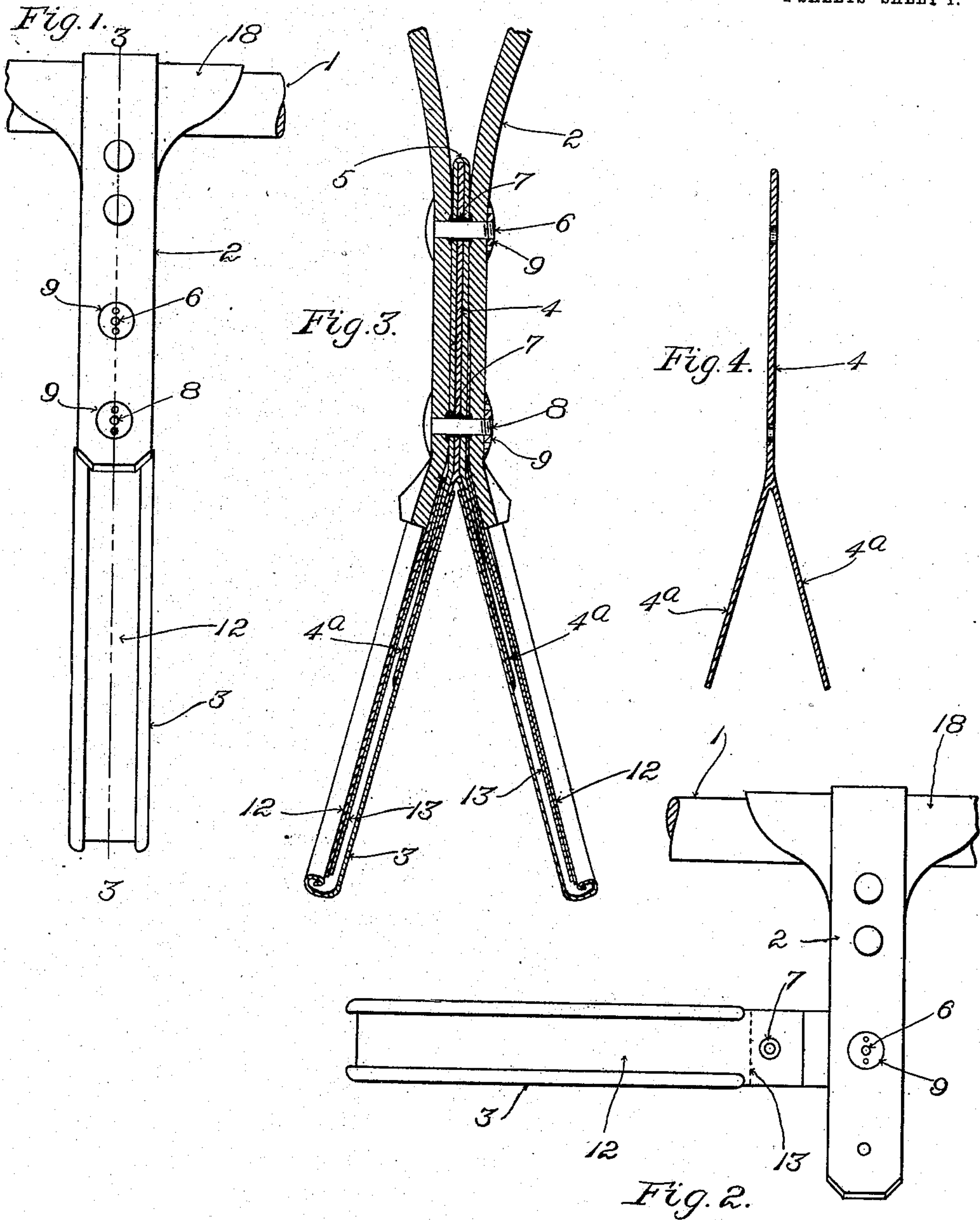


J. F. NEWTON, JR.  
HANGER STRAP OR HANDHOLD FOR CARS, &c.  
APPLICATION FILED JAN. 24, 1908.

901,119.

Patented Oct. 13, 1908.  
2 SHEETS—SHEET 1.



