G. W. MEYER
LOCKING MEANS FOR ADJUSTABLE SHORES
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INVENTOR
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My invention relates to telescoping adjustable shores used to support forms in the erection of monolithic concrete buildings, and particularly to locking means for safely holding the two members of the shore together when the shores are not in use and being moved or hoisted to a setting up position.

My invention is an improvement in shores of the general type disclosed in the patent issued to G. W. Meyer and C. A. Roos, May 9, 1922, No. 1,415,602 and the patent issued to C. A. Roos, Nov. 25, 1924, No. 1,516,621.

These and others show means for automatically locking the two members of the shore in any given position, so as to prevent their being further telescoped together as by the superimposed weight. But when the sling is secured to the outer member of the shores and the shore pulled up thereby, the locking means therein shown will not prevent the two members from being further extended and the result is that when the shores are being hoisted or lowered, the members sometimes slip completely apart and the inner member falls endangering persons and property.

The principal object of the present invention is to provide additional locking means for adjustable shores that will automatically lock the inner member to the outer member preventing further extension when the shore is being so handled.

A further object of my invention is to provide a locking means for the purpose stated without interfering with the usual or first described locking means, and also without interfering with the use of an efficient and easily manipulated lifting jack as shown in the patent issued to George W. Meyer, Nov. 25, 1924, No. 1,516,616.

My invention is illustrated in the accompanying drawings in which—

Fig. 1 is a front elevation of an adjustable shore embodying my invention, part of the shore is broken away and the tubular member shown slightly extended.

Fig. 2 is a side view of an adjustable shore embodying my invention with a jacking device in position for use. The lower part of the stanchion a and the upper part of the shore being broken away.

Fig. 3 is a horizontal cross section on line 3-3 of Fig. 1, and

Fig. 4 is a horizontal cross section on line 4-4 of Fig. 1.

Referring now to the drawings which show:

An adjustable shore comprising a pair of uprights a' a" rigidly spaced apart by plates a' perforated at a" so as to permit the relatively fixed metal tubular member B to pass therethrough. The uprights together form the extensible member A of the shore and when adjusted with relation to the fixed member are held in adjusted position by an automatic lock.

Said lock consists of a strong iron or steel plate C having upturned sides c, fitted to play between the inner side walls a' a" of the stanchions a' a" respectively and perforated at d' to embrace the fixed tubular member B. The plate is pivotally held upon a stud P extending from outside to outside of the stanchions a' a" and thru the upturned sides c of the plate C.

In its horizontal position the plate C has no locking effect and permits free telescopic movement of the part A in relation to the part B; spring s is provided between the perforated bottom plate a' and the underside of the locking plate C, so as to hold said locking plate normally in a canted or locking position, the diagonally opposite edges of the central perforation of the plate C gripping the tubular member so as to form the lock.

A moderate pressure exerted downwardly upon the front edge of the plate C forces the plate into a horizontal position and releases the lock. The construction of the lock is such that the more pressure exerted on the top of the shore the greater the locking effect of the plate C; securely holding the members A and B against further telescoping movement.

So as to hold the member B in locked position with relation to member A when the shore is raised but not in use, and free from outside pressure, I provide a secondary locking plate D perforated at d to embrace the tubular member B and suspended from the bottom plate a' by means of a pin e provided with an enlarged head at each end thereof and loosely secured near one edge of
the plate D so as to allow said plate to cant by gravity causing the opposing gripping surfaces of the perforation to bite into the tubular metal member B, forming a lock, adapted to prevent further extension or complete separation of the shore elements. The locking plate D is preferably placed so as to cant in the opposite direction to the locking plate C.

When the shore is being adjusted by means of a lifting jack the locking plate D does not interfere with the usual operation of the jacking device but is lifted by the jacking lever so as to press against the bottom plate as shown in Fig. 2.

I claim as my invention and desire to secure by Letters Patent of the United States:

1. In combination with an extensible shoring device comprising a relatively fixed member and an adjustable member engaging said fixed member and a locking plate adapted to normally prevent said fixed and adjustable members being further telescoped together; a second locking plate secured to and suspended from the bottom of said adjustable member so as to cant by gravity and hold said fixed and adjustable members against further separation.

2. In extensible shores the combination of an outer member and an inner telescoping member, a locking plate pivoted to said outer member pierced by the shaft of said inner member and normally sustained in gripping position with said shaft by a spring so that said plate will lock said shore members to prevent their being further telescoped together, and a second plate pivoted to said outer member pierced by the shaft of said inner member in such a manner as by gravity to grip the shaft of said inner member and lock said shore members so as to prevent the further extension of the shore when said shore is suspended by its outer member and to be pressed upwardly into non-locking position by the jack when the shore members are being extended.

In testimony whereof I have hereunto set my hand.

GEORGE W. MEYER.