No. 674,431. Patented May 21, 1901.

W. C. BLACK.

SKIPPING ROPE.

(Application filed Aug. 27, 1900.)

(No Model.)

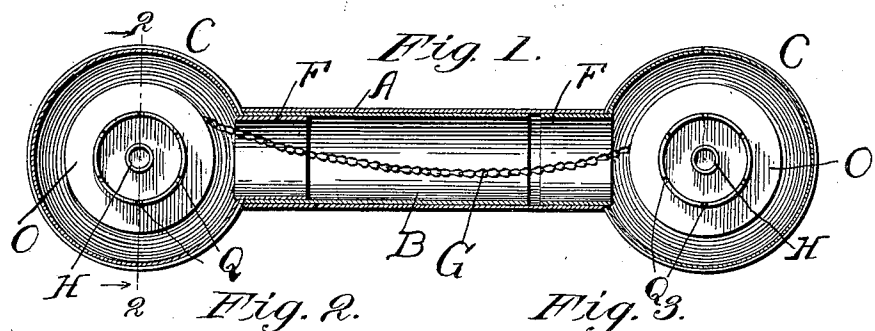
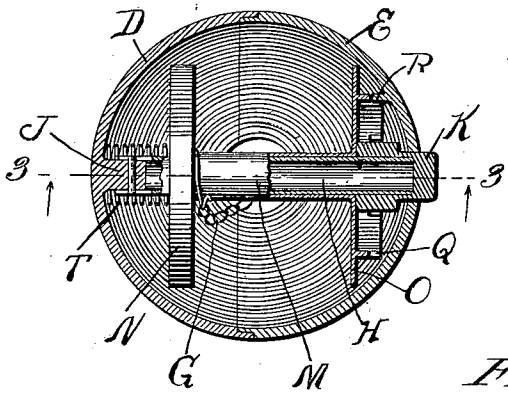


Fig. 1.

Fig. 2.

Fig. 3.



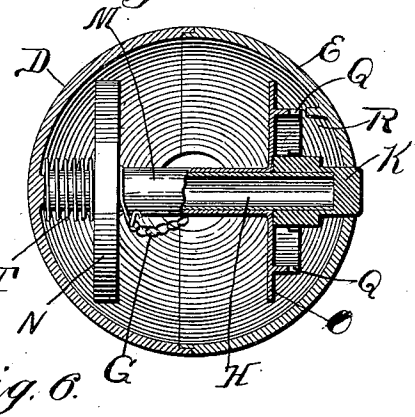


Fig. 6.

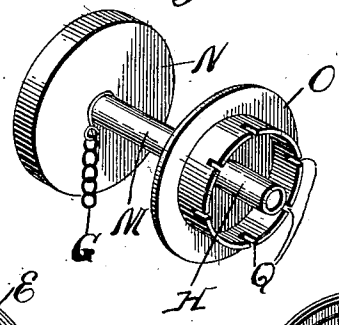
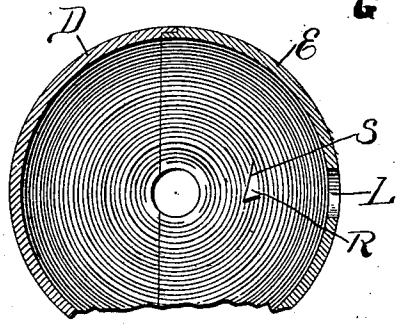
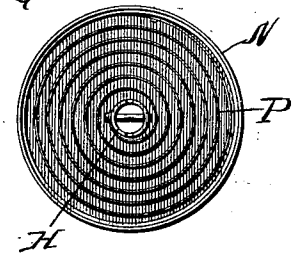


Fig. 5.

Fig. 4.





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UNITED STATES PATENT OFFICE.

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SKIPPING-ROPE.

SPECIFICATION forming part of Letters Patent No. 674,431, dated May 21, 1901.

Application filed August 27, 1900. Serial No. 28,121. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. BLACK, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Skipping-Ropes, of which the following is a specification.