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Nathan B. Day

Inventor:  
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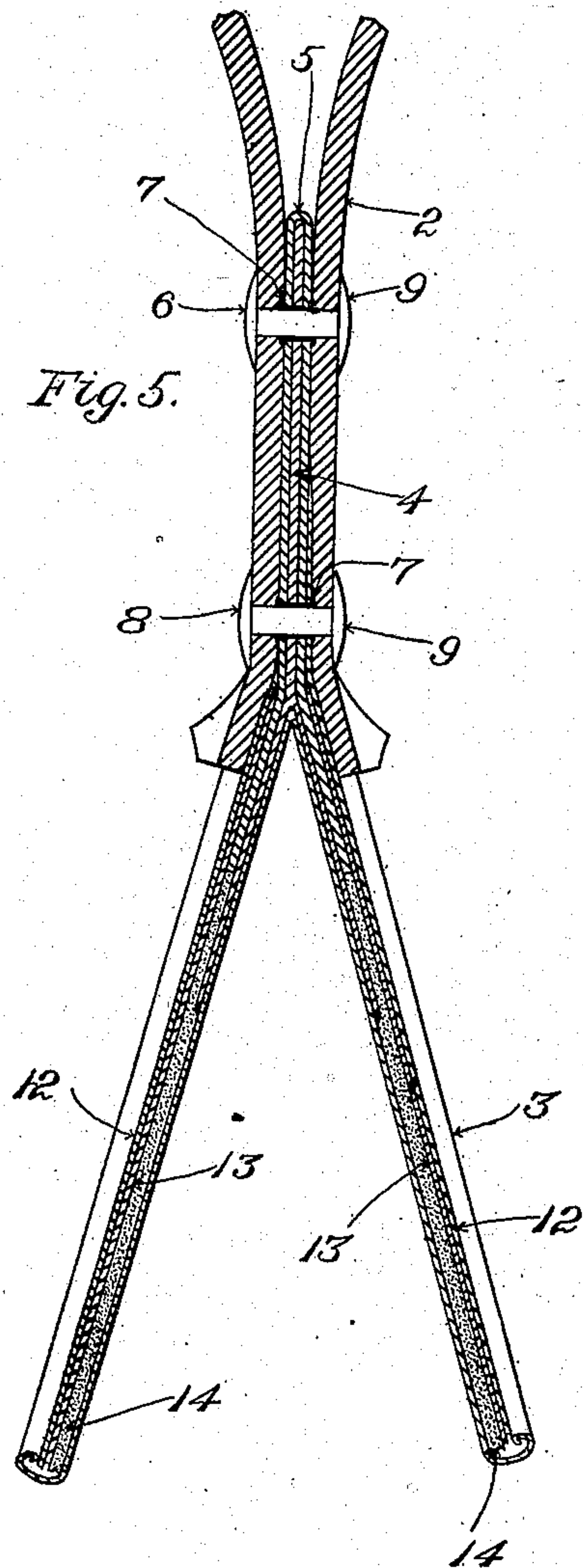


Fig. 5.

