

(No Model.)

2 Sheets—Sheet 1.

C. M. COLLINS.
TOY CART.

No. 474,215.

Patented May 3, 1892.

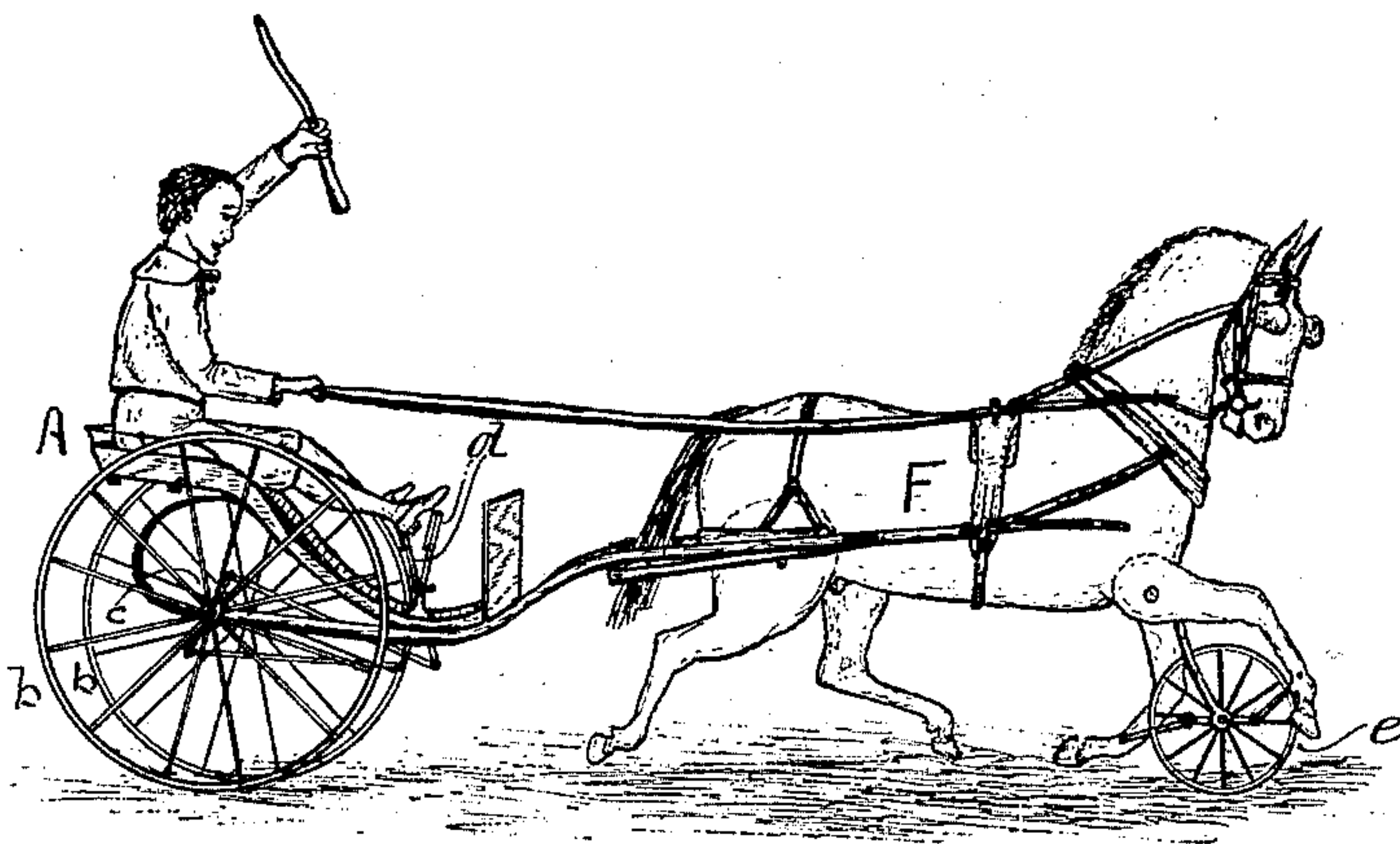


Fig. 1

