

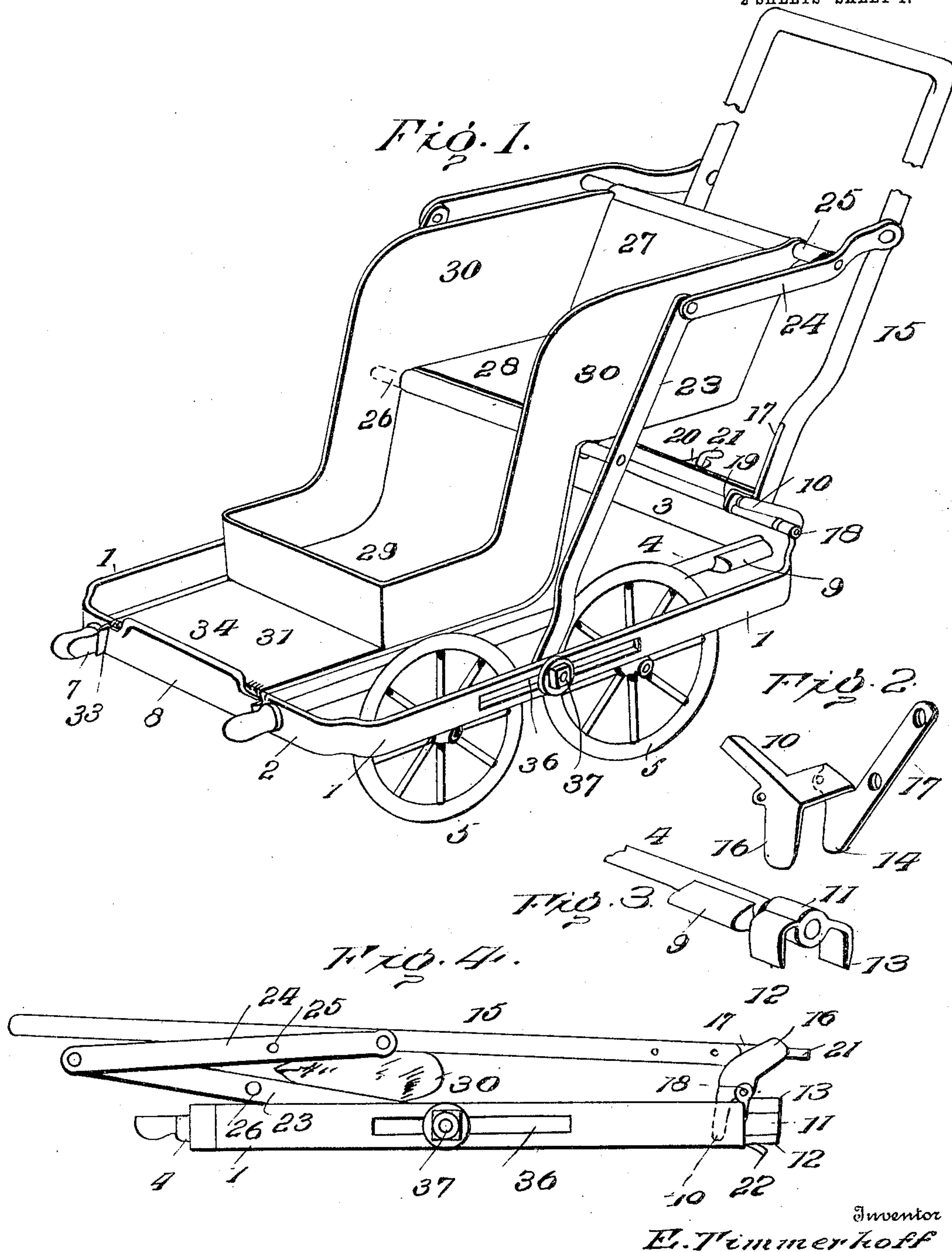
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PATENTED OCT. 31, 1905.

E. TIMMERHOFF.  
FOLDING GO-CART.

APPLICATION FILED FEB. 7, 1905.

2 SHEETS—SHEET 1.



Witnesses  
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2 SHEETS—SHEET 2.

Fig. 5.

