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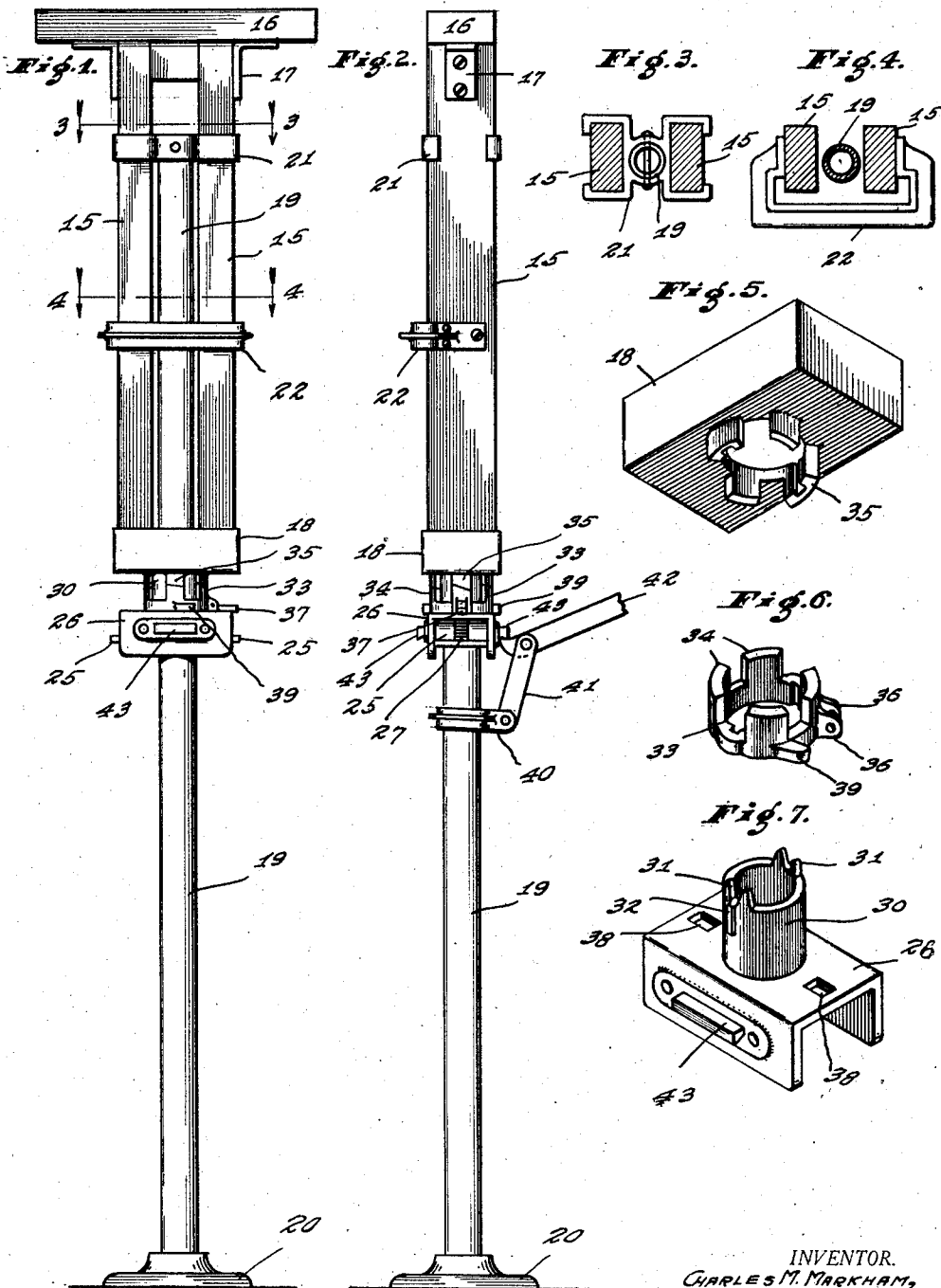
C. M. MARKHAM