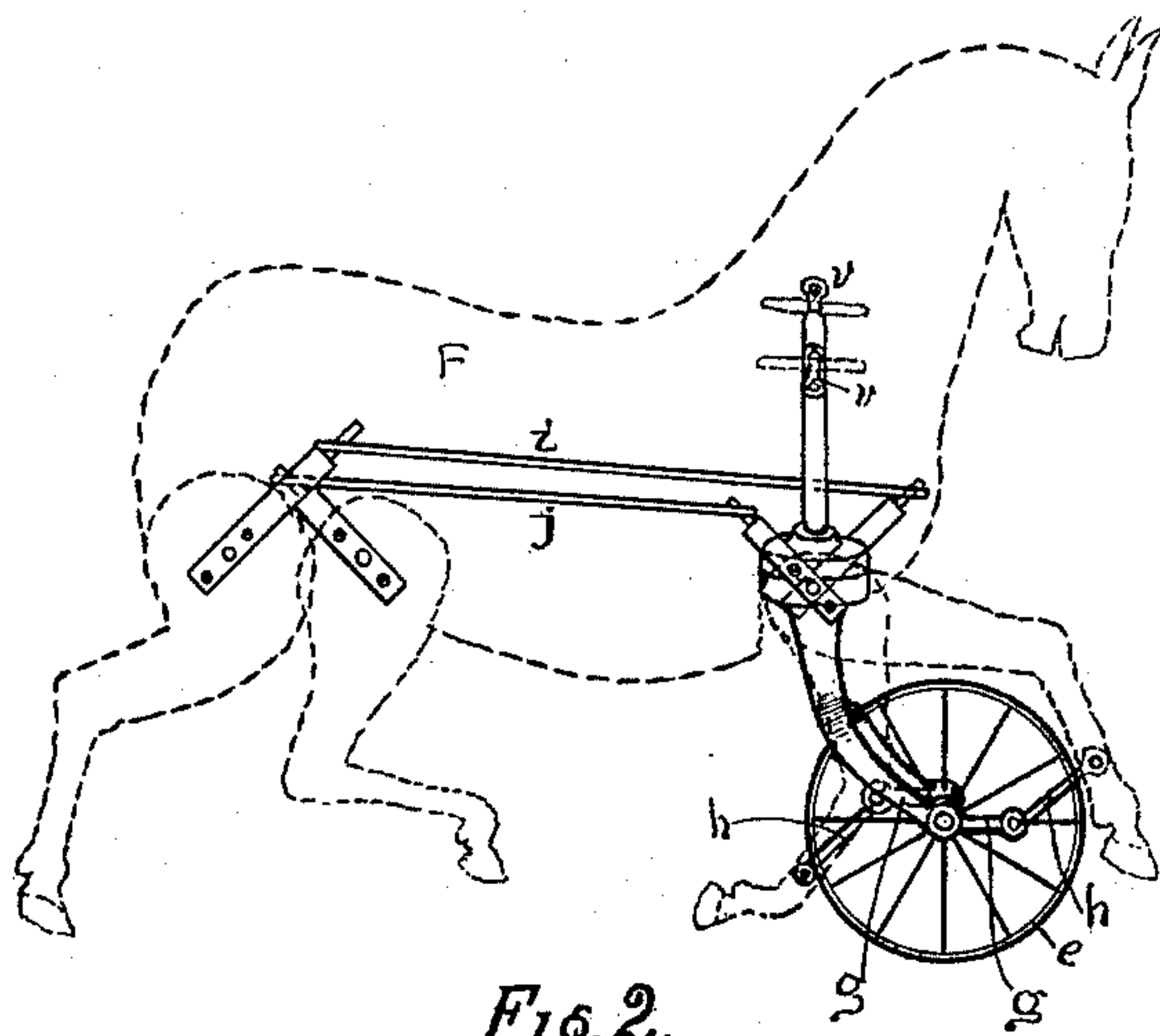


Fig. 2.

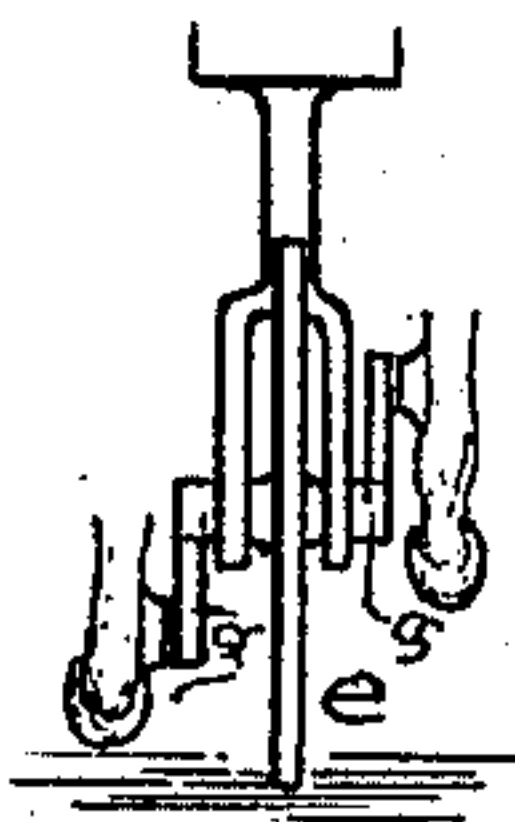


Fig. 3.

Attest H. J. Birchard
W. H. Praman.

Inventor
C. M. Collins

(No Model.)