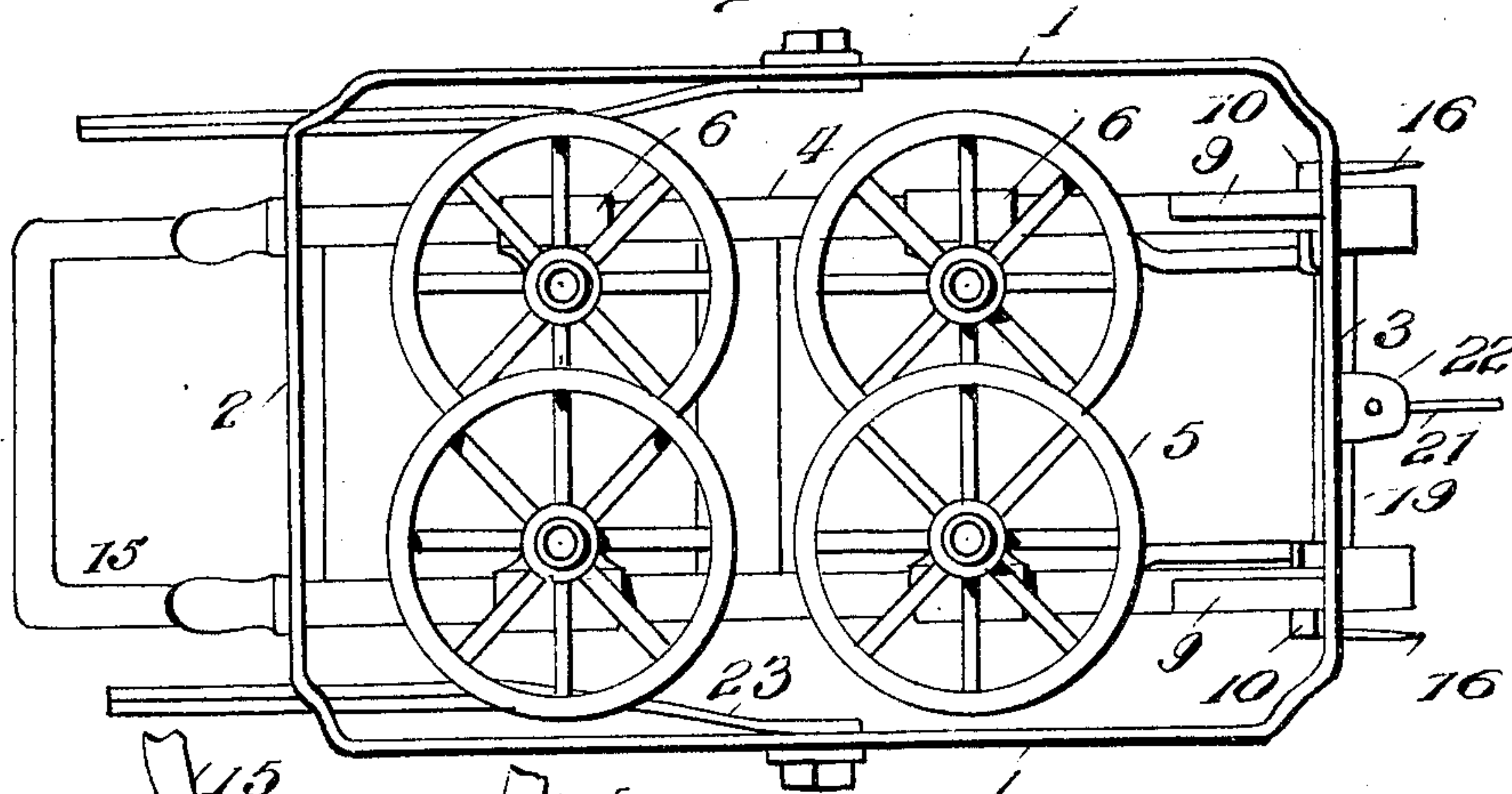


Fig. 6.

