March 8, 1966 W. D. SEIBEL 3,239,175

CONTAINER CLAMP

Filed March 18, 1964 2 Sheets-Sheet 1

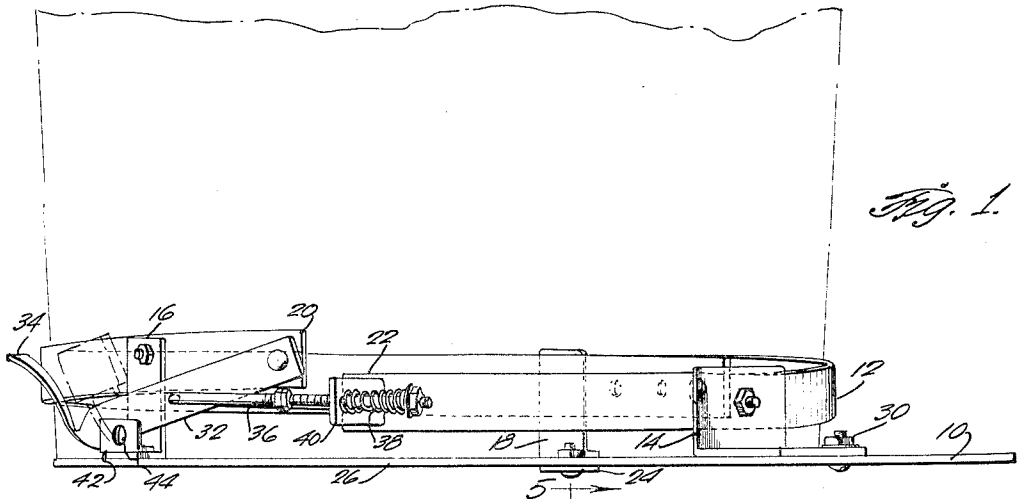


Fig. 1.