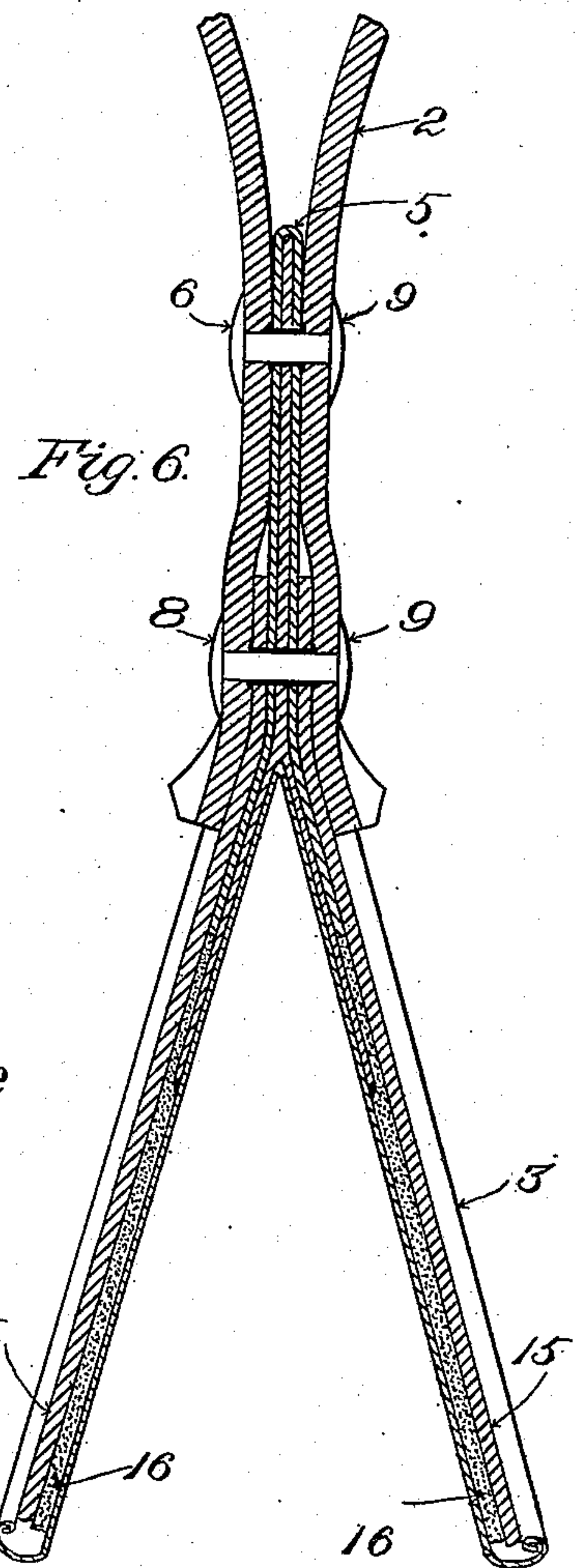
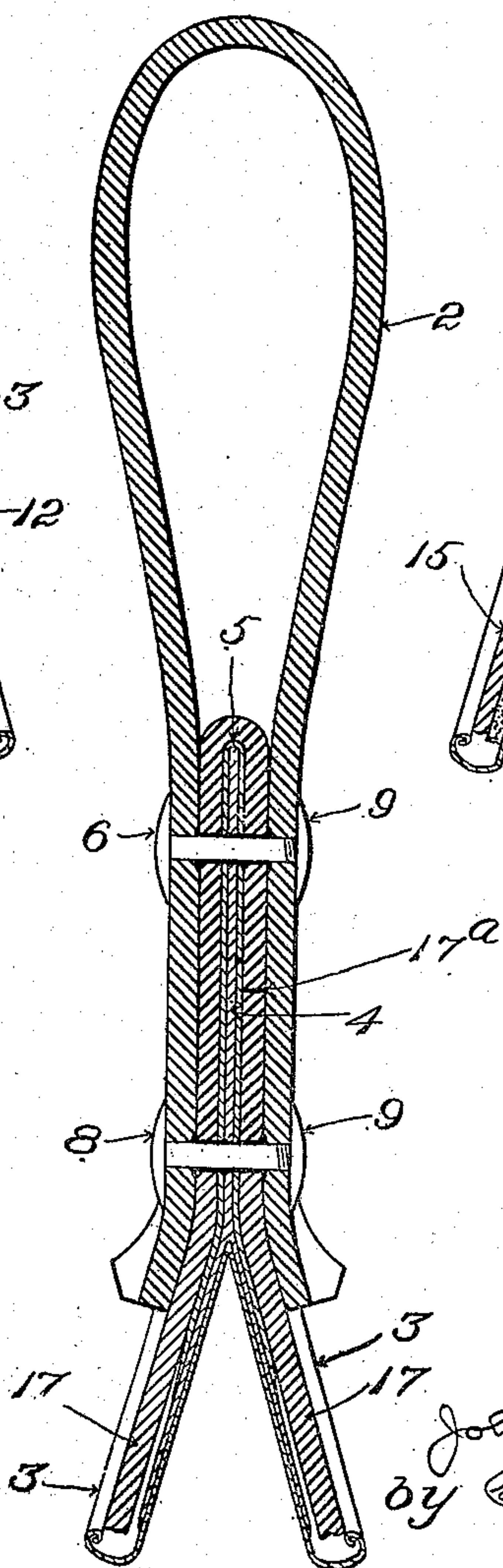


Fig. 6.

