No. 676,004. Patented June 11, 1901.

I. KARPEN.

BOX COUCH.

(Application filed May 31, 1900.)

(No Model.) 2 Sheets—Sheet 1.

FIG. 1

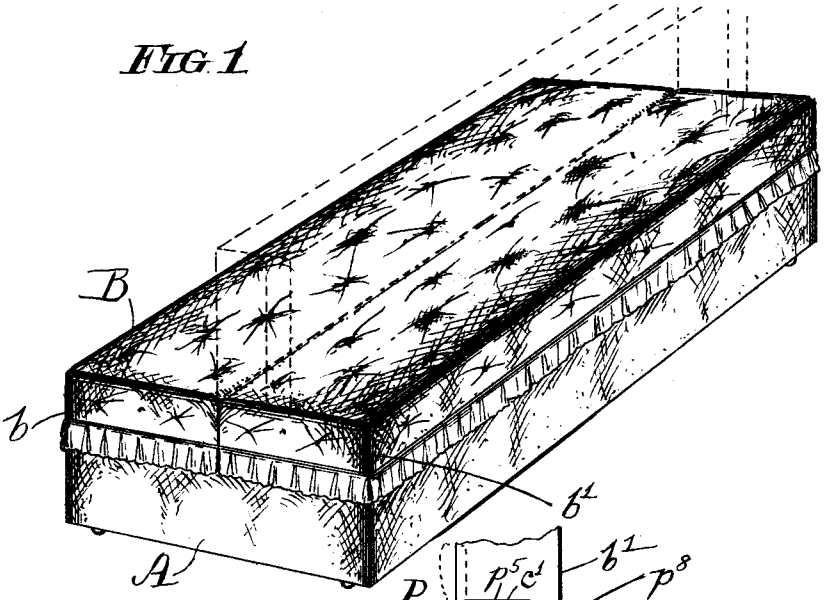


FIG. 2

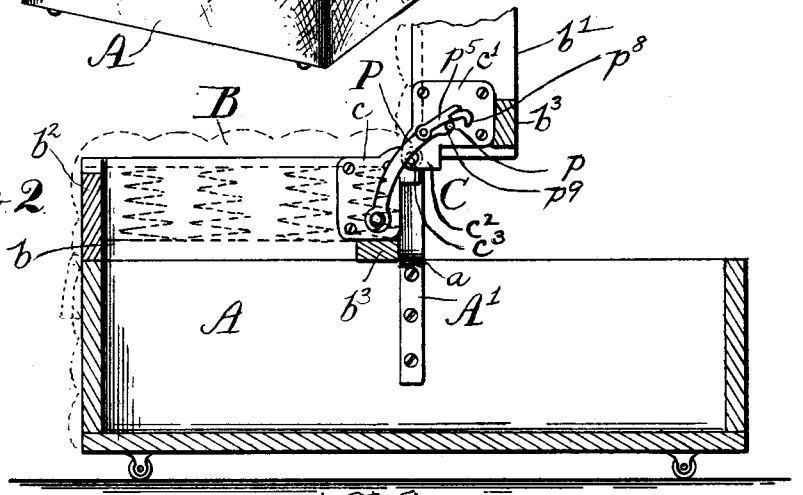
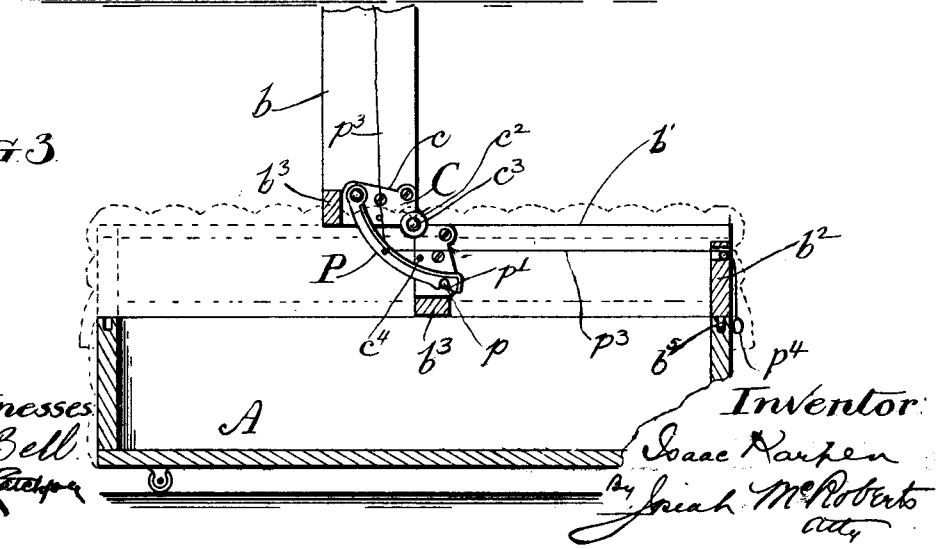


