No. 815,576. PATENTED MAR. 20, 1906

G. H. BIRCHARD.

CONCRETE FOUNDATION FOR SCALES.

APPLICATION FILED AUG. 15, 1905.

Fig. 1.

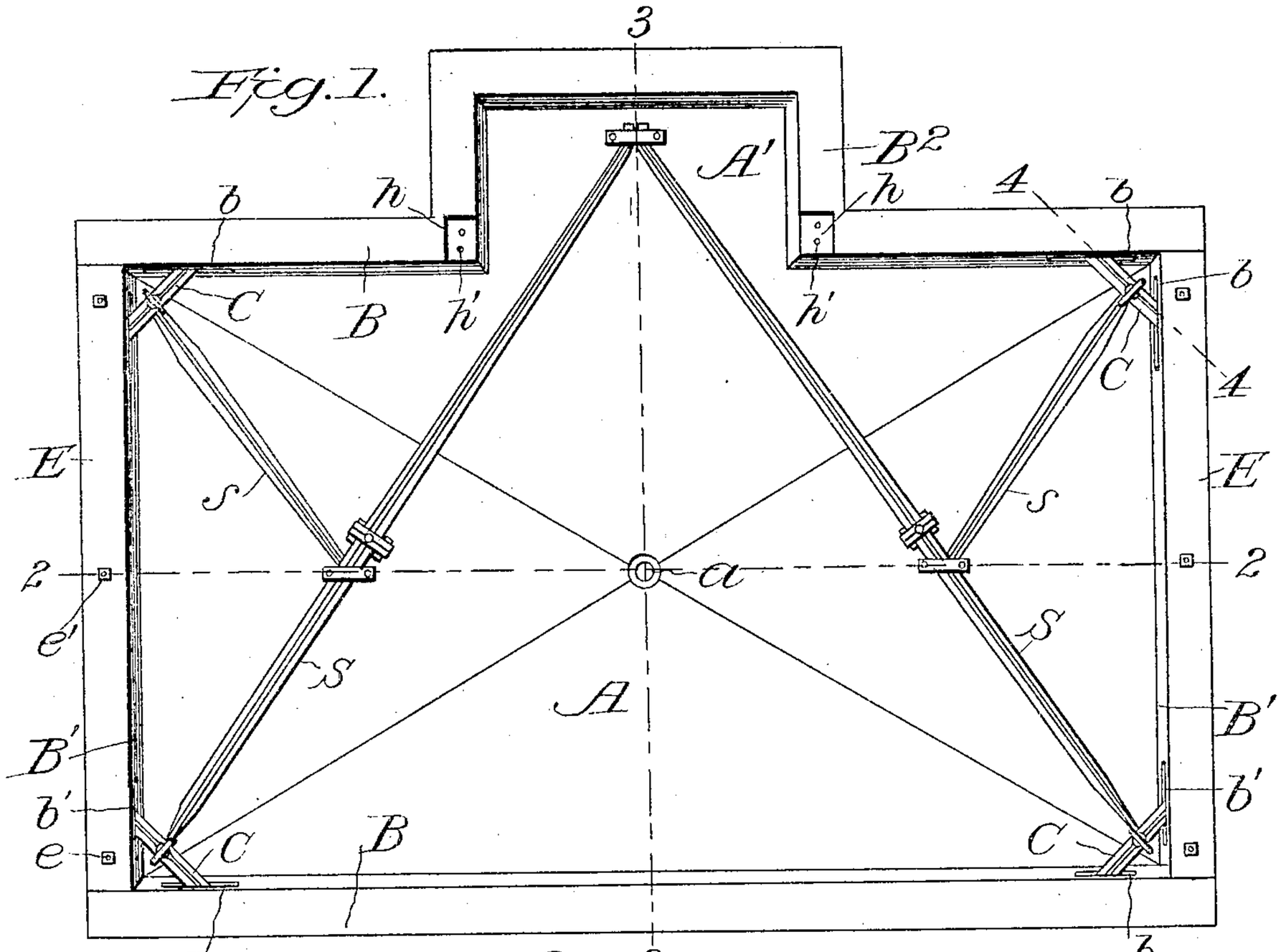


Fig. 2.

