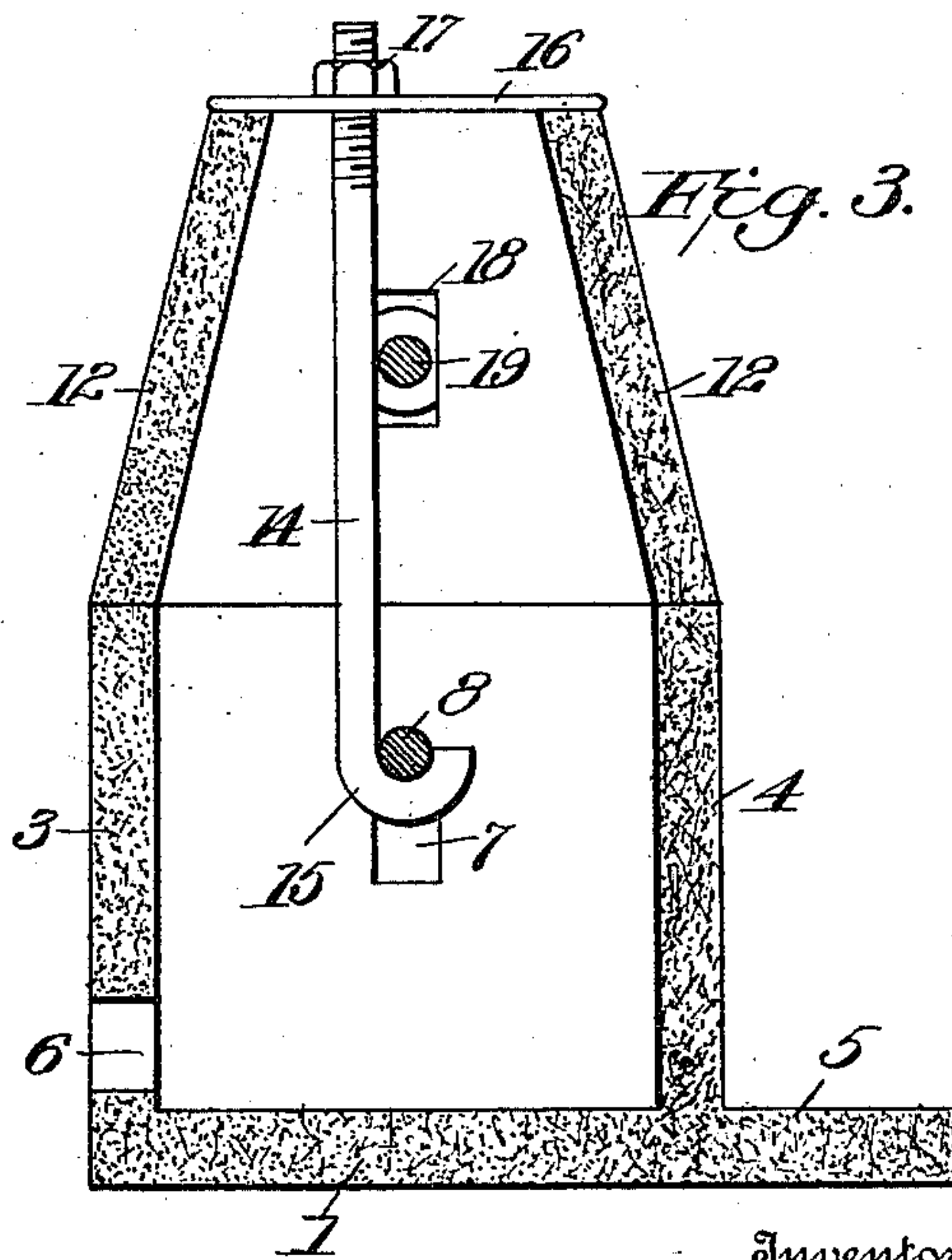
