This invention relates to frame structures such as are used in ladies' hang bags, pocket books and the like, and which frames are of the type which consist of pivotally connected frame jaws adapted to be swung from a closed parallel position to an opened angular relation and vice versa.

The present invention is directed to interengageable detent means associated with the jaws adjacent the pivotal connection therebetween, which means cooperatively function when the jaws are opened to retain the same in opened relation and function when said frame jaws are closed to retain the same in closed relation against accidental or unintentional opening movement.

More particularly the invention resides in the provision of a pair of spring detent elements respectively carried by the jaws of a frame structure which are so constructed and arranged as to interact for effecting the final closing of the jaws as the same approach the closed relation and to set up an effective tension to retain the jaws in closed relation against accidental or unintentional opening movement, the spring detent elements also functioning as the jaws are moved to and approach an opened relation to effect the final swinging movement of the jaws to fully opened relation and to then act with each other to retain the jaws opened and to tension the same against closing movement.

As a further feature the invention comprehends interengageable detent means for bag frame jaws which may eliminate the necessity of employing a latch or locking means for holding the jaws in closed relation, but which on the other hand may be utilized with a latch or locking means as a supplement thereto.

Other objects of the invention reside in the provision of detent means of the character set forth which are comparatively simple in construction and mode of operation, which may be inexpensively produced and installed on a bag frame without material alteration to the construction or affecting the appearance of the same.

With the above and other objects in view, the invention is set forth in greater detail in the following specification and illustrated in the accompanying drawings in which:

Fig. 1 is a side view of a bag frame equipped with detent means constructed in accordance with the invention.

Fig. 2 is a sectional view therethrough taken approximately on the line 2—2 of Fig. 1, showing the frame jaws in closed relation.

Fig. 3 is a similar sectional view showing the frame jaws in opened relation.

Fig. 4 is a fragmentary enlarged perspective view illustrating the detent means functioning to retain the frame jaws in closed relation.

Fig. 5 is a similar perspective view illustrating the detent means engaged and holding the frame jaws in opened relation.

Fig. 6 is a side view of a bag frame equipped with a modified form of detent means.

Fig. 7 is a sectional view therethrough taken approximately on the line 7—7 of Fig. 6, illustrating the bag frame jaws in opened relation.

Fig. 8 is a similar sectional view illustrating the bag frame jaws in closed relation.

Referring to the drawings by characters of reference A and B designate respectively a pair of bag frame jaws which are swingably connected by pivots C. While the frame jaws may be of any desired type, the same are herein illustrated as of the channel frame construction each having inner and outer flanges D and E.

The detent means for retaining the frame jaws in opened and closed relation consists of a pair of interengageable elements, designated generally by the reference characters 10 and 11, each of which is fashioned from a length of flat spring material having a straight base portion 12. The base portion 12 of the element 10 is secured by rivets or equivalent fastening means 13 to the inner flange of the jaw A, while the base 12 of the element 11 is secured to the inner flange D of the jaw B by rivets or equivalent fastening means 14.

The elements 10 and 11 are respectively provided with outwardly bowed portions 15 and 16 which project beyond the pivotal connection C of the frame jaws and the bowed portion 16 is formed with a reversely curved terminal 17 while the bowed portion 15 of the element 11 is formed with a rolled extremity 18.

In practice, detent means may be provided on the frame jaws adjacent either or both of the pivotally connected portions thereof. In use and operation when the jaws A and B are in closed relation, as shown in Figs. 2 and 4 of the drawings, the reversely curved terminal 17 of the detent element 10 cooperatively engages with the inwardly rolled extremity 18 of the detent element 11 to retain the jaws in said closed position. This also places the detent elements 10 and 11 under tension to resist the initial swinging movement of the jaws to opened position, thus preventing unintentional or accidental opening of the frame jaws.
When the frame jaws A and B are swung to open position as illustrated in Figs. 3 and 5 of the drawings, the outwardly bowed portions 15 and 16 of the detent elements 10 and 11 nestingly engage with each other to retain the frame jaws in the opened relation, that is, the convex outer surface of the bowed portion 15 snugly fits within the concave surface of the bowed portion 16. The detent elements thus function in this position of the frame jaws to tension the jaws against the initial swinging movement of the same from the fully opened towards the closed relation. It should be further noted that as the frame jaws approach the fully closed or fully opened positions, the detent means due to their inherent resiliency operate to effect the final closing or opening of the jaws.

It is apparent that bag frames equipped with detent means of the type specified may be used without any latch to lock the same in closed relation, but in event it is desired to provide the bag frame with a separate latch means, the detent elements will serve as an auxiliary means for holding the bag frame jaws in closed relation.

From the foregoing it will thus be seen that a highly effective, yet comparatively economical, variable detent means has been provided for bag frame jaws which does not materially add to the expense of the same or alter the general appearance of the bag or frame to which it is attached.

In the form of the invention illustrated in Figs. 6, 7, and 8 of the drawings, a bag frame is illustrated which includes a pair of jaws F and G which may be fashioned of wood, plastic or any other equivalent material and which jaws are swingably connected by pivots H. The detent means in the present form of the invention consists of a pair of flat leaf spring elements 20 and 21 which are suitably secured to the inner confronting faces of the jaws with the terminal portions 22 and 23 thereof protruding beyond the pivoted ends of the jaws. The terminal portions are longitudinally curved to interengage with each other so as to function to retain the jaws in opened relation against accidental or unintentional closing movement when the jaws are swung to open position as shown in Fig. 7. Likewise, the terminals 22 and 23 interengage with each other when the jaws are moved to closed relation, as shown in Fig. 8, to retain the same in said closed position against accidental or unintentional opening movement. Between the opened and closed relations, the terminals 22 and 23 set up a tension which functions as the jaws approach the fully opened or fully closed relation to effect the final relative movement of the jaws.

While the detent means has been illustrated and described as particularly adapted to bag frames, pocket books or the like, it is to be understood that the same may be equally as well employed on cigarette cases, vanity cases or similar box-like structures.

What is claimed is:

1. Detent means for retaining in opened and closed relation the pivotally connected jaws of a bag frame comprising a resilient detent element secured to each jaw adjacent the pivotal connection therebetween, each detent element having an outwardly bowed portion protruding beyond the pivotal connection of the jaws, the bowed portion of one of said elements having a reversely curved terminal and the bowed portion of the other element having an inwardly rolled extremity, said inwardly rolled extremity engaging the other detent element adjacent the reversely curved terminal with the bowed portions of said resilient elements extending outwardly in opposite directions for retaining the frame jaws in closed relation and the bowed portions of said elements interengaging in nested relation with the outer face of one of said bowed portions contacting with the inner face of the bowed portion of the other of said elements and with the bowed portions thereof extending outwardly in the same direction for retaining the frame jaws in opened position.

2. Detent means for retaining in opened and closed position the pivotally connected jaws of a bag frame, comprising a resilient detent element secured to each jaw adjacent the pivotal connection therebetween, each detent element having an outwardly bowed portion which portions are adapted to be disposed in opposed confronting relation when the jaws are in closed position to thereby dispose the free terminals of the bowed portions in tensioned engagement with each other beyond the pivotal connection of the jaws for retaining said jaws in closed position and which bowed portions are adapted to retain the frame jaws in opened position by nesting engagement of the outer convex surface of one bowed portion with the inner concave surface of the other.

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