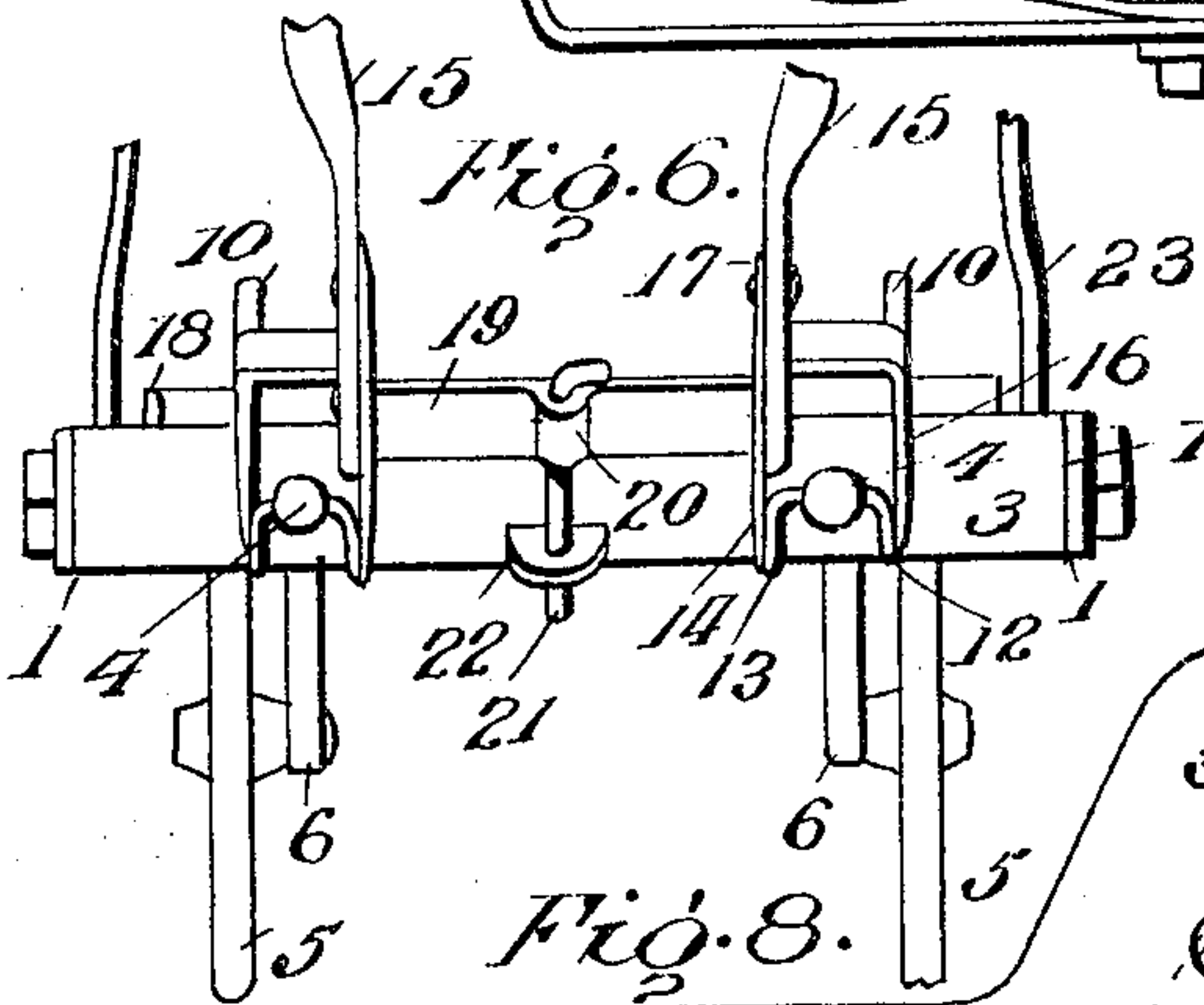


Fig. 7.