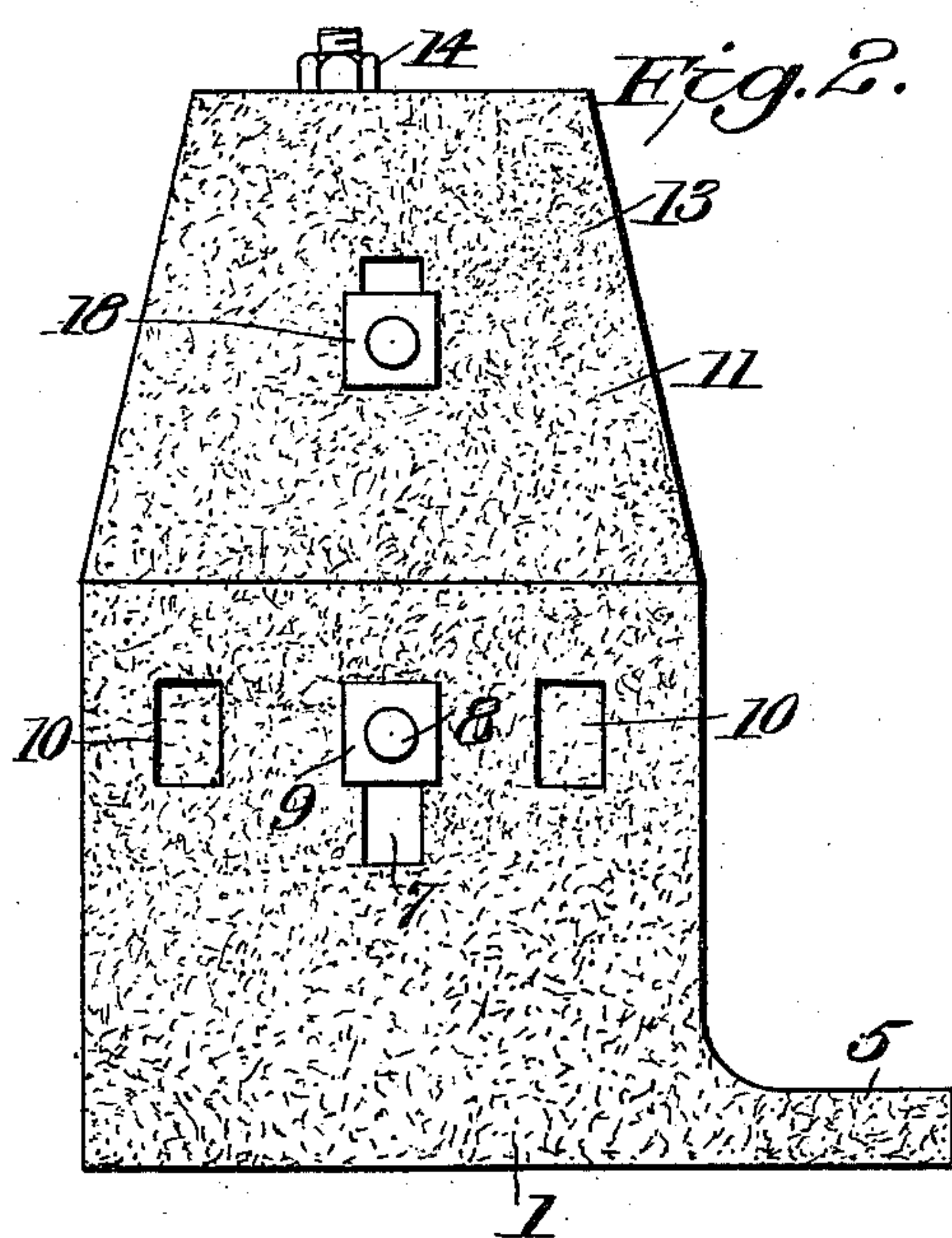
