July 23, 1929. M. KRISCHER 1,721,960.

LUGGAGE HARDWARE

Filed Dec. 31, 1926

Fig. 1,

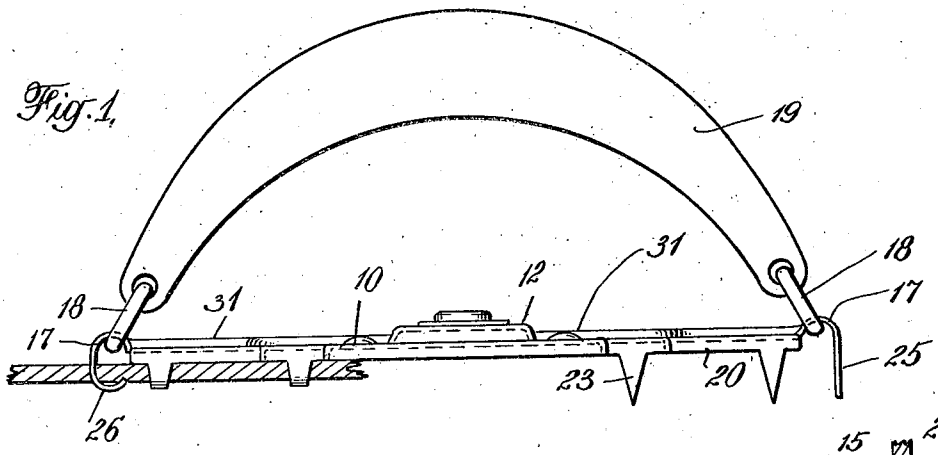


Fig. 2,

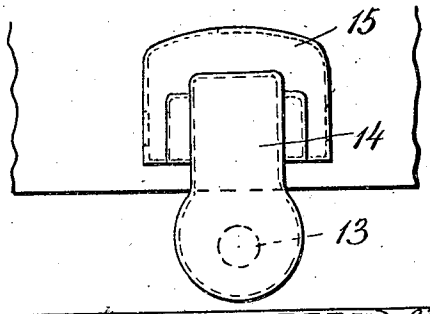
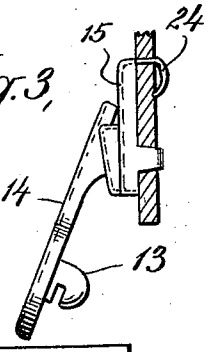


Fig. 3,



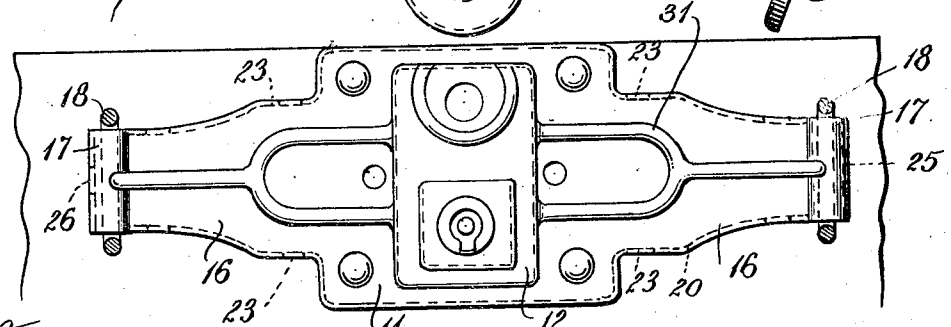


Fig. 5,

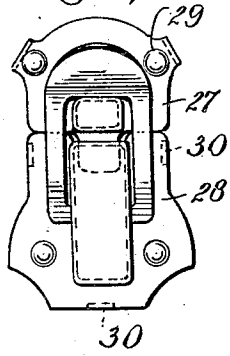


Fig. 6,

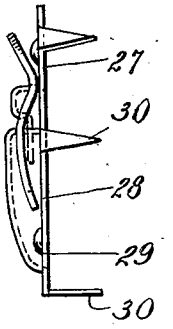
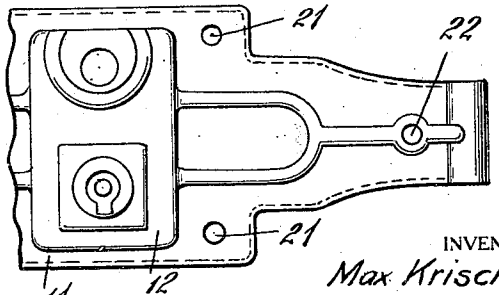


Fig. 4,



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Patented July 23, 1929. 1,721,960

UNITED STATES PATENT OFFICE.

