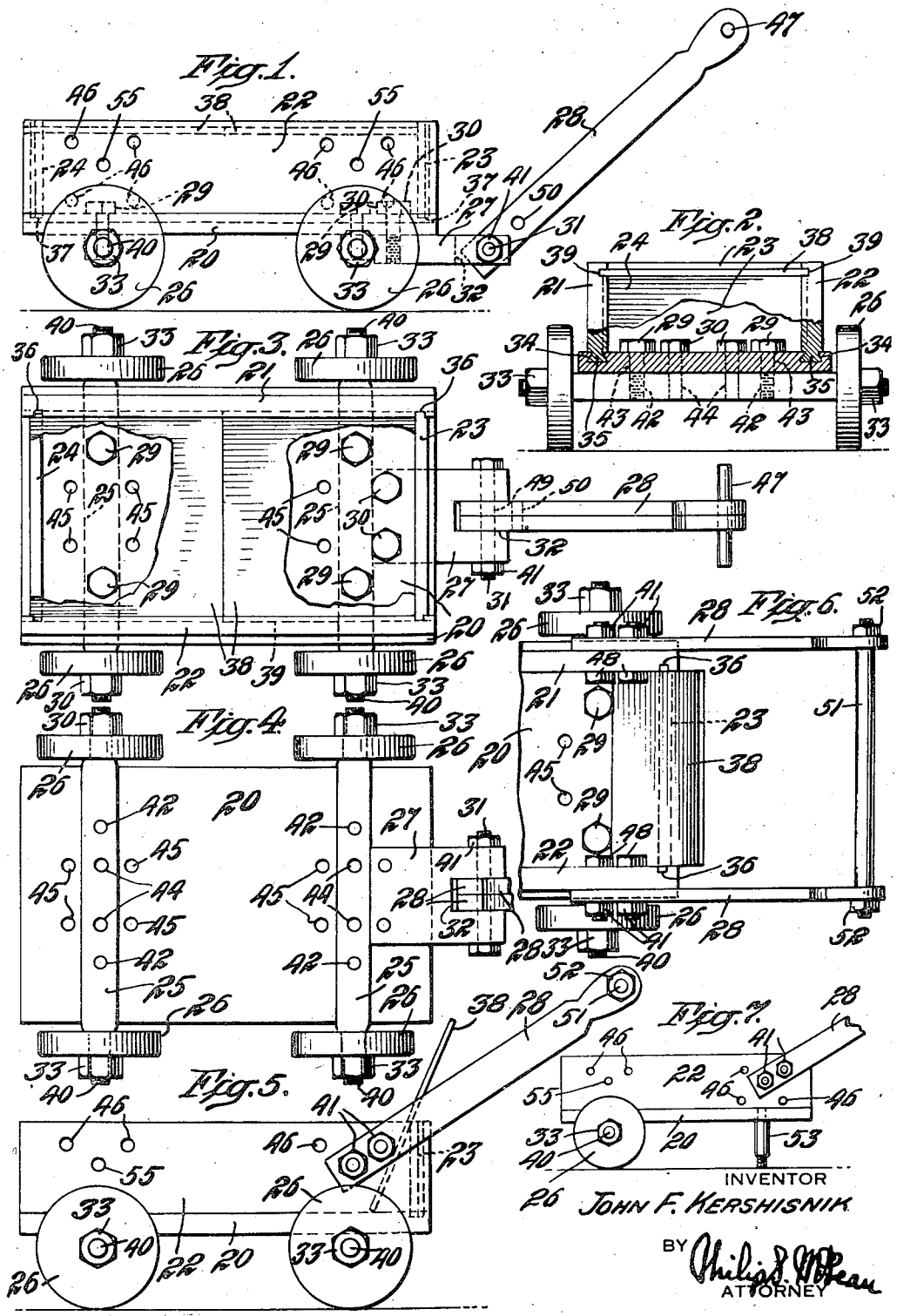
Aug. 10, 1948. J. F. KERSHISNIK 2,446,770

CONSTRUCTION TOY

Filed April 30, 1945 2 Sheets-Sheet 1



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Aug. 10, 1948. J. F. KERSHISNIK 2,446,770

CONSTRUCTION TOY

Filed April 30, 1945 2 Sheets-Sheet 2

Fig. 8.

