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T. J. HOGLUND

1,806,163

TOY HANDCUFF

Filed Nov. 19, 1928

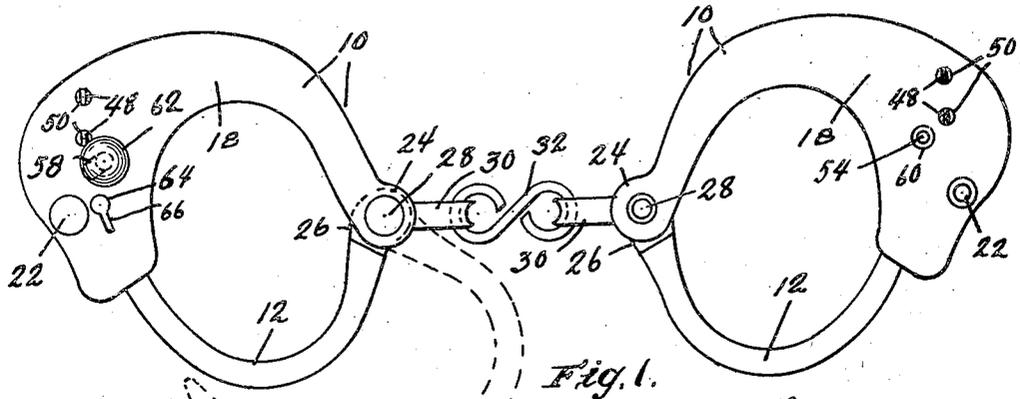


Fig. 1.

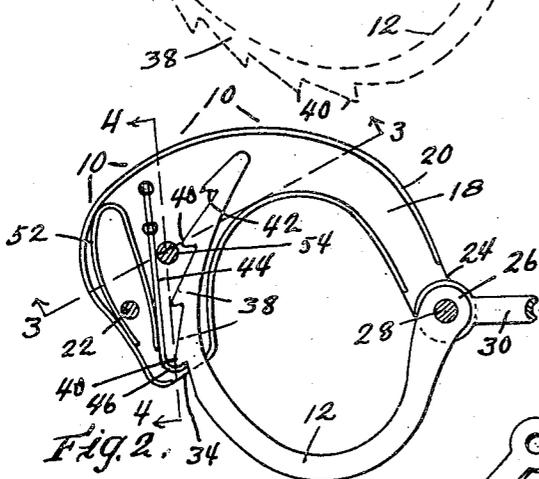


Fig. 2.

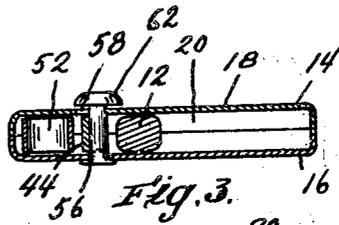


Fig. 3.

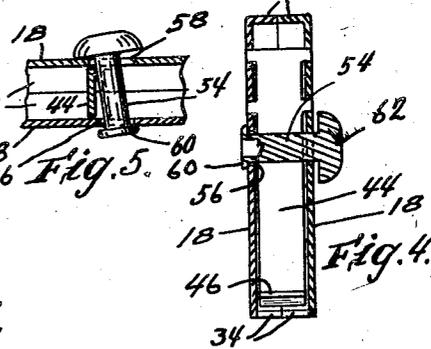


Fig. 4.

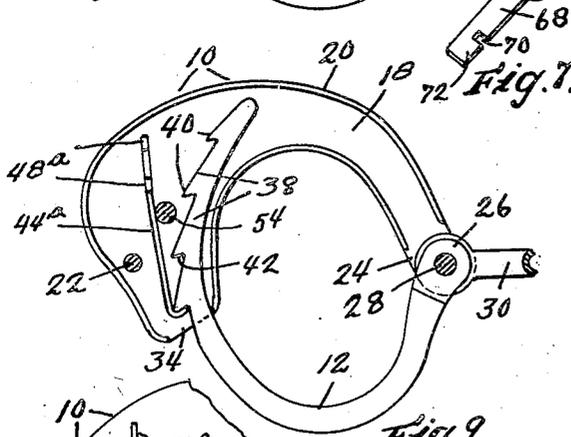


Fig. 7.

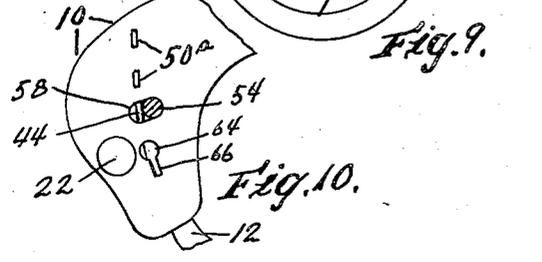


Fig. 9.