1,782,903

ADJUSTABLE SHORE

Filed July 27, 1925

2 Sheets-Sheet 1



INVENTOR.  
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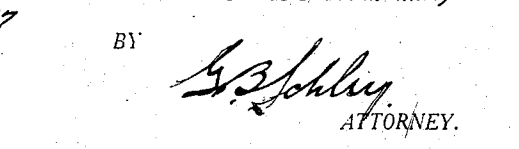
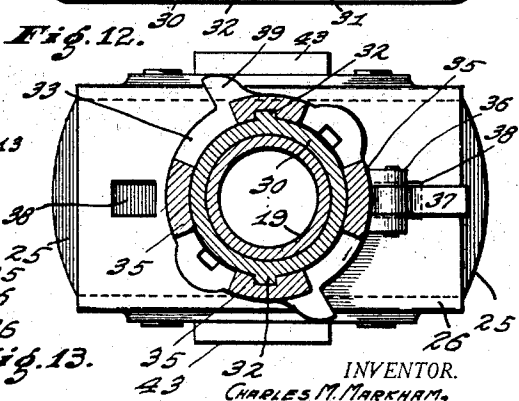
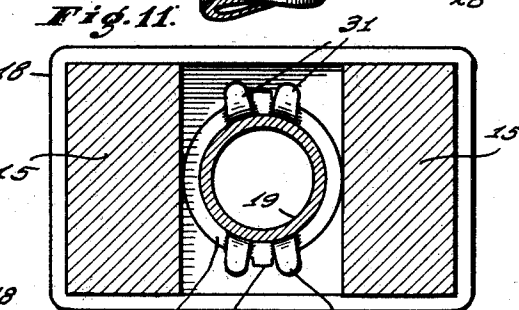
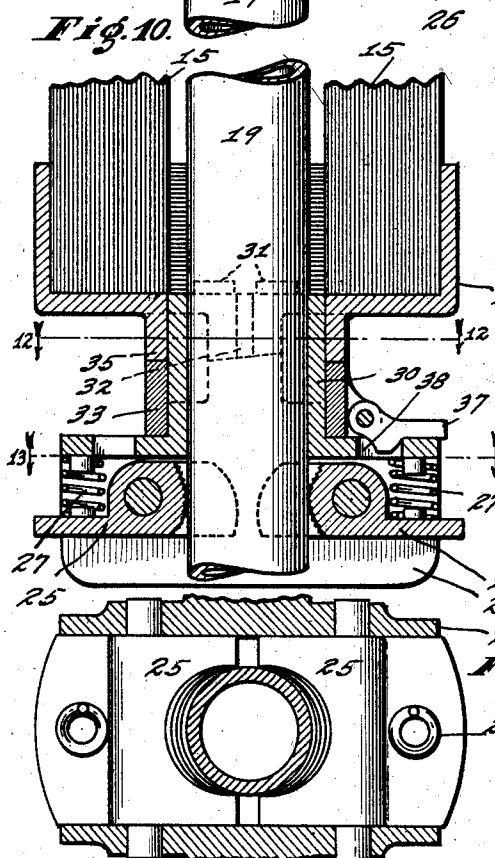
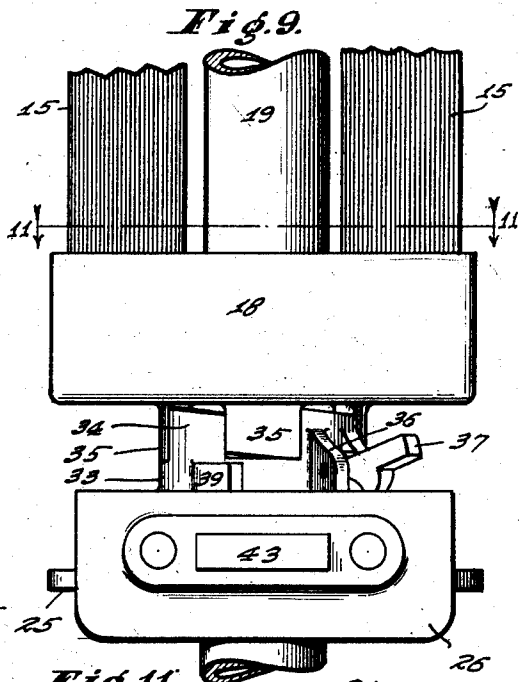
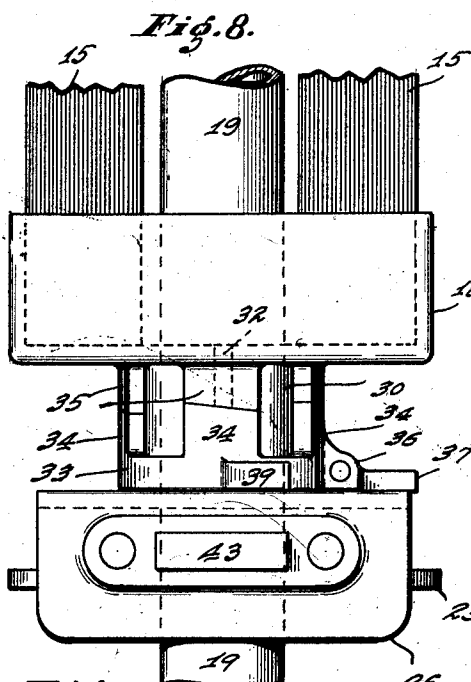
C. M. MARKHAM