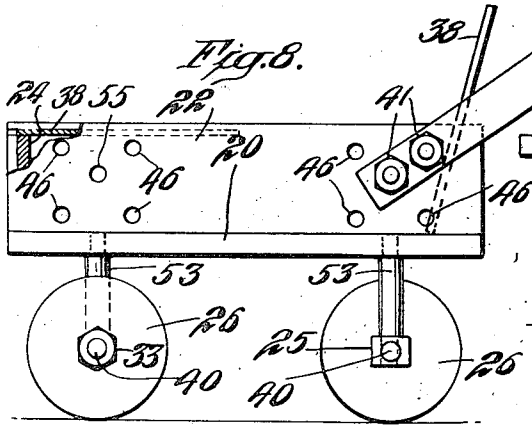


Fig. 9.

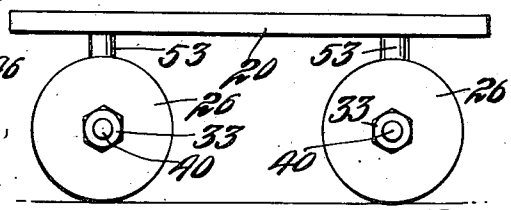


Fig. 10.

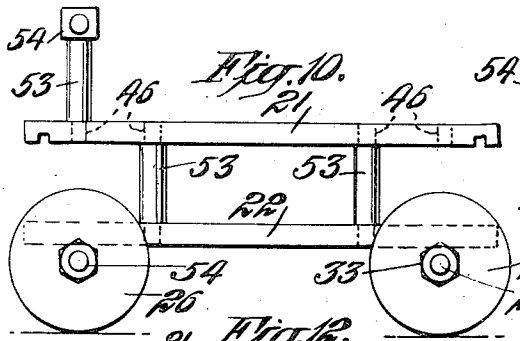


Fig. 11.

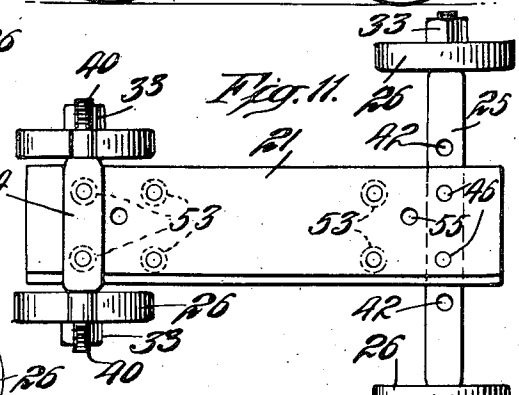


Fig. 12.

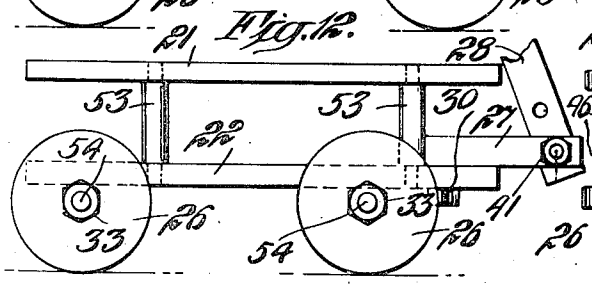


Fig. 13.

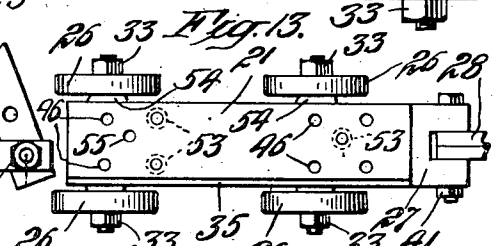


Fig. 15.

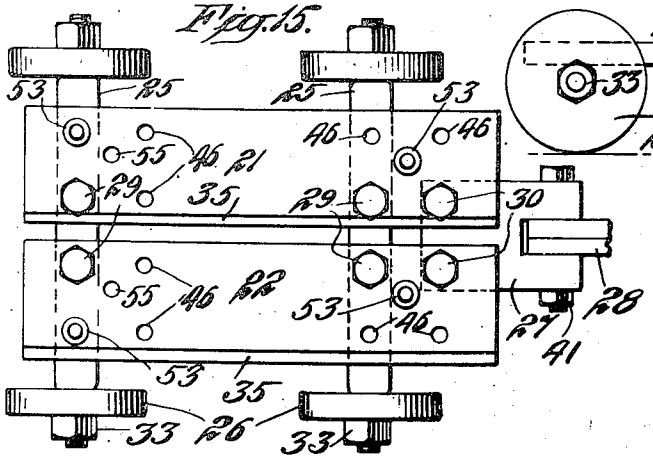
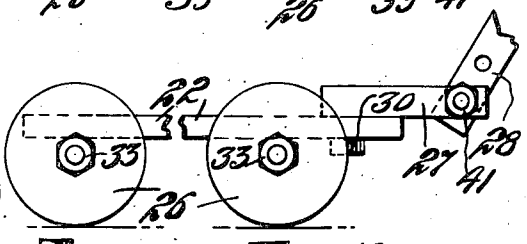


