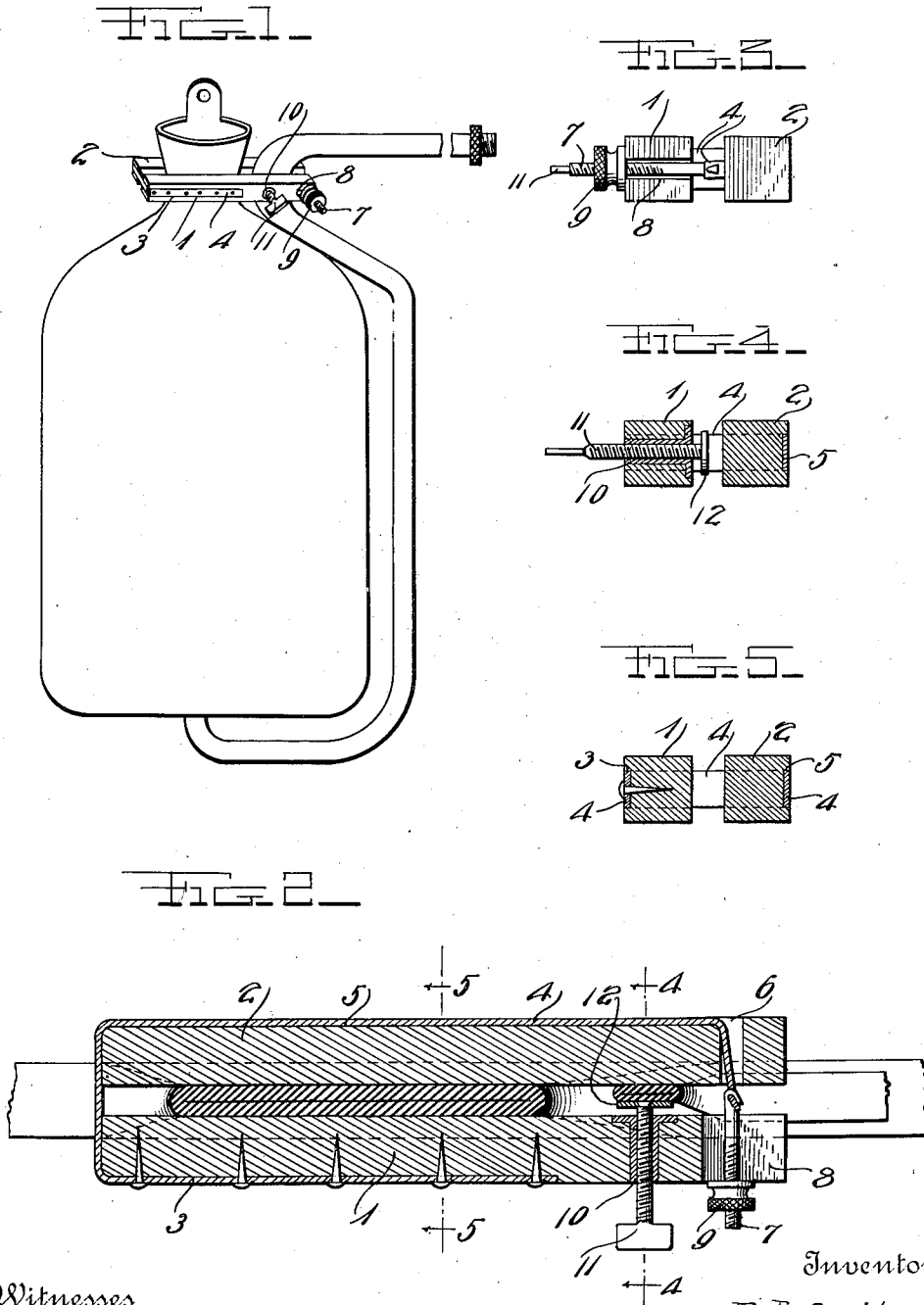


R. L. SMITH.
 COMBINED CLAMP AND TUBE COMPRESSOR.
 APPLICATION FILED AUG. 10, 1911.

1,033,959.

Patented July 30, 1912.



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UNITED STATES PATENT OFFICE.

ROBERT LEE SMITH, OF BESSEMER, ALABAMA.

COMBINED CLAMP AND TUBE-COMPRESSOR.

1,033,959.

Specification of Letters Patent.

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Application filed August 10, 1911. Serial No. 643,453.

To all whom it may concern:

Be it known that I, ROBERT LEE SMITH, a citizen of the United States, residing at Bessemer, in the county of Jefferson and State of Alabama, have invented certain new and useful Improvements in Combined Clamps and Tube-Compressors; and I do 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.

This invention relates to improvements in tube compressors.

The object of the invention is to provide a device of this character in which two jaws may be brought toward each other to compress an object with separate means for clamping a second object.

A further object is to provide a device of this character with means for regulating the pressure of both compressing devices.

With these and other objects in view, the invention consists of certain novel features of construction, and the combination and arrangement of parts as will be more fully described and claimed.

In the accompanying drawings:—Figure 1 is a perspective view of my improved tube compressor, showing it applied to a fountain syringe; Fig. 2 is an enlarged horizontal sectional view thereof; Fig. 3 is an end view; Fig. 4 is a vertical cross sectional view on the line 4—4 of Fig. 2, with the compressed object omitted; Fig. 5 is a similar view on the line 5—5 of Fig. 2.

