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Milton et al.

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[54] **CORNER LOCKS FOR CONCRETE FORMS**

[76] Inventors: **George A. Milton,** 5412-103A Ave.; **Ian M. Russell,** 5411-103A Ave., both of Edmonton, Alberta, Canada

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[52] **U.S. Cl.** ..... **249/194,** 249/219 W

[51] **Int. Cl.** **E04g 9/00**

[58] **Field of Search** ..... 249/194, 219 R, 219 W, 249/48, 49; 269/115, 116, 117

[56] **References Cited**

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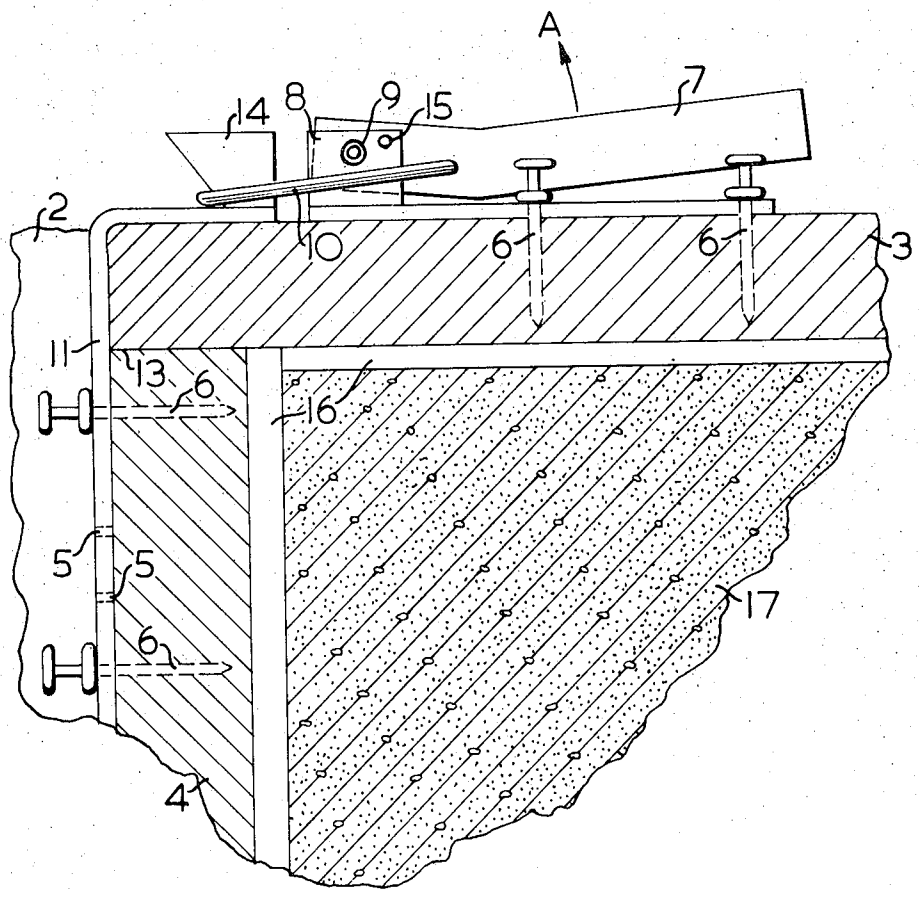
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Primary Examiner—Francis S. Husar
Assistant Examiner—Ronald J. Shore
Attorney, Agent, or Firm—Otto John Munz

[57] **ABSTRACT**

A corner lock for concrete form whalers has a lever with a hook link, adapted to engage a catch to lock the whalers. The base of the catch can be made from a bent flat iron piece which can be secured to one whaler to extend around the corner formed by the two locked whalers, thereby stiffening the corner joint. The lever can be locked to prevent its accidental release.