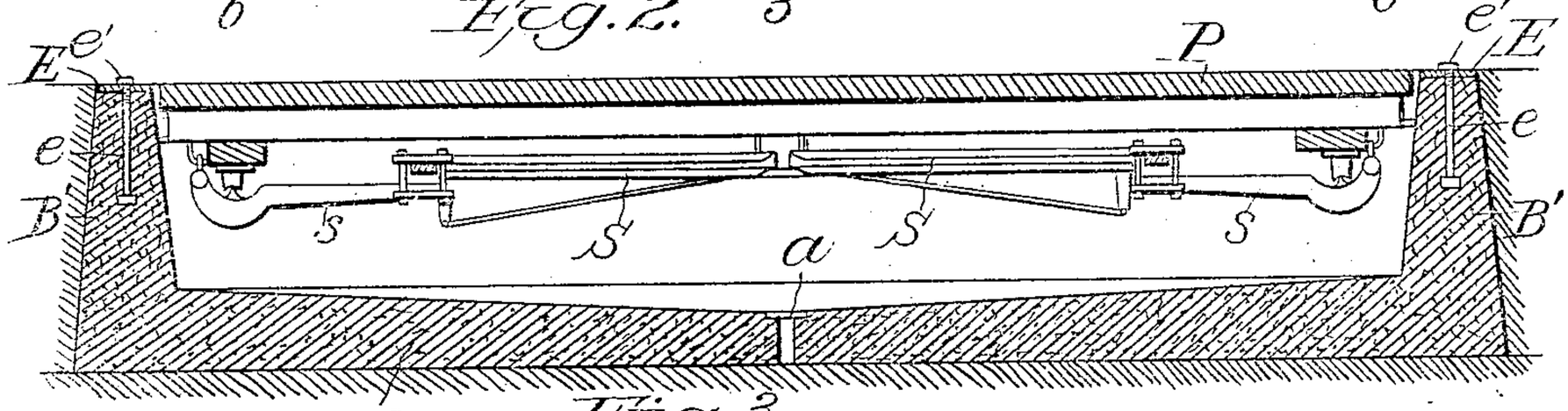


Fig. 3.

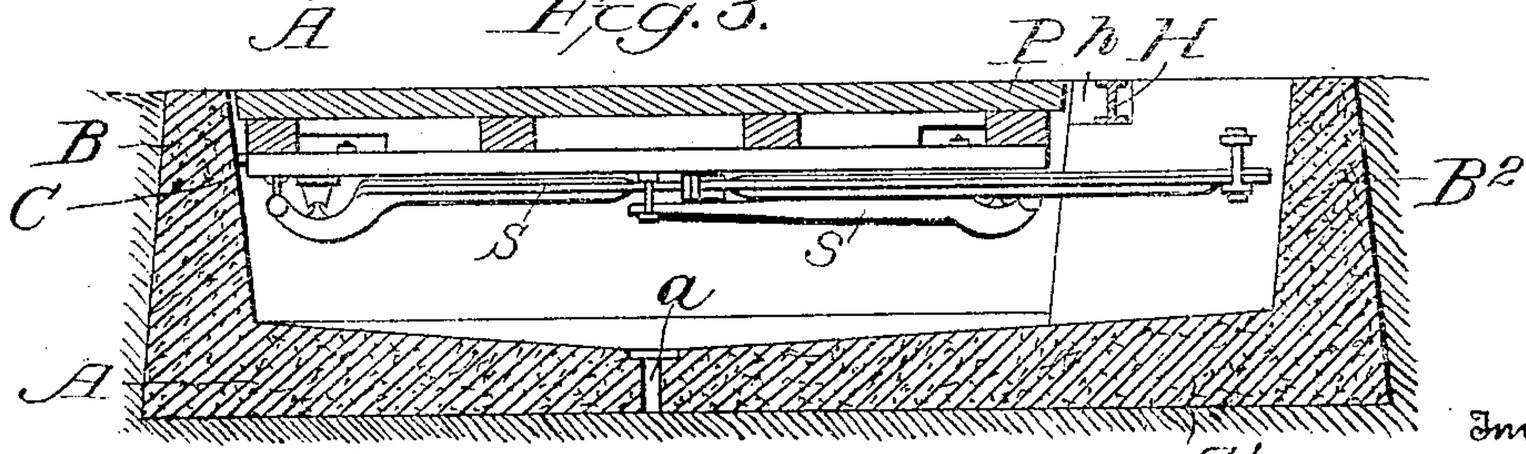
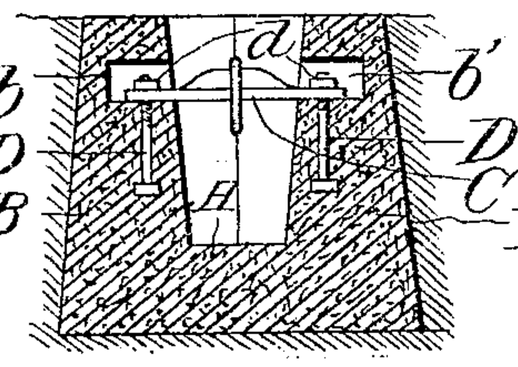


Fig. 4.