2 Sheets—Sheet 2

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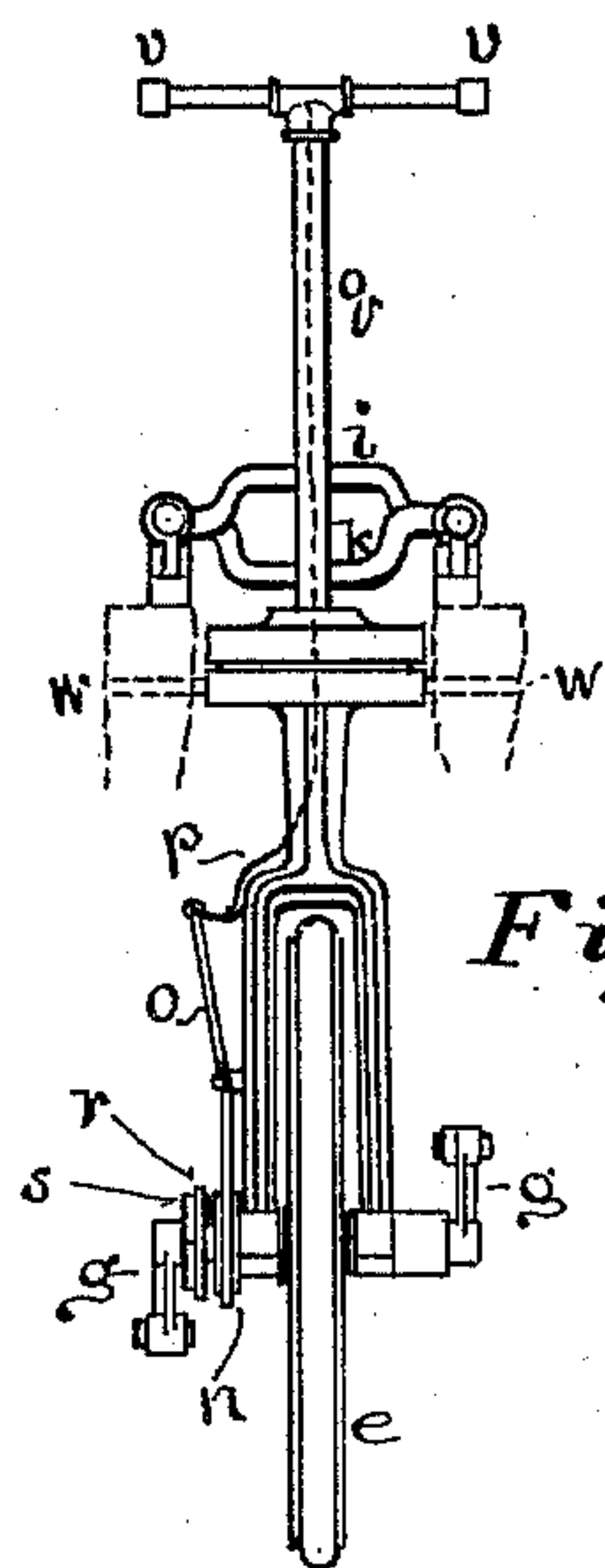