Fig. 7.



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# UNITED STATES PATENT OFFICE.

JOHN F. NEWTON, JR., OF BOSTON, MASSACHUSETTS.

HANGER-STRAP OR HANDHOLD FOR CARS, &c.

No. 901,119.

Specification of Letters Patent.

Patented Oct. 13, 1908.

Application filed January 24, 1908. Serial No. 412,367.

*To all whom it may concern:*

Be it known that I, JOHN F. NEWTON, JR., a citizen of the United States, residing at Boston, in the county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Hanger-Straps or Handholds for Cars, &c., of which the following is a specification, reference being had therein to the accompanying drawings.

The invention has relation to hanger-straps or hand-holds such as those which in cars are provided for the use of standing passengers, and comprises various improvements on the hanger-strap or hand-hold for which Letters Patent of the United States were granted to me under date of August 20, 1907, Serial No. 863,935. The hanger-strap or hand-hold of the said patent has a smooth and non-absorbent surface throughout the upright side-portions and closed lower end or bight of the depending lower loop thereof, and in the patent I have described and shown as one means of furnishing the required surface a sheet-metal facing applied to the said depending loop. The object of the invention claimed in the said Patent No. 863,935 is to provide a hanger-strap or hand-hold which shall have a surface that is non-absorbent and cleanly, and which shall be free from tendency to become soiled and charged with perspiration and grease through contact with the hands by which it is grasped. The said smooth and non-absorbent surface readily keeps clean. In my application for United States Letters Patent filed October 28, 1907, Serial No. 399,493, I have described and claimed a hanger-strap or hand-hold having a facing strip which is applied to that face of the strap which is not covered and protected by the surfacing above referred to, the said facing strip having its marginal portions entered between the flanges of the surfacing so that the facing strip is thereby held in place; also, a key by which the ends of the surfacing are united together and prevented from relative longitudinal movement, as well as from being sprung laterally, and by means of which the loop is reinforced and strengthened, and made rigid and incompressible.

One object of the invention is to enable the cost of a hanger-strap or hand-hold having a non-absorbent surfacing as aforesaid to be lessened through the employment of a smaller quantity of leather or other desired material, by the strap proper being omitted

from the lower loop or hand-grasp and thereby considerably reduced in length.

Another object of the invention is to provide an improved and positive connection between the suspending loop and the lower loop or hand-grasp.

Another object is to provide for the convenient insertion and removal of the facing strip and of supplemental strips when the latter are employed in connection therewith.

Another object is to provide for confining, concealing, and protecting the ends of the facing and supplemental strips and preventing the easy removal of the same by mischievous persons.

Another object is to prevent swaying of a hanger-strap or hand-hold in the direction of the length of the supporting rod.

Embodiments of the invention are represented in the accompanying drawings, in which latter,—

Figure 1 shows in front elevation a hanger-strap or hand-hold embodying one form of the invention, and a portion of the supporting-rod upon which the said hanger-strap or hand-hold is hung. Fig. 2 is a similar view, but represents the lower fastening between the upper and lower parts of the hanger-strap removed and the hanger-strap bent or broken upon its joint or hinge to facilitate the insertion or removal of the facing-strip or of a supplemental strip bearing advertising matter or of ornamental character applied to the lower portion of the hanger-strap. Fig. 3 is a view on an enlarged scale showing the hanger-strap or hand-hold in section in the plane of the dotted line 3, 3, of Fig. 1. Fig. 4 is a sectional view of the key, the latter being represented separately on the same scale as Fig. 3. Figs. 5, 6 and 7 are views similar to Fig. 3, and on the same scale, showing modifications.

Having reference to the drawings, and first to Figs. 1 to 4,—At 1 is represented a portion of the length of a horizontal bar or rod such as is employed in a car for the support of the hanger-straps or hand-holds, it being shown as having applied thereto a hanger-strap or hand-hold embodying features of the present invention.