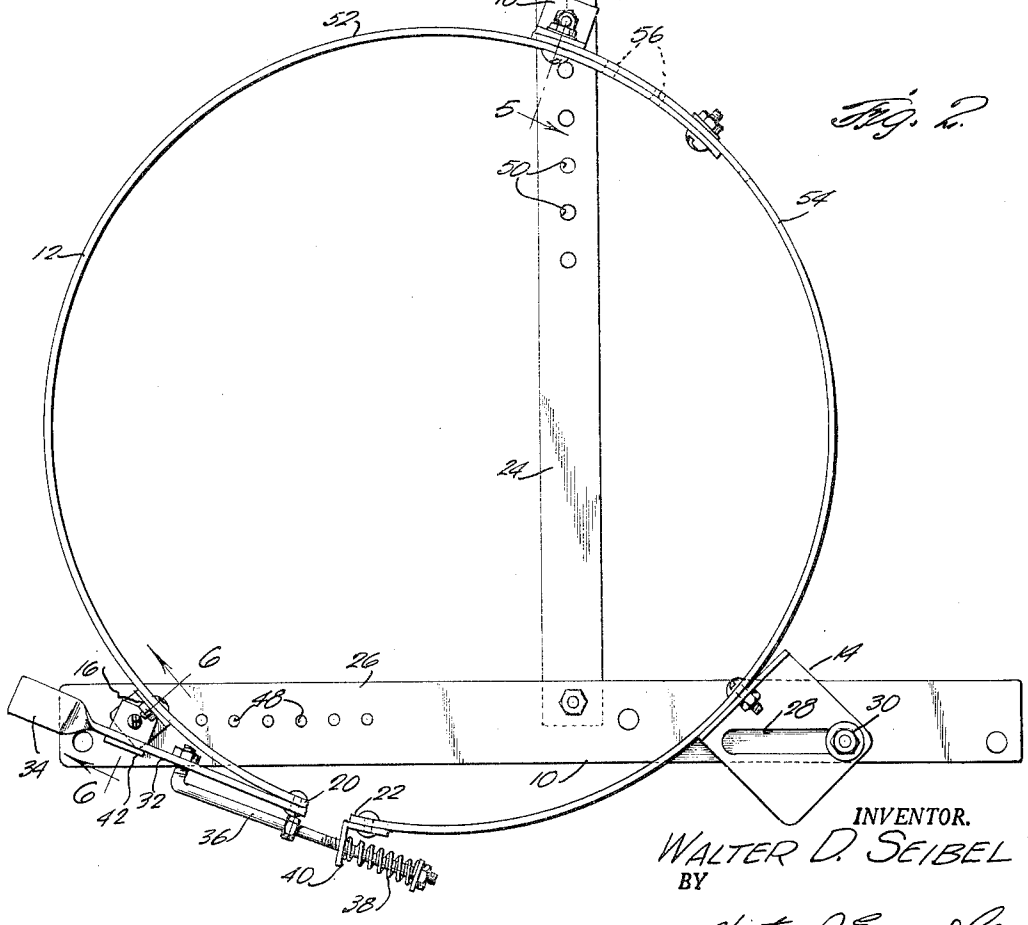


Fig. 2.

INVENTOR.
WALTER D. SEIBEL
BY
Victor J. Evans & Co.
Attorneys

March 8, 1966 W. D. SEIBEL 3,239,175

CONTAINER CLAMP

Filed March 18, 1964 2 Sheets-Sheet 2

Fig. 5.

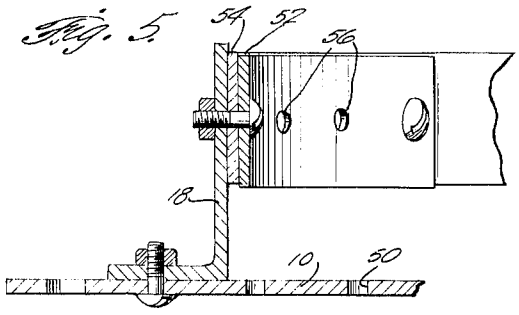


Fig. 6.

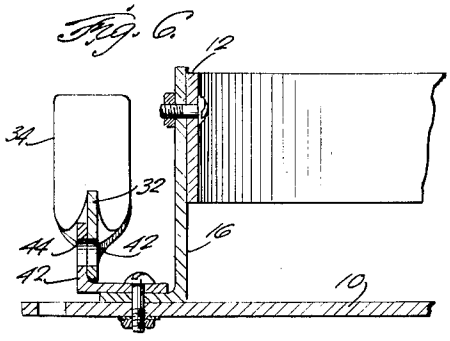
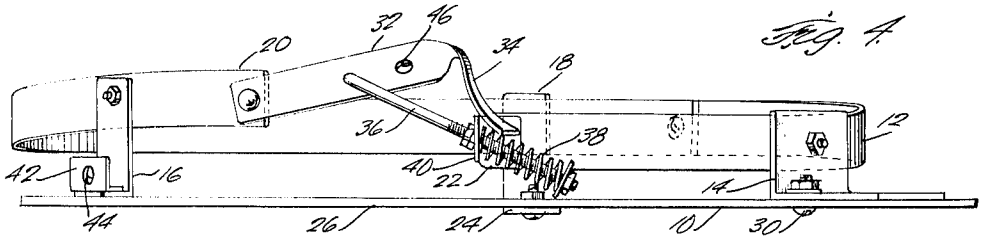


Fig. 4.