4 Claims, 2 Drawing Figures



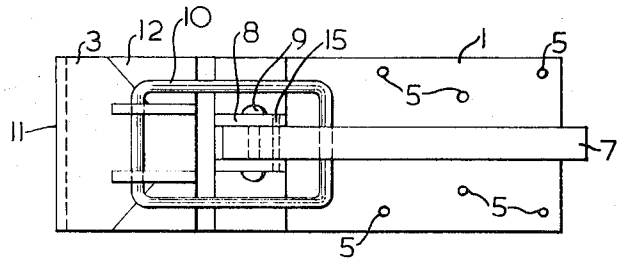


FIG. 1.

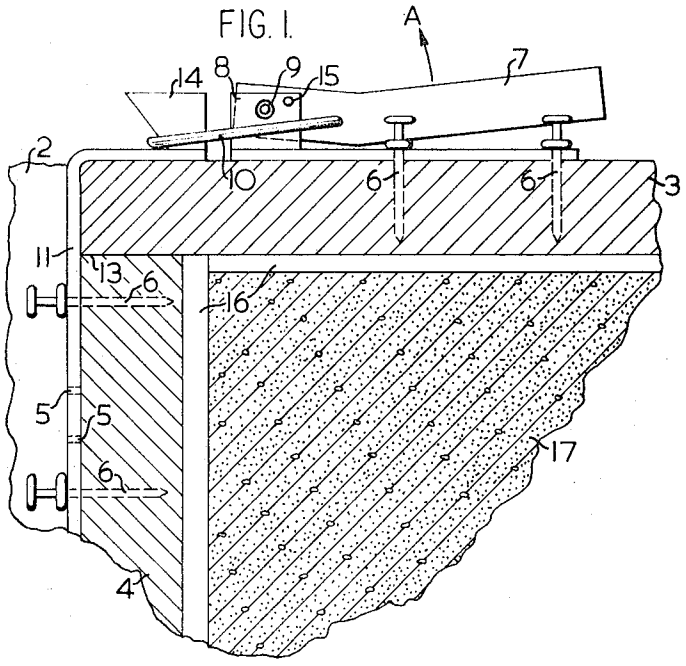


FIG. 2.

CORNER LOCKS FOR CONCRETE FORMS

This invention relates to corner locks for concrete forms and in particular to the locks for concrete form whalers, i.e. for the stiffening members used to support sheeting of a form.

BACKGROUND OF THE INVENTION

It is common in the construction industry to make concrete forms from vertically arranged wood sheeting, such as plywood, supported by horizontally arranged elongated pieces of timber or by various steel profiles. These supporting or stiffening members are known as whalers. The whalers are usually joined one to the other at a corner of the form, either by means of a releasable clamp or by merely nailing the two whalers together at the corner.

The releasable clamps presently used in the building industry generally provide sufficient clamping force, but on the other hand, they have several disadvantages, e.g. they do not sufficiently prevent the tendency of the whalers to shift from a predetermined (for instance 90°) angle of the corner. The known clamps or locks for concrete forms do not have any means for securing their locked position and thereby preventing their accidental release. They are often fixedly connected to their corresponding whalers which makes the re-use of a lock inconvenient and time consuming.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a concrete form corner lock which has an improved feature of maintaining the predetermined angle of the corner of the form. The lock can be provided with means preventing its accidental opening. The lock parts can easily be removed from the whaler when the form has been disassembled.

DESCRIPTION OF THE DRAWING

One embodiment of the lock according to the invention, designed for a 90° corner, is shown by way of an example in the accompanying drawings in which:

FIG. **1** is a side elevation of the lock; and

FIG. **2** is a simplified plan view of a corner of a form provided with the lock.

