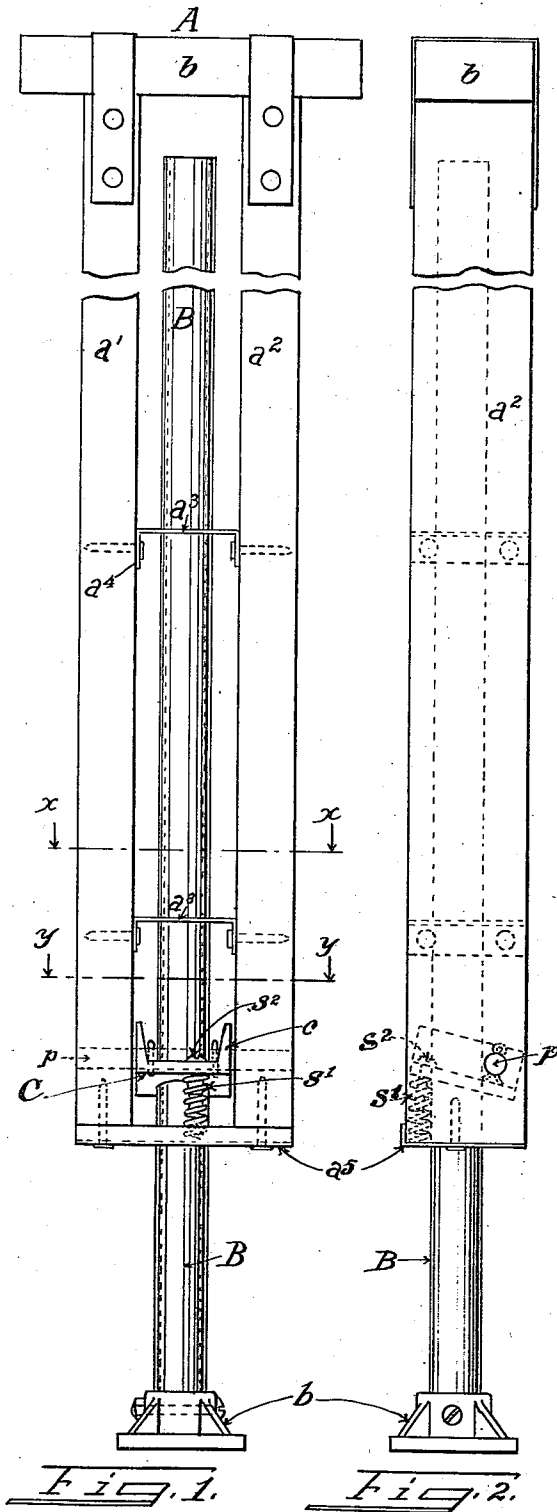
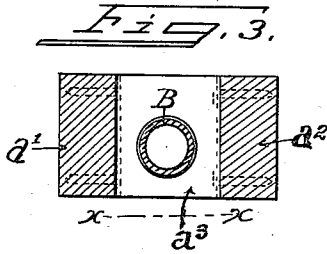
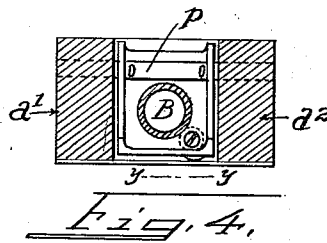
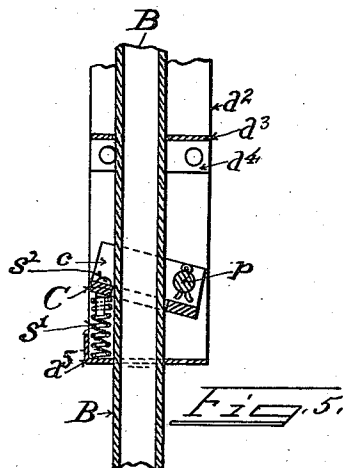


G. W. MEYER AND C. A. ROOS.
ADJUSTABLE SHORE.

APPLICATION FILED SEPT. 27, 1920.

1,415,602.

Patented May 9, 1922.



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ADJUSTABLE SHORE.

1,415,602.

Specification of Letters Patent.

Patented May 9, 1922.

Application filed September 27, 1920. Serial No. 413,239.

To all whom it may concern:

Be it known that we, GEORGE W. MEYER and CHARLES A. ROOS, citizens of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented new and useful Improvements in Adjustable Shores, of which the following is a specification.

Our invention relates to the class of implements commonly known as "extensible or adjustable shores", used in building and other operations as temporary supports; and is intended to improve their efficiency and enhance their usefulness by novel modes of structure and means, of functional operation as herein set forth and as illustrated in the accompanying drawings forming part of the following specification.

In the drawings herewith submitted:—
Figure 1 is a front view, in elevation, of our improved shore;

Figure 2 is a side elevation of the same;

Figures 3 and 4 are horizontal cross sections on the lines $x-x$ and $y-y$ of Figure 1; and

Figure 5 a vertical cross section, in part, of the shore showing the locking plate in a somewhat exaggerated canting action.

Referring to the drawings, A and B designate respectively the co-ordinated elements of the shore; the part A being adjustable longitudinally upon and in relation to the part B, to increase or diminish length as required, according to the elevation of the thing to be supported—as a ceiling, cross beam, etc.—in relation to a floor upon which the shore rests and is erected.