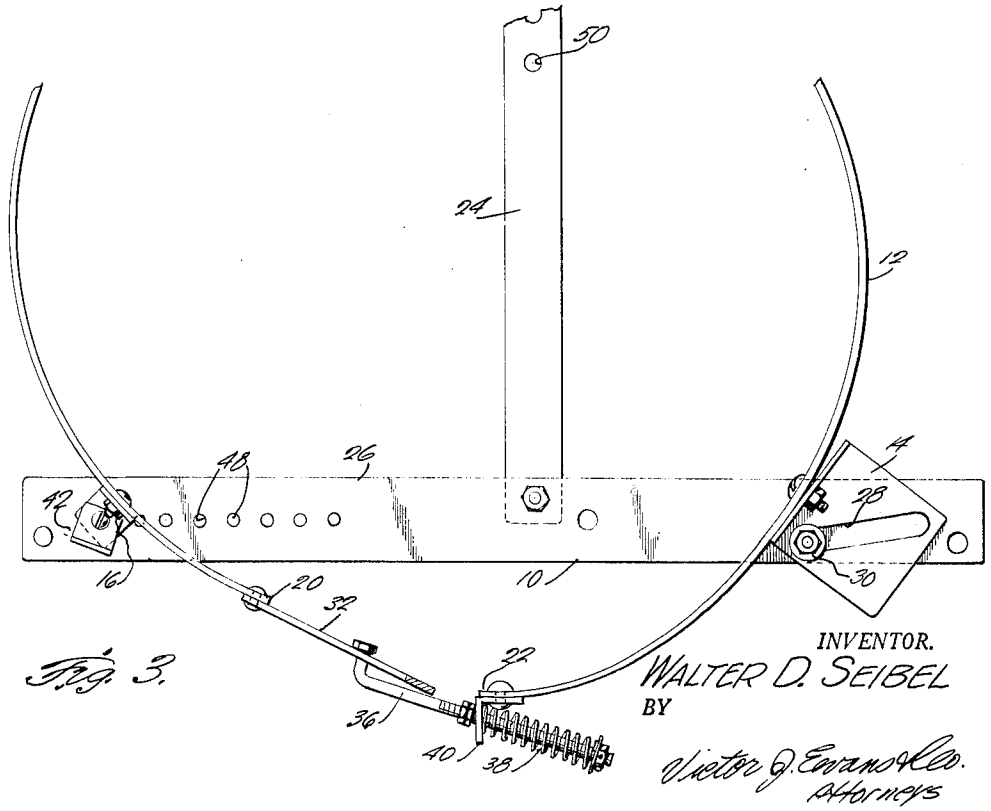


Fig. 3.

INVENTOR.
WALTER D. SEIBEL
BY
Victor J. Evans & Co.
Attorneys

United States Patent Office 3,239,175 Patented Mar. 8, 1966

3,239,175

CONTAINER CLAMP

Walter D. Seibel, Rte. 3, Caldwell, Idaho

Filed Mar. 18, 1964, Ser. No. 352,753
2 Claims. (Cl. 248—154)

This invention relates generally to a container clamp and more particularly to a clamp for retaining cans, oil drums, barrels, and other similar structures in an upright or vertical position.

It is a primary consideration in the handling of cylindrical containers to maintain them in an upright or vertical position when it is not desired to empty the contents therefrom. A particular problem exists with garbage cans being overturned by domestic animals and the forces of nature. Oil drums and other similar containers, particularly when partially empty, also are easily turned over by various forces. It is, of course, desired to retain such objects in their normal upright positions, so that their contents will not be emptied or lost. Furthermore, overturning such containers may result in their being damaged and rendered unusable.

Prior art structures for supporting cylindrical containers do not contain simple locking mechanisms. While some prior art mechanisms do not provide positive locking action to a container, others include complex locking structures which are difficult to manipulate. Furthermore, such prior articles do not provide for adjustability in their structures for adaptation to various sizes of containers. Furthermore, these prior articles do not provide for rigid support to the ground while allowing circulation of air between and under the containers.

It is, therefore, a primary object of this invention to provide a container clamp which has positive locking action to an article held thereby.

It is another primary object of this invention to provide a container clamp which is simple in construction and in operation.

Another object of this invention is to provide a container clamp which is adjustable to various sizes of containers.

Still another object of this invention is to provide a container clamp which allows free circulation of air to all parts of the container.

It is another object of this invention to provide a container clamp which secures a container rigidly to the ground.

Another object of this invention is to provide a container clamp which is easily and quickly operated to provide the clamping action and to release a container therefrom.

