

No. 898,174.

PATENTED SEPT. 8, 1908.

W. W. BEESON.
EXTENSION MINING CAISSON.
APPLICATION FILED JUNE 24, 1908.

FIG. 1

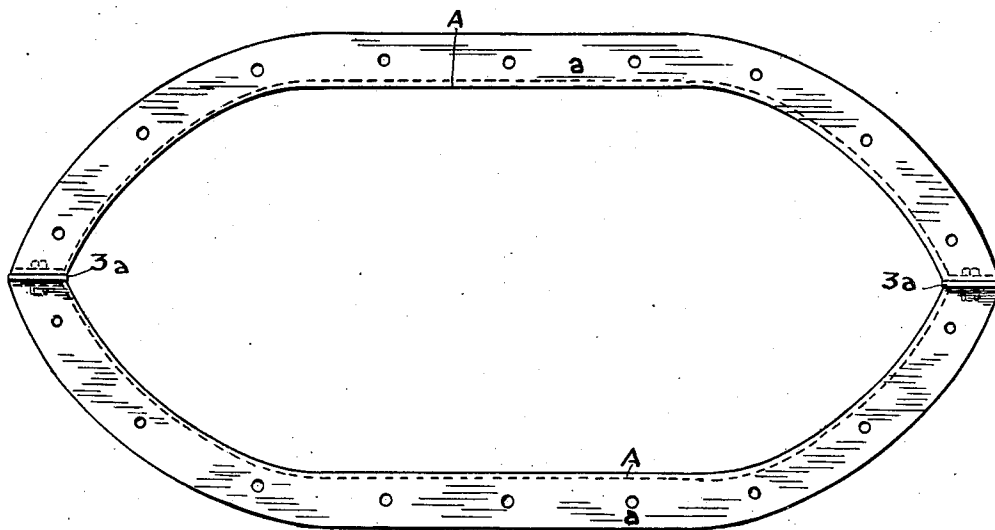
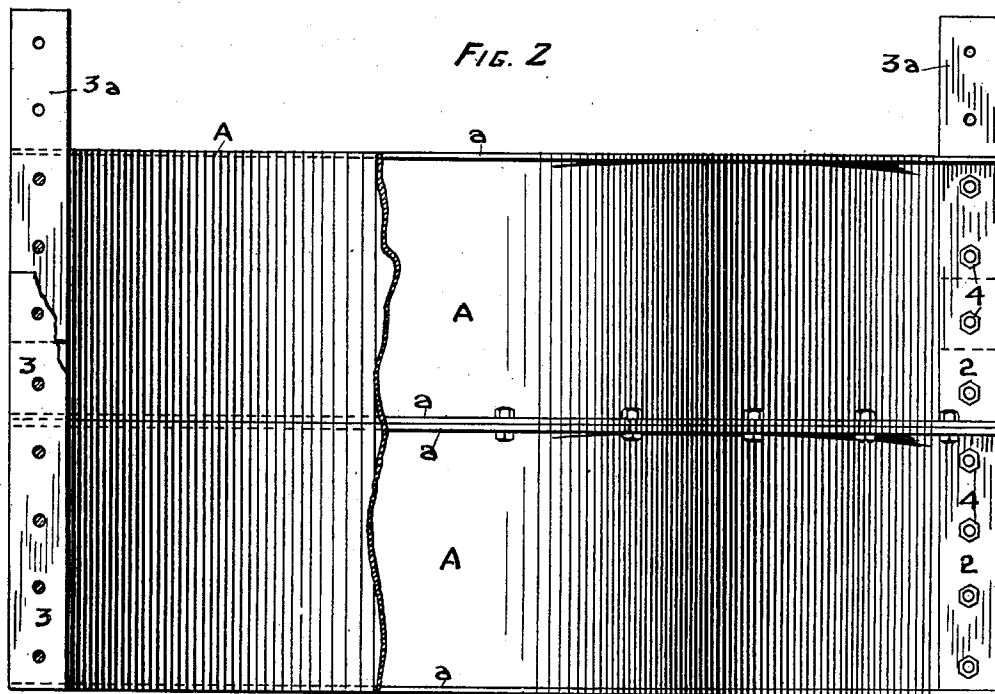


FIG. 2



WITNESSES:

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by

Geo. H. Strong
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UNITED STATES PATENT OFFICE.

