(No Model.)

C. REINISCH.

HINGE FOR TRAVELING BAGS, &c.

No. 385,138. Patented June 26, 1888.

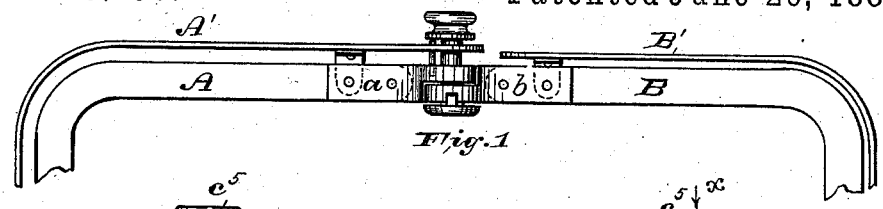

Fig. 1

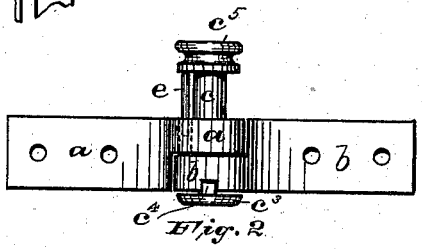

Fig. 2

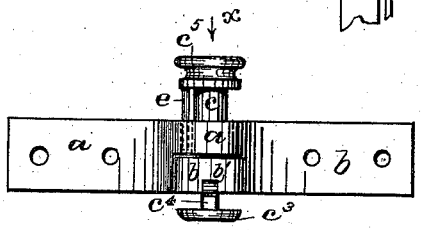

Fig. 3

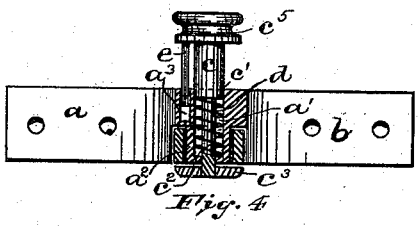

Fig. 4

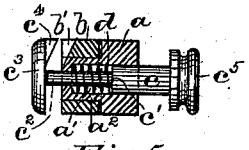

Fig. 5

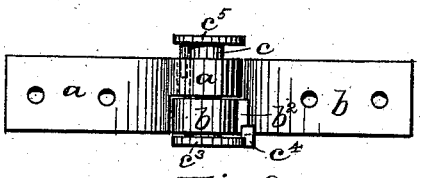

Fig. 6

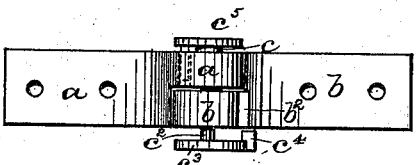

Fig. 7

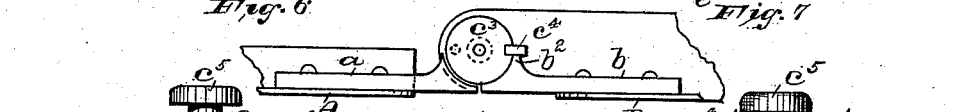

Fig. 8

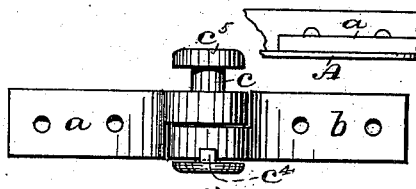

Fig. 9

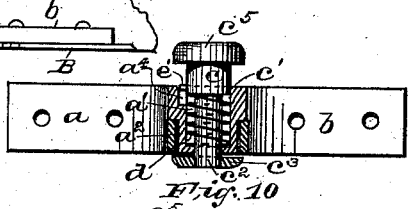

Fig. 10

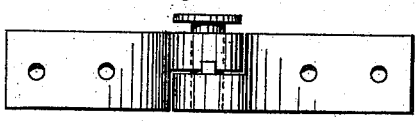

Fig. 11

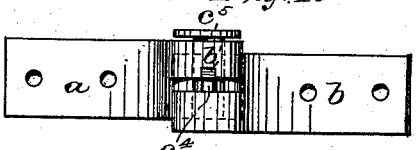

Fig. 12

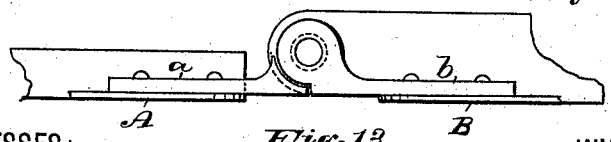

Fig. 13

WITNESSES:

George B. Adams.

Russell Wright.

INVENTOR:

Charles Reinisch,

BY Campbell & Co. ATTYS.

