May 28, 1929. W. WALLENTHIN 1,715,153

STRAP END HOOK

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Fig. 1.

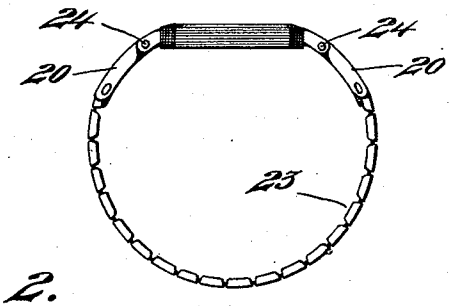


Fig. 2.

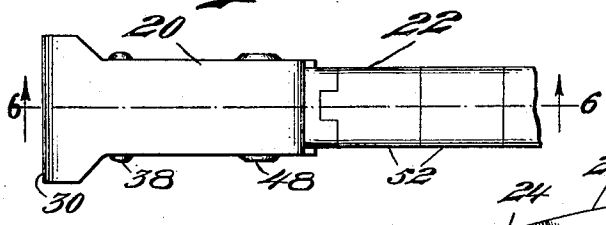


Fig. 4.

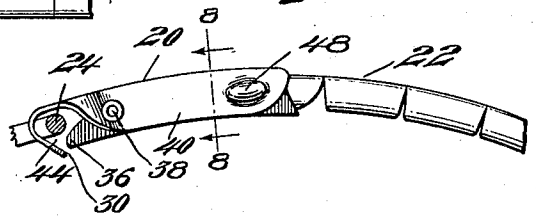


Fig. 3.

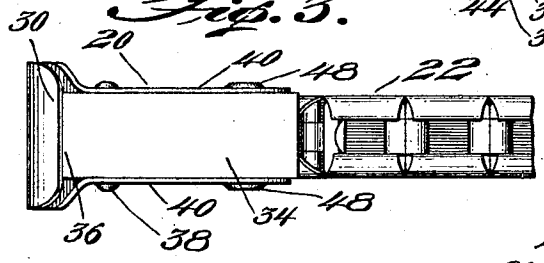


Fig. 5.

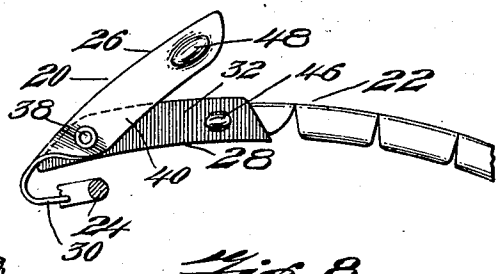


Fig. 6.

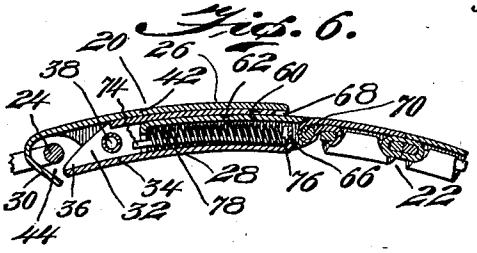


Fig. 8.

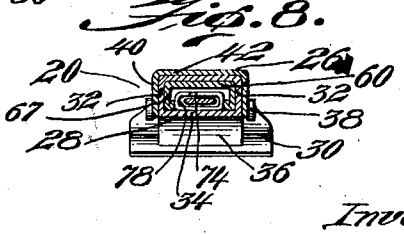
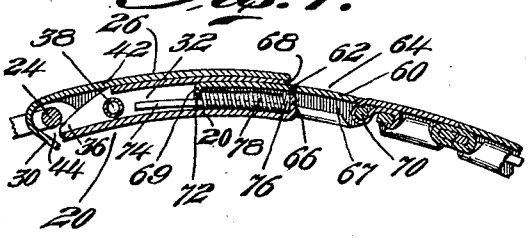


Fig. 7.



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Fig. 9.

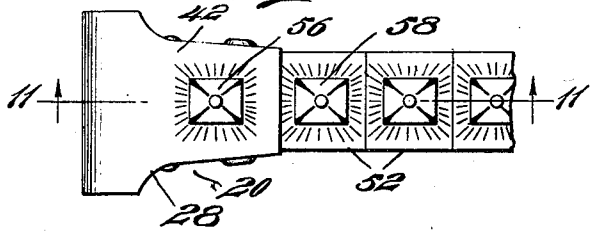


Fig. 10.