At 2 is a length or strap of leather or other suitable material, doubled upon itself to form the upper or suspending loop.

The lower loop or hand-grasp, comprises in Figs. 1 to 4 a body-portion 3 of the same form and character as the surfacing of the



Letters Patent and application aforesaid, it being composed of a strip of sheet-metal or other approved sheet-material bent to the form of the lower loop with its extremities close together, and with the side-portions or flanges thereof bent or turned over transversely toward each other, producing roll-like side-portions enabling the lower loop or hand-grasp to be grasped firmly and one's weight supported without discomfort.

At 4, Figs. 3 and 4, is the key, it being made of metal or other suitable material, and being substantially Y-shaped, with an upwardly extending stem and with oppositely diverging downwardly extending wings 4<sup>a</sup>, 4<sup>a</sup>. The key 4 is utilized as a means of enabling the upper or suspending loop 2 to be connected securely with the lower loop or hand-grasp, and also for the purpose of uniting the ends of the body-portion of the lower loop or hand-grasp together, it serving in this latter connection essentially the same purposes as the key which is applied to the surfacing of the application aforesaid. The ends of the said body-portion approach close together and the angle of the key fits over and bridges the said ends, so as to clasp the same, each wing entering between the flanges of the corresponding end of the body-portion. The wings are soldered or brazed or otherwise secured fixedly to the transversely extending surfaces of the respective ends between the said flanges. In consequence of being thus attached, and of its form and the manner of its application, the key prevents longitudinal movement of one side of the loop-shaped body-portion 3 relative to the other side, and prevents also transverse springing of one side relative to the other, in addition to rendering the loop or hand-grasp rigid and incompressible. For the purpose of the connection of the upper or suspending loop 2 with the lower loop or hand-grasp, the free ends of the upper or suspending loop are caused to extend lengthwise of the stem of the key at opposite sides of the latter, and the said ends are fastened to the said stem. A covering 5, Fig. 3, for the said stem, usually of leather and lying between the latter and the side-portions of the loop 2, extends around and covers or conceals and protects the upper end of the stem. The lower portions of the said covering extend down within the ends of the body-portion 3 of the lower loop or hand-grasp, as shown by Fig. 3, and are thereby inclosed.

A so-called screw-rivet 6 passes through the side-portions of the upper or suspending loop, and also through the stem of the key, and the covering of the said stem, near the upper end of the stem, and thereby secures the said loop to the stem, and may serve as hereinafter explained as a hinge-connection between the upper or suspending loop and

the lower loop or hand-grasp. Preferably the holes within which such screw or rivet is fitted are bushed with a tubular rivet 7. Registering holes are made through the lower portion of the stem and the covering at opposite sides thereof for the reception of a lower fastening 8, and are bushed by a tubular rivet 7. The said lower fastening 8 is a screw-rivet, and is passed through holes in the side-portions of the upper or suspending loop 2 and also through the said bushing, and is furnished with a nut 9 into which the threaded portion of the stem thereof enters.

It will be perceived that the length of strap employed in the construction shown in Figs. 1 to 4 is only that which is required for the upper or suspending loop 2, and that by attaching the downwardly extending wings of the key to the lower loop or hand-grasp and attaching the side-portions of the upper or suspending loop to the upwardly extending stem of the said key, a secure connection of the upper and lower loops together is effected without liability of the upper ends of the side-portions of the lower loop or hand-grasp being withdrawn from the concealment and protection of the extremities of the side-portions of the upper or suspending loop, which extremities overlap and conceal the said upper ends. The fastening 8 is located close to the upper ends of the said body-portion, so that the said extremities of the upper or suspension-loop are confined closely in place at such ends, thereby insuring competent protection to the ends of strips 12 and 13.

At 12 is represented a facing strip which is inserted within the longitudinally extending concavity or depression of the body-portion of the lower loop or hand-grasp, with its marginal portions confined beneath the flanges of the said body-portion. The said strip may be of ornamental character and of approved material for the purposes in view, and it may be for instance composed of transparent celluloid to expose to view an underlying strip, as 13, which may be of ornamental character or may bear printing, pictures, or the like, for advertising or other purposes.