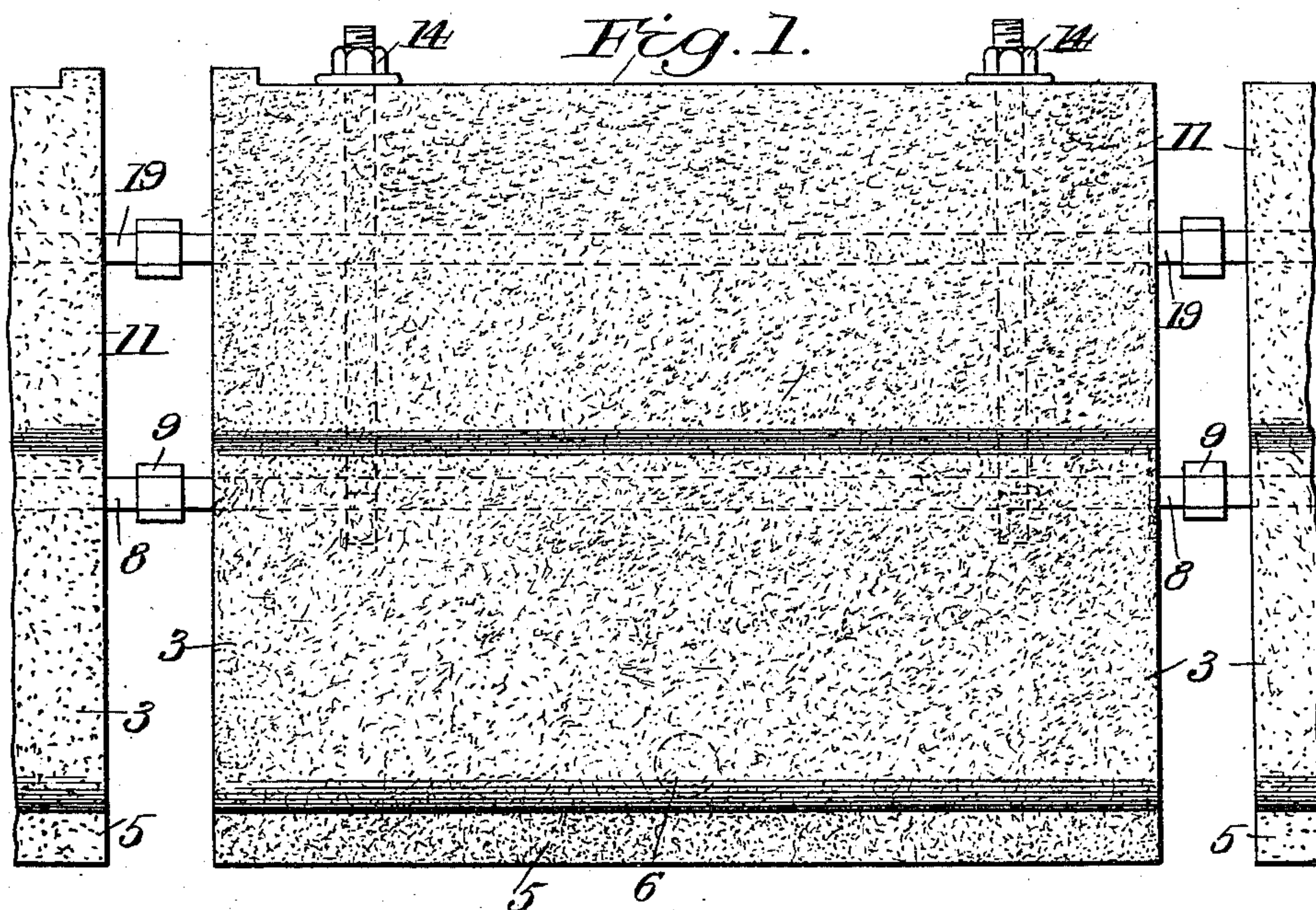