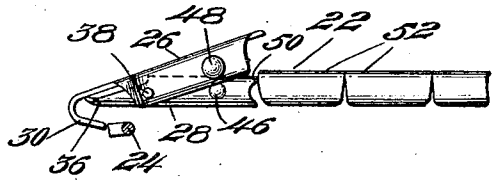


Fig. 11.

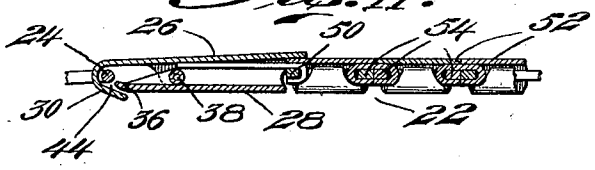


Fig. 12.

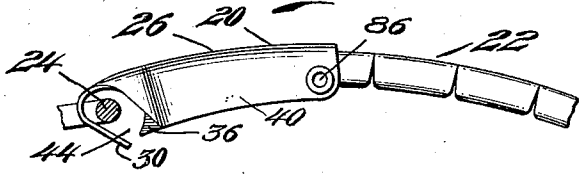
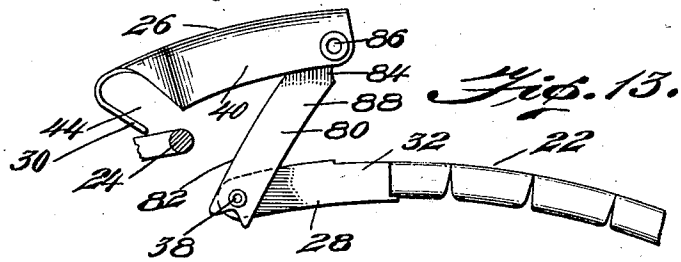


Fig. 13.



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UNITED STATES PATENT OFFICE.

WALFRID WALLENTHIN, OF ATTLEBORO, MASSACHUSETTS, ASSIGNOR TO THE ASSOCIATED ATTLEBORO MANUFACTURERS, INC., OF ATTLEBORO, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

STRAP-END HOOK.

Application filed August 7, 1928. Serial No. 297,982.

My invention relates to strap end hooks, particularly adaptable for use in clamping bracelet strap ends to wrist watch bars.

An object of my invention is to provide a novel type of strap hook easy to fabricate, simple and sure in its action and which may be readily released with the bottom connector section thereof in firm position on the wrist or other object by merely pivoting the top connector section upwards to permit withdrawal of the wrist watch bar from the hook portion thereof.

A further object of my invention is to provide a strap end hook which not only embodies the novel features referred to, but also one which is readily extensible.

A further object of my invention is to provide a strap end hook which not only combines the novel locking features hereinbefore referred to but which also contains means for resilient mounting of a strap end thereon so as to permit the clip to give to ease the wear of the bracelet or other object on the wearer.

A further object of my invention is to provide a strap end hook particularly adaptable for box link straps consisting of a plurality of box link members pivotally joined together and which clip also is extensible by having a box like rectangular connecting member ornamented to simulate the box links resiliently mounted in the lower connector section so as to permit expansion of the strap within the hook and to leave no gap between the points of connection of the strap with the hook and thus to provide an extensible strap which has the general appearance of a non-extensible box link strap and end hook.

A further object of my invention is to provide a strap end hook having the same ornamental theme or continuity of design as that of the box links themselves.

These and such other objects of my invention as may hereinafter appear will be best understood from a description of the accompanying drawings, which illustrate various embodiments thereof.

In the drawings, Fig. 1 is a side elevation of two of my improved strap end clips joining the ends of a box link strap to a wrist watch.

Fig. 2 is a plan view of my improved strap end clip and adjacent portion of an attached box link strap.

Fig. 3 is a reverse plan view of the structure shown in Fig. 2.

Fig. 4 is a side elevation of the structure shown in Fig. 2 with my improved strap end hook in closed locking position.

Fig. 5 is a side elevation similar to Fig. 4 with the top connector section pivoted to open position for removal of the wrist watch bar from the hook.

Fig. 6 is a longitudinal sectional view taken along the line 6—6 of Fig. 2.

Fig. 7 is a view similar to Fig. 6 with the strap expanded.

