

LUGGAGE HANDLE ASSEMBLY

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Background of the Invention

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The handle used to carry luggage must be comfortable, but also look good and be sturdy enough to withstand the rigors of travel. There are many materials used to make luggage handles. Injection moldable thermoplastics are most preferred since they can be used to economically form versatile, sturdy sculptured shapes. Properly selected injection moldable thermoplastics can be extremely durable and tough. However, they are not necessarily comfortable to the user's hand, especially if they are rigid thermoplastics, nor do such plastics lend themselves to a stylish look since plastic is tactilely and texturally difficult to enhance.

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Accordingly, disclosed is a simple luggage handle assembly that uses very few parts, most of them being injection molded parts. However, the overall assembly results in a comfortable, stylish handle that, because of its few molded parts, is very easy to assemble.

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Summary of the Invention

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Accordingly, the invention comprises a luggage handle assembly that includes a handle and a base for attaching the handle to a surface of a luggage case. The handle itself includes a bail, preferably of injection molded plastic with smoothly curving portions extending down from a grip portion to the base portion. The grip portion is dominated by a flexible vinyl or leather wrap which surrounds the grip portion. The spline consists of an elongated portion and guides that depend down from this elongated portion and penetrate part of the grip wrap and grip portion. The grip portion has a slot

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sized to receive the spline and the spline and its guides are inserted into the slot.

Connected to the slot in the grip portion are guide receivers that fixedly receive the spline guides to hold the spline together with the grip wrap when the spline is fully inserted into the grip portion of the bail. Additionally, the grip portion can include a pad that attaches to the downward facing surface of the grip portion of the bail. This grip pad is held within the surrounding grip wrap when the spline is fully inserted.

Detailed Description of the Invention

Referring to the figures where like reference numerals refer to corresponding structures in each figure, the overall configuration of the luggage handle assembly 1 is shown in perspective in Figure 1. The main structure of the handle is the bail 30 shown preferably as an overall C-shaped loop that has at each of its two terminal ends a pintle 32. The end portions of the handle are shaped to first curve outwardly away from one another, then inwardly such that the pintles extend toward one another. One of the pintles includes a split pintle 34 that receives one end of a torsional spring 40. Torsional spring 40 has an end that bears against an inside wall (not shown) of the base 20 or the adjacent surface of the luggage case to which the base is attached. This torsional spring is pre-biased to hold the bail 30 in a flush, horizontal position against the adjacent side of the luggage case. The grip portion 50 comprises most of the assembled parts of the handle assembly. The outer most portion of the grip comprises a grip wrap 60. This wrap portion is preferably a synthetic leather vinyl material, although it could be made of leather as well. The grip wrap has an overall tubular shape formed by an inwardly facing flush stitched seam 68 along its lower side and an outwardly facing upper stitched seam

62. The tubular shape has a relatively smaller diameter at the end openings, while the central portion has a relatively larger diameter to accommodate the larger diameter of the grip. Notches 64 formed into the upper stitched seam interrupt the stitching to leave openings in positions as will be detailed below. The grip portion also includes the spline 70.

Referring to Figure 4, the bail portion 30 is shown in greater detail here in cross section through its plane of bilateral symmetry. The portion corresponding to the grip portion has an upwardly facing open slot 36 sized to receive the elongated portion 72 of spline 70. Connecting with slot 36 are guide receivers 38 sized to receive the downwardly extending guides 74 with downwardly facing surfaces to permanently receive and be gripped by the corresponding portions of the barbed grippers 76 that parallel each guide 74.

The bail portion 30 is preferably made from an injection molded plastic. Most preferably the bail 30 and the base 20 are both made of ABS injection molded plastic.

The grip portion further includes a pad 80 as shown in Figures 2 and 6. The pad 80 has an upwardly directed protrusion or guide 82 in the middle of its upper surface. The lower surface defines an enlarged gripping contour and a downwardly opening slot 86 extending along the entire length with the lower surface and forming a comfortable contour for the fingers of the user to grip through the vinyl wrap 60. Additional comfort comes from injection molding the pad from a relatively soft polymer, such as a flexible vinyl. This permits the bail portion to be molded from a more structural plastic without compromising the comfort in the grip portion. The pad 80 includes web portions 84 and 84 to interconnect the bulk of the pad 80 across the downwardly facing slot.

