

July 12, 1932.

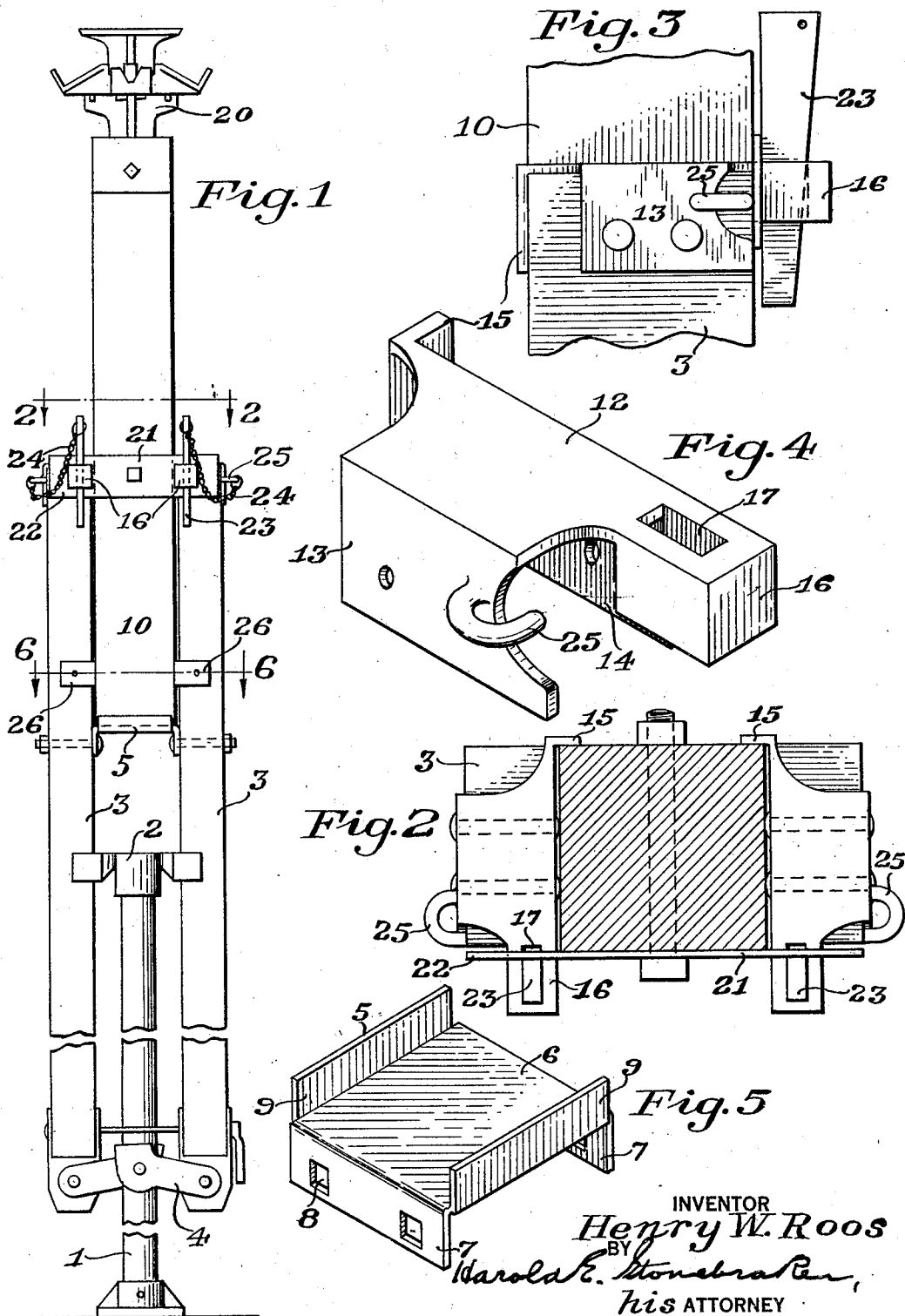
H. W. ROOS

1,867,233

SHORE

Filed Nov. 27, 1929

2 Sheets-Sheet 1



July 12, 1932.