Witnesses

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CONCRETE FOUNDATION FOR SCALES.

No. 815,576. Specification of Letters Patent. Patented March 20, 1906.

Application filed August 15, 1905. Serial No. 274,330.

To all whom it may concern:

Be it known that I, GEORGE H. BIRCHARD, of Lincoln, in the county of Lancaster and State of Nebraska, have invented certain new and useful Improvements in Concrete Foundations for Scales; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

This invention is an improvement in platform-scales, and has particular reference to wagon-scales. Its objects are to provide a solid concrete foundation for such scales of novel formation and construction and to dispense with the usual outside frame of iron or wood on which the scale members are usually hung and instead suspend the scale-levers directly from the foundation, doing away with all wooden supports, which are liable to warp and decay and soon cause the scales to operate improperly and necessitate frequent renewals.

The present invention provides a timberless foundation that is practically indestructible and will last indefinitely and is much superior to the wooden foundation and much cheaper than steel or iron frames. It is to be built in the location desired, and because of its peculiar construction it will maintain the scale members in exact position, so that the scale will always weigh accurately and be practically indestructible.

The foundation, in brief, consists of a pan-like structure formed of concrete, with a bottom plate and side walls integral, the bottom plate forming a continuous bond between the walls and affording a large bearing-surface and also preventing the growth of weeds and underbrush beneath the scale and the displacement or undermining of the walls by rodents or accumulations of moisture.

The invention in particular is an improvement on the scale-foundation shown in my Patent No. 796,398, of August 1, 1905, which is more especially adapted for track-scales and other very large scales, while the present foundation is more especially adapted for farm and wagon scales of smaller size and capacity.

The invention will be fully understood from the following description and the accompanying drawings thereof, and what is claimed as new is summarized in the claims.

In the drawings, Figure 1 is a plan view of the complete foundation. Fig. 2 is a section on line 2 2, Fig. 1. Fig. 3 is a section on line 3 3, Fig. 1. Fig. 4 is a section on line 4 4, Fig. 1.

The foundation is built *in situ* and in practically one homogeneous piece of concrete, having a base-plate A covering the entire bottom and underlying all parts of the scale. Said base-plate is preferably dished to direct any water entering the foundation to a drain-outlet *a*, through which the water can escape. The base-plate A underlies the main scale-platform and has an extension A′ underlying the computing-lever platform at the side of the scale-platform.

The side and end walls B B′ of the foundation are molded or built up integrally with the base-plate A and are preferably thicker at bottom than at top, as shown, so as to enable them to withstand all pressures to which they are subjected. The walls B^2 around the offset A′ are similarly constructed, although not necessarily quite so massive as the walls B B′. The walls B B′ B^2 are all substantially the same in height and flush with the scale-platform when the latter is in position thereon, as indicated in Fig. 2.

In building the foundation pockets *b b′* are formed in the walls B B′ near the four corners of the platform for the reception of the ends of the usual metal bars C from which the scale-levers are hung. These metal bars C may be of ordinary construction and are fastened to bolts D, which are anchored in the walls B B′ with their upper ends projecting into the pockets, as shown, the ends of bars C having eyes transfixed by bolts D and retained thereon by nuts *d*, as shown. In this manner it will be noted bars C are secured at the corners of the foundation, and each bar is supported on two walls at right angles to and mutually reinforcing and bracing each other, so that the strain or weight on the bars is distributed and resisted in the most effective manner without injury to the walls or any liability of springing them.

The main scale-levers S S are hung in the usual manner from the two bars C C at the side of the foundation opposite the offset A′, and their free ends extend into said offset, and are connected to the computing-levers, (not shown,) as usual. The shorter scale-levers *s s* are respectively connected to the other bars C and to the adjacent lever S, as shown. The scale-platform P is mounted on the scale-levers in the usual manner, so that

its top is substantially flush with the upper edges of walls B B′. The construction of the particular scale mechanism mounted on the foundation is not claimed herein and is therefore only conventionally and partly shown in the drawings.