Fig. 14.



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CONSTRUCTION TOY

John F. Kershisnik, Elmhurst, N. Y.

Application April 30, 1945, Serial No. 591,020

1 Claim. (Cl. 46—16)

1

The invention here disclosed relates to toys made up of parts interchangeably useable for the construction of different forms of devices.

Special objects of the invention are to provide a toy of this character made up of simple, elementary parts, easily put together or separated, arranged to be held in associated relation either by interlocking elements or by simple, easily understood fastenings and in which all parts, including the fastenings, will be of a design and form which can be safely handled and not liable to injure a child playing with the parts.

Other objects are to provide a toy having the advantages mentioned, which will be inexpensive to manufacture, be generally attractive and interesting and be adapted to be readily packed in compact, close shape.

Other desirable objects and the novel features by which the purposes of the invention are attained are set forth or will appear in the course of the following specification.

The drawings accompanying and forming part of the specification illustrate a present practical embodiment of the invention but structure may be modified and changed as regards this disclosure, all within the true intent and broad scope of the invention as hereinafter defined and claimed.

Figs. 1 to 4 in the drawings are views illustrating the parts combined in the form of a child's wagon, Fig. 1 being a side elevation, Fig. 2 a broken part sectional rear elevation, Fig. 3 a broken top plan, and Fig. 4 a broken bottom plan;

Fig. 5 is a side elevation showing the parts combined to form a push-cart;

Fig. 6 is a broken plan view of the latter;

Fig. 7 is a broken side elevation of a wheel barrow form of the invention;

Fig. 8 is a broken side elevation of a doll carriage form of the invention;

Fig. 9 is a side elevation of a tea cart form of the invention;

Figs. 10 and 11 are broken side and plan views, respectively, of a "Kiddie-Kar" type of construction;

Figs. 12 and 13 are similar views of a modified form of the latter;

Fig. 14 is a side view showing the parts combined to form a "Scooter";

Fig. 15 is a plan view of the parts combined to form a swiveling axle type of lumber wagon.

The basic elements used to make up the wagon shown in Figs. 1 to 4 to comprise a flat wagon bed 20, duplicate wagon box sides 21, 22, front

2

and rear wagon box ends 23, 24, front and rear axles 25, wheels 26, a yoke 27 and a tongue 28.

These and the bolts 29 for fastening the bed down on the axles, bolts 30 for securing the yoke to the under side of the bed, the longer bolt 31 for pivoting the tongue in the slot 32 in the yoke and the nuts 33 for rotatably holding the wheels on the axles are all preferably made of smooth finished wood, solid or plywood or the equivalent.

The bed is shown as having longitudinally extending undercut grooves 34 in the upper face near the opposite side edges thereof and the sides 21, 22, are shown as having dovetail or equivalent tongues 35 along their lower edges to slidingly engage and interlock in said grooves.

The side pieces have vertical grooves 36 in the inner faces near opposite ends to slidingly receive the ends of the end pieces 23, 24, and the bed is shown as having transverse grooves 37 near opposite ends to receive the lower edges of the end pieces.

The dovetail form of engagement between the sides and bed permits easy engagement and separation of parts and the interlock so provided enables the wagon to be lifted by these sides. The end pieces, on the other hand, can be removed by simply lifting them out of their grooves. When in place, however, either one or both, lock the side pieces engaged with the bed.

Further interlocking of the parts is obtained in the illustration by a cover made up in two duplicate sections 38 which slide in longitudinal grooves 39 in the inner faces of the wagon box sides, near the upper edges of the same, said cover sections sliding over the top of one or both the end pieces 23, 24. Usually the front end piece 23 may be the full height of the sides, to act as a stop limiting the sliding movement of the cover pieces, and the back end piece 24 may be of less height to permit the cover sections to pass over the same and thus lock it down in position where it in turn locks the side pieces in place on the bed.

