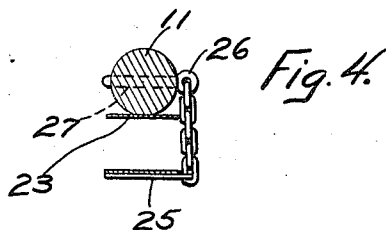
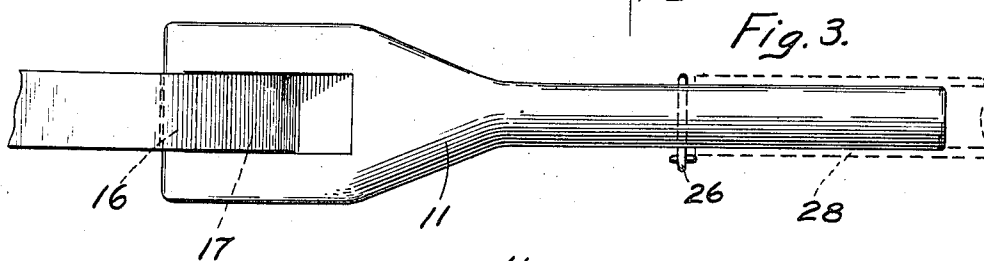
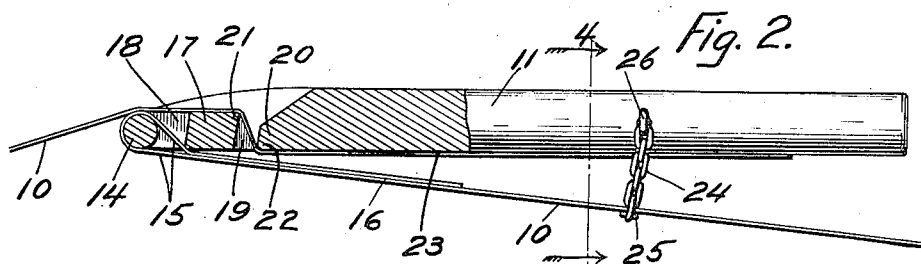
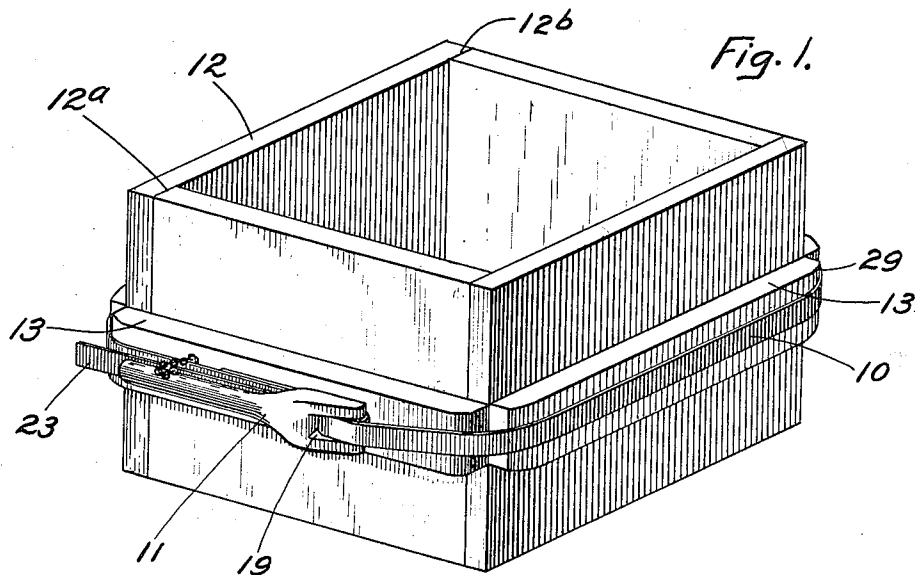


D. T. HARRIES & G. JONES.
CLAMP FOR CONCRETE FORMS.
APPLICATION FILED JULY 10, 1911.

1,064,727.

Patented June 17, 1913.



Witnesses:

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UNITED STATES PATENT OFFICE.

DAVID T. HARRIES AND GRIFFITH JONES, OF CHICAGO, ILLINOIS.

CLAMP FOR CONCRETE-FORMS.

1,064,727.

Specification of Letters Patent.

Patented June 17, 1913.

Application filed July 10, 1911. Serial No. 637,598.

To all whom it may concern:

Be it known that we, DAVID T. HARRIES and GRIFFITH JONES, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Clamps for Concrete-Forms, of which the following is a specification.

The object of our invention is to provide a clamping device for holding the parts of concrete forms together while the material is hardening or setting. Our device may also be applied to forms for holding other plastic materials.