This invention relates to skipping-ropes.

One object of the invention is to provide a skipping-rope which is of simple construction and arrangement wherein when not in use the rope or skipping part is coiled up and incased in compact condition.

A further object is to provide a construction and arrangement wherein the rope or skipping part may be adjustably extended to any desired length.

Other objects of the invention will appear more fully hereinafter.

The invention consists, substantially, in the construction, combination, location, and arrangement, all as will be more fully hereinafter set forth, as shown in the accompanying drawings, and finally pointed out in the appended claims.

Referring to the accompanying drawings, and to the various views and reference-signs appearing thereon, Figure 1 is a view in central longitudinal section of a construction embodying the principles of my invention, showing the several parts in assembled relation, with the skipping-rope inclosed within its containing casing. Fig. 2 is a sectional view on the line 2 2, Fig. 1, looking in the direction of the arrows and showing the reel-ratchet in engagement with the tooth on the casing. Fig. 3 is a view similar to Fig. 2, showing the reel-ratchet disengaged from the tooth on the casing. Fig. 4 is a face or side view showing the reel-operating spring and manner of connecting the same. Fig. 5 is a sectional detail view of the interior of the handle or coiling-chamber of the casing, showing the tooth or detent. Fig. 6 is a detached detail view in perspective of the reel.

The same part is designated by the same reference-sign wherever it occurs.

In the drawings, reference-sign A designates an open-ended tube, which when the parts are assembled as shown in Fig. 1 constitutes a portion of the inclosing casing. Arranged within tube A is a second tube B of somewhat shorter length, as clearly shown, and of an external diameter adapting it to be inserted longitudinally into tube A and to be held therein by frictional contact with the inner surface of said tube A.

Reference-sign C, Fig. 1, designates the handles of the skipping-rope, which are in the form of hollow casings and, if desired, may be of any suitable or convenient shape. In the particular form shown these handles are of spherical shape and are composed of the sections D E, each of which is hollow and of semispherical shape, said sections being suitably formed on their meeting edges to be assembled and held together to form a complete inclosure. Each section D E has formed therewith or is otherwise suitably provided with an extension F, which when said sections are assembled coöperate together to form a short tubular extension, as clearly shown in Fig. 1, and these tubular extensions are of such external diameter as to be snugly received in the open ends of the tubes A and B, respectively. Thus the extension of the one handle is received in the end of tube A and the extension of the other handle is received in the opposite end of tube B, as clearly shown. By this construction it will be seen that by grasping the handles C and exerting a pull thereon in a direction to separate the same the tube B will remain attached to the extension of one of the handles and will be withdrawn from tube A, while said tube A will remain attached to the extension of the other handle, thus affording ample and convenient hand-grips in the manipulation of the skipping-rope, and by telescoping the tube B into tube A or the tube A upon tube B the parts are again assembled in compact form.

In each handle or casing C is mounted a reel to which are secured the respective ends of the skipping-rope G, and in carrying out my invention I provide each reel with an operating-spring under the power or influence of which the skipping-rope is normally wound up or coiled upon said reels, and in connection with each reel and operating-spring I provide a detachable detent or ratchet mechanism by which the reel may be held at any desired unwound position against the normal tendency of the operating-spring to wind or turn and maintain the reel in the

opposite direction. Many specifically different constructions for effecting these results may be employed. While, therefore, I have shown and will now describe one construction which I have found simple and efficient for the purpose, I do not desire to be limited or restricted thereto. As the construction and arrangement in each handle is identical, the description of one will suffice for both.