The ends of the axles are turned with the coarse screw threads 40 to take the necessarily coarse screw threads in the wooden nuts 33. The wooden bolts and nuts 41 used with them also are made with coarse, easily engaged and disengaged screw threads. Similarly, the axles are indicated with coarse threaded screw seats 42 to receive the bolts 29.

To permit secure fastening and ready interchangeability of parts, the bed is shown as having transversely widely spaced openings 43 therethrough near opposite ends to match the cor-

respondingly widely spaced screw seats 42 in the axles. These axles also have a pair of more closely spaced screw seats 44 between the screw seats 42.

Similarly the bed also has corresponding, more closely spaced openings 45 therethrough on transverse lines at opposite sides of the transverse line of the more widely spaced bolt openings, as indicated in Fig. 3. One pair of these is used in this figure for the bolts 30 securing the tongue yoke to the under side of the bed.

The side pieces 21, 22, are shown as having single bolt holes 55 substantially on the transverse center and spaced longitudinally the normal distance between the axles, and pairs of spaced openings 46 at opposite sides of the centrally located openings spaced the same as the closer spaced openings 45 in the bed.

The tongue is shown made in duplicate parts disposed in side-by-side relation held together at the inner end by engagement in the slot 32 in the yoke and held together at the outer end by a cross pin forming a pulling handle 47.

The form of toy described can be readily put together or taken apart and the assembly may be complete or less than complete, as the child may desire or plan. This feature of selective use of more or less parts and the interchangeability of pieces enable changes to be quickly made and both more or less usual and unusual forms of toys to be reproduced.

Figs. 5 and 6 show how the wagon form of toy can be quickly converted to a push-cart type of toy by removing bolts 30 to drop the yoke and then taking the handle pieces 28 apart and securing them over the side pieces 21, 22, by bolts 48 passed through holes 55, 46, in the wagon sides and through pivot holes 49 in the lower ends of the tongue pieces and correspondingly spaced openings 50 above the pivot holes. Nuts such as 41 may be applied to the ends of these bolts. A rod 51, Fig. 6, is shown engaged between the outer ends of the thus secured upwardly inclined handle pieces held by nut elements 52 engaged over the screw threaded end portions of the rod. This rod braces the handles in their spaced apart relation and provides a convenient push handle for pushing, pulling and lifting the toy.

To complete the effect of the push-cart or push-wagon, one of the cover sections 38 may be slipped in between the sides of the wagon box in back of the heads of the bolts securing the handle pieces and supported in inclined position in engagement with the top of the front end piece 23.

A quick conversion to a wheel barrow form of construction can be made by removing the bolts 29 holding the front axle, inserting short posts or studs 53 up in the bolt openings in the bed and removing the push handle 51 so as to leave the side handle pieces 28 separated like the handles of a wheel barrow.

To lift the bed, more after the manner of a baby carriage or doll carriage, four of the posts 53 may be employed, as in Fig. 8, engaged at their lower ends in holes in the axles and at their upper ends in holes in the bed, these posts having their end portions shouldered and reduced to frictionally fit in such openings.

A quick conversion to a tea table may be accomplished, as indicated in Fig. 9, by simply taking off the side and end pieces, leaving the bed 20 to form a rolling type of table.

The closely spaced pairs of openings in the sides 21, 22, enable these to be bolted to the axles and

to be connected in superposed parallel relation, as shown for the Kiddie Kar type of toy illustrated in Figs. 10 and 11, the lower board 22 being secured on the axles by bolt elements and the other side board 21 being supported in elevated position on the first board by the posts 53.

To complete the effect a cross handle 54 may be mounted on an additional pair of the studs 53 inserted in a pair of the openings 46 in the upper board.

The effect of the Kiddie Kar is further carried out in the illustration as shown in Fig. 11 by using a shorter front axle having bolt openings corresponding to the closer spaced pairs of bolt openings 44 in the longer axles and to the spacing of the openings 46 in the side pieces. This shorter axle is designated 54 and, as indicated in Fig. 10, may be the same and serve interchangeably as either a cross handle or axle.

