No. 703,801. Patented July 1, 1902.

C. LOOFF, JR.

MERRY-GO-ROUND.

(Application filed Oct. 23, 1901.)

(No Model.) 2 Sheets—Sheet 1.

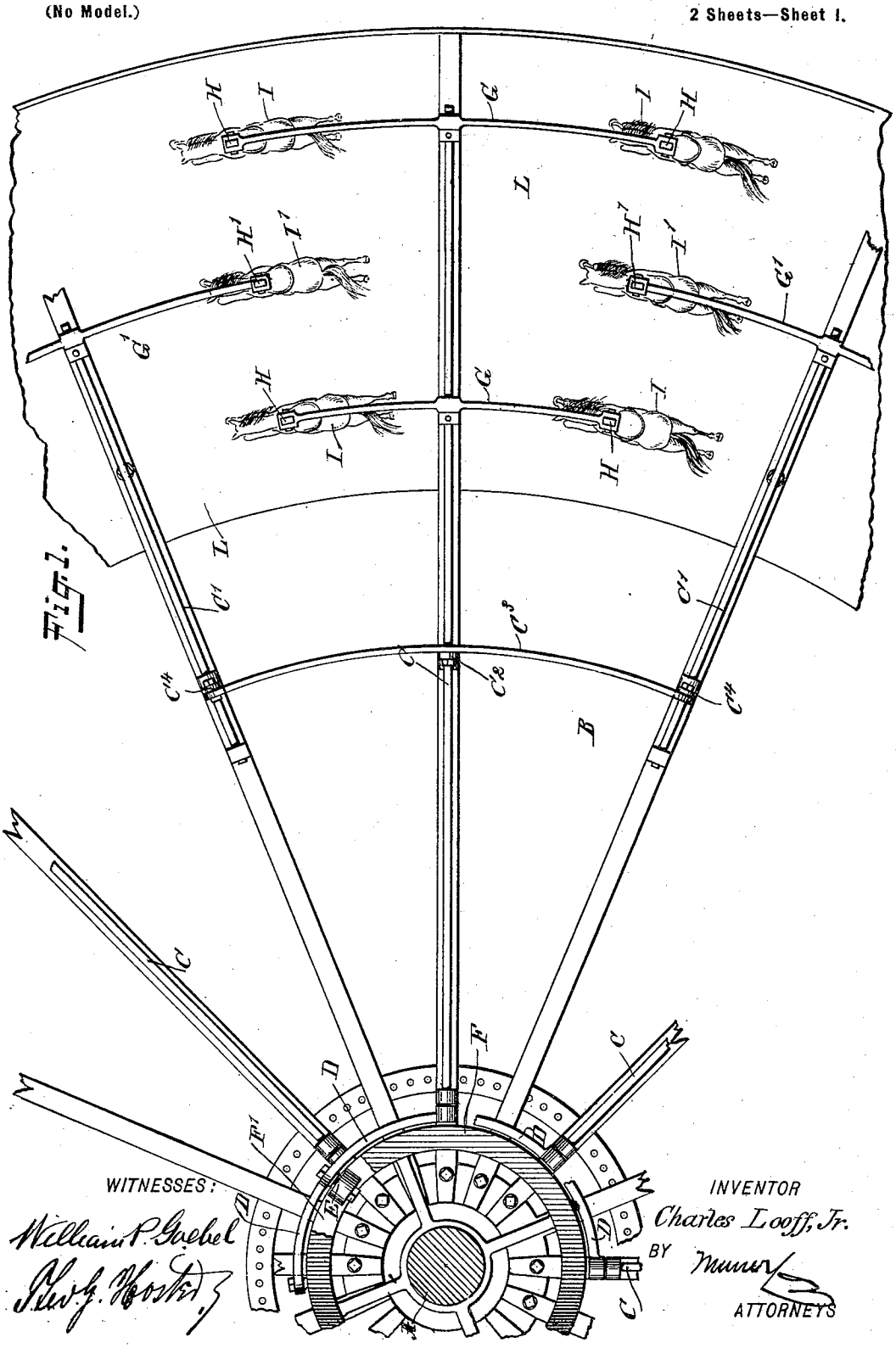

Fig. 1.