UNITED STATES PATENT OFFICE.

CHARLES REINISCH, OF NEWARK, NEW JERSEY.

HINGE FOR TRAVELING-BAGS, &c.

SPECIFICATION forming part of Letters Patent No. 385,138, dated June 26, 1888.

Application filed November 12, 1887. Serial No. 254,954. (No model.)

To all whom it may concern:

Be it known that I, CHARLES REINISCH, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Hinges; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The purpose of this invention is to secure a strong and serviceable hinge adapted to be used for bag-frames and a variety of other purposes, and further to provide an automatically-operating device at the joint of said hinge, whereby the same may be locked in any desired position, whether entirely open or closed or at any intermediate point.

In the accompanying sheets of drawings, in which similar letters of reference indicate corresponding parts in each of the views, Figure 1 is a plan view of my improved hinge and locking device as used on an "English" frame, a portion of which is shown in an open position. Fig. 2 is a similar view of the hinge and locking device detached from the frame and enlarged, the locking device being in its locked position. Fig. 3 is a view similar to Fig. 2, showing the parts in an unlocked position. Fig. 4 is also a plan view of my improved hinge, but partly in section; and Fig. 5 is a vertical section taken through *x*, Fig. 3. Figs. 6 and 7 are plan views of the invention in a locked and unlocked position, respectively. Fig. 8 is a side elevation of the device shown in Fig. 6. Figs. 9 and 10 are plan views of a slightly-modified construction, the latter view being partly in section. Figs. 11 and 12 are plan views in a locked and unlocked position, respectively, in which the elasticity of the frame is utilized to hold the joint in its locked position; and Fig. 13 is a side elevation of said last-described views.

The invention set forth in the above-described views, as applied to bags or satchels, is in itself a complete joint, and in addition thereto is an automatically-acting locking device, which, when the mouth of the bag is opened, prevents the closing of the bag until the locking device is released. The device is further adapted and designed to lock the joint when the bag is closed, and when in this position prevents the opening of the bag until unlocked.

In said drawings are shown several methods of carrying out my invention.

As indicated in Figs. 1 to 5, inclusive, the hinge consists of the jointed portions *a* and *b*, which are adapted to be riveted or otherwise secured to the ends of the opposite frame-sections, A and B, of the bag. In lieu of the fixed rivet or pin usually employed to connect the hinged portions of the joint together I use, according to the construction shown in said figures—viz., Figs. 1 to 5, inclusive—a sliding pin or rivet, *c*, which moves reciprocally in the direction of its length within and through a chamber, *a'*, in the hinged portion *a* of the joint, and between a shoulder, *c'*, on the pin and the bottom of the chamber *a'*, and around the portion c^2 of the pin or rivet is arranged a spiral spring, *d*, which acts to hold the detent-plate c^3 on one end of the pin against the end of the perforated portion of the part *b* of the hinge. As thus constructed, the hinged portion *a* is provided with the portion a^2, which projects into the perforated end of the portion *b* of the hinge and forms a journal on which said portion *b* turns.

On the detent-plate c^3 is provided a detent or projection, c^4, which, when the parts are in their locked position, projects into or engages with a stop or recess, *b'*, in the perforated end of the portion *b* of the hinge, substantially as indicated in Figs. 1 and 2. The normal tendency of the spring *d* is to force the detent c^4 into the stop *b'*, and when the detent is forced out of the stop by pressure applied against the finger-piece c^5 to permit the hinge to be bent the said spring forces the detent into the stop, when they are returned again in line. In Fig. 2 the locked position of the detent and stop is shown, while in Fig. 3 is illustrated the disengaged position of the same, in which the portions *a* and *b* of the hinge are free to be turned at any desired angle.

In Figs. 6, 7, and 8 is illustrated a slightly-different arrangement of the detent and stop, in which, instead of a recessed stop, a flat surface, b^2, is provided on the portion *b* of the hinge, and the detent, instead of projecting

from the inner face of the plate c^3, juts out from the edge and face of said plate, as is shown more clearly in Fig. 7. The pin or rivet *c* is not intended to turn around, but to turn with the portion *a* of the hinge, and has an independent longitudinal and reciprocal movement only. To cause the said pin or rivet to turn with the portion *a* of the hinge, and at the same time to move freely in the direction of its length, I have devised several constructions, which are shown in the drawings.

In Figs. 1 to 8, inclusive, is illustrated a form in which a pin, *e*, projects from the finger-piece c^5 into a recess, a^3, in the hinge portion *a*, both of which are of the proper length to admit of sufficient longitudinal movement of the rivet *c* without the pin *e* withdrawing entirely from the recess a^3.

