March 26, 1935. C. SCHAUMBURG 1,995,687

CLIP FOR WRENCH SETS

Original Filed May 5, 1931

Fig. 1.

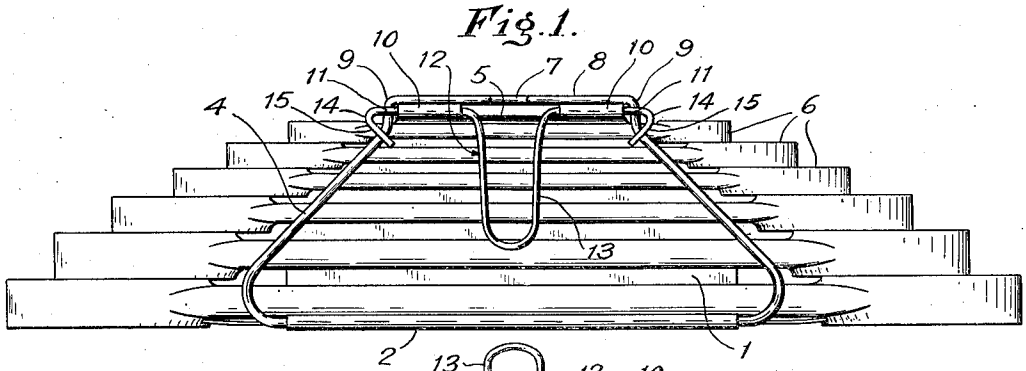


Fig. 2.

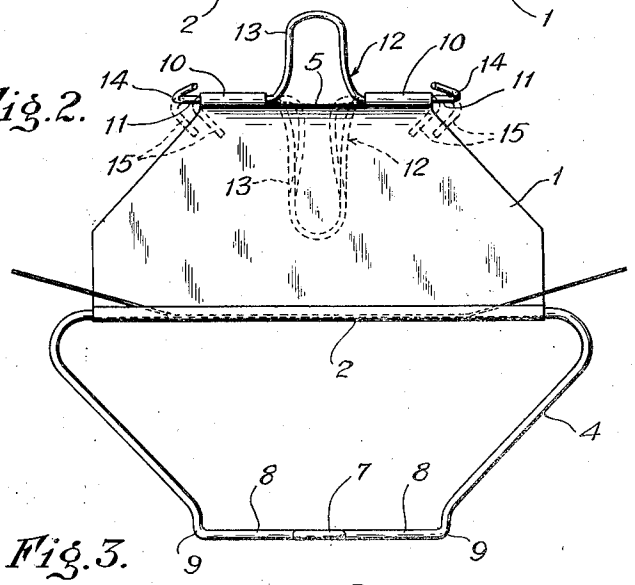


Fig. 3.

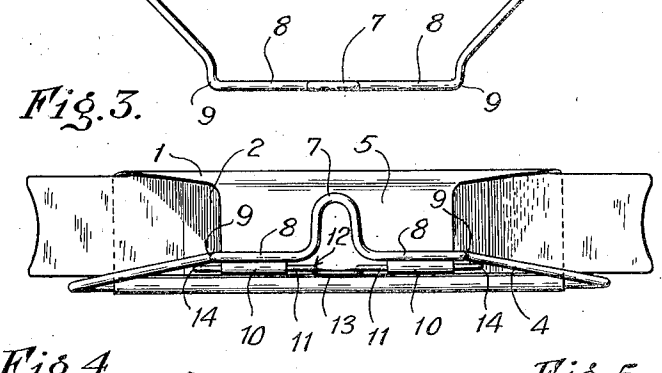


Fig. 4.

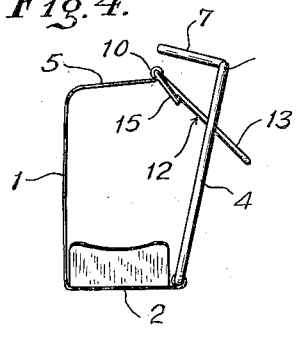
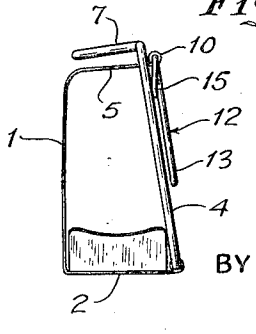


Fig. 5.



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CLIP FOR WRENCH SETS

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Application May 5, 1931, Serial No. 535,155
Renewed August 21, 1934

20 Claims. (Cl. 206—16)

My invention relates to clips for wrench sets.

In shipping wrench sets comprising a series of wrenches of different sizes, it is usual to enclose each set in a clip and thus make a separate package thereof. However, difficulty has been experienced in providing an inexpensive clip which is readily and quickly connectable at the factory when the sets are assembled, which is similarly disconnectable by the user after purchase of the set, and which is also adapted to withstand the rough usage to which the same are subjected before they reach the user, as, for example, throwing into bins or the like, without opening and scattering the wrenches and causing consequent delay and difficulty.