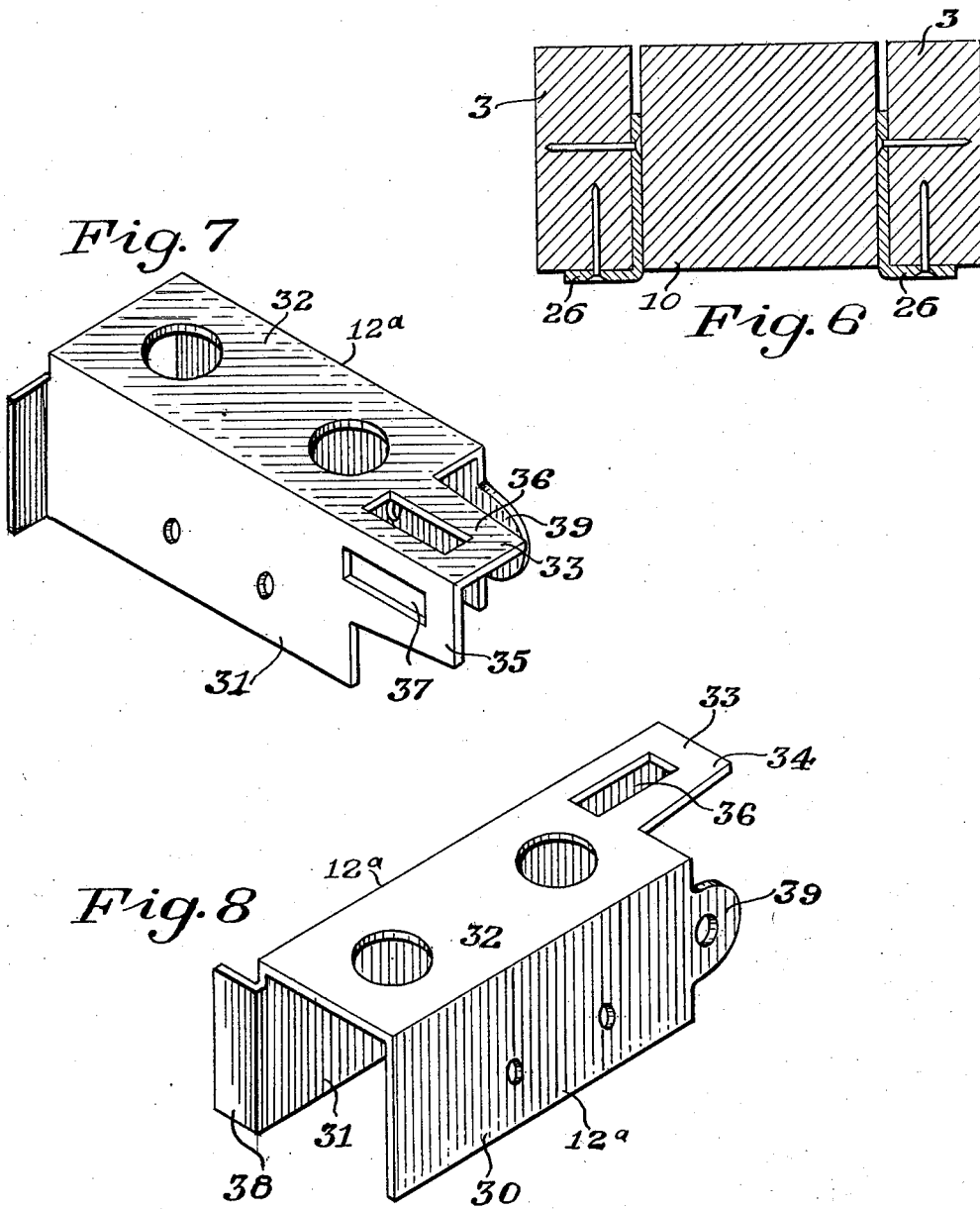
H. W. ROOS

1,867,233

SHORE

Filed Nov. 27, 1929

2 Sheets-Sheet 2



INVENTOR
Henry W. Roos
BY
Harold E. Stonebraker
his ATTORNEY

UNITED STATES PATENT OFFICE

HENRY W. ROOS, OF CINCINNATI, OHIO

SHORE

Application filed November 27, 1929. Serial No. 410,168.