The end walls B′ B′ are preferably provided with wearing-plates E E on their top edges to prevent the walls being injured by wagon-wheels passing thereover. These wearing-plates may be of wood or iron and can be secured in position by bolts *e*, anchored in the walls B′ and projecting sufficiently above the tops thereof to pass through the wear-plates and be engaged by bolts *e′*, which hold the wear-plates thereon. These wear-plates have nothing to do with the scale mechanism and can be removed and replaced without affecting the scale proper at all.

It will be noted from the foregoing that the scale is supported or hung directly on the concrete foundation without the use of any wooden or metallic frames whatever, as heretofore necessary, and that the foundation virtually forms one large substantial pan-like structure in which the scale is suspended, with every part of the foundation firmly bonded to the other, so that it is practically indestructible, and the adjustment of the scale mechanism will remain unchanged indefinitely, the foundation being unaffected by atmospheric changes or weather or water.

A beam H to support the computing-platform may be placed across the offset A′ in line with the adjacent side wall of the weighing-platform chamber, its ends being secured in pockets *h* in the walls by bolts *h′*, embedded in the walls, as shown. This beam, however, does not form any part of the foundation, nor does it carry any of the scale-levers.

From the foregoing description it will be noted that I have a very simple but efficient scale-foundation which can be readily built *in situ* without special tools and is more economical and durable than the metal and brick or concrete or stone foundations heretofore made.

The foundation can be built to suit any style or make of wagon-scale and is so made that any frame, either iron, steel, or wood, is unnecessary. Also any wood, steel, or iron under the scale-bearing irons is unnecessary, and the pockets or anchor bolts or rods will be made and located to suit the scale to be used.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A timberless foundation for wagon-scales composed of a base-plate, side and end walls surrounding the edges of the base-plate and formed integrally therewith and inclosing the scale mechanism on all sides and beneath, and scale-lever supports anchored and supported by the adjacent walls at each corner of the foundation and below the top thereof, substantially as described.

2. A timberless scale-foundation comprising concrete side and end walls inclosing the scale-platform on all sides, said walls having pockets in them at the corners of the foundation, bolts anchored in the walls and projecting into the pockets, and scale-supporting beams supported in said pockets and fastened to said bolts, substantially as and for the purpose described.

3. A timberless foundation for wagon-scales consisting of side and end walls inclosing the scale-platform and formed of concrete, said walls having pockets in their inner faces near the corners, diagonally-arranged bars supported in said pockets, bolts anchored in the walls and securing the bars in the pockets, scale-levers hung from said bars, and a scale-platform mounted on said levers, and substantially flush with the tops of the walls, substantially as described.

4. A timberless scale-foundation for wagon-scales comprising a base-plate and side and end walls rising from the edges of said base-plate to the level of the upper surface of the scale-platform, and inclosing the scale-platform on all sides and underneath, said side and end walls having pockets, bolts anchored in the walls and projecting into the pockets, and scale-supporting beam-irons supported in said pockets and fastened to said bolts, substantially as and for the purpose described.

5. A timberless foundation for scales consisting of a base-plate and side walls inclosing and rising from the edges of the base-plate, all formed of concrete, said side walls having pockets in their inner faces near the corners, diagonally-arranged metal bars supported in said pockets, bolts anchored in the walls and securing the bars in the pockets, scale-levers hung from said bars, and a scale-platform mounted on said levers, and substantially flush with the tops of the side walls, substantially as described.

6. The herein-described concrete foundation for wagon-scales comprising a base-plate underlying the entire scale, and having a lateral extension underlying the computing-platform, side and end walls surrounding the base-plate, said walls having pockets adjacent the corners of the main scale-platform chamber, and diagonally-arranged metal bars having their ends secured in said pockets, the base-plate and walls being formed of concrete and molded *in situ;* with scale-levers hung from said bars, and a scale-platform supported on said levers, substantially as and for the purpose described.

7. The herein-described foundation for wagon-scales comprising a base-plate underlying the entire scale, and having a lateral extension underlying the computing-platform, side and end walls surrounding the base-plate and extension, and supported on

the edges of the base-plate, said side walls having pockets adjacent the corners of the main scale-platform chamber, bolts embedded in the walls and projecting into said pockets; with diagonally-arranged metal bars having their ends resting in said pockets and fastened to said bolts, scale-levers hung from said bars, a scale-platform supported on said levers about flush with the upper edges of the walls, and wearing-plates fastened to the upper edges of the end walls, substantially as and for the purpose described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

GEORGE H. BIRCHARD.

In presence of—
J. M. GUILE,
H. F. GUILE.