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WATER CRIB OR CAISSON.
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To all whom it may concern:

Be it known that I, FRIEDRICH P. FENSKY, a citizen of the United States, residing at Leavenworth, in the county of Leavenworth and State of Kansas, have invented certain new and useful Improvements in Water Crib or Caissons, of which the following is a specification.

My invention relates to new and useful improvements in water cribs or caissons, and the objects of my invention are to provide a water crib or caisson which is economical, practical and efficient, and which can be used and employed as and for jetties, wharves, piers, revetments and the like. And further objects are to provide a crib or caisson which may be employed to alter the current of a stream, widen or narrow channels, remove shoals and other sedimentary formations by proper placement in the water bed, under the well established laws of hydraulic engineering. This I accomplish by a crib or caisson of novel construction, composed of concrete or similar material, adaptable to employment as a single section or in a series of sections as the nature of the work requires.

The device is illustrated in the accompanying drawings, in which,

Figure 1, is a side elevation of a section of my invention, and a broken away portion of additional sections of the same construction, showing the manner of connecting a series of sections. Fig. 2, is an end view of an upper section. Fig. 3, is a similar view of a lower section.

Referring specifically to the drawings, 1, is a rectangular base, upon which are formed at right angles, parallel perpendicular end walls, 2, and similar side walls 3 and 4, forming a hollow interior, extending the entire length of the base, and of convenient height. These walls are constructed of suitable thickness, varying with the strength required to prevent breaking by the pressure of water in the water bed in which they are used. The end walls 2 and side wall 3 are constructed flush with the edge of the base 1, while side wall 4 is set in a short distance from the edge, leaving a projecting portion of the base, forming a platform 5, extending the length of the base, and designed to give stability to the structure when submerged in the water bed.

6 is a sluice-way, provided in the longitudinal center of wall 3 and near the base 1,

adapted to the ingress and egress of water and sediment for the purpose of giving stability to the structure when located in the water bed, as the water and sediment enter the sluice-way they cover the base 1, which becomes a floor bottom of the structure.

Approximately central in end walls 2, are openings 7, adapted to a rod, 8, extending longitudinally the entire length of the crib, and beyond the outer surface of the said end walls 2, sufficiently to permit burs, as at 9, to be inserted thereon, or if a series of sections are required, to permit the use of a connecting turn-buckle with similar rods in the added sections, as hereinafter described. Openings are provided, as at 10, in the end walls 2, for convenience in transportation and locating it in the water bed.

11 is a skeleton section portion of the crib, composed of side walls 12, inwardly inclined toward their summit, and end walls, 13, adapted to the side walls 12, and of convenient height and thickness. The skeleton section thus formed is adapted to vertical placement above and on the lower section, as previously described, the lower edges of the side walls 12 and end walls 13 coming in contact with the upper edges of walls 2, 3 and 4, of the lower section, forming a complete structural arrangement of a crib or caisson section.

A rod 14, curved at one end, 15, is provided as a clutch to rod 8, of the lower section, the other end extending vertically upward beyond the upper surface of the walls 12 and 13 of the skeleton section 11, sufficiently to pass through convenient openings in the transverse plate 16, extending across the upper surface of the walls 12 and 13, where it is suitably secured at its upper end by a nut 17, thereby retaining said rod 14 firmly in clutch with rod 8 in such manner as to hold the upper and lower sections in compact form.

Upper section 11, is provided with openings 18, adapted to the passage of the rod, as at 19, extending longitudinally its entire length, said rod similar to and for like purposes as rod 8 in the lower section, to which a curved rod similar to 14 may be secured if it is desired to employ an additional upper section similar to 11, surmounting said section 11 in extending the height of the crib. In this manner any desired height may be attained, as an additional skeleton section, or a number of them, similar to 11,

may be employed, the base of the walls diminishing in size conveniently suited to the top of the interpositioned walls immediately beneath.