Fig. 8 is a cross sectional view taken along the line 8—8 of Fig. 4.

Fig. 9 is a plan view of a modified form of my improved strap end clip and adjacent portion of a box link strap.

Fig. 10 is a side elevation of the structure shown in Fig. 9 with the top connector section pivoted to open position.

Fig. 11 is a section along the line 11—11 of Fig. 9.

Fig. 12 is a side elevation of a further modified form of my strap end clip and adjacent portion of a strap end in closed position employing an intermediate connector section to permit ready extension when desired of the strap end clip for removal or other purposes.

Fig. 13 is a side elevation of the modified structure shown in Fig. 12 in open position.

In the drawings, wherein like characters of reference generally indicate like parts throughout, 20 generally indicates a strap end hook constructed in accordance with the principles of my invention. While as stated, my improved strap end to the article desired, it is particularly adapted as shown to attach an end 22 of a bracelet 23 to a wrist watch bar 24 or like structure.

As stated a chief inventive feature of my invention consists in the improved structure of a strap end hook, whereby the top connector section 26 which may be readily pivoted on the bottom connector section 28 while said bottom connector section 28 is immovably held in position on the wearer to permit ready withdrawal of the wrist

watch bar from the hook 30 (Figs. 5, 10 and 13) and this feature is common to all of the embodiments shown.

I provide a bottom connector section 28 preferably of rectangular box-like shape to present the same general appearance as that of a box-link bracelet where employed therewith. The bottom connector section 28 is provided with the side walls 32 and the bottom wall 34. The outer end 36 of the bottom wall 34 is preferably extended to form the outer locking tongue edge 36. The outer end of the top connector section 26 is pivotally mounted on said bottom connector section 28 near the outer end thereof by means of the pivot pin 38 suitably mounted in the side walls 32 of the bottom connector section and in the side walls 40 of the top connector section. The top wall 42 of the top connector section 26 is extended outwards and formed into a downwardly projecting hook 30 of a length when the top connector section 26 is pivoted to closed position to form a bar receiving hooked locking closure 44 with the outer locking tongue edge 36 of the bottom connector section 28.

In order to retain the top connector section 26 and bottom connector section 28 together, I provide suitable means on the respective side walls 40 and 32 thereof to releasably secure said connector sections in closed position, said means being yieldable on pressure to release said top connector section 26 to pivot on said bottom connector section 28 to the open position shown in Fig. 5 for removal of the bar 24 from the bar receiving hooked locking closure 44. While any suitable type of means may be employed for this purpose, such as constructing the side walls 40 of the top connector section so that they will overlap and frictionally engage the side walls 32 of the bottom connection 28, I preferably provide suitable means on said side walls 40 and 32 to more securely lock said connector sections together. In the preferred embodiment shown I provide the resilient side walls 32 of the bottom connector section 28 with the projections 46 near the inner ends thereof adapted to register in the cooperating sockets or holes 48 near the inner ends of the resilient side walls 40 of the top connector section 26 to resiliently retain said sections in closed position and yet releasable due to the resiliency of the side walls 40 and 32 on downward pressure exerted on the outer end of the top connector section or on upward pressure exerted on the inner end thereof to release to permit said top connector section to pivot on said bottom connector section to open position for removal of said bar therefrom.

As stated, I also provide means on said bottom connector section for attachment of a strap end 22 thereto. As shown in Figs. 9–11 I may nonextensibly attach the strap end 22 to the bottom connector section 26. Where a nonextensible strap is employed I preferably construct my strap end hook so as to permit this resilient attachment. As also stated, my invention is particularly adapted for use in nonextensible box-link straps consisting of a plurality of box-like link sections 52 suitably pivotally joined together on the pivot bars 54. As these box-link sections are of square or rectangular formation, I preferably construct my improved strap end hook of the same general configuration so as to preserve the same continuity of design and ornamental theme in the strap end clip as is present in the box-links 52 of the strap 23 and I thus may as shown in particular in Fig. 9 insert a similar ornament 56 in the top wall of the top connector section 26 to the ornaments 58 individually mounted in the box-links 52 themselves. In order to conceal the point of attachment of the resilient strap end hook 20 to the box-link bracelet 23, I preferably resiliently attach the strap end 22 to the bottom connector section 28 in the specific manner about to be described.