Fig 5

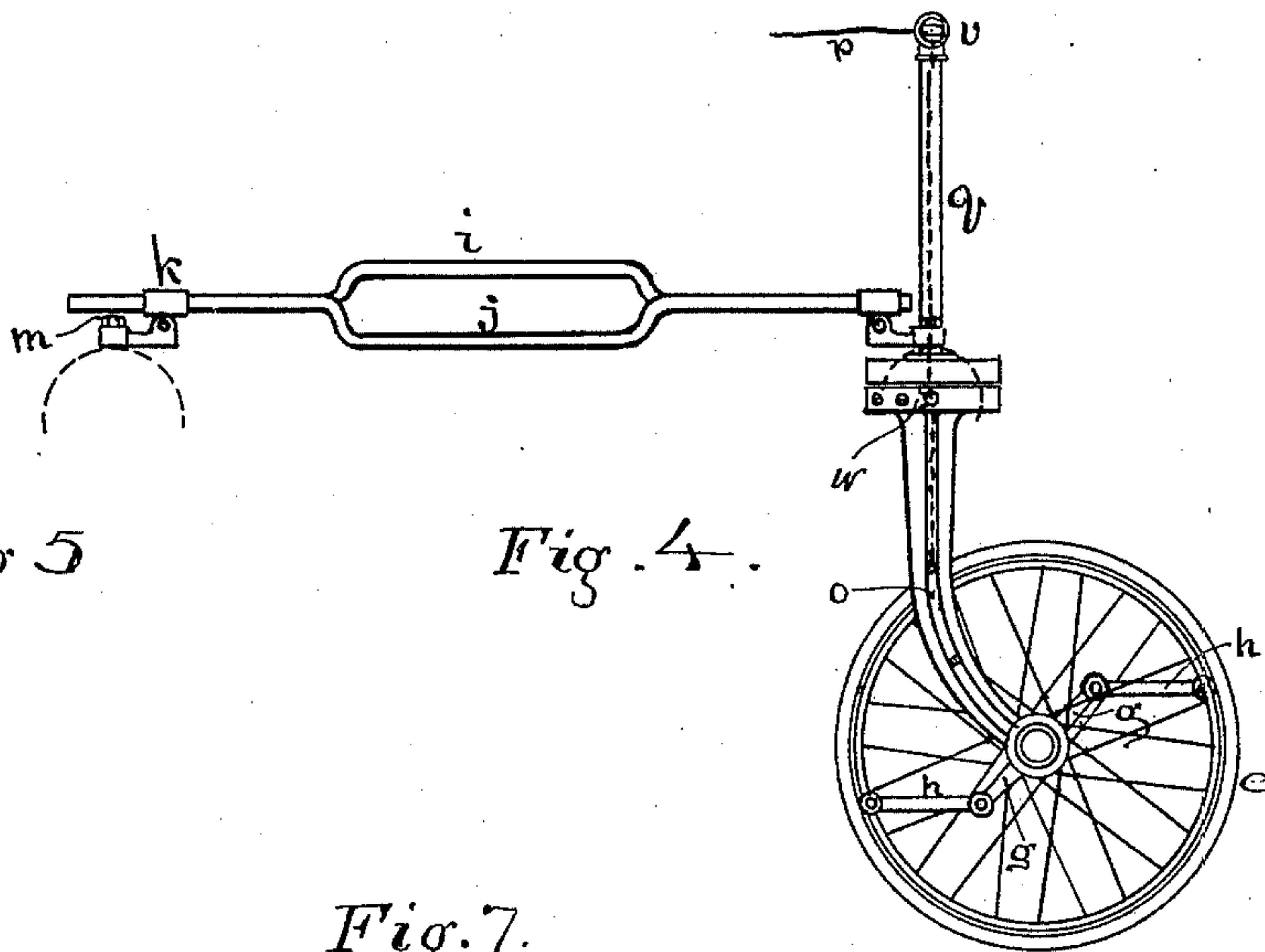


Fig. 4.