These and other objects will be more fully realized from the novel structure of this invention which includes a base member disposed for connection to the ground, a resilient band secured at one portion to the base member and slidably mounted at another portion thereof to the base member, and an actuation lever connected at one end of the band. A biasing member is connected between the other end of the band and the actuated lever for locking the lever in clamped position and tightening the band about a container.

The invention, however, will be more fully realized and understood from the following detailed description when taken in conjunction with the accompanying drawings wherein:

FIGURE 1 is a side view of the invention shown in locked position and illustrating a container held therein in phantom lines;

FIGURE 2 is a top view of the invention shown in FIGURE 1;

FIGURE 3 is a top view of the invention showing the structure in unlocked position;

FIGURE 4 is a top view of the invention shown in FIGURE 3;

FIGURE 5 is a sectional view taken along lines 5—5 of FIGURE 2 and illustrating one mounting structure; and

FIGURE 6 is a sectional view taken along lines 6—6 of FIGURE 2 and illustrating the locking structure associated with another mount.

Like reference numerals throughout the various views of the drawings designate the same or similar structures.

With reference to FIGURE 1, there is shown therein a side view of the invention in a locked position. A base member **10** supports a resilient band **12** by means of a movable mount **14** and fixed mounts **16** and **18**. Each of mounts **14**, **16** and **18**, retain the band at different distances from the base member. That is, mount **14** holds band **12** in close relationship to the base member, mount **18** holds the band at a still further distance therefrom, and mount **16** holds the band at a still greater distance. These differences in position allow an end **20** of the band to be positioned at a greater distance from base than an end **22** thereof. This displacement provides for the simple locking action which will be hereafter more fully described.

Base member **10**, as shown in FIGURE 2 is preferably formed in the shape of a T consisting of arms **24** and **26** to allow free circulation of air. Mount **14** includes a slot **28** for providing slidable movement with respect to base **10** on a bolt **30**. An actuating lever **32** is pivotally mounted at one end thereof on end **20**. Lever **32** includes a pedal portion **34** for providing the clamping and unclamping action to the structure of the invention. A bolt **36** is secured to lever **32** at a mid point thereof and acts as a biasing member with respect thereto and with the end **22** by means of a spring **38**. An angle **40** is connected to end **22** and loosely receives bolt **36** in a hole therein. Spring **38** acts on angle **40** to provide the biasing action of end **22** towards end **20** when lever **32** is rotated in a counterclockwise direction.

As shown in FIGURE 1, as lever **32** is pivoted about the end **20**, the ends **20** and **22** will move away from one another. As lever **32** is pivoted from the unclamped position of band **12** as shown in FIGURES 3 and 4, to the clamped position, ends **20** and **22** will be forced toward one another and a maximum clamping action results when the lever is in line with bolt **36**. However, as lever **32** is rotated still further in the direction of mount **16**, spring **38** biases the lever to cause it to remain in such position until a force is directed to rotate the lever in a clockwise direction.

The position of the elements shown in FIGURE 3 is that of not providing a clamping action to a container. As shown therein, mount **14**, is disposed with the slot **28** thereof in one extreme position with respect to bolt **30**. Ends **20** and **22** of the band are disposed in spaced relationship to one another, since lever **32** is pivoted to allow bolt **36** to release tension on spring **38**. Lever **32** is shown herein in broken section with the pedal **34** not shown to better illustrate the relative position thereof with bolt **36**. This position is better illustrated in FIGURE 4 wherein it can be seen that lever **32** is angularly disposed with respect to bolt **36** when the elements are in an unclamped position. As lever **32** is moved in a counterclockwise position direction, it can be seen that ends **20** and **22** are forced or biased towards one another until lever **32** is in alignment with bolt **36**. Further counterclockwise rotation of the lever places it in engagement with an angle **42** on mount **16**. This angle acts as a stopping means for the lever and includes a hole **44** which is disposed for alignment with a hole **46** in the lever when the lever is in an extreme counterclockwise position. When holes **44** and **46** are in alignment a lock, shown in