Fig. 10.

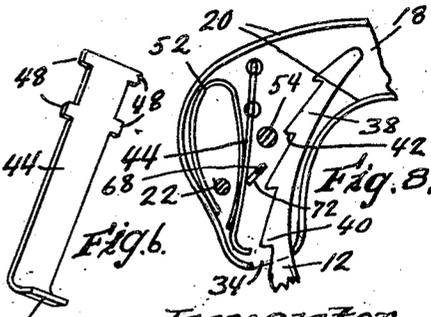


Fig. 6.

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# UNITED STATES PATENT OFFICE

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TOY HANDCUFF

Application filed November 19, 1928. Serial No. 320,363.

This invention relates to toy hand cuffs that can be automatically locked about the wrist of a child and can be unlocked by the same child in an obvious manner; and is intended as an improvement on the hand cuff disclosed in my co-pending application Serial No. 189,598, filed January 7, 1927.

One of the objects of the present invention is the provision of a hand cuff which has an unlocking or release member for its cooperating parts that can be manipulated to unlock the hand cuff easier than the unlocking member of the hand cuff of my above application.

Another object of the invention is the provision of a hand cuff having an unlocking member which is located at the side of the hand cuff rather than at the top.

Another object of the invention is the provision of a hand cuff having a locking member that can be operated by a suitable key to unlock the hand cuff there being also an unlocking member that is integral with the hand cuff that will unlock the hand cuff independently of the key.

A further object of the invention is generally to simplify the construction and improve the operation of a toy hand cuff.

Fig. 1 is a plan view of a pair of toy hand cuffs embodying the invention.

Fig. 2 is a plan view of one of the hand cuffs, one of the two casing or housing plates being removed.

Fig. 3 is a sectional view along line 3—3 of Fig. 2.

Fig. 4 is a section along line 4—4 of Fig. 2.

Fig. 5 is a sectional detail taken along line 3—3 of Fig. 2 and illustrating the position of the unlocking member in the unlocked condition of the hand cuff.

Fig. 6 is a perspective view of the locking member of the hand cuff.

Fig. 7 is a perspective view of a key for unlocking the hand cuff.

Fig. 8 is a detailed view similar to Fig. 2 and illustrating the manner in which the key serves to unlock the hand cuff.

Fig. 9 is a view similar to Fig. 2 but showing an inherently resilient form of locking member.

Fig. 10 is a plan detail of the casing illustrating the manner in which the resilient locking member is secured to the casing.

The toy hand cuff here shown comprises a housing or casing 10 and a shackle 12 which is pivotally connected with the casing. Both the shackle and the casing are of generally arcuate configuration and, when the hand cuff is closed, defines a wrist-enclosure which is shaped to conform with the wrist. The casing comprises two casing members 14 and 16 respectively, which members are formed of pressed steel and are complementary in shape; that is, they are rights and lefts and are otherwise identical. Each casing member comprises a flat side plate 18 which has a marginal upstanding lip or flange 20 that entirely circumscribes the edge of the plate except as will be hereinafter noted.

The two casing members are assembled with the flanges juxtaposed as illustrated in Figs. 3 and 4; and the space or compartment between the side plates and flanges of the casing members is adapted to be occupied by the free end of the shackle and by the locking and releasing mechanism of the hand cuff. The side plates of the casing are formed with aligned apertures which are punched in the plate and through which a rivet 22 is passed to secure the casing members rigidly and permanently together at the enlarged portion thereof. The reduced ends of the casing members opposite the enlargements are formed with opposed ears 24 that are free from the side flanges 20. The hub 26 of the shackle is located between said ears and a rivet 28 is fixed in aligned apertures in said ears whereby to secure the casing members rigidly and permanently together thereat. Said rivet is passed loosely through an aperture in the shackle hub and constitutes a pivot for the shackle. A U-shaped strap 30 has its arms pivoted on said rivet 26 between said ears on opposite sides of the shackle hub for the purpose of providing a loose connection between the pair of hand cuffs. The straps 30 of the pair of hand cuffs are connected loosely together by the S-member 32. The flanges 20 of the casing members are formed with opposed notches 34 therein at the