For this purpose I provide a preferably rectangular connecting member 60 preferably twice as long as a box link 52 provided with a cross ridge 62 on the top wall 64 thereof to give it the general appearance of two box-links and with said top wall 64 ornamented in similar fashion to the tops of the box links 52. Where this structure is employed I provide the bottom connector section 28 with the inner end wall 66 having the transverse slit 68 therein near the upper edge thereof through which the connecting member 60 may readily slide. The connecting member is also provided with the side walls 67 projecting downwardly on each side thereof and the outer wall 69 projecting downwards from the outer end thereof. The strap end 22 may be pivotally attached to the inner end of said connecting member 60 by the pivot pin 70 suitably transversely mounted of the side walls 67 of said connecting member 60. The outer wall 69 of said connecting member 60 may also be provided with the transverse slit 72 through which the guide bar 74 may project on extension of said connecting member 60. Said guide bar 74 has its inner upturned end 76 suitably retained in the inner end of the bottom connector section 28 by the pressure of the spring 78 which forces it against the end wall 66 of the bottom connector section. The spring 78 is suitably mounted on said guide bar 74 and has the outer end thereof abutting the outer wall 69 of said connecting member 60 and the inner end thereof abutting the inner wall 66 of said bottom connector section 28 through the medium of the upturned end 76 of said guide bar 74

for urging said connecting member 60 into said bottom connector section. It is thus obvious that on extension of said strap 23 said connecting member 60 may readily slide within the said bottom connector section 28 against the pressure of the spring 78 and that when tension on said bracelet is released the spring 78 will urge said connecting member 60 within said bottom connector section 28. It is obvious that this resilient attachment of the strap end 22 within the bottom connector section 28 will permit the strap to give to ease the pressure on the wearer in use, and that by this specific structure I have provided an extensible strap which may be ornamented in equal fashion as is possible on a non-extensible strap.

In order that the length of the strap may be temporarily increased if desired for any particular purpose such as for removal or attachment, I may so construct my improved strap end hook to permit this feature and I have shown a structure suitable for this purpose in Figs. 12 and 13. In this embodiment the top connector section 26 and bottom connector section 28 are constructed in identical fashion with that shown in the other embodiments but I provide an intermediate connector section 80 suitably pivotally attached to and intermediate said top connector section 26 and bottom connector section 28. In the description and in the claims I refer to the ends of said intermediate connector section 80 in the positions they occupy in closed position for it is obvious from an inspection of the structure that they become reversed when the strap end hook is extended. The intermediate connector section 80 has its outer end 82 suitably pivoted on the outer end of the bottom connector section 28 by means of the pivot bar 38 and has its inner end 84 suitably pivoted to the inner end of the top connector section by means of the pivot bar 86. The locking tongue edge 36 may be provided on the bottom connector section as usual or if desired on the outer end 82 of the intermediate connector section 80. The side walls 88 of the intermediate connector section 80 are of a size to compactly telescope when in closed position between the side walls 40 of the top connector section and side walls 32 of the bottom connector section. In the embodiment shown the strap end hook is retained in closed position by the friction of the respective walls 40, 88 and 32 against each other and the specific structure of the connector sections though if desired suitable additional means may be provided for this purpose. Thus, when it is desired to open up this type of strap end hook the top connector section 26 is grasped and pulled upwards and outwards, thus permitting the release of the bar 24 from the hooked locking closure 44 and the top connector section to pivot outwards, the intermediate connector section 80 as it is pivoted on both ends being capable of outward movement until said cooperating connector sections 26, 80 and 28 may be in open extended substantial alignment thereby substantially increasing the length of the strap end hook or the combined length of the strap end hook and non-extensible strap if desired for any purpose, such as for removal or attachment. In this embodiment the strap end 22 is suitably attached as usual to the bottom connector section 28 either in a fixed manner or in a resilient manner such as shown in Figs. 6 and 7.

It is obvious that I have provided a novel type of strap end hook in which the top connector section may be readily pivoted to open position on the lower connector section, particularly adapted for use on box link bracelets to simulate the appearance thereof and to provide the same type of ornamental theme as in the strap itself with the advantages and/or modifications as clearly indicated above.

It is understood that my invention is not limited to the specific embodiments shown and that various deviations thereof may be made therefrom without departing from the spirit and scope of the appended claims.