DETAILED DESCRIPTION

The lock comprises a lever base **1** and a catch base **2.** Each of the bases is adapted to be secured to one of two whalers **3, 4,** forming the corner, for instance by means of openings **5** for receiving double headed nails **6.**

The lever base **1,** which can be nailed to the whaler **3** (FIG. **2**) includes a lever assembly consisting of a lever **7** pivotally supported in a bracket **8** by a pin **9.** Connected pivotally to the lever **7** is a hook line **10.**

The catch base **2,** which can be nailed to the whaler **4,** is formed by a plate bent to the angle of the corner, that is to 90° to form two arms **11, 12.** The arm **11** (FIG. **2**) can be nailed to the whaler **4** with the other arm **12** distant from an end face **13** of the whaler **4.** The space between the arm **12** and the end face **13** is designed to allow for insertion of the end of the whaler **3.** The arm **12** carries a catch **14** adapted to engage with the hook link **10.**

Both the lever **7** and the bracket **8** can be provided with an opening **15.** The opening **15** is offset from the axis of the pin **9** (that is from the axis of pivotal movement) of the lever **7.** A securing member such as a nail, not shown, can be inserted into the opening **15** to prevent the movement of the lever **7** and thereby to secure the lever **7** in its locked position shown in FIG. **2.**

As shown in FIG. **2,** the whalers **3, 4,** support sheeting **16** defining the inner space of the form into which concrete **17** is poured.

The bases **1** and **2** can be nailed or otherwise fixed to their respective whalers **3** and **4** before assemblying the corner assembly and the whalers are then positioned into their operative position to support the sheeting **16** and finally the lock is locked by engaging the hook link **10** with the catch **14** and moving the lever **7** into its locked position shown in FIG. **2.** The lock is disassembled by simply lifting the lever **7** in the direction A (FIG. **2**), thereby releasing the hook link **10** from the engagement with the catch **14.** As mentioned above, an accidental release of the lock can be prevented by inserting a nail or similar object into the opening **15** thereby preventing the locked lever **7** from being movable in the direction A. It is preferable, although not necessary, to nail the lock to the whaler by means of double-headed nails **6** as shown, in order to make the removal of the lock from the whalers easier when the form is being disassembled.

The described embodiment is only one example of the invention which can be modified to meet various needs of the actual application of the invention. Thus it will be appreciated that what has been disclosed as a lever base **1** can be made a catch base and vice-versa, if required. The angle of the arms of the base **2** can be also be modified to suit a particular shape of the form, preferably with the corresponding bevelling of the front faces of the whalers **3** and **4.** Various modifications in the type of the catch **14** and the hook link **10** are also possible. The shape of the opening **15** can also be made different from that shown in which case it is preferable to correspondingly change the shape of the securing member.

These and other changes of the design of the block, however, do not depart from the scope of the present invention as set forth in the folllowing claims.

We claim:

1. A corner assembly of a concrete form comprising:

a substantially upright sheeting defining inner walls of said corner assembly;

first and second whalers being substantially horizontal and supporting said sheeting to form an outer corner assembly;

an end face of said first whaler abutting against the side of said second whaler adjacent at the end of said second whaler;

a corner lock for releasably holding said first and said second whalers in an assembled position to support said sheeting;

said corner lock comprising a lever base and a catch base, each of said bases being secured to one of said whalers;

said lever base being provided with a lever assembly including a lever pivotally connected to a bracket means and carrying a hook link;

the catch base carrying a catch adapted to be engaged with said hook link;

one of said bases being substantially straight and secured to said second whaler, the other base being bent to form two arms to angularly fit said corner, one of said arms being secured to said first whaler, the other of said arms being in engagement with an outer face of said second whaler,

whereby the clamping force created by the locking of said lock is substantially parallel to said outer face of said second whaler.

2. An assembly as claimed in claim **1**, wherein said bent base is the catch base with the catch located on said other arm, said other arm being in engagement with an outer side face of said second whaler.

3. An assembly as claimed in claim **1**, wherein said lever base and said catch base are removably secured to their associated whalers.

4. An assembly as claimed in claim **3**, wherein said bases are secured to their associated whalers by means of double-headed nails, driven through securing holes provided in said bases, whereby the bases are easily removable from said whalers after disassembling of the assembly.

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