The strips 12 and 13, one or both, are capable of insertion and withdrawal by movement lengthwise within the concavity or depression of the body-portion, thereby enabling one or both thereof to be replaced when necessary. This enables replacement of the strip 13 by another whenever desired to be effected. Preferably, as shown in Fig. 3, one end of the outer strip 12 is extended up alongside the stem of the key and formed with a hole through which the securing screw or rivet 8 passes, whereby removal of such strip is prevented so long as the said screw or rivet is in place. The downwardly extending overlapping extremities of the



upper or suspending loop cover the upper ends of the strips 12, 13, and preclude access to the said ends until the fastening at 8 is released.

5 For the purpose of facilitating the insertion and withdrawal of the strips 12 and 13, the connection at 6 between the upper or suspending loop and the body-portion of the lower loop or hand-grasp permits, after the  
10 withdrawal of the fastening at 8, the lower loop or hand-grasp to be swung edgewise between the side-portions of the upper or suspending loop into a position at an angle to the latter loop, as represented in Fig. 2, so as to carry the top of the body-portion of  
15 the lower loop or hand-grasp, and the upper ends of the strips 12 and 13, clear of the overlapping portions of the upper or suspending loop, thereby affording access to the  
20 said ends of the said strips.

Fig. 5 shows the employment of a filling or cushion 14, which may consist of felt or other approved and suitable material behind the strip 13 to back up the latter and strip  
25 12, and hold strip 12 in contact with the flanges of the body-portion, the ends of the said filling or cushion butting against those of the covering 5.

Fig. 6 illustrates the employment of a  
30 facing strip 15 of ornamental character, as for instance morocco leather, with which a backing 16 of felt or other approved material usually will be employed. The ends of the said backing butt against those of the  
35 covering 5, and those of the facing strip overlap those of the covering and in turn are overlapped by those of the side-portions of the upper or suspending loop 2. Fastening 8 passes through the said ends of the  
40 facing strip.

Fig. 7 illustrates an embodiment of certain features of the invention wherein a continuous strip 17, of approved material extends around within the body or surfacing  
45 3, and also around the upper end of the key, its ends being butted together at 17<sup>a</sup>, and the upper or suspending loop 2 being applied and fastened as in the other views.

My invention is equally applicable in the  
50 case of hanger-straps or arm-rests of automobile and other vehicles.

For the purpose of reducing the tendency of the hanger-strap to sway or swing in the direction of the length of the supporting rod  
55 in consequence of movements of the car or other vehicle, and quickly cause such swinging to cease when it does occur, I provide the upper or suspension loop 2 with a saddle 18, Figs. 1 and 2, which fits the supporting  
60 rod. This saddle extends in opposite directions lengthwise of the rod, that is to say, in the line of the opening through the said loop, and in the present instance, though not necessarily in all cases, consists of a separate piece of material occupying the bend of  
65

the loop and riveted in place therein. A force acting with a tendency to swing the hanger-strap in one direction lengthwise of the supporting rod cannot thus swing the  
70 same unless its intensity is sufficient to cause the hanger-strap to tilt on the rod on one extreme end of the saddle, raising thus practically the entire weight of the hanger-strap, and if the force is of sufficient intensity to do this the momentum of the return  
75 movement will ordinarily not be sufficient to overcome the resistance of the hanger-strap to tilt in the opposite direction upon the other end of the saddle.

I claim as my invention:—

1. A hanger-strap or hand-hold comprising a lower loop or hand-grasp having its end-portions adjacent each other a key engaging with such end-portions and provided with an upwardly-extending stem, and a suspension-loop having the said stem entered  
80 between the side-portions thereof and the latter attached thereto.

2. A hanger-strap or hand-hold comprising the lower loop or hand-grasp composed  
90 of sheet-material with intumed side-flanges and having its end-portions adjacent each other, a key connecting said end-portions and holding them in position and provided with an upwardly-extending stem, an upper  
95 or suspension loop, and means to fasten the latter loop and the said extension together.

3. A hanger-strap or hand-hold comprising the lower loop or hand-grasp having its end-portions adjacent each other, a Y-shaped  
100 key having its wings respectively engaged with the respective end-portions, and a suspension-loop having its side-portions at opposite sides of the stem of said key and fastened thereto.