My invention has for its object to provide an improved and inexpensive clip adapted to hold a set of wrenches even when very roughly handled and one which is at the same time readily and quickly connected and disconnected whenever desired. A further object of my invention is to provide an improved clip having improved means for facilitating and expediting the connecting and disconnecting operations and which also, between these operations, serves effectually to prevent opening of the clip and resultant scattering of the wrenches. These and other objects and advantages of my improved construction will, however, hereinafter more fully appear.

In the accompanying drawing I have shown for purposes of illustration one embodiment of my invention.

In the drawing,—

Figure 1 is a side elevation showing my improved clip in closed position upon a wrench set;

Fig. 2 is a side elevation of the clip, the same being shown in open position with my improved holding means shown in full lines in up position and in dotted lines in different released and compressed down positions;

Fig. 3 is a top plan view of my improved clip when in closed position;

Fig. 4 is an end elevation showing the parts in process of closing; and

Fig. 5 is an end elevation of the clip in closed position.

In this illustrative embodiment, I have shown a clip of well known construction comprising a usual body member 1 of sheet metal having a usual spring carrying bottom portion 2 provided with a beaded front edge carrying a pivotally mounted front bail or closure member 4, and with a top portion 5 adapted to overlie the top of the wrenches 6 and in the closed position of the member 4 to underlie a laterally extending handle portion 7 which is formed on the free end 8 of that member between right angled shoulders 9 connecting the end 8 to the rest of the bail; this structure herein being modified and provided with my improvements as hereinafter described.

More particularly, it will be noted that, instead of having a long continuous beaded portion on the front edge of the top portion 5 and merely snapping the end 8 over the same, I herein provide bead portions 10 which, while extending longitudinally to the opposite edges of the top 5 and being provided on the front edge of the latter, are spaced apart along that front edge as shown. Moreover, each of the same forms a journal for a longitudinally extending portion 11 of a resilient holding member 12. As shown, the latter herein also has a depending spring portion 13 compressible to pull the portions 11 longitudinally together in the beads 10 and automatically projecting the same in opposite directions upon release. Also, it will be noted that this member 12 is provided with bent ends on the outer ends of the portions 11 herein providing rounded corners 14 and bent extremities 15 extending angularly inwardly and at an angle of slightly more than forty-five degrees to the portions 11 and also inclined slightly out of plane of the rest of the member 12 as shown in Figure 4. Thus it will be noted that when the portion 13 is compressed into the inner dotted line position shown in Figure 2, its portions 11 are moved together in the beaded portions 10 in such manner as to retract the corners 14 and portions 15, while when released the portion 13 will assume the outer dotted line position shown in Figure 2 and also shown in full lines in Figure 1, and automatically project the portions 14 and 15 into the position illustrated in those figures. It will also be evident that the member 12 will be freely rotatable in the portions 10 between a position wherein it rests on top of the top portion 5 and the position shown in Figure 1.

Considering the operation of the clip it will be noted that when the member 12 is in the full line position shown in Figure 2 or resting flat on the top 5 and the member 4 is in any open position, as, for example, that shown in Figure 2, wrenches may be readily inserted in the member 1 from the side and arranged as shown in Figure 1. When the wrenches are in position, the member 12 is then thrown from its open position refered to, toward the position shown in Figure 4, while the member 4 is moved toward the position shown in Figure 4. With the parts in this position the portion 13 of the member 12, which is then accessible

through the open bail 4, is then compressed into the inner dotted line position shown in Figure 2 in such manner as to draw in its portions 14 and 15, and the member 4 is moved from the position shown in Figure 4 beyond these portions 14 and 15 into the position shown in Figures 1, 3 and 5. More particularly, it will be noted that the shoulders 9 on the bail 4 will pass the corners 14 on the member 12 and that the end 8 of the member 4 will lie in back of the beaded portions 10. Where the portions 14 are not quite sufficiently retracted to enable the shoulders 9 to clear, it will also be noted that the portions 15 provide cam surfaces facilitating the closing operation, while the pressure of the shoulders 9 also acts to press in the shoulders 14. Attention is also directed to the fact that, when the parts are in the position shown in Figure 4, an upward movement of the member 12 toward its position shown in full lines in Figure 2 will then result in a camming movement of the member 4 into closed position. Further, after the member 4 is in closed position, upon release of the portion 13 of the member 12, its portions 14, 15 will, of course, automatically spring out into the holding position shown in Figure 1 and the wrenches and clip will be securely connected together, reverse movement of the member 4 then being prevented. When it is desired to release the clip from the position shown in Figure 1, the member 12 is again compressed into the inner dotted line position shown in Figure 2 whereupon the member 4 is readily pulled back over the portions 10 and the rounded elbows 14 on the portions 11 in such manner as to enable ready release of the portion 4.