The principal object of our invention is to provide a device of the character mentioned which will hold the parts of column forms in place while the material is setting. Our device comprises a flexible band which may be quickly placed about the form and which is provided with a lever for drawing it tightly in place. It is also provided with means for locking it in the position described.

Other objects and advantages of our invention will be apparent from the following description when taken in connection with the accompanying drawings, in which—

Figure 1 is a perspective view of a portion of an upright square form for a vertical column, with our clamping device shown as applied thereto. Fig. 2 is a plan view, partly in section, of the clamping lever and a portion of the band. Fig. 3 is an elevation thereof; and Fig. 4 is a cross section of the clamping lever and band, taken along the line 4—4 of Fig. 2.

Referring to Fig. 1, the band 10 is preferably made of a flexible strip of metal of such thickness and width as will permit it to be quickly bent around the form. The clamping lever 11 is pivotally attached to one end of this band and is adapted to engage variable portions of the other end of the band. When the band is thus engaged by the lever it may be drawn tightly into place.

The form comprises inner rectangular boards or planks 12, which preferably overlap at the edges, as shown at 12^a, 12^b, &c. The plastic material is inclosed within these planks. Immediately exterior to said forms are cleats 13. These cleats meet at the extreme corners of the mold, but preferably do not overlap.

The lever 11 is provided with a pin or bar 14 at one end, which is preferably integral with the body of the lever. The band 10 is pivotally attached to the said pin or bar by means of a loop 15, which is made by bending the end portion of the band upon itself and securing it to the body of said band in any suitable manner, as shown at 16. The lever 11 is also provided with a bar 17 spaced from the bar 14 and preferably integral with the body of the lever. A space 19 between the bar 17 and the adjacent portion 20 of the lever permits the insertion of the opposite end portions of the band. The bar 17 is provided with angular edges, as shown at 21, and the adjacent portion of the bar is provided with a similar angular edge at 22. When the end portion of the band is inserted in the space or aperture 19 and a tension is produced in said band, the angular edges 21 and 22 will cause abrupt angles or bends to be formed in said band. These abrupt angles or bends hold the band in place and prevent its slipping out when tension is applied to the device. It is then held more perfectly by the said angles when the end portion 23 of the band is held closely against the body of the lever by the user of the device.

In order that the lever 11 may be retained in its closed or operative position, a short chain 24 is provided. This chain is secured at one end to the band by means of a small strip of metal or other device 25. At the other end a pin 26 is attached to the chain and may be inserted in an aperture 27 in the body of the lever. By this means the lever may be effectively held in close relation to the side of the form, thereby locking and clamping the device in position.

In order that a greater leverage may be applied to the device than is permitted by the short length of the lever, a piece of gas pipe 28 may be placed over the end of the lever. Said gas pipe is shown in dotted lines in Fig. 3.

It will be seen that the loop in the end of the band serves as the fulcrum of the lever in which the bar 14 rotates. The space 18 between the bars 14 and 17 permits the insertion of the end of the band forming the loop when the parts are first put together.

In using the device it is necessary only to first place the band around the form and then to insert the free end thereof into the

aperture 19. Such length of the end portion is inserted in the aperture as will permit the lever to draw up the entire band with the desired tightness. The user may 5 grasp the end 23 of the band simultaneously with the lever 11. When the lever is pressed against the band and against the side of the form, it becomes self-locking. The small chain 24 and pin 26 serve to prevent the device from becoming loosened. The boards 10 or cleats 13 are rounded at 29 to prevent sharp bends in the band.

It will be apparent from the foregoing description of our improved clamping device 15 that it may be used on any shape or size of form, thereby avoiding the necessity of providing separate clamps for each size and shape. Many columns are circular and other forms very frequently occur. Our 20 clamp is applicable to any of these, and therefore a single clamp may have a very extended use.

While we have described our invention with more or less minuteness and as being 25 embodied in certain precise forms, yet it will be understood that we do not desire to limit ourselves thereto unduly, or any more

than is pointed out in the claims: On the contrary, we contemplate changes in form, dimensions, and arrangement; the omission 30 of parts, and the substitution of equivalents, as circumstances may suggest or necessity render expedient.

We claim:—

In a clamp for concrete forms, the combination with a flexible metallic band, of a 35 lever to one end of which said band is pivotally attached, said lever having an opening through which said band adjustably passes, the walls on opposite sides of said opening 40 being formed with angular edges around which the band passes and by which the band is bent and thereby prevented from slipping relatively to said lever when the 45 latter is oscillated to draw the portions of said band which it engages past each other.

In testimony whereof, we have subscribed our names.

DAVID T. HARRIES.
GRIFFITH JONES.

Witnesses:

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