4. A hanger-strap or hand-hold comprising the lower loop or hand-grasp having the body-portion formed with intumed side-flanges, a strip confined in place by the said  
110 flanges, and a suspension-loop having side-portions which overlap by their extremities the ends of said strip and cover and protect such ends.

5. A hanger-strap or hand-hold comprising the lower loop or hand-grasp having the  
115 body-portion thereof formed with intumed side-flanges, a strip confined in place by the said flanges, and a suspension-loop which by the free extremities of its side-portions overlaps and covers the upper end of the said  
120 lower loop or hand-grasp and also covers and protects the ends of the said strip.

6. In a hanger-strap or hand-hold, in combination, a lower loop or hand-grasp having the body-portion formed with intumed side-  
125 flanges, a transparent facing-strip and an underlying strip, both confined in place by the said flanges, and a suspension-loop having side-portions which overlap the ends of said strips and cover and protect such ends.



7. A hanger-strap or hand-hold comprising the lower loop or hand-grasp having the body-portion formed with inturned side-flanges, a strip confined in place by the said flanges, a suspension-loop having side-portions which overlap the ends of said strip and cover and protect such ends, and a fastening which confines such side-portions closely adjacent the top of said lower loop or hand-grasp.

8. A hanger-strap or hand-hold comprising the lower loop or hand-grasp having the body-portion formed with inturned side-flanges, a strip confined in place by the said flanges, a suspension-loop which by the free extremities of its side-portions overlaps and covers the upper end of the said lower loop and covers and protects the ends of the said strip, and a fastening which confines such side-portions closely adjacent the top of said lower loop or hand-grasp.

9. A hanger-strap or hand-hold comprising the lower loop or hand-grasp having the body-portion formed with inturned side-flanges, a transparent facing-strip and an underlying strip, both confined by the said flanges, a suspension-loop having side-portions which overlap by the ends thereof the ends of such strips and cover and protect the latter, and a fastening which confines such side-portions closely adjacent the top of the lower loop or hand-grasp.

10. In a hanger-strap or hand-hold, the combination with a lower loop or hand-grasp, and a suspension-loop, of a pivotal connection between the two, and a disconnectible fastening by which they are secured in line with each other.

11. In a hanger-strap or hand-hold, the combination with a lower loop or hand-grasp having the upward extension, and a suspension-loop, of a pivotal connection between said extension and suspension-loop, and disconnectible means for securing the two loops in line with each other.

12. In a hanger-strap or hand-hold, in combination, a lower loop or hand-grasp

having the ends of its body-portion adjacent each other, a Y-shaped key having its wings engaged with the said ends, a suspension-loop receiving the stem of said key between its sides, a pivotal connection between said sides and key, and disconnectible means of fastening the loops from turning relative to each other.

13. In a hanger-strap or hand-hold, in combination, a lower loop or hand-grasp having side-flanges, and the ends of its body-portion adjacent each other, a Y-shaped key having its wings engaged with the said ends, a strip confined by the said flanges, a suspension-loop receiving the stem of said key between its sides, and by the latter normally covering and protecting the ends of the strip, a pivotal connection between said sides and key permitting relative movement of said sides to uncover the ends of the strip, and disconnectible means for fastening the loops from turning relative to each other.

14. In a hanger-strap or hand-hold, in combination, a lower loop or hand-grasp having side-flanges, a removable strip confined by said flanges, a suspension loop having a pivotal connection with said lower loop or hand-grasp and by the extremities of its sides normally covering and protecting the ends of the strip, and disconnectible fastening means for preventing the loops from turning relative to each other to uncover the said ends.

15. A hanger-strap or hand-hold comprising a lower loop or hand-grasp, and an upper or suspension loop provided with an elongated saddle to rest upon the supporting rod and restrain the hanger-strap or hand-hold from tipping lengthwise of such rod the said lower loop or hand-grasp projecting fixedly from the upper or suspension loop.

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

JOHN F. NEWTON, Jr.

Witnesses:

CHAS. F. RANDALL,

EDITH J. ANDERSON.