WITNESSES:

William P. Goebel

Rud. F. Kostka

INVENTOR

Charles Looff, Jr.

BY Munn & Co.

ATTORNEYS

No. 703,801. Patented July 1, 1902.

C. LOOFF, JR.

MERRY-GO-ROUND.

(Application filed Oct. 23, 1901.)

(No Model.) 2 Sheets—Sheet 2.

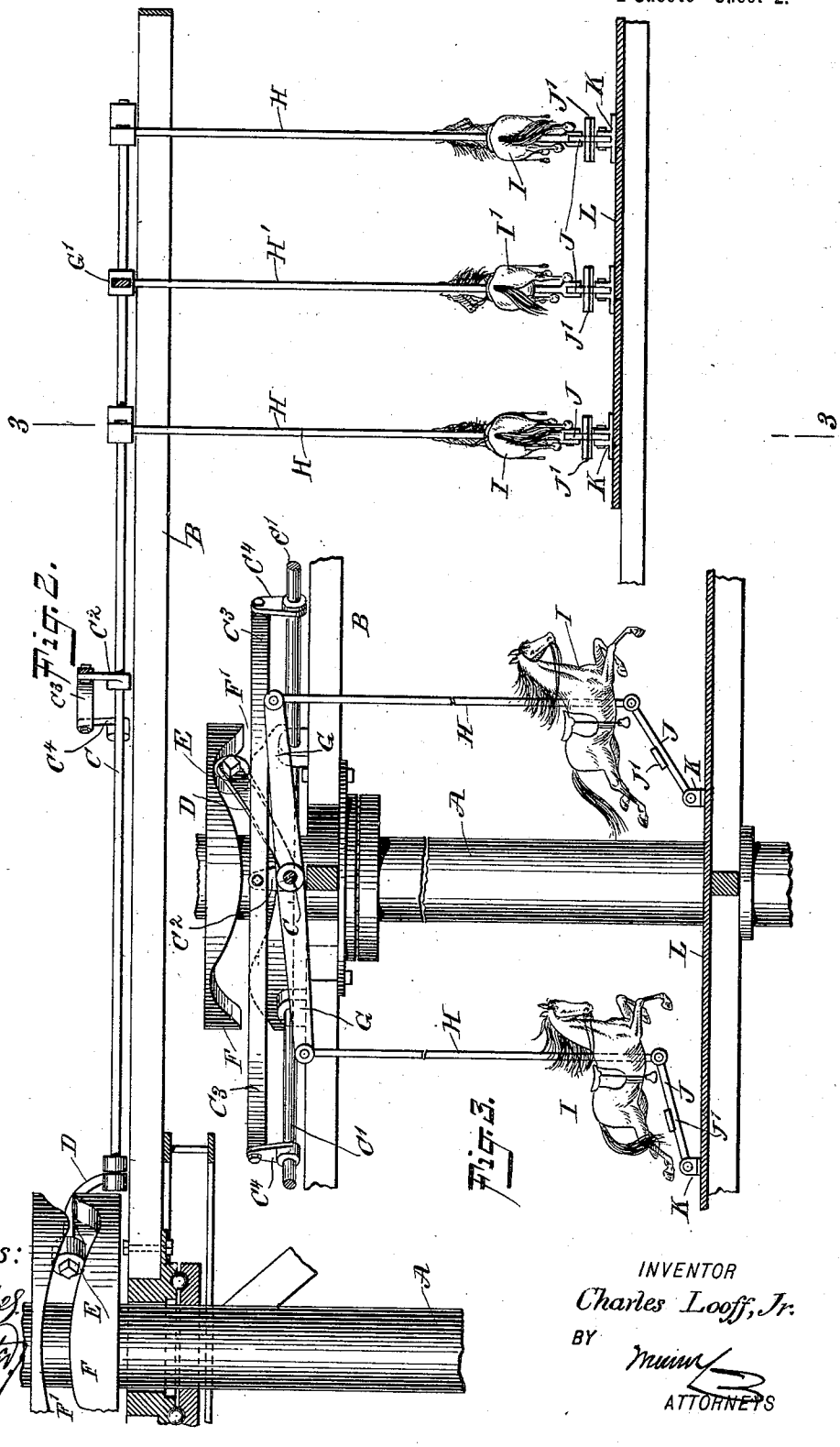

Fig. 2.

Fig. 3.

WITNESSES:

Wm. P. Goebel

Edw. J. Koehler

INVENTOR

Charles Looff, Jr.

BY Munn & Co.

ATTORNEYS

UNITED STATES PATENT OFFICE.

CHARLES LOOFF, JR., OF BROOKLYN, NEW YORK.

MERRY-GO-ROUND.

SPECIFICATION forming part of Letters Patent No. 703,801, dated July 1, 1902.

Application filed October 23, 1901. Serial No. 79,642. (No model.)

To all whom it may concern:

Be it known that I, CHARLES LOOFF, Jr., a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Merry-Go-Rounds, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved merry-go-round arranged to give the seats a uniform up-and-down motion and without requiring much driving power.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improvement with parts in section. Fig. 2 is a sectional side elevation of the same, and Fig. 3 is a transverse section of the same on the line 3 3 of Fig. 2.

On the usual center post A is mounted to rotate the frame B, carrying in its overhead portion a plurality of radially-extending main rock-shafts C, each carrying at its inner end a cam-arm D, provided with a friction-roller E, traveling in a cam-groove F′ of a cam F, secured to the center post A. The outer portion of each rock-shaft C is provided with transversely-extending double arms G, each carrying at its free end a supporting-rod H, supporting a seat I of the usual form, and the lower end of each supporting-rod H is pivotally connected with a link J, fulcrumed on a bearing K, attached to the platform L of the revoluble frame B, the said link J preferably extending rearwardly directly under the seat. Each link is provided with a step J′ to permit persons to conveniently mount the seat.