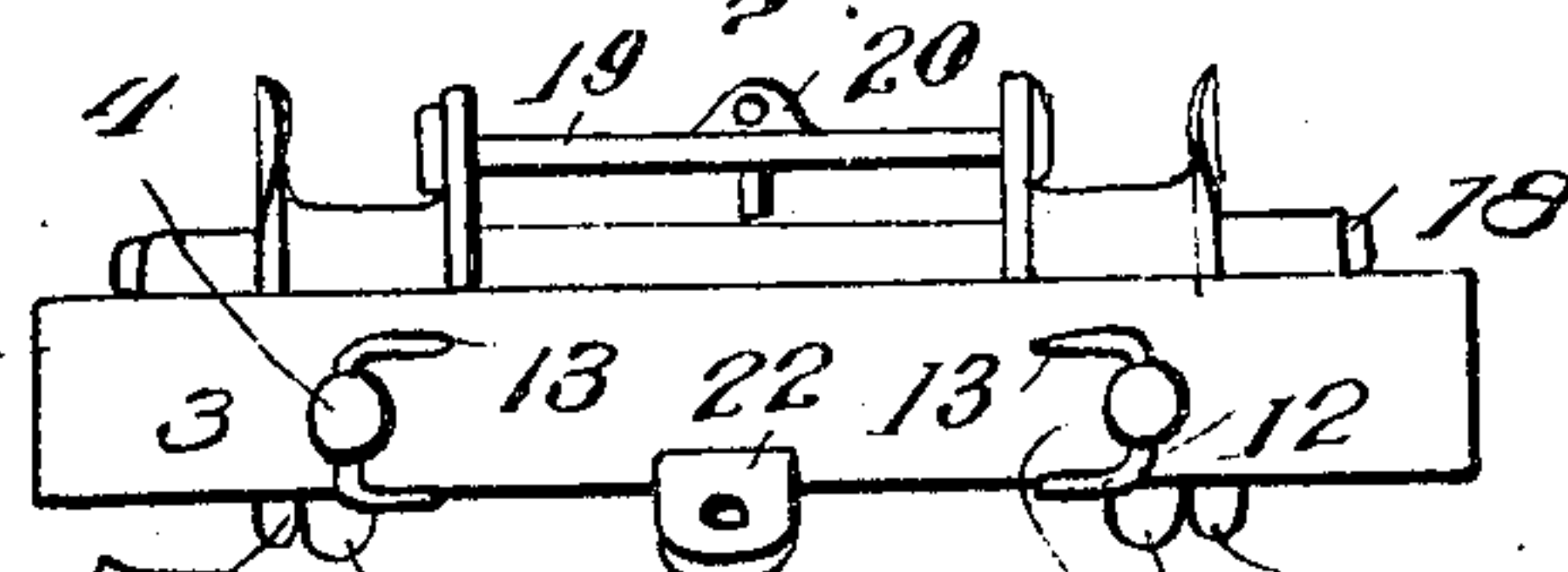


Fig. 8.