5 From this detailed description of my device, it is obvious that a series of sections may be conveniently employed, varying with the nature of the work and the surrounding conditions. If linear extensions are desired, 10 the walls 2 and 2' are adjacently placed and rods 8 and 8' are joined by a turn-buckle as at 18, securing the sections in position. The use of connecting rods is not always essential, as in most instances the weight of the 15 crib will be sufficient to stay the crib, after it is submerged, and in such cases the cribs are employed and retained in place by being embedded in the water bed, where the water and sediment enter the sluice-way 6, filling 20 the interior of the walls, and with this added weight, causes the crib to settle securely into the bed of the water.

In the application and use of my invention I have taken the accepted theories re- 25 specting sediment bearing rivers narrowing their mouths and having a tendency to change their channels and form and destroy shoals, and also that tidal waters flowing in and out of harbors, or the floods of a river 30 flowing through alluvial deposits, will maintain a channel through such shoals or deposit the cross-sectional area of which will be proportional to the volume of water passing through them. Therefore, the use of my 35 invention becomes obvious in respect to this branch of its employment and utility. The lower or foundation section, provided with base 1, and walls 2, 3 and 4, is prepared by inserting rod 8 in openings 7, in end walls 40 2, and burs 9 adjusted to the protruding ends of the same. Skeleton section 11, is similarly prepared with rod 19, and suitably positioned vertically above the lower section, the rod 14 with the curved end clutching 45 rod 8 and its upper end secured in transverse plate 16 at the top of the skeleton section 11, and thus arranged the entire section is lowered into a desired position. The base settles into the water bed, the platform 50 covers with sediment and the sluice-way admits water and sediment sufficiently to securely retain the crib in place.

By observing the well known rules of hydraulic engineering relating to placing of 55 cribs, and other similar structure, in water beds, for the purposes of changing currents, removing shoals, establishing revetments, and the like, the crib will perform all functions required. By placing in the water bed at a 60 desired point its use as a wharf or levy is obvious, as it may be extended up or lengthwise to suit conditions, by adding sections, as herein detailed.

Having described the construction and use of my invention I claim and wish to secure 65 by Letters Patent the following:—

1. In a device of the character described, a crib or caisson member, composed of a rectangular base surmounted by parallel end walls and vertical lateral walls, the end 70 walls and one side wall constructed flush with the edge of the base and the other side wall set in, forming a projecting base portion; the said end walls provided with central openings, and a rod adapted thereto, 75 of sufficient length to project beyond said walls, substantially as described.

2. In a device of the character described, a crib or caisson member, composed of the upper skeleton structure adaptable to ver- 80 tical adjustment on the lateral and end walls of the rectangular base portion and having lateral inclined walls and parallel end walls provided with central openings, a rod threaded at its ends and adapted to open- 85 ings in the base portion and extending longitudinally therethrough; a rod curved at one end and threaded at the other and adapted to vertical adjustment to the said longitudinal rod and a transverse plate adapted to 90 retain said rod in vertical position, all substantially as described.

3. The combination of a crib or caisson member having a rectangular base sur- 95 mounted by parallel end and lateral walls, the end walls provided with central openings, and a rod adapted to said openings, with a skeleton structure having lateral inclined side walls and parallel end walls provided with central openings and a rod 100 adapted thereto; a curved rod adapted to vertical adjustment to the longitudinal rod of the base section, and a transverse plate adapted to the said curved rod, substantially as and for the purposes described. 105

4. A series of cribs or caissons, of the character described, having a rectangular base surmounted with parallel end and lateral walls, the end walls provided with 110 central openings, and a rod extending longitudinally therethrough; a skeleton structure adapted to vertical placement on said walls, and having inclined lateral walls and parallel vertical end walls having central 115 openings, and a rod extending longitudinally therethrough; a curved rod adapted to vertical adjustment to the said longitudinal rod and of the base section and a transverse plate adapted to the curved rod, all sub- 120 stantially as and for the purposes described.

In testimony whereof I affix my signature in presence of two witnesses.

FRED. P. FENSKY.

Witnesses:

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