FIG. 3



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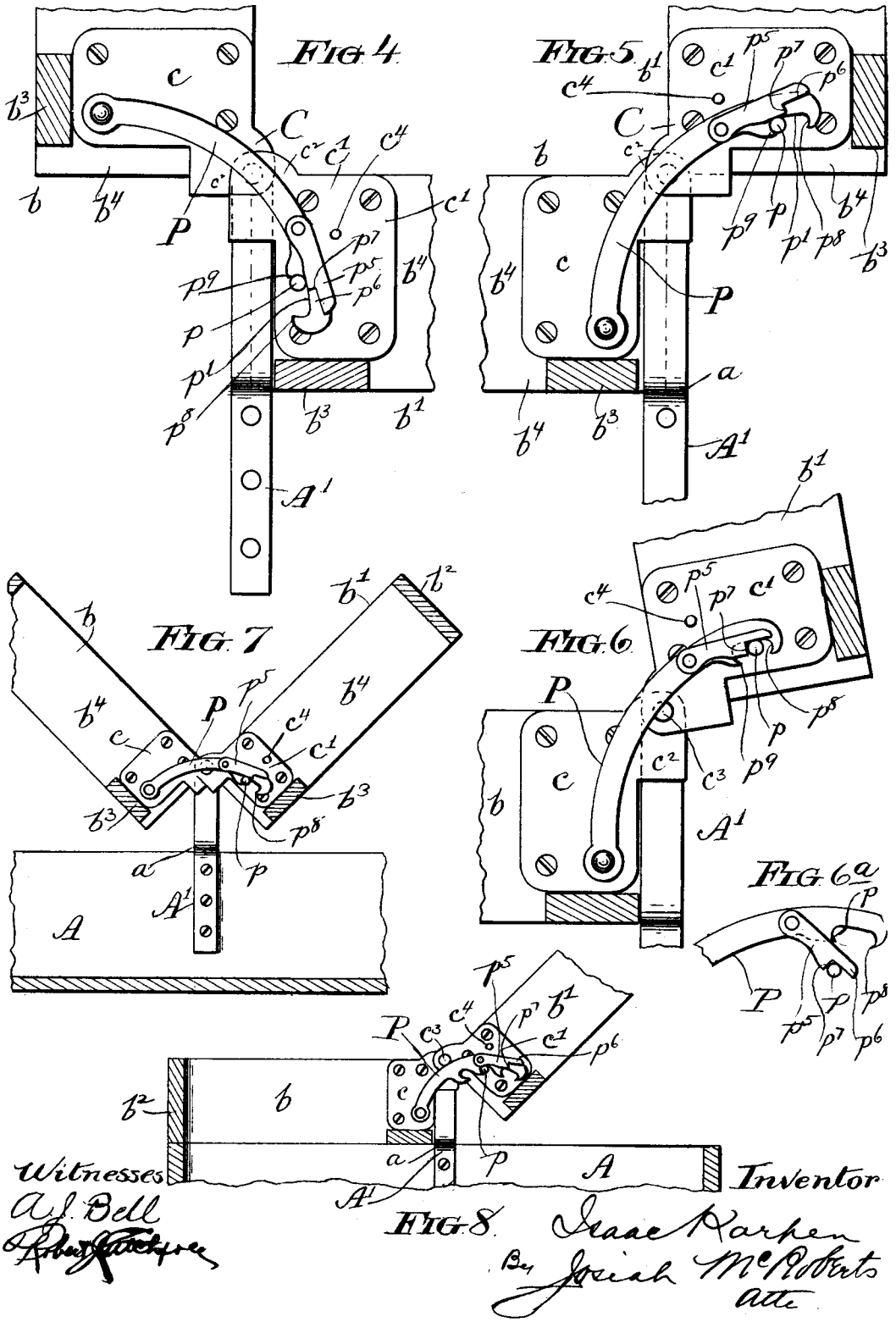
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UNITED STATES PATENT OFFICE.