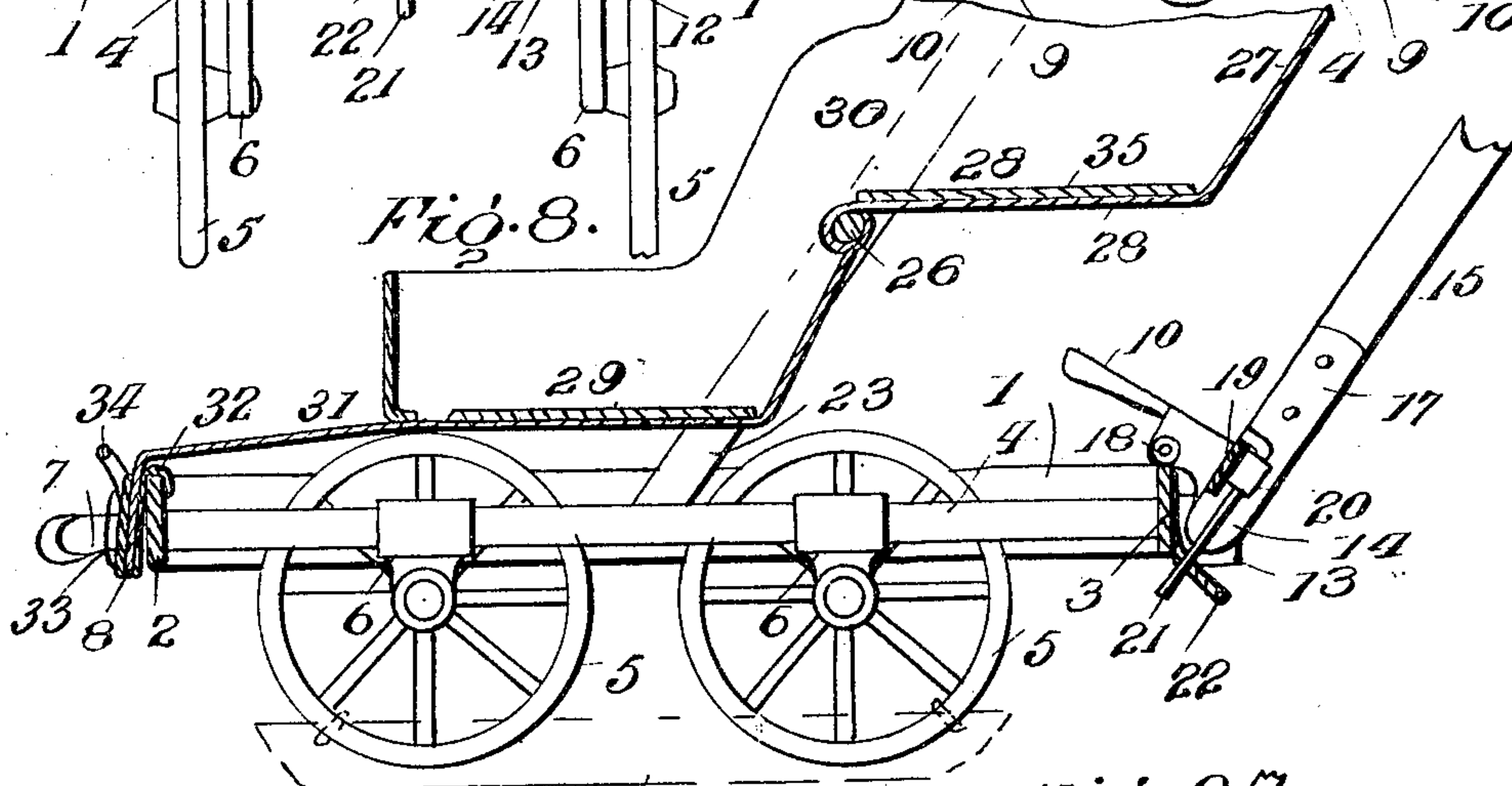
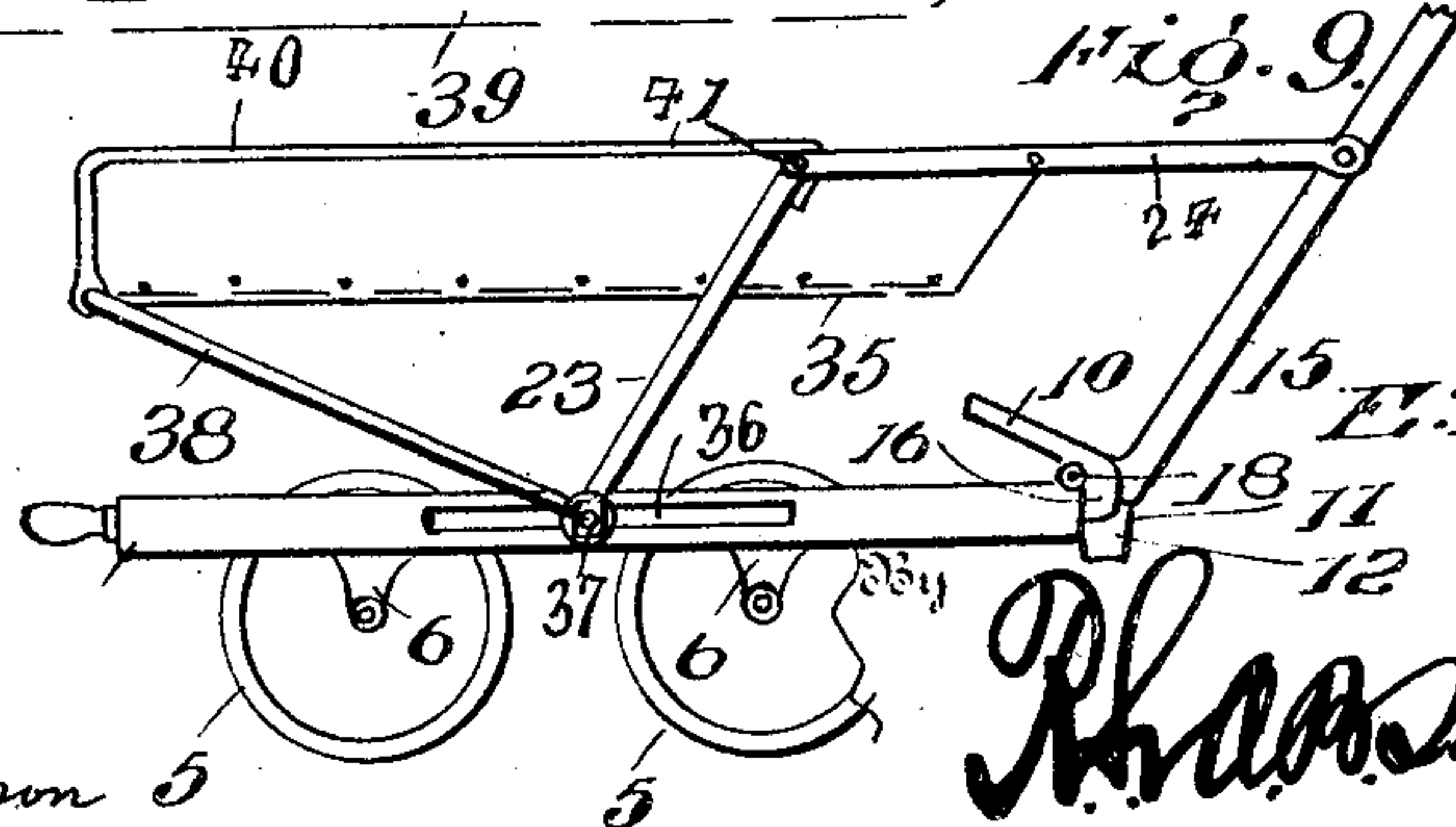