As constructed according to Figs. 9 and 10, a pin, *e'*, on the rivet *c* projects into a slot, a^4, opening into the chamber *a'*, and accomplishes the same result.

In lieu of either of these constructions the pin or rivet *c* may be angular in cross-section and the chamber *a'* similarly formed to receive the same.

In Figs. 11, 12, and 13 is illustrated a construction in which the rivet *c* is rigidly secured to the end of the portion *b* of the hinge and slides through the portion *a* and the detent and stop are formed on the inner and contiguous faces of the portions *a* and *b* of the hinge. As thus made, the elasticity of the frame itself holds the stop and detent in locking engagement, as in Fig. 11, and the disengagement thereof is effected by pressing upon or against the finger-piece c^5, as indicated in Fig. 12, which throws the portions *a* and *b* of the joint, and also the frame-sections to which they are secured, out of line, and thereby causes the same to exert a pressure at the joint which, when the detent and stop are turned so as to be in line, throws the same into locking engagement.

As will be understood, the hinge-locking device may be arranged with the finger-piece c^5 either on the outside of the frame and bag, as shown in Fig. 1, or on the inside of the bag, and when constructed and designed to be used to hold open the mouth of the bag is preferably so arranged; but when the locking device is so constructed and intended to lock the joint when the bag is closed as well as when opened, the same is operated from without the bag, the finger-piece being placed on the outside thereof.

When the hinge is intended to be locked when the bag is closed as well as when opened, a second recess or stop, *b'*, is provided diametrically opposite to that which is used to lock the joint when the bag is opened—that is to say, the second stop or recess is so placed that when the hinge is bent to that position which it assumes when the bag is closed the detent enters into holding engagement therewith. It will be understood that the relative or independent position of either or both of said stops or recesses may be varied according to the degree to which the mouth of the bag is held open.

The portion of a bag-frame shown in the drawings is that of what is known as an "English" frame, in which the parts lettered A' and B'—the bends—are held at a distance from the portions or hoop-irons A and B. This construction necessitates an elongation of the pin *c* when the locking device is operated from without the bag, as shown in Fig. 7.

I am aware that many changes may be made from those constructions which have been described and illustrated—as, for instance, the position of the stop and detent may be reversed, and, also, the arrangement and kind of spring employed may be varied where an independent spring is used.

While I have shown the hinge-locking device in connection with an English frame, still it may and is designed to be used with the ordinary sheet-iron bag-frame, or with any frame, or, in fact, with any hinge which it is desirable to lock to prevent the opening or closing thereof, whether applied to a bag or any other purpose—as, for instance, doors, desk-lids, trunks, &c.

The hinge may be secured to the upper side of the hoop-irons A and B, as shown in Fig. 1, or to the under side thereof, with the jointed portion of the hinge projecting up between the ends of the hoop-irons, as will be readily understood.

Having thus described my invention, I desire to claim the following:

1. A bag-hinge consisting of the portion *a*, provided with a chamber, *a'*, and a journal, a^2, at the joint, the portion *b*, encircling said journal and provided with a stop thereon, a locking-pin moving reciprocally through the chamber *a'* and having a detent thereon which engages with the stop on the portion *b*, and a spring arranged and operating to cause the holding engagement of the said stop and detent, for the purposes set forth.

2. The combination, with the frame-sections of a bag, of a hinge therefor consisting of the plates or portions *a* and *b*, secured to said frame-sections, said portion *a* having a chamber, *a'*, and a journal, a^2, the end of the plate *b* being perforated to receive and turn on said journal, and also provided with a recess or stop, *b'*, a spring-actuated locking-pin arranged and moving within and through the chamber *a'* and provided with a lug thereon which engages with the recess or stop *b'*, and a locking device whereby the said locking-pin is prevented from turning within the chamber *a'*, but permits the same to move reciprocally therein, for the purposes set forth.

3. The combination, with a bag-frame, of a bag-hinge consisting of the plates or portions *a* and *b*, adapted to be secured to said frame, said portion *a* having a chamber, *a'*, and a journal, a^2, the portion *b* encircling said journal and provided with a stop thereon, a locking-pin arranged and sliding reciprocally

through said chamber and also projecting and moving through the sides of the bag-frame, for the purposes set forth, said locking-pin being provided on one end with a plate, c^3, having a stop thereon, and a finger-piece, c^5, on the opposite end on the outside of the bag-frame, and a spring arranged and operating to cause the automatic holding engagement of said stop and detent, as set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 10th day of November, 1887.

CHARLES REINISCH.

Witnesses:
FREDK. F. CAMPBELL,
FREDK. C. FRAENTZEL.