

Aug. 8, 1933.

G. F. COUCH

1,922,016

JOURNAL BOX

Filed Nov. 20, 1930

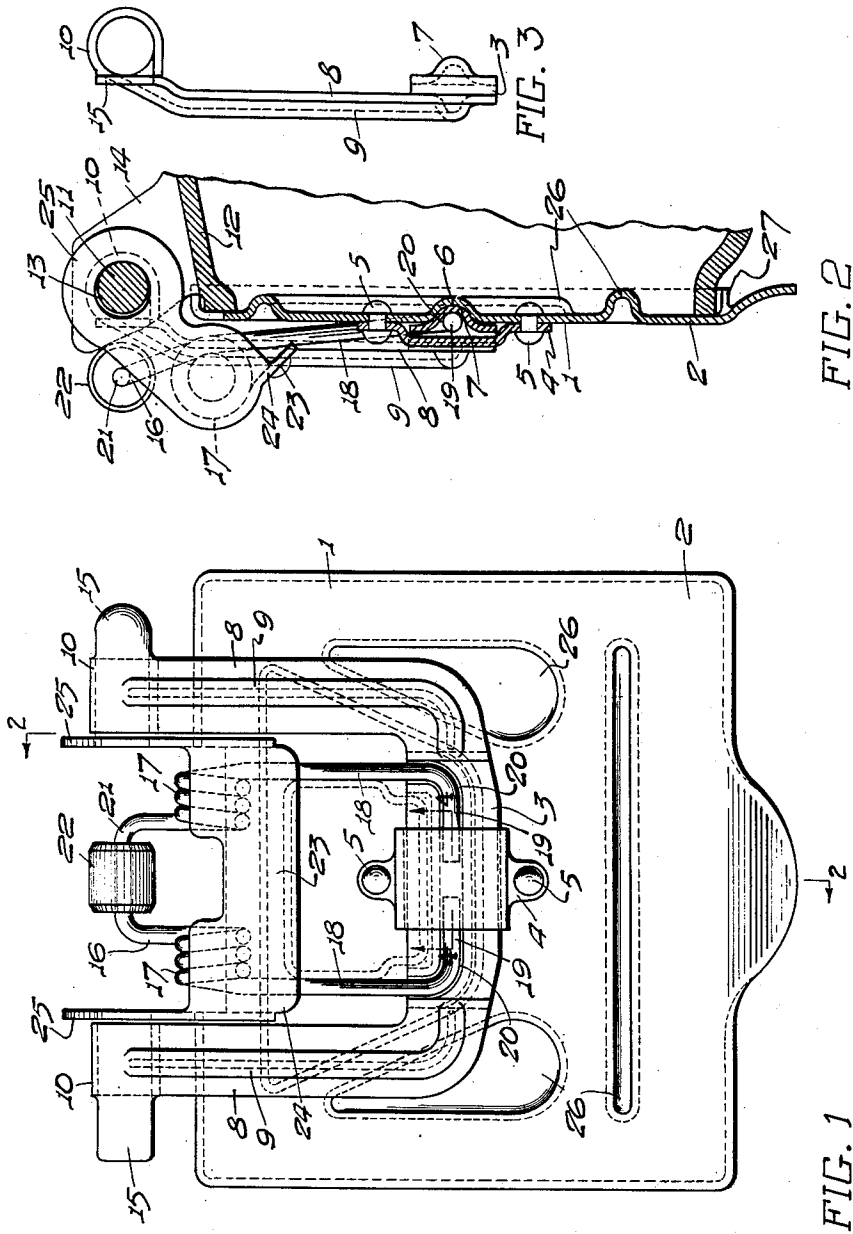


FIG. 1

FIG. 2

FIG. 3

FIG. 4

Inventor

Glenn F. Couch

By *Ernest S. Wecklin*  
Attorney

# UNITED STATES PATENT OFFICE

1,922,016

## JOURNAL BOX

Glenn F. Couch, Rochester, N. Y., assignor to The  
Symington Company, New York, N. Y., a Cor-  
poration of Maryland

Application November 20, 1930  
Serial No. 497,037

8 Claims. (Cl. 308—47)

This invention relates to journal boxes and, more particularly, to lids therefor and means for pivotally mounting said lids on said boxes.