Fig. 9.



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# UNITED STATES PATENT OFFICE.

ERNEST TIMMERHOFF, OF ELKHART, INDIANA.

## FOLDING GO-CART.

No. 803,030.

Specification of Letters Patent.

Patented Oct. 31, 1905.

Application filed February 7, 1905. Serial No. 244,655.

*To all whom it may concern:*

Be it known that I, ERNEST TIMMERHOFF, a citizen of the United States, residing at Elkhart, in the county of Elkhart and State of Indiana, have invented certain new and useful Improvements in Folding Go-Carts, of which the following is a specification.

This invention appertains to appliances for trundling infants, and most especially to the type commonly known as "go-carts," the purpose being to enable the compact folding of the wheels and body so that the device may be conveniently handled or reduced to a comparatively small package, so as not to occupy any appreciable amount of space when laid aside or when carried in a public conveyance.

The invention provides a novel combination of elements whereby the wheels and body may be folded and unfolded by manipulation of a single part—as, for instance, the handle-bars—the leverage of which greatly facilitates the operation.

The invention also aims to devise novel means for securing the parts when unfolded against casual displacement as to guard against accidents if the parts were liable to displacement in the event of the carriage receiving an unusual jar or lateral thrust.

The invention also provides a flexible body which is adapted to fold into flattened form when the go-cart is collapsed, whereby provision is had for reducing the entire structure to a flattened condition, which is most desirable in an article of this kind to economize space and enable the same to be conveniently and advantageously handled at all times and under all conditions usually met with.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still some of the preferred embodiments are shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a go-cart embodying the invention and showing the same as it will appear when unfolded and ready for use. Fig. 2 is a detail perspective view of one of the trips provided at the lower end of a handle-bar. Fig. 3 is a detail perspective