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LUGGAGE HARDWARE.

Application filed December 31, 1926. Serial No. 158,184.

This invention relates to luggage hardware, including locks and snap and bolt catches, and has to do particularly with the provision of articles of hardware which are arranged to be quickly and securely attached to a piece of luggage without the use of the rivets ordinarily employed for the purpose. In addition, the invention includes an article of luggage hardware which carries part of a lock, such as might be used with a suitcase, this piece of hardware likewise including means by which a handle may be attached thereto, so that when this piece of hardware is used the single member takes the place of the ordinary lock element and the two ring members or the like ordinarily used for securing the handle to the luggage.

Luggage hardware as customarily made includes cooperating members placed on the lid and the main body of the piece of luggage, and provided with inter-engaging parts to provide a lock or snap catches to hold the lid in place. These parts frequently include sheet metal plates, each of which carries a part of the fastening device, and these plates are secured to the leather or other material of which the luggage is made by means of rivets. The use of rivets as an attaching means necessitates making openings in the piece of hardware and similar openings are then made in the luggage and after the rivets are inserted through the openings, their ends are upset to attach the hardware in position. These operations consume much time and have to be carried on with great care in order to make an article in first class condition. Usually, the handle for the luggage is attached by means of rings, which are secured to the luggage as separate mountings, one for each end of the handle, and these mountings are frequently provided with leather tabs which are stitched to the piece of luggage, or else other laborious attaching operations have to be performed. The hardware as heretofore employed with luggage consequently adds considerably to the cost of the final product, because of the time and care necessary to secure it in position.

The object of the present invention is to provide luggage hardware which may be quickly attached to the piece of luggage and in addition, to provide a piece of hardware which serves not only to carry a part of a fastening device such as the usual lock, but also provides means for mounting the handle in position. The attaching means provided with the hardware of the present invention includes prongs which extend from the base plate of each piece of hardware and are turned at an angle thereto so that they can be forced into the piece of luggage and then clinched in position. The hardware element which includes one of the lock members has a central body portion on which the lock housing with the other elements of the lock are carried, and this body portion has end extensions which terminate in open loops. The rings of the handle may be engaged with these loops, and the loops are formed so that the force exerted to lift the luggage tends to wedge the handle more securely in position rather than to spring the loops open so that the handle rings may slip loose. In addition, each of the loop extensions may have a prong at its end by which the free end of the loop is secured to the luggage so that this single article provides a lock and a handle mounting which may be mounted in position on the luggage with great facility and at a reduced cost, both for labor and parts. The same type of fastening, that is, the prongs, may likewise be used with the usual snap catches placed at either end of a suitcase, for example, or the bolt catches ordinarily used only with trunks.

For a better understanding of the invention, reference may be had to the accompanying drawings, in which

Fig. 1 shows a view in side elevation and partly in section of a piece of hardware providing part of a lock and also a handle mounting;

Fig. 2 is a plan view showing both parts of the lock with the handle removed from one of the elements;

Fig. 3 is a side view partly in section showing the manner of mounting one portion of the lock to the luggage;

Fig. 4 is a plan view of an article of hardware, providing a handle mounting but arranged to be secured to the luggage by rivets or similar fastening devices; and

Figs. 5 and 6 are plan and side views respectively of a snap catch constructed in accordance with this invention.

Referring now to the drawings, one article of hardware is illustrated at 10 in Fig. 1, this article being formed preferably of a

piece of sheet metal having an enlarged central body portion 11 carrying a part 12 of the lock. This part includes the locking members which engage a tongue 13 carried on a pivoted arm 14 mounted on a plate 15 secured to the lid of a piece of luggage. The member 10 has end extensions 16 of a suitable length to provide mountings for a handle and at each end, each extension is bent upwardly as at 17 to provide a loop with which a ring 18 at one end of a handle 19 may be engaged. It will be observed that when the handle is mounted in position, as illustrated in Fig. 1, the pull of the handle tends to move the rings 18 toward the body portion 11, thus wedging the handle more tightly in position.