Suitably secured to or connected with one of the sections D E of the handle C is a shaft or rod H. This in the form shown comprises a tubular rod which is secured at one end to a lug J, formed on or carried by section D of the handle. The opposite end of rod H is received in a socket formed in a shouldered plug or button K, the reduced head of which projects through an opening L in the section E when said sections D E are assembled. The shoulder on plug or button K is arranged within the interior of the handle-section, and, engaging the inner periphery of such section, limits the extent of projection of the reduced head of the plug or button through the opening L, while permitting said plug or button to be moved or depressed into or toward the interior of the handle. The reel M is mounted or journaled to freely rotate upon rod H and is provided at the opposite ends thereof with the flanges N O. One end of the skipping-rope G is secured to this reel, the opposite end of such rope being similarly secured to the reel in the other handle. The end flange N is formed into a chamber adapted to receive a thin flat coiled spring P, one end of which is secured to the chamber or flange N of the reel and the other to the rod H. Thus the tension of this spring is constantly exerted to maintain the reel in one limit of its rotative movement, while permitting such reel to be rotated in the opposite direction. Now the end of the skipping-rope G is secured to the reel when the latter is rotated to its fullest extent in a direction to wind up the springs, so that when released the spring will unwind and cause the skipping-rope to be wound up or coiled upon the reel. A rim or projection of flange O of the reel is suitably provided with notches or ratchets (indicated at Q) adapted to be engaged by a detent or tooth R, formed on or secured to the inner periphery of section E of the handle. The detent or tooth R is provided with a beveled edge, as shown at S, Fig 5, whereby the ratchet-teeth are permitted to freely pass or slide by said detent or tooth when the reel is revolved in a direction to cause the skipping-rope to be unwound therefrom; but the reverse rotation of the reel under the influence of the operating-spring P is prevented. The reel M is mounted to slide or move longitudinally upon rod H, as well as to rotate thereon, and a spring T serves to keep the reel pressed in the limit of its longitudinal movement in a direction to maintain operative relation or engagement of the ratchets Q and tooth or detent R and also to keep the reduced head of plug or button K projected to its fullest extent through opening L. From this construction it will be readily seen that when it is desired to coil or wind the skipping-rope upon the reel the plug or button K is depressed toward the interior of the handle, thereby shifting the reel longitudinally and against the action of spring T and hence effecting a disengagement of the ratchet from the detent or tooth and permitting the spring P to effect the rotation of the reel in a direction to wind up the rope.

In practice I prefer to employ a chain for the skipping-rope by reason of the facility with which a chain may be coiled or wound upon and unwound from the reel; but it is obvious that any other suitable or convenient cord or rope may be employed. It is also obvious that only one handle may be provided with a reel, the other end of the skipping-rope being merely fastened within the other handle; but I prefer to employ a reel in each handle, as thereby the size of the handles may be minimized.

The operation of the device will be readily understood from the foregoing description. Taking the device in its assembled relation, as shown in Fig. 1, if it is desired to use the skipping-rope the handles are pulled apart in the manner above described and the rope is uncoiled from the reels by the continued pull thereon, the inclined side S of the tooth R permitting the ratchets Q to ride thereover, but preventing reverse rotation of the reels. The uncoiling of the rope and the consequent rotation of the reels causes the springs P to coil up under a tension tending to restore or reversely rotate the reels in a direction to coil the rope thereon. When a sufficient length of the rope is thus uncoiled, the article is ready for use, and the rope will be held in the length to which it has been uncoiled. If a greater length is required, further pull on the rope will continue the uncoiling thereof until the desired length is attained. If it is desired to shorten the rope, the button or plug K is depressed to effect a disengagement of the tooth R and ratchet Q, and thereupon the springs P will cause a reverse rotation of the reels and in a direction to coil the rope thereon, the plug or button being maintained depressed until the desired length of rope is attained. When it is desired to restore the apparatus to its compact and inclosed condition, the plugs or buttons are depressed until the rope is sufficiently coiled upon the reels, and then the tubes A and B are telescoped upon or into each other, thereby inclosing the chain and forming a neat compact device convenient for handling, packing, or shipping.