What I claim is:

1. A strap end hook, comprising a bottom box-like connector section having side walls and a bottom wall with the bottom wall thereof extended into an outer locking tongue edge, a top connector section having its outer end pivotally mounted thereon near the outer end thereof having side walls and a top wall extended outwards and formed into a downwardly projecting hook of a length to form a bar receiving hooked locking closure with the outer locking tongue edge of the bottom connector section, means on the side walls of said top and bottom connector sections to releasably secure said connector sections in closed position and means for attachment of a strap end on said bottom connector section whereby the inner end of the top connector section may be pivoted upwardly to open position to cause the hooked outer end thereof to pass downwards beyond said locking tongue edge to form a passage for removal of the bar from said hook and whereby when said top connector section is pivoted to closed locked position on said fixed bottom connector section, said locking tongue edge may form with said hook a bar retaining closure.

2. A strap end hook, comprising a bottom box-like connector section having side walls and a bottom wall with the bottom wall thereof extended into an outer locking tongue edge, a top connector section having its outer end pivotally mounted thereon near the outer end thereof having a top wall ex-

tended outwards and formed into a downwardly projecting hook of a length when the top connector section is pivoted to closed position to form a bar receiving hooked locking closure with the outer locking tongue edge of the bottom connector section and side walls adapted to overlap and frictionally engage the side walls of the bottom connector section to retain said connector sections in closed locked position, and means for attachment of a strap end on said bottom connector section whereby the inner end of the top connector section may be pivoted upwardly to open position to cause the hooked outer end thereof to pass downwards beyond said locking tongue edge to form a passage for removal of the bar from said hook and whereby when said top connector section is pivoted to closed locked position on said fixed bottom connector section, said locking tongue edge may form with said hook a bar retaining closure.

3. A strap end hook comprising a bottom box-like connector section having side walls having projections thereon near their inner ends and a bottom wall with the bottom wall thereof extended into an outer locking tongue edge, a top connector section having its outer end pivotally mounted thereon near the outer end thereof having side walls and a top wall extended outwards and formed into a downwardly projecting hook of a length when the top connector section is pivoted to closed position to form a bar receiving hooked locking closure with the outer locking tongue edge of the bottom connector section, side walls adapted to overlap the side walls of the bottom connector section having sockets near the inner ends adapted to receive the resilient projections from the side walls of the top connector section to resiliently retain said sections together and means for attachment of a strap end on said bottom connector section whereby the inner end of the top connector section may be pivoted upwardly to open position to cause the hooked outer end thereof to pass downwards beyond said locking tongue edge to form a passage for removal of the bar from said hook and whereby when said top connector section is pivoted to closed locked position on said fixed bottom connector section, said locking tongue edge may form with said hook a bar retaining closure.

4. A strap end hook comprising a bottom connector section having a locking tongue portion projecting outwards therefrom, a top connector pivotally mounted thereon having a hook projecting outwardly and downwardly therefrom adapted to form when the inner end of said top connector section is pivoted downwards to closed position on said fixed bottom connector section a hooked bar receiving locking closure, means to secure said connector sections together in closed position yieldable on pressure to permit the inner end of said top connector sections to pivot upwards on said bottom connector section to open position for removal of said bar end and means for attachment of a strap end on said bottom connector section.

5. A strap end hook, comprising a bottom connector section, a top connector pivotally mounted thereon having a hook projecting outwardly and downwardly therefrom adapted to form when the inner end of said top connector section is pivoted downwards to closed position on said fixed bottom connector section a hooked bar receiving locking closure, means to secure said connector sections together in closed position yieldable on pressure to permit the inner end of said top connector sections to pivot upwards on said bottom connector section to open position for removal of said bar end and means for attachment of a strap end on said bottom connector section.

6. A strap end hook, comprising a bottom connector section having a locking tongue portion projecting outwards therefrom, an intermediate connector section having its outer end in closed position pivoted on the outer end of said bottom connector section, a top connector section having its inner end pivoted on the inner end of the intermediate section in closed position, whereby said connector sections may be pivoted upwards and forwards into open extended alignment and into telescoping closed position, said top-connector section having a hook projecting outwardly and downwardly therefrom adapted to form when said top connector section is pivoted downwards to closed position on said bottom connector section, a hooked bar receiving locking closure, means to secure said connector sections together in closed position yieldable on pressure to permit said top connector sections to pivot upwards on said bottom connector section to open position for removal of said bar end and means for attachment of a strap end on said bottom connector section.

