

J. Braidwood.

Coffer Dam.

N^o 66,236.

Patented Jan. 5, 1866.

Fig. 1

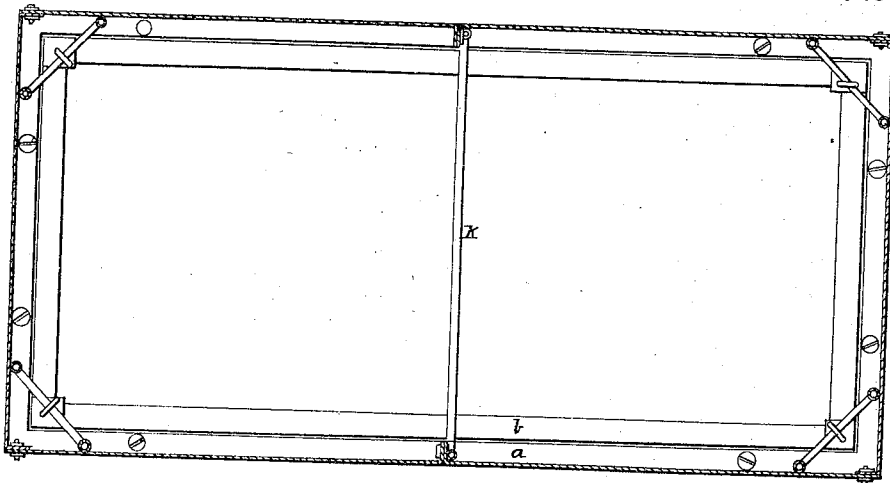
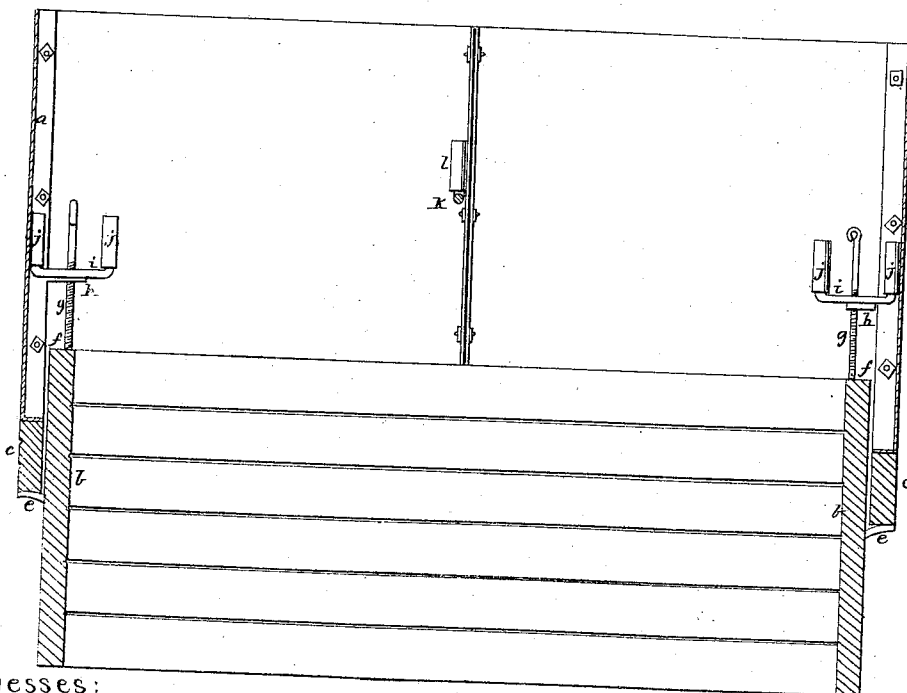


Fig. 2



Witnesses:

T. Smith
L. Jones

Inventor:

James Braidwood
by Atty. Thos. P. Everett

UNITED STATES PATENT OFFICE.

JAMES BRAIDWOOD, OF WILMINGTON, ILLINOIS.

IMPROVED COFFER-DAM.

Specification forming part of Letters Patent No. 55,235, dated June 5, 1866.

To all whom it may concern:

Be it known that I, JAMES BRAIDWOOD, of Wilmington, in the county of Will and State of Illinois, have invented a certain new and useful Improvement in Coffe-Dams; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters and marks thereon.

Of the drawings forming part of this specification, Figure 1 is a view of a coffer-dam having my improvement forming a part thereof, the view being what is usually termed a "top" view, or a view had by looking down on the structure, and showing the interior thereof, while Fig. 2 is a view by vertical section.

In both of these figures, where like parts are shown, like marks and letters are used to indicate the parts.

The drawings represent the coffer-dam as being of rectangular form; but, as is evident, it may be cylindrical, or of any other form that may be regarded as the most suitable for the particular work to be done, and the several parts of the structure may be of iron or of some other metal, or of wood, or some parts of metal and other parts of wood, as may be deemed the best for the particular locality or work on hand.

Coffe-dams may be constructed, under my invention, to be used in any location and under any circumstances where such structures can be used, as in building wharves or piers, for shafts in excavations for coal or minerals, or mining purposes generally, wherever it is necessary to exclude water, sand, &c.

As shown by the drawings, the coffer-dam will be made up of sections, as indicated by *a* and *b*, the one section fitting within the other, on the principle of the telescope, the size and number of the sections being greater or less, as may be required. The upper section may be in part of metal and part of timber, *c*, and the continuing sections entirely of timber, securely connected, as is indicated by the section *b*.

At the point of union of the sections, as at *d*, I surround the joint with an elastic valve, *e*, which, by the material without, will be pressed against the joint under sufficient force to keep out water, quicksand, &c. This valve may be

nailed or otherwise attached to the surfaces of the timbers about it to keep it in place.

The upper surface of the inner section (marked *f*) will afford a bearing for the screw *g*, or such other mechanical devices as may be used to force the section downward, which screw may have for its guide a plate, *h*, affixed to a rod or bar, *i*, with the female screw in the plate, and the turned ends of the rod or bar *i* may be fitted into sockets *j*, securely connected to the upper section, so that when the upper section is firmly held, either by its own weight or by fixtures, the application of power by the screw or other means will force the lower section down.

Each additional section can therefore be provided with the means for forcing the section below, or to be below it, down, the invention permitting of quite a number of sections and of the separating and detaching of the one section from the other, thus rendering the coffer-dam portable and of easy carriage and transportation.

As is evident, in some instances hydraulic pressure may be used for forcing down the sections.

Bracings or ties *k*, with their ends fitting into sockets, as shown at *l*, and easily detached, may be used in such number and at such points as may be needed to strengthen and support the sides of the upper or other sections.

What I claim as new in the construction of coffer-dams, and desire to secure by Letters Patent, is—

1. The making them of sections that may be fitted within each other, and operated and detached from each other, substantially as herein recited.

2. The elastic valve surrounding the points of union of the sections and made tight by the outward pressure, as described.

3. The detachable mechanical means or devices for forcing down the sections by pressure upon the surfaces, as set forth.

This specification signed this 15th day of March, 1866.

JAMES BRAIDWOOD.

Witnesses:

JAMES L. YOUNG,
A. WHITTEN.