phantom lines in FIGURE 1, may be inserted therein for restricting undesired unclamping of the mechanism. Since the lever **32** is rotated beyond a point of alignment with bolt **36** in its counterclockwise rotation, spring **38** acts to bias the lever against angle **42**, thereby locking the mechanism in its clamping action. The entire structure is easily adaptable to various sizes of containers by the provision of mounting holes located at various positions in the base **10** and on the band **12**. Holes **48** on arm **26** allow mount **16** to be moved therealong and holes **50** on arm **24** allow for mount **18** to be moved therealong. Since movement of mount **16** and **18** will reduce the required diameter of band **12**, it is provided in two sections, **52** and **54**. A plurality of holes are disposed in each section for alignment with one another such that the diameter of band **12** can be reduced by changing the relative positions of section **52** with respect to section **54**. This structure is better illustrated in FIGURE 5 wherein it can be seen that section **52** can be moved with respect to section **54**. FIGURE 6 illustrates the relative position of lever **32** with respect to angle **42** and mount **16** in its locked position.

The operation of the novel structure of the present invention is as follows: When the elements are in the positions shown in FIGURES 3 and 4, the unclamped position, a container may be placed within the band **12** and onto the base **10**. Lever **32** is rotated in a counterclockwise direction causing the bolt **36** and the spring **38** to exert a tension on end **22**. As end **22** is moved towards end **20**, mounting plate **14** is moved with respect to base **10** from the position as shown in FIGURE 3 to the position as shown in FIGURE 2. When lever **32** is in line with bolt **36**, maximum clamping action is produced by the band **12** on a container as lever **32** is rotated still further in the counterclockwise direction bolt **36** and spring **38** tend to force the lever towards plate **42**. Since the lever cannot move beyond angle **42**, it is locked thereby and biased to remain in such position until another force is exerted to direct it in a clockwise direction.

It can now be seen that the difference in the respective distances of ends **22** and **20** from plate **10** causes this locking action to be more effective. If ends **20** and **22** were the same distance from base **10**, the biasing action of lever **32** and bolt **36** and spring **38** would not be as effective. That is, if the ends were disposed at the same distance from the base, lever **32** could not be moved substantially beyond a line of alignment with bolt **36** and positive biasing would not result.

The principles of the invention explained in connection with the specific exemplification thereon will suggest many other applications and modifications of the same. It is accordingly desired that, in construing the breadth of the appended claims they shall not be limited to the specific details shown and described in connection with the exemplification thereof.

What is claimed is:

1. A can holder comprising a T-shaped base member for supporting said can, a resilient band having a portion thereof rigidly secured to said base and another portion slidably mounted on said base, a lever pivotally mounted at one end thereof to one end of said band, a biasing member connected between the other end of said band and the other end of said lever, said lever being movable to bias the ends of said band toward one another, and means mounted on said base member for stopping the lever at a point in the movement thereof when the ends of said band are toward one another.

2. A can holder comprising a T-shaped base member for supporting said can, a resilient band having a portion thereof rigidly secured to said base and another portion thereof slidably mounted at another end thereof to one end of said band, means for biasing the other end of said lever toward the other end of said band, said lever being movable to bias the ends of said band toward one another, and means mounted on said base member for stopping the lever at a point in the movement thereof when the ends of said band are toward one another.

References Cited by the Examiner

UNITED STATES PATENTS

625,573	5/1899	Leavitt	217—94
664,352	12/1900	Gibbs	211—4
1,288,839	12/1918	Conrad et al.	248—313
1,300,533	4/1919	Wessinger	248—129
1,382,115	6/1921	Ohme	248—149
1,754,714	4/1930	Gundrup	248—310
1,902,423	3/1933	Seltzer	248—149 X
2,319,762	5/1943	Bruning et al.	24—270
2,453,492	11/1948	Carter	24—270
2,513,631	7/1950	Erikson	248—154
2,541,434	2/1951	Nelson et al.	248—210
2,679,996	6/1954	Rowe et al.	248—149
2,911,180	11/1959	Dunagan et al.	248—346

CLAUDE A. LE ROY, *Primary Examiner.*