My improved tube compressor comprises a pair of jaws or clamping bars 1 and 2 preferably in the form of square or rectangular strips of suitable length and of any suitable material. In the outer side of the jaw 1 and extending from near the center to one end of the same is a groove or channel 3 in which is secured one end of a strap 4 which extends around the end of the jaws 1 and 2 and has an operative engagement with a groove or channel 5 formed in the outer side of the jaw 2 as shown. The free end of the strap 4 passes through an opening 6 formed in the opposite end of the jaw 2 and is secured to the inner end of an adjusting bolt 7 adapted to be swung into and out of a notch 8 formed in the adjacent end of the jaw 1, and on said bolt is arranged a clamping nut 9 which when screwed into

engagement with the outer side of the jaw 1 will draw the jaws 1 and 2 together and hold the same in operative engagement with an object placed between them, such as the mouth of the syringe, for the purpose of closing the mouth and converting the syringe into a water bottle or ice bag.

Seated in the jaw 1 adjacent to the notched end thereof is an interiorly threaded sleeve 10 in which is threaded a tube compressing screw 11, preferably a thumb screw, the inner end of which is swiveled in a plate 12 which when operated by the screw is adapted to compress a tube between the same and the inner side of the jaw 2 thereby closing said tube and preventing the flow of fluid therethrough.

A tube compressor constructed in accordance with my invention is adapted to clamp and compress two objects and is particularly adapted for the purpose of compressing or closing the mouth of a fountain syringe and for simultaneously or separately compressing and closing the discharge tube thereof.

By constructing and arranging the parts as herein shown and described it will be seen that the clamping nut may be released wholly or partially and the fluid entirely cut off or permitted to flow through the tube in a greater or less quantity as may be desired.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention claimed.

Having thus described my invention, what I claim is:

1. In a combined clamp and compressing device, a pair of clamping jaws hingedly connected together at one end, means near the other end for actuating the jaws toward each other to clamp an object between them, and a compressor carried by one jaw intermediate its ends, coacting with the other jaw to compress a second object while the first named object is clamped between the jaws.

2. In a combined clamp and compressing device, a pair of clamping jaws hingedly connected together at one end, a bolt near the opposite end for actuating the jaws toward each other, to clamp an object between

them, and a bolt threaded through one jaw intermediate the ends thereof coacting with the other jaw to compress a second object while the first named object is clamped between the jaws.

3. In a combined clamp and compressing device, a pair of clamping jaws, a flexible strap adapted to adjustably connect said jaws together whereby an object may be clamped between the same, and a compressing member arranged in and adapted to coact with said jaws to form a separate compressing mechanism.

4. In a combined clamp and compressing device, a pair of clamping jaws, a flexible jaw operating element secured at one end to the outer side of one of said jaws, and adapted to be passed around the outer side of the opposing jaw and engaged with the ends of said jaws, an adjusting bolt secured to the free end of said element, a clamping nut arranged on said bolt and adapted to be screwed into engagement with the outer side of one of said jaws whereby the jaws are forced toward each other into engagement with the object clamped between them and an independent compressing member operatively arranged in and adapted to coact with said jaws to form a compressing mechanism separate from and independent of the operation of the clamping jaws.

5. In a combined clamp and tube compressor, a pair of co-acting clamping bars having in their outer sides longitudinal grooves, a strap secured at one end to the groove in the outer side of one of said bars and adapted to be passed around and into engagement with the groove in the outer side of the opposing bar and into engagement with the opposite ends of said bars, a bolt secured to the free end of said strap, a clamping nut arranged on said bolt and adapted to be screwed into engagement with the outer side of one of the jaws whereby said jaws are forced toward each other and into operative engagement with the object clamped between the same, a compressing screw operatively engaged with one of said jaws, a clamping plate loosely mounted on the inner end of said screw and adapted to be operated thereby to clamp a

tube between said plate and the adjacent side of the opposing clamping bar.

6. In a combined clamp and tube compressor, a pair of clamping bars having in their outer sides longitudinal grooves, one of said bars having formed therein near one end a notch, and the other bar having formed in its adjacent end a transverse passage, a bar operating strap secured at one end to the outer side of one of said jaws and adapted to be passed around the opposite jaw and through the passage in the end thereof, a clamping bolt secured to said strap and adapted to be swung into engagement with the notched end of the opposing bar, a clamping nut adapted to be screwed onto said bolt and into engagement with the outer side of the notched clamping bar whereby said bars are drawn together and into operative engagement with the object clamped between the same and whereby the pressure on said object may be regulated, and an independent compressing member arranged in one of said bars and adapted to coact with the other jaw or bar to form a separate compressing mechanism.

7. In a combined clamp and tube compressor, a pair of clamping jaws, a flexible strap arranged around and connected at one end to the outer side of one of said jaws, a jaw operating mechanism secured to the opposite end of said strap and having an operative engagement with said jaws to draw the same together and into adjustable engagement with the object clamped between the bars, a threaded sleeve arranged in one of said jaws, a compressing screw having an operative engagement with said sleeve, a clamping plate loosely mounted on the inner end of said screw and adapted to be forced thereby into engagement with the inner side of the opposing bar whereby an independent compressing mechanism is provided.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ROBERT LEE SMITH.

Witnesses:

F. R. MATHEWS,
C. W. WILLIAMS.