This invention relates to improvements in shores, and particularly to that kind of shore which is used for supporting forms for concrete floors and the like.

5 The principal object of the present invention is to provide a simple and inexpensive construction whereby the range of adjustability of an adjustable shore may be considerably increased.

10 A further object of the invention is to provide a shore having a frame adjustable on a support with a head bearing member which may be readily and quickly removed from the frame and another of a different length quickly substituted therefor without the use of
15 special tools.

To these and other ends, the invention consists in the construction and arrangement of parts that will appear from the following
20 description when read in conjunction with the accompanying drawings, the novel features being pointed out in the claims following the specification.

In the drawings:

25 Figure 1 is a front elevation of an adjustable shore showing one way of carrying out the invention applied thereto;

Figure 2 is a transverse section taken substantially on line 2—2 of Figure 1, and looking
30 in the direction of the arrow at said line;

Figure 3 is a fragmentary side elevation of parts shown in Figure 2;

Figure 4 is a perspective view of one of the brackets for retaining the head bearing member on the frame;
35

Figure 5 is a perspective view of a supporting member for the head bearing member;

Figure 6 is a section on line 6—6 of Figure 1, and

40 Figures 7 and 8 are perspective views of a slightly modified form of bracket.

Referring specifically to the drawings in which like reference numerals refer to the same part in all the figures, 1 is the base or support of an adjustable shore of well known type and construction. This post comprises
45 a tubular upright member having a spreader 2 at its upper end which is slidably engaged by the side members 3 of a frame. The spreader 2 has outwardly extending lugs be-

tween which the side members 3 are guided in their vertical or longitudinal movements. The side members 3 have clamping members 4 mounted on their lower ends which extend
55 inwardly and are pivoted together in such a manner as to clamp the post 1 between them to support the frame thereon. The construction is such that when the side members are raised relatively to the post, the clamping members are disengaged therefrom, permit-
60 ting the frame to be moved longitudinally relative to the post, but when the side members are lowered, the clamping members engage the post and lock the frame thereto under the action of its own weight.

65 Arranged between the side members 3 and secured thereto at a point above the spreader or guiding head 2, when the parts are in the position of shortest adjustment, is a supporting bracket 5 shown in perspective in Figure 5. This supporting member or bracket
70 5 may be formed of sheet material, and comprises a horizontal supporting wall 6 substantially square or rectangular in form, and on opposite sides has downwardly project-
75 ing flanges 7. These flanges 7 may be provided with openings 8 whereby the support is secured in the frame by means of bolts, although it might be secured in the frame by
80 any other suitable means. The opposite front and rear edges of the supporting member are provided with upwardly projecting flanges 9 adapted to engage the sides of a head bearing member 10 resting with its lower end on
85 the support 5 and serve to retain the head member between the side members 3 of the frame.

The side members 3 extend above the support 5 and at their upper ends each is provided with a bracket generally referred to by the numeral 12. Since these brackets are similar in construction, except for being right and left, a description of one will suffice. Each of said brackets comprises an outer wall member 13 and an inner wall member 14
90 integral therewith but spaced therefrom to form a channel between them. These inner and outer walls engage opposite sides of the top of the side members 3 to which they are
95 secured by any suitable means, as by bolts

100

as shown. The inner member 14 is longer than the width of the side members, and at its rear end has an inwardly or laterally projecting flange 15 arranged at substantially right angles thereto, and at its other end projects forwardly of the side member as shown, to form a projection 16 having a slot or opening 17 for a purpose presently to be described. It will be understood that the bracket 12 is secured to the top of the side member which lies between the inner and outer walls of the bracket, and the member or lug 16 projects forwardly and outwardly over the front wall of the side member. By this construction, the bracket is readily and quickly positioned on the side member of the frame.

The bottom of the head member 10 is seated on the support 6 between the side members and the flanges 9 on the support, which fixes it against movement in all directions horizontally. The member 10 extends upwardly from this support between the side members 3 of the frame and vertically above said side members, and at its top has secured thereto a head 20 of any usual or well known construction. The rear wall of the head supporting member engages the inwardly projecting flanges 15 of the brackets 12, as shown in Figure 2, which retain it from rearward movement from the frame. Secured to the front wall of the head member at a point opposite the flanges 15 by means of a bolt or otherwise is a tie member 21 in the form of a strap preferably formed of sheet material, and which projects laterally over the front walls of the side members 3, as at 22. Each of the projections 22 is provided with an opening through which the corresponding projection or lug 16 on the associated bracket 14 is adapted to project.