Short or auxiliary rock-shafts C′ alternate with the main rock-shafts C and are likewise journaled on the overhead portion of the frame B, and the said shafts C′ are rocked from and in unison with alternate shafts C, and for this purpose each of said shafts C is provided with upwardly-extending arms C^2, connected by links C^3 with arms C^4 on the shafts C′. Each auxiliary shaft C′ carries a double arm G′ similar to the arms G, previously mentioned, and on the ends of the arms G′ are held the supporting-rods H′ for the seats I′, extending midway between a pair of seats I, as plainly indicated in Fig. 1. Each seat I′ moves in an opposite direction to the seats I, between which it is located. The lower ends of the seats I′ are guided by links K, the same as the supporting-rods H.

When the merry-go-round is in use and the frame B is revolved in the usual manner around the center post A, then the rock-shafts C and C′ are carried along, and the friction-rollers E of the cam-arms D, traveling in the groove F′, impart a rocking motion to the shafts C, so that the double arms G swing up and down, and thereby cause an up-and-down movement of the supporting-rods H and the seats I. By having the connection between the rock-shafts C and C′ a like up-and-down movement is given to the supporting-rods H′ and seats I′.

By reference to Fig. 3, it will be seen that when the shafts C rock in one direction then one set of seats I moves downward while the other set moves upward, and when the shafts C rock in the opposite direction then the motion of the sets of seats is reversed. The seat I′ in alinement with a set of seats I rocks in the opposite direction to the seats I in the set, thus producing a very novel effect.