The Kiddie Kar form of toy with the elevated seat or platform may be further modified, as indicated in Figs. 12 and 13, by using two short axles 54 for the wheels and by putting the yoke and handle on the lower board. In this case, to make room for the yoke on top of the bottom board, the front axle is moved rearward and held by bolt elements in the rearward set of closer spaced openings 46. Also, since both sets of closer spaced openings 46 are then in use at the front end of the board, the upper board is supported at the front end by a single post 53 inserted in corresponding center openings 45 in the top and bottom boards.

A Scooter type of toy may then be provided by simply removing the top board and posts, substantially as indicated in Fig. 14.

To allow for limited turning movement of the axles, the parts may be combined as illustrated in Fig. 15, using the side boards 21, 22 on the longer axles 25, holding them each with only two bolts 29, one at the front and one at the back. The yoke 27, held by the two bolts 30, will, with side pull on it, act as a lever to cause the angling or swiveling action of the axles. This structure may be made to resemble a lumber wagon or the like by setting up some of the posts 53 in the openings 55 or 46 in the side pieces.

It will be clear that many other interesting forms of toys may be produced with this invention. The parts are easily put together and taken apart. All parts are of simple, rugged construction and when put together cooperate to provide a strong, sturdy form of toy.

The wagon box with the cover sections provides a container which may be used to hold the other parts, or for other purposes. The cover sections, as in use as a cover, are longer than the distance between the side pieces so as to slide in the grooves 39. As shown in Fig. 6, however, these cover sections have a width less than that of the wagon box so that when turned around they can be dropped down between the sides to form back rests or other such elements, as in Figs. 5, 6 and 8.

Other parts may be provided and various changes may be made, all within the intent of the invention. Thus in place of wheels, bob-sled runners may be engaged on the ends of the axles. Many other changes and variations will occur in the course of playing with the toy.

For the purpose of more firmly or permanently securing the parts together, the posts or studs 53 may be extended into screw threaded ends adapted to receive terminal nuts in one or more of the relations described.

The push handle 51, Figs. 5 and 6, may be made up so that it can be engaged in the openings 46, 55, in the sides of the wagon bed, or, if preferred, rods may be provided which can be inserted through these openings, across the wagon bed to brace or tie the sides together, such rods preferably having screw threaded ends for engagement of nuts thereon. These rods across the wagon box may also be used as handles for lifting the box or the complete wagon structure.

To carry out the doll carriage idea further, the end piece 24 may be left in place and the other cover section 38 be slid in over the top of the same, after the manner indicated in Fig. 8.

While usually preferable to make the parts of wood, as before mentioned, certain or all the parts may be made of plastic or even of metal, particularly the light alloy metals.

What is claimed is:

A convertible wagon type of construction toy comprising a flat wagon bed having transversely spaced axle bolt openings therethrough near opposite ends, longitudinally extending undercut grooves therein near opposite side edges and cross grooves across the face of the same near opposite ends, wagon bed sides tongued along the lower edges to slidingly interlock in said undercut grooves and having transversely spaced axle bolt openings near opposite ends spaced the same as those in the bed, vertical grooves in the inner faces near the ends to register with said cross grooves and longitudinal grooves in the inner faces near the upper edges, wagon box ends slidable in said vertical grooves downward into seated engagement in said cross grooves to lock the sides in place longitudinally on the bed and at least one of said ends when seated in a cross groove being of less height than said longitudinal grooves in the sides, a wagon bed cover slidable in said longitudinal grooves over the last mentioned seated wagon box end to lock the latter in position, axles having bolt openings spaced the same as those in the wagon bed and sides, quick removable bolt elements interchangeably engageable in said bolt openings in the axles and wagon bed or sides so that the sides may be mounted on the axles in place of the wagon bed, a yoke having bolt openings spaced the same as the bolt openings in the axles, bed and sides for enabling it to be connected by the quick removable bolt elements with the axles, the bed or the sides, a separable, two-part tongue pivotally connected with said yoke and the two parts of said tongue having bolt openings to register with bolt openings in the wagon box sides and whereby said tongue parts may be separated from each other and be secured by the quick removable bolt elements to the wagon box sides to serve as push or pull handles, said wagon box cover being in sections of a length approximately equal to the width of the wagon box between the sides and whereby said cover sections may be inserted in the wagon box as a back support, the quick removable bolt elements for fastening the separate tongue parts to the sides projecting into the wagon box body sufficiently to form abutments for holding said cover sections in inclined back supporting position therein.

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