The principal object of my invention, generally considered, is to provide a three-piece lid allowing free equalization with respect to an associated box, said lid involving a closure member, a loop member movably connected to the central portion of said closure member and carrying hinging ears or scrolls, and a spring retainer, tensioning member or stirrup adapted to engage the intermediate or coil portions of a torsion spring for holding the spring in stressed position in engagement with the hinge lug of an associated box.

Another object of my invention is to provide a preferably pressed steel journal box lid which is adapted to be so equalized with respect to an associated box that the edge thereof engages the outer opening in said box around the full periphery thereof to securely close said opening.

A further object of my invention is the provision of a journal box lid comprising a closure member, a loop member carrying scrolls or hinging ears and flexibly attached to said closure member, a torsion spring with the lower ends attached to said closure member preferably by the same means which connect the loop member to the closure member, and means for stressing said spring so that it acts to hold the lid in open or closed position with respect to an associated box.

Other objects and advantages of the invention relating to the particular arrangement and construction of the various parts will become apparent as the description proceeds.

Referring to the drawing illustrating my invention, the scope whereof is defined by the appended claims:—

Figure 1 is a front elevation of one embodiment of my journal box lid.

Figure 2 is a transverse sectional view on the line 2—2 of Figure 1, looking in the direction of the arrows.

Figure 3 is a side elevation of the loop or hinging member for the lid.

Figure 4 is a fragmentary sectional view on the line 4—4 of Figure 1, looking in the direction of the arrows.

Referring to the drawing in detail, like parts being designated by like reference characters, I have shown the invention in connection with a pressed metal lid mounted on a standard journal box, although it will be understood that I

do not wish to be limited to this showing. The lid assembly 1 comprises a closure member or lid proper 2 and a loop or generally U-shaped connecting member 3 flexibly attached to the outer face of the lid proper 2 by means of a strap or retainer plate 4 and rivets or other connecting means 5. The outer face of the lid proper or closure member 2 is desirably inwardly embossed or depressed, as indicated at 6, to receive a corresponding portion 7 on the loop member 3 to provide for a limited amount of swivelling or equalizing therebetween, the necessary clearance for that purpose being provided between the connecting member 4 and the outer face of the loop member 3.

The loop or U-shaped member 3 has upwardly extending arms 8 and is desirably of pressed metal to correspond with the construction of the closure member, longitudinal corrugations 9 being desirably formed for stiffening purposes. The upper ends of the arms 8 are provided with hinging ears or scrolls 10 which may closely embrace or be mounted on the pivot pin or pintle 11, which thereby serves for connecting the lid assembly to the box 12 as by passing through a corresponding aperture 13 in a hinge lug 14 on the roof of said box. In order to retain the pivot pin in place, the loop member 3 may be provided with bendable tabs 15 adapted to be moved to locking position overlying the ends of the pin 11. The hinging ears or loops 10 may be made circular to closely fit the hinge pin 11, because with the loop member 3 articulated or flexibly connected to the lid, it is unnecessary to provide for equalizing between the scrolls or hinging ears 10 and the hinge pin 11.

The lid assembly 1 is provided with a preferably torsion spring 16 for holding it in open or closed position with respect to the box 12. The spring 16 is shown with intermediate coil portions 17 and depending end portions 18, which end portions preferably have their extreme lower ends turned toward one another, as indicated at 19, and underlying the plate or retaining strap 4, so that said retaining member serves for holding the lower ends of the spring as well as the loop member in position with respect to the closure member 2. The in-turned portions 19 of the spring desirably seat in the corresponding corrugations or depressions 20 in the loop member. The upper portion of the spring 16 comprises a loop 21 which may engage the hinge lug 14 or carry an anti-friction device or roller 22 thereon, which normally engages the hinge lug for holding said lid in open or closed position, in a manner which will be understood.

For placing the spring 16 under the desired tension, so as to make it operative for the purpose, a retainer, tensioning member or stirrup 23 is provided, and comprises a plate or retainer portion 5 24 desirably shaped to fit the outer portion of the spring coils 17 and formed with upwardly extending apertured arms 25 receiving and being supported by the hinge pin 11. The retainer being mounted on the pin 11 independently of the lid proper or hinging loop for said lid proper, 10 may be forced into operative position over the coils 17 of the spring when the lid is in closed position, so that the spring will exert its pressure at the center of the lid in such a manner that the lid will seat itself evenly on the top, bottom and 15 sides of the box face even though the relation of the hinge pin to said lid is not entirely accurate, the necessary equalizing movement being provided by the flexible mounting between the loop member 3 and lid 2, and the natural resiliency in the arms 3 of said loop member.