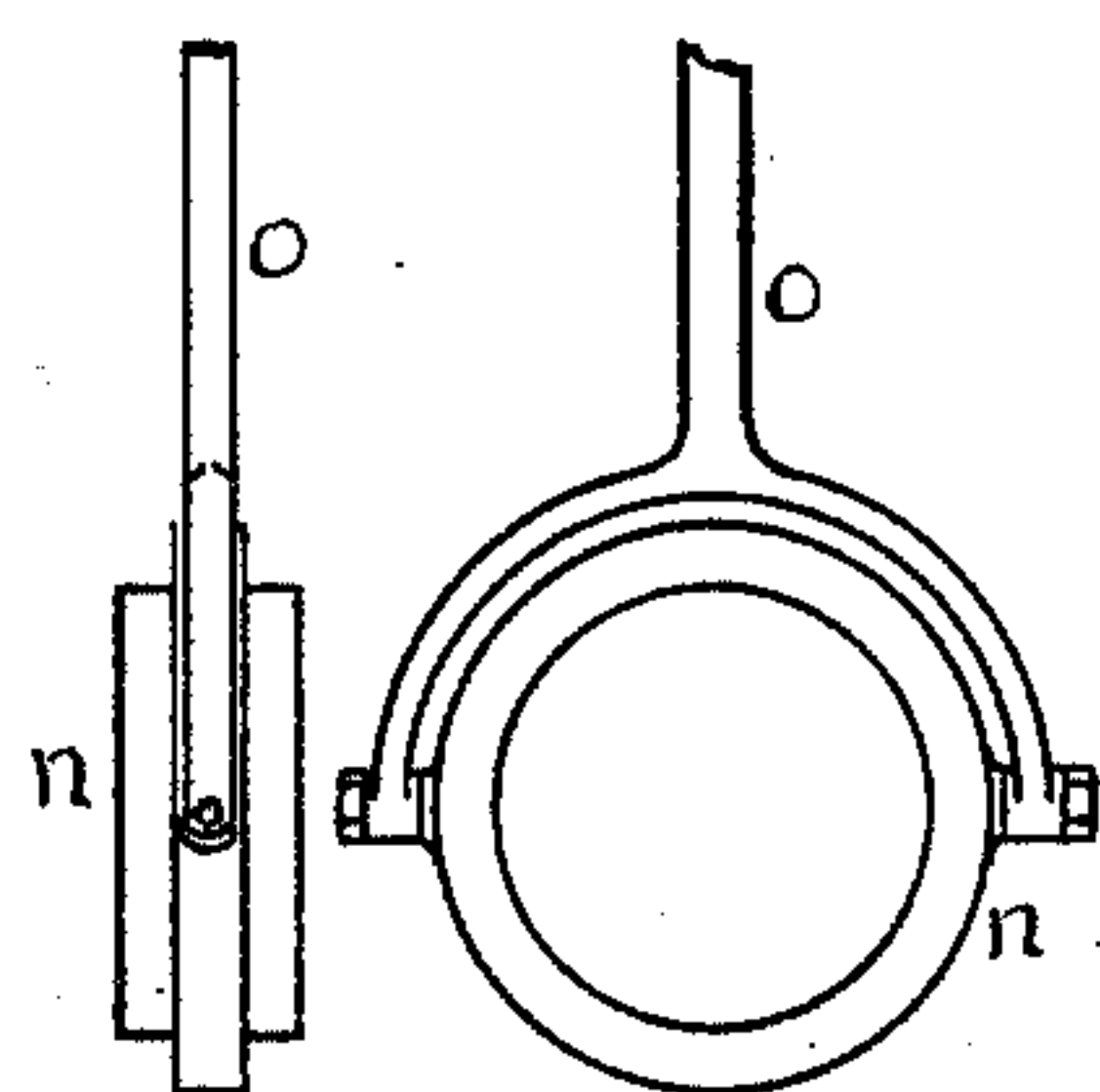


Fig. 8.