As a result of my improved construction it will be noted that the member 12 provides a very quick and conveniently operable holding means readily operable during connection or release of the parts through the open bail, one hand being usable to compress the same and the other to swing the bail. It will also be noted that the member 12 very effectually holds the parts in connected position, the portions 11 then being disposed and held by the spring portion 13 in the path of the vertical portions of the shoulders 9 on the member 4 in such manner as effectually to prevent separation of the parts should the portion 8 tend to ride over the beads 10. It will also be observed that the structure is such as to permit the clip to be applied very quickly in the factory while the same is also adapted to be readily and quickly opened by a user. It is also capable of withstanding very rough usage, the holding member by reason of its resilient character not being liable to breakage, while the same is also so disposed as to be protected. It will further be noted that the structure may be provided without appreciably increasing the cost of the clip. These and other advantages of my improved construction will, however, be clearly apparent to those skilled in the art.

While I have in this application specifically described one embodiment which my invention may assume in practice, it will be understood that the same is shown for purposes of illustration only, and that the invention is not limited thereto but may be modified and embodied in various other forms without departing from its spirit or the scope of the appended claims.

What I claim as new and desire to secure by Letters Patent is: —

1. A clip for wrenches or the like comprising a body, a co-operating closure member thereon, and means carried by one of said elements and adjustable independently of either of the same for moving the elements into closed relation.

2. A clip for wrenches or the like comprising a body, a co-operating closure member therefor pivoted thereon, and means movable on said body relative to said member for moving the latter into closed position.

3. A clip for wrenches or the like comprising a body, a co-operating closure member thereon, and resiliently connected cam means for said member having holding means projectable into the path thereof.

4. A clip for wrenches or the like comprising a body, a co-operating closure member pivoted thereon, and resiliently connected spaced retractile holding means pivoted on said body having portions projectable into engagement with said member.

5. A clip for wrenches or the like comprising a body, a co-operating closure member pivoted thereon, and retractile holding means pivoted on said body having cam carrying ends and projectable into engagement with said closure member.

6. A clip comprising a body, a co-operating swinging closure member thereon, and a compressible member journaled on the top of said body having oppositely projecting portions movable therewith engageable with said closure member.

7. A clip comprising a body, a co-operating swinging closure member thereon, and a compressible member journaled on the top of said body having oppositely projecting portions movable therewith engageable with said closure member and inwardly inclined ends on said portions.

8. A clip comprising a body, a co-operating swinging bail thereon, and cam means on said body engageable by said bail and manually adjustable relative thereto for forcing the latter into closed position on said body.

9. A clip comprising a body, a co-operating swinging bail thereon, and cam means journaled on the top of said body engageable by said bail and manually adjustable relative thereto for forcing the latter into closed position on said body.

10. A clip comprising a body having a catch thereon, a co-operating swinging bail on said body movable over said catch, and cam means journaled on the top of said body engageable by said bail and manually adjustable relative thereto through the latter for forcing the latter over said catch.

11. A clip comprising a body, a co-operating swinging bail thereon, and a swinging cam means for said bail on said body over which said bail is movable toward closed position and operable through the opening in the latter.

12. A clip comprising a body, a co-operating swinging bail thereon, and a swinging adjustable holding member for said bail on said body over which said bail is movable toward closed position and operable through the opening in the latter.

13. A clip comprising a body, a co-operating swinging bail thereon, and a swinging retractile holding member for said bail on said body over which said bail is movable toward closed position and operable through the opening in the latter, said holding member having a compressible projecting portion intermediate its ends and portions reciprocable thereby in the top of said body.

14. A clip comprising a body, a co-operating swinging bail thereon, and a swinging retractile holding member for said bail on said body over

which said bail is movable toward closed position and operable through the opening in the latter, said holding member having a compressible projecting portion intermediate its ends and portions reciprocable thereby in the top of said body and having angularly disposed projecting ends.

15. A clip comprising a body having overlying top and bottom portions, a co-operating bail pivoted on said bottom portion, spaced journals on said top portion, and a holding member having a compressible portion movable between said journals and having retractile portions therein.

16. A clip comprising a body having overlying top and bottom portions, a co-operating bail pivoted on said bottom portion, spaced journals on said top portion, and a holding member having a compressible portion movable between said journals and having retractile portions therein, said last mentioned portions having ends disposed angularly relative thereto.

17. A clip comprisng a body having overlying top and bottom portions, a co-operating bail pivoted on said bottom portion, spaced journals on said top portion, and a holding member having a compressible portion movable between said journals and having retractile portions therein, said last mentioned portions having ends disposed angularly relative thereto and also relative to the plane of said holding member.

18. A clip for wrenches or the like comprisng a body, a cooperating closure member thereon, and cam means carried by one of said elements and adjustable independently of either of the same for moving the elements into closed relation.

19. A clip for wrenches or the like comprising a body, a cooperating closure member therefor pivoted thereon, and cam means movable on said body relative to said member for moving the latter into closed position.

20. A clip for wrenches or the like comprising a body having spaced protruding top and bottom flanges, a cooperating closure member pivoted on said bottom flange, and cam means journaled on said top flange and rotatable thereon to cam said closure member into closed position.

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