WILLIS W. BEESON, OF REDWOOD CITY, CALIFORNIA.

EXTENSION MINING-CAISSON.

No. 898,174.

Specification of Letters Patent.

Patented Sept. 8, 1908.

Application filed June 24, 1908. Serial No. 440,163.

To all whom it may concern:

Be it known that I, WILLIS W. BEESON, citizen of the United States, residing at Redwood City, in the county of San Mateo and State of California, have invented new and useful Improvements in Extension Mining-Caissons, of which the following is a specification.

My invention relates to structures of that character which are especially used for the purpose of collecting valuable gold-bearing sand and material from submerged positions in rivers or equivalent bodies of water.

It consists in the combination of parts, and in details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a plan of caisson. Fig. 2 is a partly broken elevation of caisson.

For the purpose of obtaining access to valuable gold-bearing sands and material submerged in rapidly flowing rivers, it has been customary to construct inclosures or caissons which are lowered to the bottom of the river, and within which caissons a diver may work and be protected from the action of the water, which would otherwise sweep him away. These caissons have been constructed in complete sections, which may be flanged, and are bolted together, and as the work progresses, additional sections have been bolted on. These complete sections are exceedingly heavy and difficult to manipulate. The apparatus for removing the sand from the interior of the caisson must be removed before another section can be added, and the rush of water taking place in the interval will frequently fill the caisson to such an extent that the work must all be done over again.

In my invention, I make the sides of the caisson A—A separately so that one side may be applied, and then the other without in any way interfering with the diver, or with the progress of excavation which may thus be made continuous, and the filling up of the caisson prevented; in addition to which, the sides being very much lighter, are more easily handled. The caisson is built up of these sections A—A. At the ends, each of these sections has a flange 2 turned in the direction of the length of axis of the caisson, so that a pair of these flanges may be brought together, and lie substantially parallel with each other. 3 are strips of metal which are adapted to fit between the flanges. The first or lower-

most of these strips is made long enough to fit between the flanges of the lowermost section, and to extend upwardly to a point midway, more or less, of the depth of the next superposed section. Holes are made through the flanges and through the metal strips, these holes registering so that bolts 4 may be passed through, and the sections may be thus secured together. The next strip 3^a is long enough to overlap the upper end of the first named strip, and to extend above the second caisson section to a point between the flanges 2 of the third section, and by means of bolts, the lower end of these strips is connected with the second section, and also with the first named strip. The caisson may thus be built up to any desired depth and the overlapping strips having a convenient length for being rapidly introduced and secured, also form a practically continuous support by reason of overlapping each other. The upper and lower edges of the sections A may also have outwardly turned flanges *a*, with bolt-holes through which bolts may be passed to secure the caisson sections together at points intermediate of their length. These sections are preferably made with convergent ends and sunk in the river, and are placed with one of these ends to meet the current of the river, and to offer as little resistance as possible.

By this construction I am enabled to build up the caisson sections as fast as the work progresses, and without in any way interrupting the excavating and raising the material which is being carried on.

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

1. In an apparatus of the character described, a sectional caisson having independent sides formed with meeting flanges at the ends, means for securing said sides together to form a complete section, and means for connecting a series of superposed sections.

2. In an apparatus of the character described, a caisson composed of superposed sections, each section having independent sides with projecting parallel flanges at the ends, bolts by which said flanges are secured together, and intermediate connections by which the sections are united vertically.

3. In an apparatus of the character described, a caisson composed of superposed sections, each section formed with separate independent sides having parallel perforated

flanges at the ends, strips of metal extending between the flanges, and overlapping the junction of the sections, and bolts whereby the flanges and strips are united.

- 5 4. In an apparatus of the character described, a caisson composed of superposed sections, each section having independent curved sides meeting at the ends and having parallel flanges projecting from said ends,
10 plates interposed vertically between said flanges, and crossing the horizontal joints of

the sections, said plates also overlapping each other and being bolted through the flanges and the overlaps to form continuous uniting and supporting members.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIS W. BEESON.

Witnesses:

G. F. GRAY,

K. H. LIST.