Suitable means are provided for securing the tie member to the bracket 12 to prevent forward movement thereof and the head bearing member 10 engaged thereby and to which it is secured. In the embodiment illustrated herein, said means comprises wedge-shaped members 23 adapted to be inserted in openings provided therefor in the projections 16 and to engage the front wall of the tie member 21 and secure it and the head member in the frame. Vertical openings are shown in the projections 16. However, they may extend in a horizontal direction or additional horizontal openings may be provided so that the wedges may be inserted in a horizontal direction. In this position, they may be readily removed or replaced when the shore head and forms supported thereon are positioned as near as possible to the top of the frame.

From the preceding, it will be understood that the extension or head supporting member 10 can readily be demounted from the frame by removing the wedges 23 from the

projections 16. The head supporting member with the tie bar 21 can then be inclined forwardly from the flanges 15 and removed from the frame 3 and support 6. By this means, a new extension head member of greater or lesser length can be substituted for the one removed to provide a shore of greater or lesser height. A supporting member having a different type of head, such as a standard T-head, could also be mounted in the frame, or a shore head of T-type or other well known construction could be mounted directly on the side members 3 and retained thereon by means of a block arranged between the side members and to which the tie member 21 may be secured. By providing extension head members of different lengths, it is possible to secure shores of a wide range of heights or provided with different types of heads, all using the post and frame of a standard adjustable shore.

In order to prevent loss of the wedges 23 and to have them convenient for use when mounting a new extension member on the frame, they may be secured to the ends of suitable flexible members, such as the chains 24, the other ends of which are secured to rings or hooks 25 conveniently provided therefor on the outer walls of the brackets 14.

To secure the extension member against lateral movement or vibration in the shore frame, bearing members may be provided therefor. In the present embodiment such bearing members are shown in the form of angle irons 26. The angle irons 26 are secured to the members 3 of the frame and project inwardly between said members and the extension member 10. It will thus be seen that these angle irons prevent movement of the extension member in one direction and the flanges 5 of the supporting member 6 prevent movement in the other direction.

The base of the head bearing member could also be secured against lateral movement or vibration by providing upwardly projecting lateral flanges on the supporting member arranged between the sides of the base of the head bearing member and the side members of the frame. This could be done by cutting the flanges 7 and bending portions in opposite directions to provide both upwardly and downwardly projecting flanges.

In Figures 7 and 8 slightly modified forms of brackets 12^a are illustrated. These are similar, except that like the brackets 12 they are right and left, and only one will be described in detail. The brackets 12^a are preferably constructed of sheet material and each comprises an outer wall 30 and an inner wall 31 spaced therefrom but connected therewith by means of a spacing wall 32. By this construction, the walls 30 and 31 are connected with opposite sides of the wall 32 and arranged substantially at right angles thereto. The inner and top walls are extended for-

wardly to provide a projection or lug 33 having a top wall 34 in the plane of the top wall 32 and forming an extension thereof adjacent its inner side, and a side wall 35 in the plane of the side wall 31 and connected with the top wall 34. The wall 34 is provided with a slot or opening 36 and the wall 35 with a slot or opening 37. At its rear end, the inner wall 31 is provided with a flange 38 arranged substantially at right angles thereto.

The brackets 12^a are adapted to be arranged at the tops of the side members 3 of the frame in a manner similar to the brackets 12. The top wall 32 engages the top of the side member which is arranged between the inner and outer walls 30 and 31. The flange 38 engages the rear wall of the head bearing member.

When the head bearing member 10 is arranged in the frame between the side members, the member 22 carried thereby engages the lugs 33 which pass through the openings therein, and to which it may be secured by the wedges 23 inserted in the openings 36, as will be understood by reference to Figure 1 of the drawings. If desired, the wedges may be connected by flexible chains 24 with the bracket, the outer wall of which may be provided with a ring or eyelet 39 in which the chain may be secured.