1,782,903

ADJUSTABLE SHOE

Filed July 27, 1925

2 Sheets-Sheet 2



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## UNITED STATES PATENT OFFICE

CHARLES M. MARKHAM, OF INDIANAPOLIS, INDIANA

## ADJUSTABLE SHORE

Application filed July 27, 1925. Serial No. 46,246.

It is the object of my invention to produce an adjustable shore of the type commonly used for supporting forms in concrete building construction. A further object of my invention is to produce such a shore which will be exceedingly strong and positive in operation.

I accomplish the above objects by constructing my shore of two relatively slidable parts, the upper one of which is composed of two transversely spaced members adapted to receive between them the lower shore-part, and I provide means for holding such parts together in any relative position of adjustment.

The accompanying drawings illustrate my invention: Fig. 1 is a front elevation of my building shore; Fig. 2 is a side elevation of the shore illustrated in Fig. 1; Figs. 3 and 4 are horizontal sections on the lines 3—3 and 4—4 respectively of Fig. 1; Figs. 5 to 7 inclusive are perspective views illustrating details of construction; Figs. 8 and 9 are fragmental front elevations on an enlarged scale showing my shore in two positions of adjustment; Fig. 10 is a fragmental central section through the locking mechanism; and Figs. 11 to 13 inclusive are horizontal sections on the lines 11—11, 12—12, and 13—13 respectively.

As stated, my shore comprises two relatively slidable parts, the upper one of which is formed of two laterally spaced members 15 which may conveniently be of wood. The upper ends of the members 15 are joined to a cross piece 16, the junction between such cross piece and the members 15 preferably being reinforced by suitable brackets 17. The lower ends of the members 15 enter and are secured to a cap 18 provided with a central opening adapted to receive the lower shore-part 19 which extends through such opening and upward between the members 15. The shore-part 19 is conveniently formed of pipe to the lower end of which is attached a base 20 and to the upper end of which is affixed a guide 21 adapted to engage the members 15. Between the cross piece 16 and the cap 18 may be placed one or more braces 22 which are fixed to the members 15 to strengthen the construction. These braces 22 are of the

form illustrated in Fig. 4 in order that the guide 21 may slide past them.

For preventing the upper shore-part from sliding downward on the pipe 19, I provide a pair of releasable ratchet dogs 25 pivotally mounted in a head 26 which is attached to the cap 18. The surfaces of the dog 25 which engage the pipe 19 are toothed or otherwise roughened and are curved to fit such pipe. In addition, these surfaces are curved eccentrically to the axes of pivotal mounting of the dogs so that they will grip the pipe 19 and prevent lowering of the upper shore-part while permitting free upward movement of it. The springs 27 acting between the dogs 25 and the head 26 tend to force the dogs into engagement with the pipe 19.

The head 26 is provided with a centrally located circular upward extension 30 which is slidably received within the central opening in the cap 18 and which is provided with an axial hole for the reception of the pipe 19. To retain it in place in the cap 18, the upward extension 30 is provided with several ears 31 which may be bent over after the upward extension 30 is in place in the central opening of the cap 18, as is clear from Fig. 11. Preferably, the upward extension 30 is also provided with one or more keys 32 which mate with slots in the cap 18 and prevent relative rotation of such cap and the head 26.