From the foregoing, it will be seen that I have devised a lid which is so flexibly mounted on an associated journal box that it is adapted to equalize when pressed into engagement with the periphery of the journal box around the front opening therein to thereby seat securely with respect to said box.

Although I have shown a lid of pressed construction and formed with stiffening corrugations 26 and a peripheral flange 27, it will be understood that the lid proper, as well as the other parts, may, if desired, be formed in other ways than by pressing sheet metal and that I may, if desired, make my lid and the associated parts as castings.

Although I have disclosed a preferred embodiment of my invention, it will be understood that modifications may be made within the spirit and scope of the appended claims.

I claim:—

1. In combination, a journal box having a hinge lug and a lid assembly carried thereby, said assembly comprising a lid proper, a loop member engaging the outer face of the lid and carrying hinging ears for pivotally mounting said assembly on the lug, a lid closing spring at one end operatively engaging the outer face of the loop member and at the other end engaging the lug, and tensioning means pivotally connected to said lug and engaging an intermediate portion of said spring.

2. In combination with a journal box having a hinge lug, a journal box lid assembly comprising a closure member, a loop member engaging the outer face of said closure member and carrying hinging ears, pivotal means extending through said ears and lug for pivotally mounting said lid with respect to said box, a lid-closing spring at one end operatively engaging the outer face of the loop member and at the other end normally engaging the lug, and tensioning means mounted on said pivotal means and engaging an intermediate portion of said spring.

3. In combination, a journal box having a hinge lug and a lid assembly carried thereby, said assembly comprising a closure member, a loop member carrying hinging ears, a pivot pin extending through said hinging ears and hinge lug for pivotally mounting said lid assembly, a spring with one end engaging the outer face of the loop member and the other end engaging the lug, means for connecting said loop member and the

adjacent end of the spring to the outer face of said lid, and a tensioning member pivotally mounted on said pin and adapted to engage intermediate portions of said spring for holding it in stressed position.

4. In combination, a journal box having a hinge lug and a lid assembly carried thereby, said assembly comprising a closure member, a loop member movably connected to the outer face of the closure member and carrying scrolls extending beyond the upper edge thereof, a pivot pin extending through said scrolls and lug for pivotally connecting said lid to the box, a torsion spring involving intermediate coils and downwardly extending end portions connected to an intermediate portion of said loop member, an upper portion normally acting on said hinge lug for holding the lid in open or closed position, and a stirrup member with arms mounted on said pivot pin and an intermediate portion engaging the coils of the spring for holding said spring in stressed position.

5. In a journal box lid, in combination, a closure member and a generally U-shaped member carrying hinging ears at its ends and flexibly connected to said closure member adjacent an intermediate portion thereof by means of a plate bridging an intermediate portion of said U-shaped member and with end portions connected to said closure member, whereby equalization of the lid with respect to an associated box is permitted.

6. In a journal box lid, in combination, a closure member, a loop member movably connected to the central portion of said closure member, the ends of said loop member forming hinging ears for connection with an associated journal box, a spring connected to said loop member and closure member, and a spring retainer, separate from said closure member, normally overlying intermediate portions of said spring for holding the same in stressed position and provided with end portions adapted for pivotal connection to the hinge lug of an associated journal box.

7. A journal box lid comprising a closure member, a loop member normally engaging the outer face of the closure member and carrying hinging ears for pivotally mounting said lid with respect to an associated box, a lid closing spring operatively engaging the outer face of the loop member at one end, and tensioning means adapted to engage intermediate portions of said spring and hold the same in operative engagement with the hinge lug of an associated journal box.

8. A journal box lid comprising a closure member with an inwardly depressed portion on its front face, a loop member with a complementary portion fitting the depressed portion in the front face of said lid and carrying scrolls normally extending beyond the upper edge of said lid to serve as hinging ears, a torsion spring involving intermediate coils and downwardly extending end portions fitting in depressed portions in the outer face of said loop member, means connected to the outer face of said lid and overlying the ends of said spring and said loop member for connecting the parts to the outer face of said closure member, and a spring retainer with arms adapted for pivotal mounting on an associated journal box and an intermediate portion adapted to engage the coils of said spring for holding said spring in stressed position.

GLENN F. COUCH.