The article 10 has downwardly bent flanges 20 along its edges, and when it is to be mounted on the piece of luggage, it is properly centered and then may be secured in position, as for instance, by means of rivets passing through openings 21 formed through the plate and disposed above similar openings in the piece of luggage. Ordinarily the lock of a piece of luggage is held in place by four such rivets placed one at each corner of the plate on which the lock housing is mounted, and the handle mounting may include a leather tab which is stitched to the luggage or else the mounting may include a plate which is secured to the luggage by a pair of rivets. With the arrangement illustrated, in which the handle mounting is formed by means of an extension from the central plate carrying the lock, two of the rivets ordinarily used for the combination of parts are eliminated, since each extension carries a single rivet 22 near its end which will serve the purpose.

Instead of using rivets for securing the piece of hardware in position, I prefer to employ unitary fastening means taking the form of pointed prongs 23 which may be formed as integral extensions from the plate 10 and the end extensions 16, while the plate and its extensions are being shaped from a sheet of metal. These extensions are next bent so as to lie at right angles to the plane of the plate, and when the piece of hardware is secured to the luggage, it is properly centered and then pressure is applied to force the prongs into the leather or other material of which the luggage is made. In this operation, a tool is employed which serves as an anvil and bears against the ends of the prongs after they have pierced the luggage, thereby turning these ends over as indicated at 24 to cause the ends to be clinched to the luggage. Thus the piece of hardware is firmly secured in position, and the operation is much simpler than that of attaching the hardware by the usual rivets. Where the article includes the handle mountings, I prefer to have each open loop 17 terminate in a prong 25 which is forced into the luggage and clinched in position in the usual way, as indicated at 26. This prong thus secures each handle mounting firmly in position and prevents it from being distorted or deformed during use, thereby insuring a rigid mounting for the handle at all times.

This method of securing the hardware in position on the luggage may likewise be employed with members 27 and 28 which constitute a snap catch. These members include base plates of sheet metal, one of which is secured to the luggage lid and the other to the main body of the piece of luggage. These members, instead of being mounted in position by means of rivets placed as indicated at 29, will then have prongs 30 which can be forced into the luggage and clinched as previously described.

Luggage constructed in accordance with this invention affords numerous advantages, because the plate-like members which carry the fastening elements can be provided with prongs by a stamping operation which forms the members from the sheet of metal. These members provided with prongs may then be shipped to the luggage manufacturer with the prongs either lying in the plane of the plate members, or else turned to the position indicated at the right in Fig. 1. The luggage manufacturer is likewise furnished with an anvil tool and the operation of attaching the hardware to the pieces of luggage is relatively simple. When attaching prongs are provided as integral parts of the hardware, great savings are effected in labor, and also in material, since the use of rivets is avoided. The element 10, which provides a combined lock and handle mounting, affords additional savings, not only on account of the simplicity of attaching the handle in place, but also because additional handle mountings are not necessary. This member 10, if desired, may be stiffened by being channeled as indicated at 31 to provide stiffening ribs, and it affords a rigid mounting for the handle which is strong and durable. The hardware of the present invention is preferably made of sheet metal by stamping operations, and the articles may be given any desired finish during their manufacture.

I claim:

1. An article of luggage hardware, which comprises a plate member having an enlarged central portion and end extensions, these extensions being bent to form open loops with the free ends of the extensions lying substantially in the plane of the plate member, a handle having end rings each of which is engaged in one loop, prongs secured to the member and extensions and adapted to be forced into and clinched to the piece of luggage, and stiffening ribs formed in the member and extensions.

2. An article of luggage hardware which comprises a sheet metal plate having an en-

larged central portion with extensions from its opposite ends, the central portion and the extensions being formed with stiffening ribs, terminal loops at the ends of the extensions, each loop terminating in a sharp prong adapted to be forced into the luggage and to be clinched thereto, a handle mounted in the loop portions, and a plurality of sharp prongs extending from the edges of the plate member at intervals and adapted to be forced into the wall of the piece of luggage and clinched thereto for securing the plate member in position.

In testimony whereof I affix my signature.

MAX KRISCHER.