The adjustable shore element A is composed of two stanchions a^1 , a^2 , preferably of wood, spaced apart and held in parallel relations by intervening rectangular plates a^3 , having upturned sides a^4 seated upon and between the opposite inner walls of the stanchions a^1 , a^2 , to which they are secured by nails or screws. A plate a^5 is also secured to and across the bottoms of the stanchions.

The relatively fixed or base element B is preferably a section of iron or steel tubing. The stanchion at the top and the basic element at the bottom are each provided with a terminal foot b of somewhat enlarged area.

The cross-plates a^3 , a^5 , are centrally perforated to register in succession and admit

by an easy-sliding-fit the tube B in telescopic relations, by which the total length of the shore may be increased or diminished by the inter-adjustment thus provided for. The series of tie plates a^3 , and a^5 , connecting and holding the stanchions a^1 , a^2 , in parallel, serve as telescopic guides for the tube B which is thus co-ordinated as a central stiffening core, assisting to preserve the linear rigidity of the parts under stress of load. This very desirable condition is enhanced by the relative location of the basic element B centrally between the stanchions a^1 , a^2 , in, or approximately in, the central axis of gravity of the load through the device as a whole. Thus the tendency to bend or bow sidewise, common to shores formed of uprights placed side by side, is eliminated; and a shore of lighter weight and increased strength is produced.

The desired inter-adjustment being made, the adjustable element A is held firmly seated upon and in relation to the basic element B by an automatic lock consisting of a strong iron or steel plate C having upturned sides c fitted to play between the inner side walls of parts a^1 , a^2 , and perforated to embrace the basic element B in a normally horizontal relation permitting canting fit, in which the relative downward pressure of the element A seats the diagonally opposite edges of the central perforation of the plate C as clamping jaws at opposite sides of the tubular post B. The plate is pivotally held upon a stud p extending through from outside to outside of the stanchions a^1 , a^2 , and through the upturned sides c of the plate C.

In its horizontal position, the plate has no locking effect and permits free telescopic movement of the post B in relation to part A; but when raised into the canting relation indicated in Figures 2 and 5, it causes the diagonally opposite edges of the perforation of the plate to "bite" into the metal tubing, engaging at opposite sides and holding the parts securely in the adjusted position. A moderate pressure downwards upon the front edge of the plate C forces the plate into horizontal position and releases the lock. As it is desirable, however, to keep the parts in locked position except when released for adjustment, we provide a coiled spring S^1 to rest upon the base plate a^5 and bear upwardly against the locking plate C, said spring being held in place by a pin S^2 se-

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cured in and projecting through the plate C, a short distance into the central enclosure of the coiled spring S¹ to hold it in position.

It will be noted that the location of the locking plate as well as of the connecting plate *a*³ is between the stanchions *a*¹, *a*²,—there being no part of the device projecting beyond the outer planes of the stanchions. In piling—as in loading trucks, railway cars in storage, etc.,—this feature not only economizes space but also protects the locking device from injury, besides forming a “pile” of minimum dimensions by reason of the fact that the external cross planes of the structure are free from any projections; whereby the shores may be piled one upon another in contact from end to end within the smallest limits of space.

We claim as our invention and desire to secure by Letters Patent of the United States:—

1. An extensible shoring device comprising a relatively fixed member, an adjustable member telescopically engaged upon said fixed member, said adjustable member comprising parallel bars slightly spaced apart, a series of perforated spacing and bracing plates rigidly secured to and between the inner faces of said parallel bars, one end of the fixed member being free to pass through any or all of the perforations of said plates, and means for securing the relative position of the fixed and adjustable members.

2. An extensible shoring device comprising a relatively fixed member, an adjustable member telescopically engaging said fixed member, said adjustable member comprising two bars maintained in parallel spaced relation, a series of perforated spacing and bracing plates rigidly secured to and between the inner faces of the parallel bars and lying wholly within their outer surface planes, one end of said fixed member being free to pass through any or all of the perforations of said plates, and a perforated

locking plate pivoted to and operating between the parallel bars of the adjustable member, the fixed member extending through said perforation in the locking plate, and the relative position of the fixed and adjustable members being maintained by the canting of the locking plate.

3. An adjustable shoring device comprising a relatively fixed member, an adjustable member telescopically engaging said fixed member, said adjustable member comprising two bars maintained in parallel spaced relation, a series of perforated spacing and bracing plates rigidly secured to and between the inner faces of said parallel bars and lying wholly within their outer surface planes, one end of the fixed member being free to pass through any or all of the perforations in the said plates, and a perforated locking plate pivoted to and operating between the parallel bars of the adjustable member, the fixed member extending through said perforation in the locking plate, and a spring to cant the locking plate causing the edges of its perforation to grip the fixed member and thus maintain the relative position of the fixed and adjustable members.

4. In an extensible shore of the character indicated embodying an adjustable element composed of two stanchions in parallel and a central tubular basic element in telescopic relations therewith, a perforated locking plate having upturned sides adapted to fit and operate in side contact between the stanchions and a pivot stud seated in and through the stanchions and extending through the sides of the locking plate.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

GEORGE W. MEYER.
CHARLES A. ROOS.

Witnesses:

NORMA D. BERGER,
LEWIS M. HOSEA.