view of the rear end portion of a longitudinal shaft forming a support for the wheels. Fig. 4 is a side view of the go-cart as it appears when folded or collapsed. Fig. 5 is a view of the go-cart inverted, showing the arrangement of the parts when in folded position. Fig. 6 is a rear view of the go-cart, the parts being unfolded and the upper portion of the handle-bars broken away and the body omitted. Fig. 7 is a view similar to Fig. 6, showing the relative arrangement of the parts when the go-cart is folded or collapsed. Fig. 8 is a central longitudinal section of the go-cart, the parts being unfolded and the upper portion of the body and handle-bars being broken away and illustrating runners fitted to the wheels. Fig. 9 is a side view of a modification, showing the device converted into a baby-carriage.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The running-gear of the go-cart or like device comprises an approximately rectangular-shaped frame consisting of longitudinal bars 1 and end bars 2 and 3. Longitudinal shafts 4 are journaled near their terminals to the end bars of the frame and are provided with the needles 5. Standards 6 are clipped or otherwise secured to the shafts 4 and are provided with spindle-arms, upon which the wheels 5 are mounted. The shafts 4 are adapted to turn to admit of the wheels 5 folding approximately into the plane of the aforesaid frame, as indicated most clearly in Figs. 4, 5, and 7. The front ends of the shafts 4 project beyond the forward end bar 2 and are finished in any manner so as to present a pleasing and ornamental effect and are flattened upon one side, as shown at 7, for cooperation with a stay-piece 8 to hold the shafts 4 against casual turning in either direction when the wheels 5 are in an unfolded position, as shown most clearly in Fig. 1. Each of the shafts 4 is provided near its rear end with a lateral extension 9, arranged to engage upon the inner side of the rear end bar 3 and adapted to cooperate with a tappet 10, connected with or forming a part of the respective handle-bars, so as to effect a turning of the shafts 4 when it is required to fold the wheels 5 into the plane of the frame. A trip is fast upon the rear extension of each shaft 4 and consists of a hub 11 and wings 12 and 13. The inner wing 13 is longer than the



outer wing 12 and is adapted to be engaged by a member 14 of the trip at the lower end of a handle-bar 15, so as to turn the shaft 4 and cause unfolding of the wheels carried thereby when expanding or unfolding the go-cart when required for service.

The handle-bars 15 are connected at their upper ends and may be of any construction and are provided at their lower ends with a trip of approximately  $\square$  form, the members 14 and 16 thereof being pendent and approximately parallel. In the preferable construction the trips are separate from and attached to the handle-bars 15, each being provided with an extension 17 to fit against a side of the handle-bar and secured thereto by any suitable fastening means. A tappet 10 projects from each handle-bar trip across the path of the lateral extension 9, so as to engage therewith to effect folding of the wheels when the upper end of the handle-bars is thrown forward and downward to reduce the go-cart to a compact form. The handle-bars are pivotally connected to the rear bar 3 of the running-gear frame in any determinate manner—as, for instance, by means of a rod 18, passed through knuckles or openings of the trips at the lower end of the handle-bars and applied to the rear bar 3. When the go-cart is unfolded, the members 14 and 16 of the handle-bar trip embrace the wings 12 and 13 of the shaft-trip and prevent turning of the longitudinal shafts in either direction, thereby holding the wheels in an upright position. The lower ends of the handle-bars are connected by means of a cross-bar 19, which is provided at a central point with a keeper 20, in which is mounted a pin or bolt 21, adapted to engage with a companion keeper 22, secured to or forming a part of the rear end bar 3, said parts serving to hold the handle-bars against casual movement when unfolded.

Uprights 23 are loosely connected at their lower ends to the longitudinal bars 1 and are pivotally connected at their upper ends to bars 24, which are pivotally connected at their rear ends to the handle-bars 15. The uprights 23 and side bars 24, in connection with cross-pieces 25 and 26, support the body of the go-cart or like contrivance. The cross-piece 25 connects the side bars near their rear ends, whereas the cross-piece 26 connects the uprights 23 approximately at a medial point.

The body comprises a back 27, bottom 28, foot-rest 29, and side 30. An apron 31 extends forward of the foot-rest and is adapted to be engaged with the front bar 2 of the running-gear frame. The stay-piece 8, secured in any substantial manner to the front end of the apron 31, is provided at its upper edge with a hook 32 to engage over the upper edge of the end bar 2, so as to hold the body expanded when unfolded. The end portions of the stay-piece 8 are finished, as shown at 33,

to obtain an extended bearing against the flattened side 7 of the front extensions of longitudinal shafts 4. A bail 34 is attached to the stay-piece 8 and constitutes a hand-rail, as well as giving a finished appearance to the front portion of the device. The bottom 28 of the body is reinforced by means of a board or plate 35 and constitutes a seat upon which the child is placed. The back 27 is attached at its upper end to the cross-piece 25. The foot-rest 29 is of box form, so as to retain the clothes and other articles forming the complement of an outfit of this character. The sides 30 are preferably formed of flexible material, such as textile or leather, so as to readily fold into flattened form when the contrivance is collapsed. To admit of varying the inclination of the bottom or seat 28 and the effective leverage of the handle-bars 15, the lower ends of the uprights 23 have adjustable connection with the longitudinal bars 1. For this purpose slots 36 are formed in the bars 1, and bolts or like fastenings 37, mounted to slide in the slots 36, are fitted to the uprights 23 and connect the same to the bars 1 in the required position.