ISAAC KARPEN, OF CHICAGO, ILLINOIS.

BOX-COUCH.

SPECIFICATION forming part of Letters Patent No. 676,004, dated June 11, 1901.

Application filed May 31, 1900. Serial No. 18,536. (No model.)

To all whom it may concern:

Be it known that I, ISAAC KARPEN, a citizen of the United States, residing at Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Box-Couches, of which the following is a specification.

The invention relates to that class of furniture known as "box-couches," and one object of the invention is to provide a box-couch which may be opened from either side by means of a longitudinally-divided cover.

Another object is to provide a box-couch whose cover is composed of sections which may be independently operated.

Another object is to provide a box-couch whose cover is composed of sections which may be either independently operated or connected to move together.

Another object is to provide a box-couch whose cover is composed of sections so arranged and organized that either section may constitute a back for the other, whereby the box-couch may be converted into a sofa and changed back again at will.

Other objects will be apparent from the following disclosure.

To these ends the invention consists in the novel constructions, arrangements, and organizations of parts recited in the appended claims.

The accompanying drawings, which form a part of this specification, illustrate an embodiment of the invention.

In the drawings, Figure 1 shows a perspective view of a box-couch embodying my invention, one side of the cover being shown raised in dotted lines. Figs. 2 and 3 show cross-sections of the same, each illustrating different mechanism that may be used. Figs. 4, 5, 6, and 6^a illustrate different positions of the cover-sections. Fig. 7 shows the sections connected for movement together. Fig. 8 illustrates a modification showing means that may be used to provide for different inclinations of the sections.

The reference-letter A indicates the base of the box or body couch, which preferably is in the ordinary form of an open-topped box, having suitable side and end pieces and of any desired size or dimensions, preferably of the usual rectangular form. The top or cover is in two sections b and b', each being adapted to be operated independently of the other and each being preferably in the form of a rectangular skeleton frame composed of suitable side pieces b^2 and b^3 and end pieces b^4, the side pieces extending approximately the length of the base and the end pieces together approximately the width thereof, the front side pieces b^2 and the end pieces adapted to rest upon the sides and ends of the base when the sections are lowered. The two sections are hinged to the base or to each other, and any suitable form of hinge may be employed which permits the sections to be independently raised, whereby the couch may be opened from either side. I prefer hinges composed of two members or plates c and c', fixedly secured upon the inner faces of the respective end pieces of the sections of the top at their adjacent corners and having projecting ears c^2, through which pintles c^3 pass. With this form of hinge, as with any other equivalent form, either section of the top may be operated, the box itself or the respective stationary section of the cover, as the case may be, then providing a bearing or support upon which the moving section turns. When the stationary section thus acts as a bearing, it may be held against displacement by any suitable means—such, for example, as pins b^5 upon the front rail engaging the box, or other equivalent means may be employed, if desired, though it is obvious that the stationary section will not be displaced under normal conditions of use. When the box so acts, the hinge is preferably secured thereto as, for example, in the manner hereinafter pointed out.

In the preferred exemplification of my invention suitable means will be provided to maintain the operated section of the top in its raised position. Various means may be employed for this purpose, but the simplest and most efficient device will be a mechanism which shall be common to both sections, so that the same catch or lock may operate on either section. I have illustrated such a device which in the present exemplification of the invention is constituted by a pawl P, which is pivoted to one section and engages at a given angle with a pin p upon the other section. For convenience and economy of construction I prefer to pivot this pawl upon one

of the hinge-sections, as c, and provide the pin p upon the other section, as c', it being of course understood that the best results are obtained by providing such pawl and pin at each end of the couch. The pawl is provided on its lower edge near its free end with a recess or notch p', which is provided with a shoulder p^8, so shaped as to engage its associated pin and limit the relative movement of the sections when either section of the top is raised. For example, as illustrated in Figs. 3 and 4, when the section b is raised the pawl rides up over the pin until the section reaches its vertical or approximately vertical position, when the notch of the pawl engages the pin and the parts are securely held in this open relation to afford access to the interior of the box. Also, as clearly shown in Fig. 5, when the section b' is raised the pin moves outwardly along the pawl and when the parts are in open position engages the recess, as before. By this means either section may be securely locked in its raised or open position, so as to afford access to the couch from either side, and by employing the simple pawl-and-pin arrangement here illustrated an effective device is provided which has the advantage of operating with equal facility upon either section.