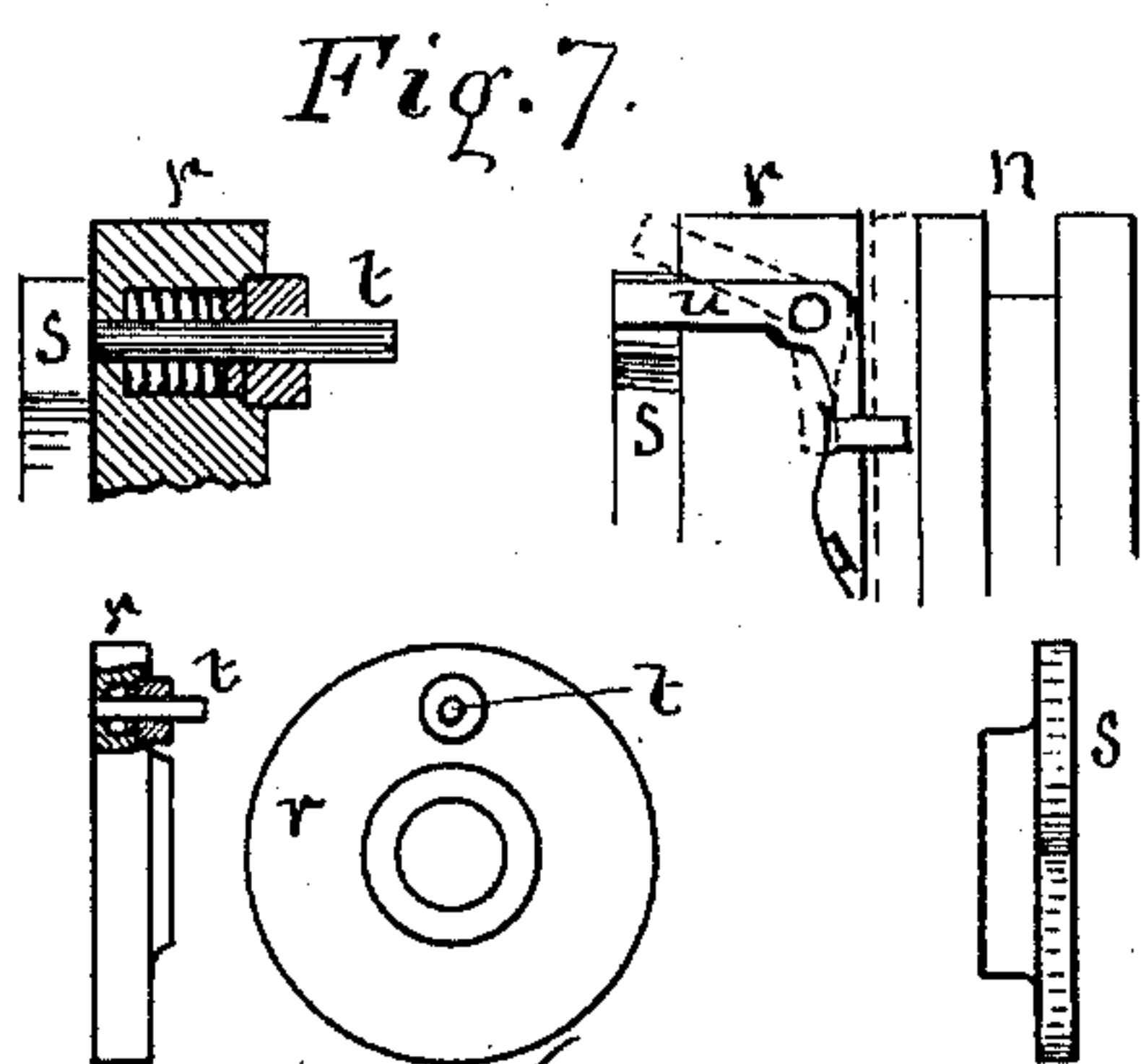


Fig. 6

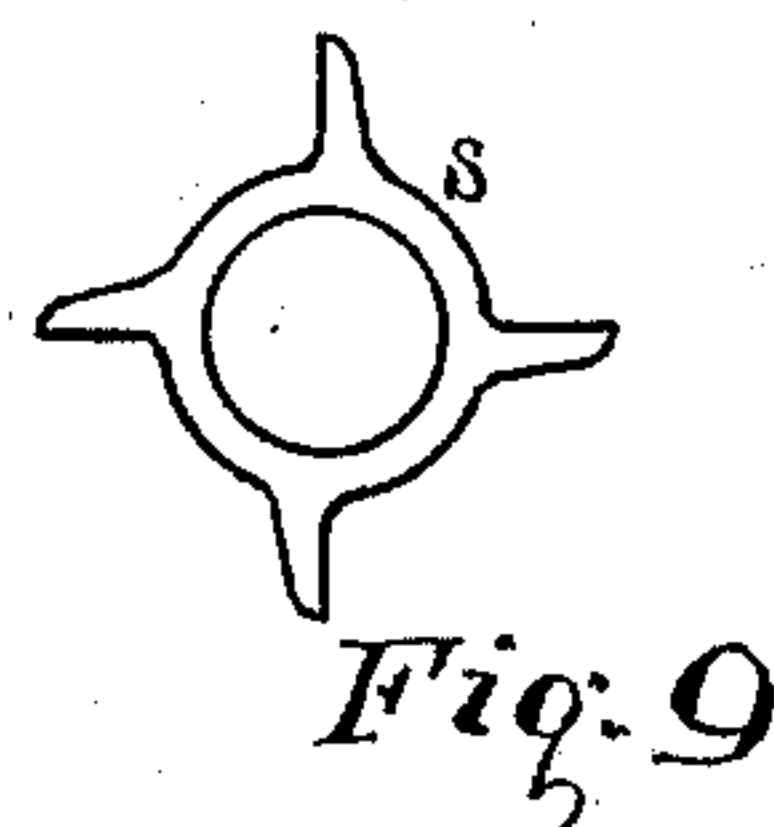


Fig. 9

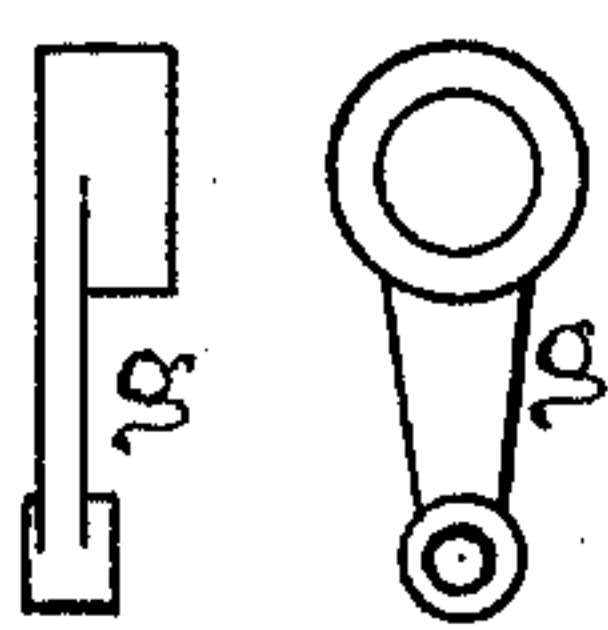


Fig 10

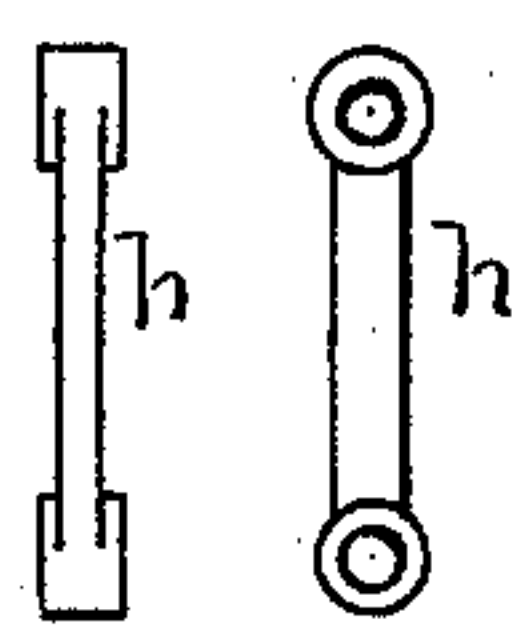


Fig. 11

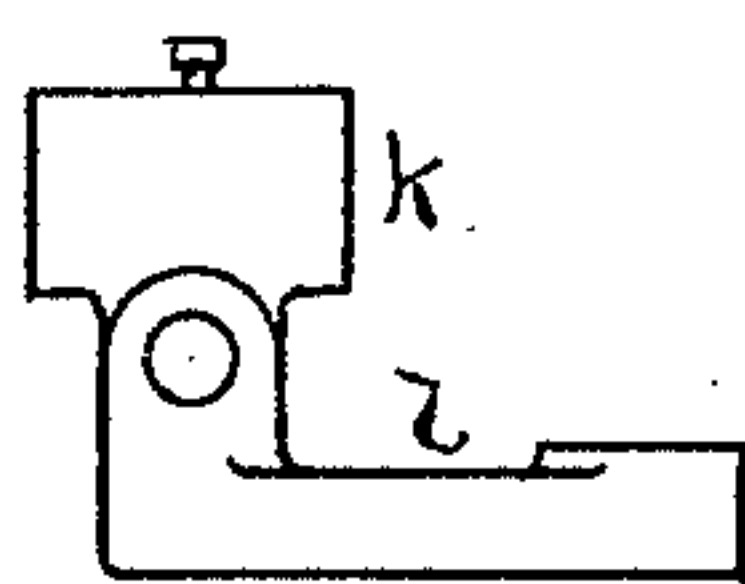


Fig 12

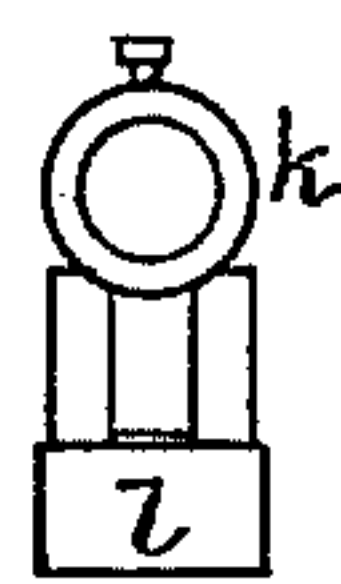


Fig. 13

Attest

D. O. Donda
C. W. Gill

Inventor

Chas M. Collins

By his atty
R. D. Smith

UNITED STATES PATENT OFFICE.

CHARLES M. COLLINS, OF SOUTH BEND, INDIANA, ASSIGNOR OF ONE-HALF
TO JOHN M. STUDEBAKER, OF SAME PLACE.

TOY CART.

SPECIFICATION forming part of Letters Patent No. 474,215, dated May 3, 1892.

Application filed October 12, 1891. Serial No. 408,412. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. COLLINS, of South Bend, St. Joseph county, in the State of Indiana, have invented new and useful Improvements in Perambulating Toy Carts; and I do hereby declare that the following is a full and accurate description of the same, reference being had to the accompanying drawings, wherein—

Figure 1 is a perspective view of my invention in operation. Fig. 2 is a side elevation showing the mechanism concealed in Fig. 1. Fig. 3 is a front elevation of a part. Figs. 4 to 13 are details.

The object of this invention is to provide a cart large enough to carry a child, with means for pedal propulsion, and, for the purpose of amusing and interesting the child operative, with an imitation horse so constructed that its limbs will be caused to take motion by reason of the movement of the cart and simulate the movement of a real horse.

I am aware that tricycles and carts have been heretofore made with means for pedal propulsion and that toy carts have been provided with imitation horses; but I am not aware that heretofore anybody has produced an invention substantially like mine, as hereinafter described.

A is the cart. It is carried upon the wheels *b b*, which are rigidly mounted on the axle *c*, so as to be revolved when said axle is caused to revolve. Treadles *d d* are mounted on the frame of the cart within proper reach of the rider's feet, whereby they may be moved, and means are provided for communicating motion of the treadles to the axle *c* and changing the reciprocating motion of said treadles to a rotary motion of said axle. Commonly such means will consist of cranks on said axle and a connecting-rod from each of said cranks to one of the treadles, respectively.

The cart is provided with two shafts, and between them there is the figure of a horse supported under its breast by a swivel-wheel *e*, so that in fact the sulky or cart A has three points of support upon the ground, (represented by the wheels *b b c*), and upon these the apparatus and rider are carried. Between the shafts I place the figure of a horse F, which I prefer to make hollow of sheet metal,