enlarged portion of the casing whereby to provide an opening or entrance to the interior of the casing. The flanges are otherwise free from similar notches. The free end of the shackle is adapted to pass through the opposed notches 34 into the interior of the casing to be engaged by the locking mechanism located therein. The opposite sides of the shackles are provided with flattened sections 38 formed by pressing the shackle between dies whereby to "size" the free end of the shackle to a uniform thickness that closely conforms with the width of the interior of the casing. The end of the shackle is adapted to abut against the flanges 20 on the outer periphery of the casing whereby to limit the extreme closed position of the hand cuff. The free end of the shackle is provided with a series of teeth 40 on its outer face, which teeth are adapted to be engaged by the locking mechanism for the purpose of releasably holding the shackle locked to the casing. The forward end faces 42 of the teeth are undercut somewhat for the purpose of more effectively maintaining a locking engagement between the shackle and the casing.

The locking member 44 for the shackle in the construction illustrated in Figs. 2 through 6 comprises essentially a flat stiff metal strip or plate that has a downwardly reflexed or hooked forward end 46 that can releasably engage any one of the teeth 40 of the shackle. The width of the strip 44 is slightly less than the interior width of the casing compartment in which it is received. The locking member at the end opposite the hook 46 is provided with pairs of longitudinally-spaced integral laterally-outstanding projections 48 which are received loosely in pairs of opposed and aligned openings 50 in the side plates of the casing members, thereby pivotally connecting the locking member with the casing. A U-shaped spring 52 is located above the locking member and one arm thereof bears against the locking member and the other arm thereof bears against the flanges of the casing. The locking member is thus maintained yieldingly in locking engagement with the shackle. The shape of the casing and the U-spring is sufficient to maintain the U-spring in the position illustrated in Fig. 2 without the provision of especial securing means.

The releasing member for the locking member comprises a pin 54 which is located under the locking member and over the hooked end of the shackle. The pin is extended loosely through an opening 56 in one of the side plates of the casing and through an elongated slot 58 in the other side plate of the casing, the direction of elongation of said slot being along the line of release-movement of the locking member. Said pin 54 is provided with an upset outer end or flange 60 which overlies one side plate and an enlarged head or finger piece 62 at the other end which

overlies the other side plate, whereby the pin is permanently secured loosely in the casing. By pushing on the head 62 of the pin in a direction to move it along the length of the slot 58, the pin is caused to tilt about its other end as shown in Fig. 5 and to engage the locking member 44 and raise it from engagement with the shackle, whereby to release the shackle, the locking member pivoting about the extensions 48 thereof during this unlocking movement. When the pin is released, the spring 52 returns the locking member to its locking position. By having the locking member operated from the side of the casing rather than at the end as in my above-named application, it is found that the hand cuffs can be unlocked by the child wearing them more readily than is the case with the construction shown in my above identified application. The construction also is cheaper in that the locking member 44 is much simpler to make than the corresponding locking member of my above identified application; and the hand cuff also is considered to be neater in appearance.

In order to simulate more closely the appearance and manner of use of the regular hand cuffs, the toy hand cuffs embodying the present invention are provided with means by which they can be unlocked with a key. To this end one of the side plates of the casing members is provided with a key hole therein consisting of a circular opening 64 and a slot 66 which opens into said opening, the key hole being located immediately under the locking member 44 over the shackle and in front of the unlocking or releasing pin 54. A key 68 as illustrated in Figs. 7 and 8 is provided to unlock the hand cuffs. The key has a slot 70 therein which is adapted to receive the side plate of the casing and has a ward 72 that has a length approximately equal to the width of the casing-compartment and lies approximately parallel to and under the locking member 44 when the key is inserted in the key hole. When the key is rotated the ward engages and raises the unlocking member out of engagement with the teeth of the shackle thereby permitting the hand cuff to be opened. Obviously, however, the shackle can be unlocked independently of the key by manipulating the release pin 54.

In the modification illustrated in Figs. 9 and 10, the locking member 44a comprises a spring-plate that is inherently resilient and is adapted to be maintained releasably in engagement with the teeth of the shackle by its inherent resiliency, thus eliminating the U-shaped spring 52. The sets of longitudinally-spaced, laterally outstanding rectangular projections 48a at one end of the plate are received in opposed spaced rectangular slots 50a in the side plates of the casing members whereby to hold that end of the resilient

locking member fixedly to the casing while permitting the hooked end thereof to move. The construction of the hand cuff and the unlocking pin 54 is otherwise the same as has been previously described.