In order to disengage the parts, so as to permit either section to drop back into its closed position, any suitable means for disengaging the catch may be employed, whether manual or automatic. For example, when the pin-and-pawl device is employed, they may be manually disengaged by means of cords p^3, attached to the pawls and carried out through the end rails of the sections, preferably at their centers, where the cord on each side is provided with a ring p^4 by which to manipulate it. It is obvious that by this arrangement the catch or lock mechanism may be released from either side of the couch, it being understood that each section is provided with a cord, as shown in Fig. 3. In this construction it is desirable to provide a stop, such as a lug c^4, to prevent the pawls from being thrown too far out of engagement with the pins. The pawls may, however, be automatically released or disengaged from their pins, and for obvious reasons I prefer a construction having this capability. In the present exemplification I provide for this function by small links or dogs p^5, one for each pawl, and which are pivoted near the free ends of the pawls and are provided at their own free ends on their under edges with notches p^6, affording engaging shoulders p^7 to coöperate with the pins p. The recesses or notches p' of the pawls in this case are somewhat elongated and the shoulders p^8 p^9 at their front and rear ends, respectively, are separated accordingly. The relative arrangement of the shoulders p^7 and p^9 is such that the shoulder p^7 lies slightly in advance of the shoulder p^9 or nearer the shoulder p^8. As shown in Fig. 5, when the section b' is raised the shoulders p^9 engage the pins and lock the parts together, so that the raised section is maintained in its open position. When it is desired to drop this section, the operator swings it a trifle farther away from the base and toward the closed section, in order to slightly lessen the angle between the sections. This movement causes the shoulders p^9 to recede from the pins and allows the dogs to drop by reason of their notches or cut-away portions p^6, which then rest upon the pins, as in Fig. 6. A reverse or downward movement of the section b' then causes the pivots of the pawls to again approach the pins p and the shoulders p^7 of the dogs to engage the pins and raise the pawls clear of the pins, as shown in Fig. 6^a, when the section may be closed. Similarly, when the section b is operated, as in Fig. 4, the shoulders p^9 of the dogs engage the pins, when it is raised to a vertical position, and a continued movement of the section releases this engagement and permits the dogs to drop upon the pins, so as to raise the pawls upon a reverse movement of the section, the operation being as before and also as shown in Fig. 6^a. This construction is simple and effective to automatically lock either section in open position and automatically release it again, the two operations taking place by reason of the angular positions and relations of the sections. When the section b' is raised, the dogs remain in operative relation to their pins by reason of the curve of the pawls, which brings the pivot-points of the dogs above or in line with the pins. Otherwise the dogs would be liable to be overthrown.

While the sections may act as a base or support, each for the other when raised to open position, as shown in Fig. 3, I prefer to support them upon fixed mountings attached to the box. I have shown a suitable manner of doing this in Fig. 2, where the pintles of the hinges are supported and carried by the metallic uprights A', which are secured to the ends of the box or base A at the center line thereof and extend some distance above its upper edge. The uprights are slightly curved outwardly at about the top of the box at a, so that the end pieces of the sections of the top shall be in the same plane as the ends of the box. By this construction the uprights afford bearings for the hinges and supports for the sections of the top. When this arrangement is employed, the sections may be locked together and in a partially-open disposition, as shown in Fig. 7. This is accomplished by swinging either section up until it is locked in position by the pins resting against the rear shoulders p^9. A reverse swing then causes the two sections to swing or move together, so that they both may be opened more or less, as in Fig. 7. This is of advantage, as it thereby uncovers the entire top of the box, as for ventilation or other purposes.

It is obvious that as each section may be locked in substantially vertical relation with respect to the other section the couch may

readily and easily be converted into a sofa. Moreover, as either section may be thus manipulated the couch may be thus transformed into a sofa to face in either direction. It is of course understood that the couch is suitably upholstered and may have a spring-top.

The provision of a divided or sectional top is a very great advantage in the practical use of a couch. It enables the couch to be opened from either side, thereby giving more ready access to its interior to remove the materials which are ordinarily stored therein. When the bed materials are removed through the opening afforded by either section, the other section provides a most convenient place to receive them, so that the operator does not have to pitch them on the floor or carry them to a chair in another part of the room while closing the top preparatory to making the couch up as a bed. The weight of the cover is greatly reduced and becomes unnoticeable, which is an important consideration, owing to the fact that upholstered lids or covers are very heavy and difficult to raise and devices having usually been applied to assist in raising them or counterbalance them. The capability of transformation into a sofa adapted to face in either direction and without providing an independent back-section renders the device doubly useful. The locking of the sections together, as in Fig. 7, insures the uncovering of the entire box. The sections being preferably, though not necessarily, hinged at the center of the box enables the cover to be raised without moving the box from the wall, as is often necessary when upholstered box-couches are opened.