Before the head 26 is attached to the cap 18, a rotatable collar 33 is placed over the upward extension 30, the keys 32 being short enough so that they will not interfere with the rotation of such collar when it is in place. The collar 33 is provided with a peripheral series of upwardly extending teeth 34 adapted to mate with a corresponding series of teeth 35 extending downwardly from the lower surface of the cap 18. The collar 33 is rotatable on the upward extension 30 from a position in which the upper surfaces of the teeth 34 abut against the lower surfaces of the teeth 35 to a position in which the teeth 35 drop into the spaces between the teeth 34. The two positions of the collar 33 are illustrated in Figs. 8 and 9. Pivotaly mounted between ears 36 on the collar 33 is a pawl 37 adapted to drop into an opening 38 in

the head 26 to prevent rotation of the collar when the teeth 34 abut against the teeth 35. If desired, the collar 33 may be provided with one or more laterally projecting fingers 39 to aid in its rotation.

The means employed for extending my shore comprise a jaw 40, adapted to straddle the pipe 19, and connected by a link 41 to a raising lever 42, the end of which is adapted to engage a lip 43 on the head 26. It will be evident that if the outer end of the lever 42 is depressed, the jaw 40 will be tilted on the pipe 19 and will firmly grip such pipe. Continued lowering of the outer end of the lever 42 will raise the upper shore-part which will be prevented from dropping by the action of the dogs 25. The raising lever illustrated and described above is only one form of lever that can be used with my shore. Another form is shown in my prior Patent No. 1,401,172, issued December 27, 1921.

When it is desired to use my shore, the collar 33 is rotated to the position shown in Fig. 8 with the teeth 34 abutting the teeth 35. The shore is raised to the desired position by means of the raising lever 42 above described, the dogs 25 preventing the upper shore-part from dropping. When it is desired to remove the shore, the collar 33 is rotated to the position shown in Fig. 9 to permit the upper shore-part to drop a short distance. A slight raising of the upper shore-part will now permit the dogs 25 to be released, whereupon the shore may be collapsed.

I claim as my invention:

1. An adjustable shore comprising an upper part and a lower part, said upper part being formed of two laterally spaced members provided at their lower ends with a cap, said cap being provided with a central opening, a head including an upward extension slidably received within the opening in said cap, means on said head for locking it to said lower shore-part, and means for holding said head in different longitudinal positions relative to said upper shore-part.

2. An adjustable shore comprising an upper part and a lower part, said upper part being formed of two laterally spaced members provided at their lower ends with a cap, said cap being provided with a central opening, a head including an upward extension slidably received within the opening in said cap, means on said head for locking it to said lower shore-part, a collar rotatable on the upward extension of said head, said collar being provided with a circumferential series of upwardly projecting teeth, and a series of teeth integral with said cap and projecting downwardly therefrom to engage the teeth on said collar.

3. An adjustable shore comprising an upper-part and a lower-part, said upper-part being formed of two laterally spaced members provided at their lower ends with a cap,

said cap being provided with a central opening, a head including an upward extension slidably received within the opening in said cap, means on said head for locking it to said lower shore-part, a collar rotatable on the upward extension of said head, said collar being provided with a circumferential series of upwardly projecting teeth, a series of teeth integral with said cap and projecting downwardly therefrom to engage the teeth on said collar, means preventing relative rotation between said cap and head, and controllable means carried by the collar and co-acting with the head for preventing rotation of said collar when its teeth abut against the teeth of said cap.

4. An adjustable shore comprising an upper-part and a lower-part, said upper-part being formed of two laterally spaced members provided at their lower ends with a cap, said cap being provided with a central opening therethrough, a guide on the upper end of said lower shore-part arranged to engage at least one of said members, said lower shore-part anchored with the guide and extending downwardly through said central opening, and means carried by said cap below said cap and clear of the upper part to engage said lower part for locking the two shore-parts together to prevent relative movement in one direction.

In witness whereof, I have hereunto set my hand at Indianapolis, Indiana, this 18th day of July, A. D. one thousand nine hundred and twenty-five.

CHARLES M. MARKHAM.