In case it is desirable to use a very short shore in which the head, on which the forms are supported, is very near the top of the frame, or in which a T-head is mounted directly on the top of the frame, the wedges may be arranged in the horizontal openings 37 of the lug 33. In this arrangement, neither the head nor the forms supported thereon interfere with the removal or replacement of the wedges.

While the invention has been described with reference to certain details, it is not limited to the embodiments shown herein, and this application is intended to cover such changes or rearrangements as may come within the spirit of the invention or scope of the following claims.

I claim:

1. In a shore, the combination with a support, a frame having a pair of spaced side members carried thereby, of a head bearing member, means for supporting said head bearing member on and between said side members, a bracket on each of said side members, and means on said head bearing member for securing it to said brackets.

2. In a shore, the combination with a support, a frame having a pair of spaced side members carried thereby, of a head bearing member, means for supporting said head bearing member on and between said side members, a bracket on each of said side members, a projection on each of said brackets, and means engaging said projections for se-

curing said head bearing member to said brackets.

3. In a shore, the combination with a support, a frame having a pair of spaced side members carried thereby, of a head bearing member, means for supporting said head bearing member on and between said side members, a bracket on each of said side members, inwardly projecting flanges on each of said brackets for engaging the wall of said head bearing member, and means on said head bearing member for securing it to said brackets.

4. In a shore, the combination with a support, a frame having a pair of spaced side members carried thereby, of a head bearing member, means for supporting said head bearing member on and between said side members, a bracket on each of said side members, each of said brackets comprising an inwardly projecting flange at one end adapted to engage said head bearing member and a projection at its other end, and means on said head bearing member cooperating with said projections for securing the head bearing member in the frame.

5. In a shore, the combination with a support, a frame having a pair of spaced side members carried thereby, of a head bearing member, means for supporting said head bearing member on and between said side members, a bracket on each of said side members, each of said brackets comprising inner and outer walls embracing its associated side member and a forwardly projecting lug, and means on said head bearing member cooperating with said lugs for securing the head bearing member in the frame.

6. In a shore, the combination with a support, a frame having a pair of spaced side members carried thereby, of a head bearing member, means for supporting said head bearing member on and between said side members, a bracket on each of said side members, each of said brackets having a slotted projection thereon, and means on said head bearing member engaging said slotted projections and adapted to be secured thereto by means engaging said slotted projections.

7. In a shore, the combination with a support, a frame having a pair of spaced side members carried thereby, of a head bearing member, means for supporting said head bearing member on and between said side members, a bracket on each of said side members, each of said brackets comprising inner and outer walls, an inwardly projecting flange on one end of said inner wall adapted to engage one side of the head bearing member, and a projection at its other end adjacent the opposite side of the head bearing member, and means on the head bearing member cooperating with said projections for securing the head bearing member thereto.

8. A bracket for securing a head bearing

member in a shore frame comprising inner and outer walls spaced from each other, a flange at one end of said inner wall arranged substantially perpendicular thereto, and a
5 slotted projection at its other end.

9. A bracket for securing a head bearing member in a shore frame comprising inner and outer walls spaced from each other, a flange at one end of said inner wall arranged
10 substantially perpendicular thereto, and a slotted lug projecting from its other end, the inner wall of said lug being arranged in the same plane with the inner wall.

10. In a shore, the combination with a support, a frame comprising a pair of spaced side members mounted on said support, of a head bearing member, a bracket mounted between said side members for supporting the head bearing member, means on the bracket
15 for retaining the head bearing member between the side members, means for securing the head bearing member between the side members, and separate means secured to the side members and adapted to engage the head bearing member to retain it against lateral displacement.
20

11. In a shore, the combination with a support, a frame carried thereby having a pair of spaced side members, of a head bearing member, a bracket arranged between said side members and secured thereto on which said head bearing member is seated, means on one side of the frame for retaining the head bearing member against lateral movement in one
25 direction but leaving it free for lateral movement in the other direction, and means on the head bearing member movable into engagement with means on the side members for detachably securing the head bearing member between the side members.
30

In witness whereof, I have hereunto signed my name.

HENRY W. ROOS.

45

50

55

60

65