It is apparent that the members of the hinges attached to each section constitute its hinges proper, whether they are supported and turn upon the members attached to the other section or upon independent supports. Each section is hinged independently of the other, though for simplicity of construction the hinges have common pintles.

It is apparent that the hinges shown in Fig. 3 may be mounted upon standards, such as A', in which case the pins b^5 may be omitted, or that the hinges shown in Fig. 2 may be employed without the standards in the same manner as in Fig. 3, these hinges being alike in general structure and of any ordinary construction; also, that manual or automatic release devices may be used with either form interchangeably, as desired, and that when automatic means are used the lugs c^4 may be omitted.

The term "hinged" as used herein is intended to cover and refer to any suitable form of hinge, such as those shown, and to include any and all devices by which the hinging and swinging action of the sections of the top may be accomplished, such as when the upholstered pad itself is employed as a pivot, in which case the body of the pad will constitute the leaves of the hinge.

It is further obvious that with any form of hinge the release-dogs here shown may be attached to the frames of the sections in any suitable manner, though a compact and simple construction is effected by assembling the parts as here shown; also, the dogs may have either one recess, as in Figs. 2 and 3, in order to provide a substantially vertical back when the device is converted into a sofa, or they may have a plurality of recesses, as in Fig. 8, whereby either section of the top when providing a sofa-back for the other section may be inclined more or less. In either case manual or automatic release means may be employed. When the particular automatic release mechanism here disclosed is employed, the section affording a sofa-back may be again lowered to closed position by raising it up to lessen the angle between the sections, as above described.

Various other changes may be made in the details of construction without departing from the spirit and scope of my invention, which comprehends, broadly and generically, any organization wherein or whereby the couch may be opened from either side or at either side or by means of a divided or sectional top or cover.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a box-couch, a base, uprights on the base projecting above the same, a top composed of sections hinged to the uprights to swing at their inner sides, and means to hold each section open.

2. A box-couch having a base, a sectional cover, and hinges rigidly connected with the base and common to the sections.

3. An article of furniture comprising an open-top box, uprights projecting above the box, and a seat portion composed of sections hinged to the uprights.

4. An article of furniture having a base in the form of a box, a seat portion composed of hinged frames, and a folding cushion common to the swinging frames.

5. An article of furniture having a box-like base, a seat portion composed of hinged sections, each section comprising a suitably-upholstered frame, and a cushion or pad secured to the sections.

6. A box-couch having a sectional cover and a pair of hinges secured to the body, one at each end and common to the sections.

7. A box-couch having a sectional cover and means common to the sections to hold each in its open position.

8. A box-couch having a sectional cover and a catch common to the sections operating to hold either section at a given angle.

9. A box-couch having a sectional cover and means engaging each section at a given angle and common to the sections to hold them open.

10. A box-couch having a cover composed of sections pivoted at their adjacent sides,

and a catch to lock either section in upright position as a back for the other section.

11. A box-couch having a sectional cover, means to hold the sections open, and mechanism to release the holding means from either side of the base.

12. A box-couch having a sectional cover, a catch for each section when raised, and means to automatically release the catch from its section when the section is moved inwardly.

13. A box-couch having a sectional cover, a catch common to the sections to hold each in its open position, and means to automatically release the catch from either side of the base.

14. A box-couch having a sectional top, a catch common to the sections adapted to automatically lock and unlock either section.

15. A box-couch having a sectional top, a pair of uprights fixed to the body of the couch, hinges supported on the uprights and attached to the sections, a curved pawl on one section having a notch, a pin on the other to engage the notch at a given angle of the sections, and a dog on the pawl adapted to engage the pin when the angle is reduced.

16. A box-couch having a cover composed of sections, means common to the sections to retain either in open position, and a cushion or pad common to the sections.

17. A box-couch having a cover composed of inwardly-swinging sections, a catch common to the sections to retain either in open position, and a cushion or pad common to the sections.

18. A box-couch having a cover composed of rectangular frames extending longitudinally of the body and hinged at the point of division, springwork on each frame, and an upholstered pad or cover common to the frames.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ISAAC KARPEN.

Witnesses:
JULIUS KARPEN,
JOSIAH MCROBERTS.