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Assembly of the overall handle will now be detailed. First the vinyl or leather handle wrap 60 is formed. This is done simply by cutting out the part from flexible flat stock as required and stitching first the lower seam 68 and then stitching the upper seam 62. The size of the tubular cavity is such that the smaller opening at each end (see Figure 3) can slip over the relatively larger diameter of the central grip portion formed by the assembled bail and pad (See Figure 5.) The notches 64 are formed at positions corresponding to the spline guides 74 and barbs 76 when the wrap is cut from the flat stock. A decorative stitched edge 66 (Figure 1) can also be made around the circular ends, but this should be done preferably after the wrap is cut from flat stock but before forming stitched seams 62 and 68. The grip 80 is adhered to the lower face of the bail 30 and the handle wrap 60 is slid over one of the pintle ends of the bail to place it in position for affixation. This position is such that the lower seam 68 is contained within the slot 86 of pad 80 and the upper slot 62 is positioned above the slot 36 in the bail, with the notches 64 positioned to receive the guides 74 of the spline 70. Once the wrap is positioned, the guides of the spline are inserted into the notches 64 and the spline is pushed down to place the barbed guides 76 in the guide receivers 38. The guides spring inward enough to permit the barbed ends to pass through the portions interconnecting the slots 36 with the receivers 38. Once in position, the guides spring outwardly, thus locking the spline, the wrap and the grip in place.

As seen in Figure 5, the lower stitched seam 68 is trapped in the downwardly facing slot 86 of the pad 80. The upper stitched seam 62 has been pulled deep into the bail slot 36 by the spline 70. Also, note the spline 70 engages the outer surface of the wrap 60 and has moved a substantial portion of the wrap 60 into the slot 86. This has the

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effect of accumulating or using up the excess material making up the wrap 60, causing the wrap to snugly engage the plastic bail 30 over the entire length dimension of the wrap.

The finished handle is remarkably comfortable, durable, and simple to manufacture. The spline 70 is preferably made of a contrasting color injection molded plastic. This color contrast, together with the simply constructed handle wrap, presents a stylish and visually and texturally interesting handle which belays its simple construction. The handle looks remarkably hand-crafted, especially if simple contrast stitching such as stitching 66 along each edge has been included.

Claims

1. A luggage handle assembly comprising a bail, a spline, and a handle wrap, the bail having end portions to attach to a luggage case and a grip portion between the ends, the grip portion has a length dimension, an outside surface, and further including a slot extending along its length dimension which is sized to receive the spline and at least a portion of the handle wrap, the handle wrap having a generally tubular shape sized to surround the grip portion, and the spline is sized to be received in the slot, the spline further includes guides to affix the spline in the slot, wherein the handle wrap engages the outer surface of the grip portion and the slot, and the spline engages the outer surface of the handle wrap, holding it in position in the slot and causing a snug fit between the handle wrap and the grip portion.
2. A luggage handle assembly according to claim 1, wherein the bail has an overall "C" shape having two end portions, each end portion including a pintle sized to engage a base, one of the pintles including a slot sized to receive a torsional spring contained in the base, the spring functioning to bias the bail against a surface of the luggage to which the handle assembly may be affixed.
3. A luggage handle assembly according to Claim 1, wherein the spline includes a flexible barb projecting from a side, the slot is connected to a receiver sized to hold the barb, the barb protrudes through the slot and into the receiver, whereby the spline is firmly held in the slot and the handle wrap is held onto the grip portion by the spline.
4. A luggage handle assembly according to Claim 1, wherein the handle wrap is

made of a flexible material selected from leather or artificial leather.

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5. A luggage handle assembly according to Claim 4, wherein the handle wrap has the overall shape of a tube having a longitudinal dimension similar to the length dimension of the grip portion, the handle wrap has two seams running along the longitudinal dimension, one seam positioned in the slot.
6. A luggage handle assembly according to Claim 5, wherein the spline includes a flexible barb projecting from a side, the slot is connected to a receiver sized to hold the barb, the barb protrudes through the slot and into the receiver, and wherein the one seam has a notch therethrough, the barb passing through the slot.
7. A luggage handle assembly according to Claim 5, wherein the grip portion has a pad having a lower surface defining an enlarged gripping contour and a downwardly opening slot extending along its length dimension, another of the grip wrap seams is positioned within the downwardly opening slot.
8. A luggage handle assembly according to Claim 2 wherein the end portions curve outwardly from the grip, then inwardly towards one another with the pintles projecting towards one another, whereby both pintles can be fixedly received by a single base.