7. A strap end hook, comprising a bottom connector section, having side walls and a locking tongue portion projecting outwards therefrom, an intermediate connector section having side walls and its outer end in closed position pivoted on the outer end of said bottom connector section, a top connector section having side walls and its inner end pivoted on the inner end of the intermediate section in closed position, whereby said connector sections may be pivoted into open extended alignment and into telescoping closed position, said top connector section having a hook projecting outwardly and downwardly therefrom adapted to form when said top connector section is pivoted to closed position on said bottom connector section a hooked bar receiving locking clo-

sure and side walls adapted to overlap and frictionally engage the side walls of the bottom connector section to retain said connector sections in telescoped closed locked position and means for attachment of a strap end on said bottom connector section.

8. An extensible strap end hook for box link straps consisting of a plurality of box-link members pivotally joined together comprising a rectangular box-like bottom connector section having side and bottom walls with the bottom wall thereof extended into an outer locking tongue edge, a top connector section having its outer end pivotally mounted thereon near the outer end thereof having side walls and a top wall extended outwards and formed into a downwardly projecting hook of a length when the top connector section is pivoted to closed position to form a bar receiving hooked locking closure with the outer locking tongue edge of said bottom connector section, means on the side walls of said top and bottom connector sections to releasably secure said connector sections in closed position, a connecting rectangular member in simulation of a plurality of box links slidably contained within said box-like bottom connector section having means on the inner end thereof for attachment of said box-link strap thereto and a spring urging said connecting member into said bottom connector section.

9. An extensible strap end hook for box-link straps, consisting of a plurality of box-link members pivotally joined together, comprising a rectangular box-like bottom connector section having side walls and a bottom wall with the bottom wall thereof extended into an outer locking tongue edge, and an inner wall having a transverse slit therein near the upper edge thereof, a top connector section having its outer end pivotally mounted thereon near the outer end thereof having side walls and a top wall extended outwards and formed into a downwardly projecting hook of a length when the top connector section is pivoted to closed position to form a bar receiving hooked locking closure with the outer locking tongue edge of said bottom connector section, means on the side walls of said top and bottom connector sections to releasably secure said connector sections in closed position, a connecting box-like rectangular member having a downwardly projecting outer wall and a top wall ornamented in simulation of a plurality of box-links slidably contained within said box-like bottom connector section with said top wall projecting through said transverse slit in the inner wall of the bottom connector section and having means on the inner end thereof for attachment of said box-like strap thereto and a spring contained within said bottom connector section having the outer end thereof abutting the outer wall of said connecting member and the inner end thereof abutting the inner wall of said bottom connector section for urging said connecting member into said bottom connector section.

10. A strap end hook comprising a bottom connector section having a locking tongue portion projecting outwards therefrom, a top connector having its outer end pivotally mounted thereon having a hook projecting outwardly and downwardly therefrom adapted to form when said top connector section is pivoted to closed position on said bottom connector section a hooked bar receiving locking closure, means to secure said connector sections together in closed position yieldable on pressure to permit said top connector section to pivot on said bottom connector section to open position for removal of said bar end and means for resiliently attaching a strap end to said bottom connector section.

11. A strap end hook comprising a bottom connector section having a locking tongue portion projecting outwards therefrom, a top connector section having its outer end mounted thereon having a hook projecting outwardly and downwardly therefrom adapted to form when said top connector section is pivoted to closed position on said bottom connector section a hooked bar receiving locking closure, means to secure said connector sections together in closed position yieldable on pressure to permit said top connector section to pivot on said bottom connector section to open position for removal of said bar end and a connector member resiliently slidable within said bottom connector section having means on the inner end thereof for attachment of a strap end thereto.

12. A strap end hook for box-link straps consisting of a plurality of ornamental box-link members pivotally joined together, comprising a bottom connector section, a top connector section having its outer end pivotally mounted thereon near the outer end thereof having a hook projecting outwardly and downwardly therefrom adapted to form when said top connector section is pivoted to closed position on said bottom connector section a hooked bar receiving locking closure, means to secure said connector sections together in closed position yieldable on pressure to permit said top connector section to pivot on said bottom connector section to open position for removal of said bar end and means for attachment of a strap end on said bottom connector section, the top wall of the top connector section having the same ornamental theme as that of the box link strap.

In testimony whereof I affix my signature.

WALFRID WALLENTHIN.