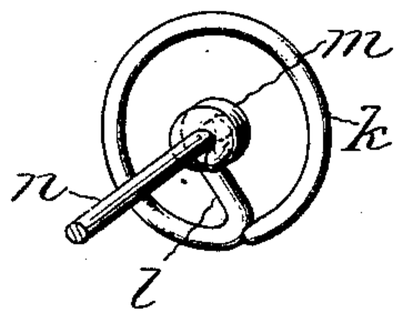


Fig. 5

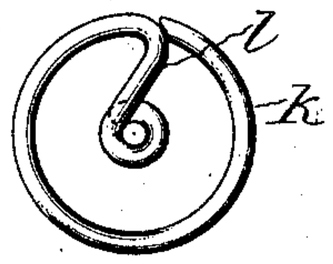
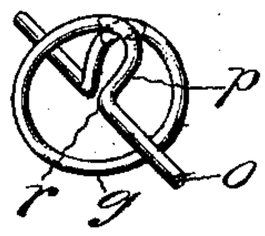


Fig. 6



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No. 729,246. Patented May 26, 1903.

UNITED STATES PATENT OFFICE.

JOHN C. WELLS, OF EAST HAMPTON, CONNECTICUT.

WHEEL FOR TOYS.

SPECIFICATION forming part of Letters Patent No. 729,246, dated May 26, 1903.

Application filed August 27, 1902. Serial No. 121,183. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. WELLS, a citizen of the United States, and a resident of East Hampton, in the county of Middlesex and State of Connecticut, have invented a certain new and useful Improvement in Wheels for Toys, of which the following is a specification.

The object of my invention is to provide an extremely simple construction of wheel applicable for use in wheeled toys and one that can be made at a minimum cost of manufacture.

Different forms of construction of wheels in which my invention may be embodied are illustrated in the drawings herein and in the use of which the above-recited objects may be attained.

Figure 1 is a view in front elevation of a toy provided with my improved wheel. Fig. 2 is a perspective view of one form of my improved wheel shown as connected with an axle. Fig. 3 is a like view, showing another form of wheel embodying my improvement, the axle connected with the wheel being divided midway of its length and united by a sleeve. Fig. 4 is a like view of one end of an axle, showing another form of connection with the wheel. Fig. 5 is a face view of the latter form of wheel. Fig. 6 is a perspective view showing another form of wheel with the axle or shaft projecting from each side.

In the accompanying drawings the letter *a* denotes the body of a wagon or like toy provided on its under side with downward-projecting parts or supports *b*, in which the axle *c* is mounted to turn.

A peculiar feature of my invention consists in forming the wheel-rim and the connection with its support of a single piece of material, as of wire bent to shape, and by the term "hub," as used herein, is meant that part of the wheel which serves to unite it to the axle, whether it be a bend formed in the connection from the rim extending the former into the axle, as shown in Figs. 2, 3, and 6, or a well-defined hub, as shown in Figs. 4 and 5. In several of the views the wheel is shown as constructed of a separate piece of wire from that composing the axle or the other wheel; but in the simplest form of the invention both wheels and the axle are shown as composed of the same piece of wire, but in either instance there is present in the structure the hub, as above described.

In Fig. 1 the rim *d*, the connection *e*, the hub *f* of each wheel, and the axle *c* are all formed of the same piece of material, as wire. The wire is bent in circular form, starting at a point on the rim and extending around to a point where it meets this end of the wire. It is then bent inward on a radial line to a point at the center of the circle, and is then bent outward at right angles to the plane of the wheel, the bend forming the hub. The extension of the wire at right angles to the plane of the wheel forms the axle, and the wheel on the opposite end of the axle is formed in like manner as to its hub, connection, and rim, the opposite end of the wire terminating at a point where the connection is bent to form the rim.

In the form of the invention shown in Fig. 3 the wheel *g* is formed in the same manner as that shown in Fig. 2. In this form, however, the axle *h* is formed of two pieces joined by a sleeve *i*, that may be slitted along its length, as shown, or of any other desired form.

In the form of the invention shown in Figs. 4 and 5 the rim *k* and connection *l* are formed in the same manner as that of Figs. 2 and 3. In this form of the invention the hub *m* is formed by a number of turns of the wire, providing an opening in which the end of the axle *n* extends. It is obvious that this turn of the wire may securely bind the axle to rigidly secure it to the wheel or that the axle may be of such size as to allow the wheel to turn thereon.

In the form of wheel shown in Fig. 6 the axle extends on opposite sides of the wheel, but is formed of the same piece of wire as that constituting the rim and connecting part. In this form of the device one end of the wire forming a portion of the axle *o* is located at right angles to the plane of the wheel and is bent at the hub *r* and extends toward the rim to form a connection *p*. At the termination of the connection the wire is then bent in a circular direction to form the rim *q*, and at the point at which the circle is completed the wire is bent in a radial direc-

tion to form another connection, and at the same center or hub is bent to form the other end of the axle located at right angles to the plane of the wheel.

It is obvious that several variations may be made from the forms shown herein without departing from the scope or intent of the invention, and any such variations will be understood as embodying the features of my improvement.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A roller for toys consisting of a supporting-axle member combined with a wheel at each end, each wheel having a hub, rim and the part connecting the two formed of a single piece of material bent to shape.

2. A supporting-axle member consisting of a split sleeve and two wheel-supporting members, combined with a pair of wheels, each wheel having a central support, a rim and the part connecting the two formed of a single piece of material bent to shape.

3. An axle and a wheel secured to each end, each wheel consisting of a hub, a rim and the part connecting the two all formed of a single piece of material, bent to shape.

4. A roller for a toy or the like consisting of an axle projecting on opposite sides of a wheel, a wheel-rim and connections between the wheel-rim and axle, the whole formed of a single piece of material bent to shape.

5. A roller for a toy consisting of an axle and a wheel secured to each end, each wheel consisting of a rim and a connection with the axle, the whole being formed of a single piece of material bent to shape.

JOHN C. WELLS.

Witnesses:
EUGENE WELLES,
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