Should it be required to use the conveyance as a sled, runners or skids 39 are adapted to be fitted to the wheels, as indicated in Fig. 8, said runners being grooved to receive the lower portion of the wheels and having opposite ends upwardly curved.

For converting the go-cart into a baby-carriage a bail 38 and side bars 40 are provided. The lower ends of the bail members are attached to the bars 1 by the fastenings 37, and the bars 40 have their front ends bent and loosely fitted upon the horizontal portion of the bail and their rear ends formed into hooks 41, which engage with the upper ends of the bars 23 or with the fastenings connecting the parts 23 and 24.

Having thus described the invention, what is claimed as new is—

1. In a go-cart or like contrivance, the combination of a frame, folding handle-bars, uprights and side pieces pivotally connected to each other and to said frame and handle-bars, cross-pieces connecting corresponding side bars and uprights, and a collapsible body supported between said uprights and side bars by means of their connecting cross-pieces.

2. In a go-cart or like contrivance, the combination of a frame, folding handle-bars, uprights and side bars pivotally connected to each other and to said frame and handle-bars, cross-pieces connecting corresponding uprights and side bars, a collapsible body supported by means of said cross-pieces, and a connection between the front portion of the frame and the front portion of the body, substantially as set forth.

3. In a go-cart or like contrivance, the combination of a rigid frame comprising longitudinal and end bars, longitudinal shafts



5 journaled in the end bars, supporting-wheels carried by and movable with said longitudinal shafts, handle-bars pivoted to the said frame, and cooperating trips between the handle-bars and said shafts for turning the latter to positively fold or unfold the supporting-wheels and to hold the latter in either extreme position.

10 4. In a go-cart or like contrivance, the combination of a rigid frame comprising longitudinal and end bars, longitudinal shafts journaled in the end bars of the frame and provided with trips, wheels carried by and movable with said shafts, handle-bars pivoted to said frame, and trips projected from the handle-bars and cooperating with the trips of the longitudinal shafts for positively turning the latter in each direction and holding them in either extreme position.

20 5. In combination, a frame, companion shafts having lateral extensions and provided with supporting-wheels, folding handle-bars, tappets projected from the handle-bars and adapted to cooperate with said lateral extensions to effect folding of the wheels, and cooperating trips fitted to said shafts and handle-bars to effect simultaneous unfolding of the wheels and handle-bars, substantially as set forth.

30 6. In combination, a frame, companion shafts journaled to the frame and provided with supporting-wheels, a trip fast to each of said shafts, folding handle-bars, and complementary trips applied to the handle-bars and

35 adapted to cooperate with the trips fitted to said shafts to effect unfolding of the wheels and to interlock with the trip of the shafts and hold the latter against casual movement when the wheels are in serviceable position.

40 7. In combination, a frame, companion shafts provided with supporting-wheels, trips applied to said shafts, folding handle-bars, and trips of approximately  $\Gamma$  form carried by the handle-bars and adapted to cooperate with the trips of the aforesaid shafts to effect unfolding of the wheels and to hold them and the shafts in fixed position.

50 8. In combination, a frame, longitudinal shafts journaled thereto and provided with supporting-wheels, folding uprights and side bars, folding handle-bars, a collapsible body, an apron extended from the body, a stay-piece connected to the front end of the apron and adapted to be fitted to the front bar of the frame and to cooperate with said shafts to hold them and the supporting-wheels in unfolded position, and cooperating trips between said shafts and handle-bars to effect both a positive folding and unfolding of the contrivance, substantially as set forth.

60 In testimony whereof I affix my signature in presence of two witnesses.

ERNEST TIMMERHOFF. [L. s.]

Witnesses:

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