5 I claim:

1. A toy hand cuff comprising an arcuate casing having an opening in one end, outer and inner walls, and opposed flat side walls, a cooperating arcuate shackle pivoted to said casing at the end opposite said opening and having a toothed end adapted to pass through said opening into said casing, a hooked locking member located within said casing on the outside of said shackle opposite the wrist-enclosure of the hand-cuff arranged releasably to engage the teeth of said shackle, and an unlocking member loosely extended through a flat side wall of said casing movable to raise said locking member from locking engagement with said shackle.

2. A toy hand cuff comprising an arcuate casing having an opening in one end and opposed flat side walls, a cooperating arcuate shackle pivoted to said casing at the end opposite said opening and having a toothed end adapted to pass through said opening into said casing, a hooked locking member located entirely within said casing on the outside of said shackle opposite the wrist-enclosure of the hand-cuff arranged releasably to engage the teeth of said shackle, and an unlocking member that is separate from said locking member loosely extended through a flat side wall of said casing and having means cooperating with said locking member within said casing for moving it from locking engagement with said shackle.

3. A toy hand cuff comprising a casing having an opening in one end and opposed flat side walls, a shackle pivoted to said casing at the end opposite said opening and having a toothed end adapted to pass through said opening into said casing, a hooked locking member located within said casing above the toothed end of said shackle arranged releasably to engage the teeth of said shackle, and an unlocking member located in the space between said locking member and said shackle extended loosely through a flat side wall of said casing adapted to be raised to engage said locking member and move it away from the teeth of said shackle.

4. A toy hand cuff comprising a casing having an opening in one end and opposed flat side walls, a shackle pivoted to said casing at the end opposite said opening and having a toothed end adapted to pass through said opening into said casing, a hooked locking member located within said casing above said shackle arranged releasably to engage the teeth of said shackle, and a pin extended through said casing in the space between said locking member and said shackle and carried loosely by the flat side

walls of said casing having a projection external of said casing and overlying one of said side walls by which said unlocking pin can be raised into engagement with said locking member and unlock the shackle.

5. A toy hand cuff comprising a casing having an opening in one end and opposed flat side walls, a shackle pivoted to said casing at the end opposite said opening and having a toothed end adapted to pass through said opening into said casing, a locking member located within said casing and having one end thereof connected to the casing and having a hook at its free end arranged releasably to engage the teeth of the shackle, and an unlocking member loosely extended through a flat wall of the casing having means cooperating with the free end of said locking member within said casing for moving the hook thereof from locking engagement with the shackle.

6. A toy hand cuff comprising a casing having an opening in one end and opposed flat side walls, a shackle pivoted to said casing at the end opposite said opening and having a toothed end adapted to pass through said opening into said casing, a hooked locking member located within said casing arranged releasably to engage the teeth of said shackle, and an unlocking member extended through said casing having one end thereof loosely pivoted in one of said side plates and having its other end thereof located in a slot in said other side plate and having an externally-located finger piece at the slotted end of said casing by which said pin can be raised into engagement with said locking member to unlock the shackle.

7. A toy hand cuff comprising a casing having an opening in one end and opposed flat side walls, a shackle pivoted to said casing at the end opposite said opening and having a toothed end adapted to pass through said opening into said casing, a locking member located within said casing having at one end pairs of laterally extended projections which are received in openings in said side walls whereby to secure said locking member in said casing, said locking member having at its other end a hook which engages the teeth of said shackle, and an unlocking member having a part that is external of said casing and a part that is within said casing and is movable into engagement with said locking member between said projections and said hook thereof, to move said hook out of locking engagement with said shackle.

8. A toy hand cuff comprising a casing having an entrance, a shackle pivoted to said casing and having a toothed end which is movable into and out of said entrance, a locking member for said shackle comprising a flat inherently resilient plate located within said casing having one end fixed thereto and the other end provided with a hook that is

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adapted to engage the teeth of said shackle, and a locking member having a projection that is external of said casing arranged to flex said locking member and release the hook thereof from engagement with the teeth of said shackle.

9. A toy hand cuff comprising a casing having an entrance, a shackle pivoted to said casing having a toothed end that is movable into and out of said entrance, a locking member for said shackle comprising an inherently resilient plate fixed at one end in said casing and having its other end free to flex and having a hook at said free end that is adapted to engage the teeth of said shackle, and a release member carried by said casing independently of said locking member having a projection that is external of said casing and having a part that is located within said casing in position to engage the free end of said locking member and flex it away from engagement with said shackle.