It is obvious that many variations and changes in the details of construction and arrangement would readily suggest themselves to persons skilled in the art and still fall within the spirit and scope of my invention. While, therefore, I have shown and described

a construction which operatively embodies the principles of my invention, I do not desire to be limited or restricted thereto; but,

Having now set forth the object and nature of my invention and a construction embodying the principles thereof and having described such construction, its purpose, function, and mode of operation, what I claim as new and useful and of my own invention, and desire to secure by Letters Patent, is—

1. A skipping-rope including hollow handles adapted to receive the rope (when not in use) therein and inclose the same, as and for the purpose set forth.

2. In a skipping-rope, detachably-connected handles adapted, when the rope is not in use, to receive the same therein, as and for the purpose set forth.

3. The combination with hollow handles, of a skipping-rope, and means for coiling said rope within said handles, as and for the purpose set forth.

4. The combination with hollow handles, a reel arranged in one of said handles, and a skipping-rope having the end thereof connected to said reel, whereby said reel may be coiled upon or uncoiled from said reel, as and for the purpose set forth.

5. The combination with handles, a reel carried by one of said handles, a spring arranged to maintain said reel in one limit of its rotative movement, and a skipping-rope connected at one end to said reel, as and for the purpose set forth.

6. The combination with handles, a reel carried by one of said handles, a spring arranged to maintain said reel in one limit of its rotative movement, a ratchet mechanism for permitting said reel to rotate in one direction but preventing reverse rotation thereof, and a skipping-rope connected at one end to said reel, as and for the purpose set forth.

7. The combination with handles, a reel carried by one of said handles, a spring arranged to maintain said reel in one limit of its rotative movement, a ratchet mechanism for permitting said reel to rotate in one direction but preventing reverse rotation thereof, means for disengaging said ratchet mechanism, and a skipping-rope having one of its ends connected to said reel, as and for the purpose set forth.

8. In a skipping-rope, the combination with handles having extensions, of tubes adapted to be telescoped into each other, said extensions being received in opposite ends of said tubes, respectively, as and for the purpose set forth.

9. In a skipping-rope, the combination of hollow handles, each provided with an extension, a tube, into one end of which the extension of one of said handles is received, a second tube, into one end of which the extension of the other handle is received, said tubes adapted to be telescopically assembled, and a skipping-rope connected to said handles, as and for the purpose set forth.

10. In a skipping-rope, the combination of hollow handles, a reel mounted in each handle, a rope connected at the ends to said reels, and means normally tending to coil said rope upon said reels, as and for the purpose set forth.

11. In a skipping-rope, the combination with handles, each made in separable sections, and provided with extensions, and telescopically-joined tubes, each adapted to receive a handle extension, whereby said parts are held in assembled relation, as and for the purpose set forth.

12. In a skipping-rope, a hollow handle having a projection and an opening in diametrical alinement, a rod secured at one end to said projection, a button projecting through said opening and adapted to receive the other end of said rod, a reel journaled upon said rod for rotary and for longitudinal movement, a spring arranged to press said reel in one limit of its longitudinal movement, a spring arranged to maintain said reel in one limit of its rotary movement, and a skipping-rope having one end thereof connected to said reel, as and for the purpose set forth.

13. In a skipping-rope, a hollow handle, a reel mounted for rotary and longitudinal movement therein, means for yieldingly maintaining said reel in one limit of said movements, a ratchet mechanism and a skipping-rope having its end connected to said reel, as and for the purpose set forth.

14. In a skipping-rope, a hollow handle made in sections, a rod connected to one of said sections, a reel mounted on said rod for rotary and longitudinal movement, means for yieldingly opposing said movements in one direction, a ratchet connected to said reel, a tooth carried by one section of said handle and coöperating with said ratchet, a button arranged to shift said reel longitudinally to disengage said ratchet and tooth, and a skipping-rope having one end thereof connected to said reel, as and for the purpose set forth.

In witness whereof I have hereunto set my hand, this 23d day of August, A. D. 1900, in the presence of the subscribing witnesses.

WILLIAM C. BLACK.

Witnesses:
E. C. SEMPLE,
S. E. DARBY.