veneer, papier-maché, or other suitable material. The legs are separate from but hinged to the body, and motion is imparted to them by means of proper attachments connecting said legs to the wheel *e*, so that said wheel will communicate motion to said legs. This required motion may be imparted most conveniently perhaps by means of cranks *g* on the shaft of the wheel *e* and short connecting-rods *h h*, carried by said cranks and at their outer ends pivoted to the fore legs, respectively. When these cranks *g* are set in opposite directions, as shown in Figs. 1 and 2, the motion of the fore legs will simulate trotting, and when they are set in the same direction, or nearly so, as shown in Fig. 4, they will simulate running in the movement imparted to the legs. The movement of the fore legs is not sufficient, however, and a corresponding motion of the hind legs is required. This corresponding movement of the hind legs is accomplished by connecting-rods *i j*, of which one connects the right fore leg with the left hind leg and the other connects to left fore leg with the right hind leg. To simulate the motion of a pacing horse, the rods *i j* are adjusted to connect the fore and hind legs on the same side, respectively. Thus by varying the position of the cranks *g g* the trotting horse may be caused to run, and by changing the connections of the rods *i j* the trotting horse may be converted into a pacing horse, much to the satisfaction of the owner. These changes are readily accomplished by the hand reaching through an opening in the belly of the horse, and the change of cranks *g g* to simulate running may be accomplished at will by the use of a clutch connection for one of said cranks operated by a cord or otherwise from the cart to liberate said crank from one position and permit it to slip around to the next position, so that the youthful horseman may indulge in a runaway when it pleases him and have the satisfaction of bringing his horse under control whenever he chooses.

The connecting-rods *i j* may conveniently be made with offset bends, as shown in Figs. 4 and 5, so that they may cross each without contact. At the free end of each rod *i j* an adjustable thimble may be placed and a clip

l jointed to the same to constitute an easily-detachable connection with the joint-pin *m* on the hind leg. When it is desired to change the connecting-rods *i j* from cross to parallel, it is only necessary to lift the clip *l* off the pin *m* of one leg and replace it upon the similar pin of the other leg to effect the readjustment of said rods and change the gait of the horse, as set forth.

The connections at the front ends of the rods *i j* may be duplicates of the connections at the rear ends; but it will be understood that the structure (the coupling just described) may be changed or entirely different from the one described without in any way changing the invention.

One or both of the cranks *g* may be provided with a clutch connection, so that it may be released from or coupled to the crank-shaft at will, and I illustrate two devices for this purpose. One of them automatically releases and the other automatically engages the clutch; but these are merely sample methods.

A clutch-collar *n* is placed on the crank-shaft and provided with an ordinary clutch-lever *o*, operative by a clutch-cord *p*, which may pass into and through the hollow pivot-standard *q* and thence through the body of the horse in some convenient way to a point convenient to the driver's hand. Another collar *r* is placed on said crank-shaft, and keyed or otherwise fastened thereto close beside the collar *n* and immediately adjacent thereto, but attached to the crank *g*, there is a ring *s*, bearing the clutch-fingers. The ring *r* is provided with a latch, which may at will cause the engagement or disengagement of the clutch-ring *s* and its crank. This latch may be a spring-retracted pin *t*, which, when pressed forward by the sleeve *n*, will project and engage with the fingers of the ring *s*, so that by momentarily releasing said pressure the clutch will automatically be released and pass over freely; or in lieu of the spring-retracted pin *t* a spring-impelled latch *u* may be mounted on said ring *r*, which will only be withdrawn and released from engagement with the clutch-fingers by pressure of the sleeve or collar *n*. By these or similar means the positions of the cranks *g g* relative to each other may be changed at will by pulling or releasing the cord *p* to change the gate of the imitation horse.

The pivot or swivel standard *q* is provided at or near its upper end with two lateral arms *v v*, which project through slots in the sides of the neck of the horse for the attachment of the guiding-lines.

Fig. 12 shows the pivot-clip *w*, whereby the fore legs may be jointed to the standard of the wheel *e*.

It will be understood without further explanation that the imitation animal may represent any animal other than a horse, if desired.

Having described my invention, I claim—

1. The cart *A*, provided with propelling-treadles *d d*, and means for transmitting their motion to the axle *C*, and the imitation horse *F*, provided with legs pivoted to the body, the supporting-wheel *e*, the cranks *g g*, and connecting-rods *h h* and *i j*, substantially as set forth.

2. An imitation horse *F*, provided with four legs hinged to the body, connecting-rods *i j* to couple the fore and hind legs, a supporting-wheel *e*, provided with cranks *g g*, and connecting-rods *h h*, whereby when the horse is moving it is supported on said wheel and the legs are moved in simulation of the motion of the horse.

3. An imitation horse *F*, provided with four legs pivoted to the body, and the connecting-rods *i j*, each jointed at one end to one of said legs and provided at the other with a latch-pivot, substantially as described.

4. An imitation horse *F*, provided with four legs pivoted to the body, connecting-rods *i j*, a supporting-wheel *e*, provided with cranks *g g*, whereby the legs will be moved, and a clutch whereby the relative positions of said cranks may be changed, as set forth.

5. The wheel *e*, provided with the cranks *g g* and the clutch and operative cord *p*, whereby said clutch may be released at will to change the gait of the horse, as set forth.

6. The clutch-ring *s*, attached to the crank *g*, the clutch-ring *r*, attached to the shaft and provided with the spring-impelled latch described, and the clutch-sleeve *n*, with its operative lever *o* and cord, substantially as set forth.

CHARLES M. COLLINS.

Witnesses:

J. L. TAYLOR,
W. D. OSBORN.