10. A toy hand cuff comprising a casing having an opening in one end and opposed flat side walls, a shackle pivoted to said casing at the end opposite said opening and having a toothed end adapted to pass through said opening into said casing, a locking member located within said casing and comprising a substantially flat spring plate having opposed outstanding projections of non-circular cross-section at one end received in corresponding opposed non-circular openings in said side walls whereby to fix that end of said plate rigidly with said casing, the free end of said plate being adapted to flex toward and away from said shackle and having a hook at the free end that is adapted to engage the teeth of said shackle, and a release member for said locking member having a projection that is external of said casing and having an extension that is within said casing and is located in position to flex said locking member out of locking engagement with said shackle.

11. A toy hand cuff comprising a casing having an opening in one end and opposed flat side walls, a shackle pivoted to said casing at the end opposite said opening and having a toothed end adapted to pass through said opening into said casing, a locking member located within said casing comprising an inherently resilient flat plate located above said shackle having opposed pairs of spaced projections which are fixed in corresponding pairs of aligned and spaced holes in said opposed side plates whereby to anchor one end of said plate to said casing, the other end of said plate being free to flex and having a hook at its free end which is adapted releasably to engage the teeth of said shackle, and a release member located in the space between said plate and said shackle and having its ends movably carried by said plate and having a projection that is exter-

nal of said casing by which said member can be raised to flex said locking plate out of locking engagement with the teeth of said shackle.

12. A toy hand cuff comprising a casing having an entrance, a shackle pivoted to said casing having a toothed end that is movable into and out of said entrance, locking and releasing mechanism for said shackle including a member located within said casing having a hook which is movable into and out of locking engagement with the teeth of said shackle, a projection external of said casing for moving said locking member out of engagement with said shackle, said casing having a key hole which is located beside said locking member and is adapted to receive a key the ward of which can engage and raise said locking member away from engagement with the teeth of said shackle.

13. A toy hand cuff comprising a casing, a shackle pivoted to the casing having a toothed end which is movable into and out of said casing, locking mechanism engageable with the teeth of said casing including means that is permanently connected with said casing and has a part that is external thereof for unlocking said locking mechanism and releasing said shackle and means which is removable from cooperative relation with said casing for also operating said locking means and releasing the shackle.

14. A toy hand cuff comprising two hingedly connected cooperating members, locking mechanism carried by one of said members to lock the other member releasably thereto, said locking mechanism having a member that is permanently connected with the casing for unlocking said members and also having provision for being unlocked independently of said member.

15. A toy hand cuff comprising two hingedly connected cooperating members, locking mechanism carried by one of said members to lock the other member releasably thereto, said locking mechanism having a member that is permanently connected with the casing for unlocking said members, and a key adapted to be passed through an opening in said casing and engage said locking mechanism for unlocking said hand cuff independently of said unlocking member.

16. A toy hand cuff comprising a casing, a shackle pivotally connected with said casing and having a toothed end which is movable into and out of said casing, a locking member for said shackle located within said casing having one end connected with said casing and the other end provided with a hook which is adapted to engage the teeth of said shackle, said locking member being maintained normally in locking engagement with said shackle, and an unlocking member for said locking member comprising a pin which is extended through said casing and has one

end thereof loosely pivoted in said casing and its other end operable in a slot in said casing and having an external projection that overlies said slot and is adapted to be manipulated to tilt said pin about its pivoted end and raise it into engagement with said locking member, whereby to release said shackle.

17. A toy hand cuff comprising a casing, a shackle pivoted thereto and having teeth on its outer face, said casing and shackle cooperating to define a wrist-enclosure, said casing having a shackle-passage therein, a shackle-locking member located within the outer portion of said casing adjacent said passage but entirely outside the line of movement of said shackle therein and having a hook which is engageable with the teeth of said shackle, and an unlocking member which projects laterally through said casing in the direction of the axis of the wrist-enclosure near the hook of said locking member and is movable to be raised to move said hook away from locking engagement with the teeth of said shackle.

18. A toy hand cuff comprising a casing having an opening in one end and opposed flat side walls, a shackle pivoted to said casing at the end opposite said opening and having a toothed end adapted to pass through said opening into said casing, said shackle and casing cooperating to define a wrist-enclosure, a locking member for said shackle located within said casing comprising a plate which has integral oppositely-outstanding projections at one end which are pivotally received in aligned openings in the opposed flat side walls of said casing, said plate having a hook at the other end which releasably engages the teeth of said shackle, and a releasing member which extends through an opening on one of the side walls of said casing in the direction of the axis of said wrist-enclosure near the hook of said plate and is movable to raise said hook from holding engagement with the teeth of said shackle.

In testimony whereof, I have signed my name to this specification.

THEODORE JOHN HOGLUND.

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