By the arrangement described a very simple means is provided for giving the desired motion to the seats I without requiring much power, as the friction-rollers E travel freely in the cam-grooves F′, and consequently impart an easy rocking motion to the shafts C. The links J are arranged in alinement with the arms G, so as to give a steady movement to the supporting-rods H.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A merry-go-round having a revoluble frame, a rock-shaft journaled on the said frame and provided at one end with a cam-arm and at the other end with an arm for supporting a seat, a fixed cam engaged by the

said cam-arm to cause a rocking motion of the rock-shaft on revolving the said frame, short auxiliary rock-shafts also journaled on the frame and provided with arms connected by a link with an arm on the first-named shaft, and arms for supporting seats carried by the auxiliary rock-shafts, as set forth.

2. A merry-go-round having a revoluble frame, rock-shafts journaled on the said frame and extending in a radial direction, supporting-arms on the outer end of the rock-shafts, seat-rods carried by the said supporting-arms, guide-links pivoted to the said seat-rods and extending rearwardly under the seat, the said guide-link being fulcrumed on the platform of the revoluble frame, a cam-arm on the inner end of each rock-shaft, and a fixed cam engaged by the said cam-arm, as set forth.

3. A merry-go-round comprising a center post, a frame mounted to turn on the said post, radially-arranged rock-shafts journaled on the said frame, transversely-extending double supporting-arms secured on the outer portions of the said rock-shafts, seat-supporting rods held on the said supporting-arms, guide-links pivotally connected with the seat-supporting rods and fulcrumed on the frame, cam-arms secured on the inner ends of the said rock-shafts and each carrying a friction-roller at its free end, and a cam secured on the said center post and provided with a groove engaged by the said friction-rollers, as set forth.

4. A merry-go-round having a revoluble frame, rock-shafts journaled on the said frame and extending in a radial direction, supporting-arms on the outer ends of the rock-shafts, seat-rods carried by the said supporting-arms at the free ends thereof, guide-links pivoted to the said seat-rods and pivotally connected with the revoluble frame, the said guide-links being each provided with a step, a cam-arm on the inner end of each rock-shaft, a fixed cam engaged by the said cam-arm, short auxiliary rock-shafts connected with and rocked from the said first-named rock-shafts, supporting-arms on the said auxiliary rock-shafts, and seat-rods held on the last-mentioned supporting-arms, as set forth.

5. A merry-go-round having a revoluble frame provided with a platform, rock-shafts journaled on the said frame and extending in a radial direction, supporting-arms on the outer ends of the rock-shafts, seat-rods carried by the said supporting-arms, seats supported by said rods, guide-links pivoted to the lower ends of said seat-rods and pivotally connected with bearings on the platform of the revoluble frame, the said guide-links being each provided with a step, a cam-arm on the inner end of each rock-shaft, a fixed cam engaged by the said cam-arm, short auxiliary rock-shafts connected with and rocked from the said first-named rock-shafts, supporting-arms on the said auxiliary rock-shafts, and seat-rods held on the last-mentioned supporting-arms, the last-mentioned seat-rods and their seats being in alinement with the seat-rods and seats first mentioned, as set forth.

6. A merry-go-round, comprising a revoluble frame, rock-shafts journaled on the frame and extending in a radial direction, supporting-arms on the outer ends of the rock-shafts, seat-rods carried by the said supporting-arms, seats supported thereby, means for imparting a rocking motion to the rock-shafts on revolving the said frame, short auxiliary rock-shafts alternating with the main rock-shafts, supporting-arms on the said auxiliary rock-shafts, seat-rods held on the last-mentioned supporting-arms, seats carried thereby, and links connecting arms on the main rock-shafts with arms on the auxiliary rock-shafts, each seat connected with the auxiliary rock-shafts extending between a pair of seats connected with the main rock-shafts and moving in an opposite direction to the seats between which it is located, as set forth.

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

CHARLES LOOFF, JR.

Witnesses:
THEO. G. HOSTER,
EVERARD BOLTON MARSHALL.