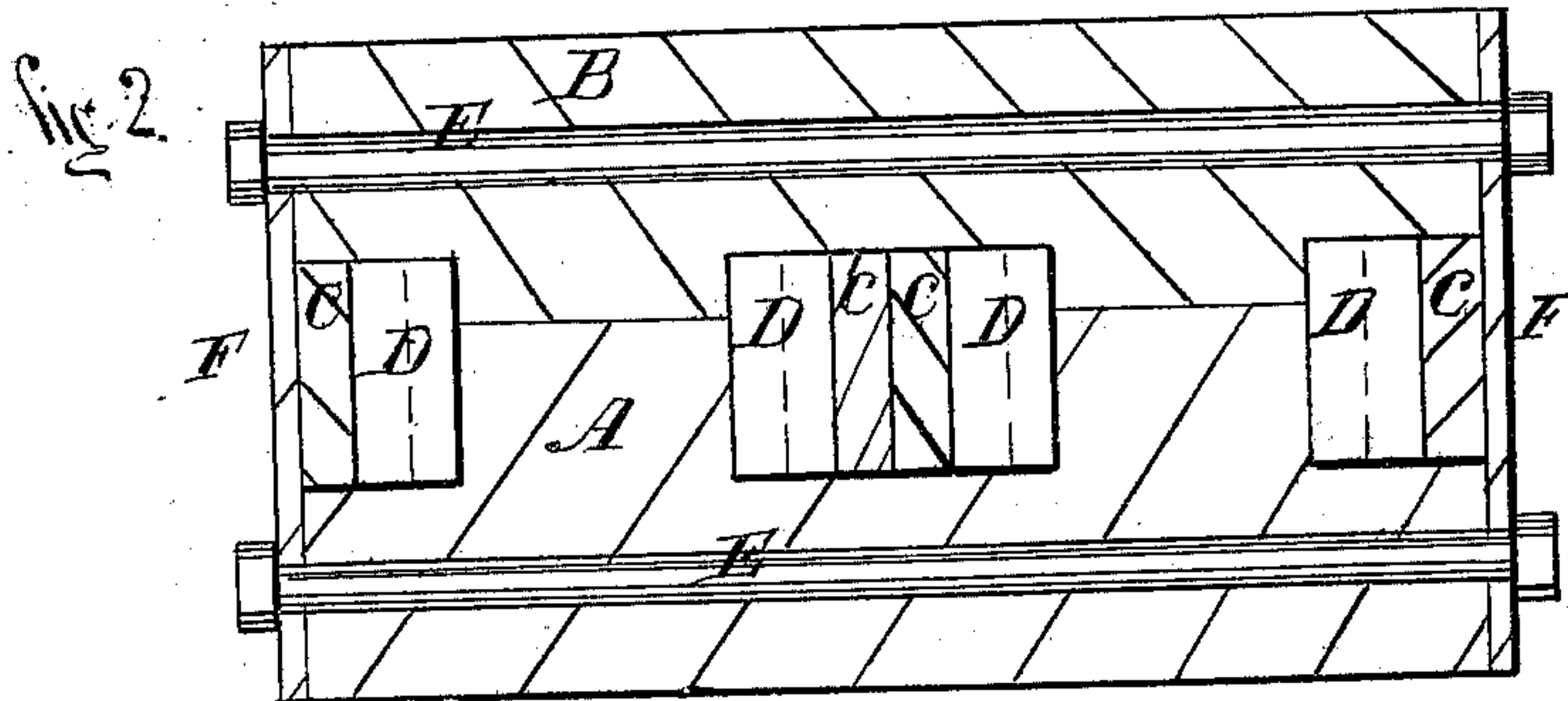
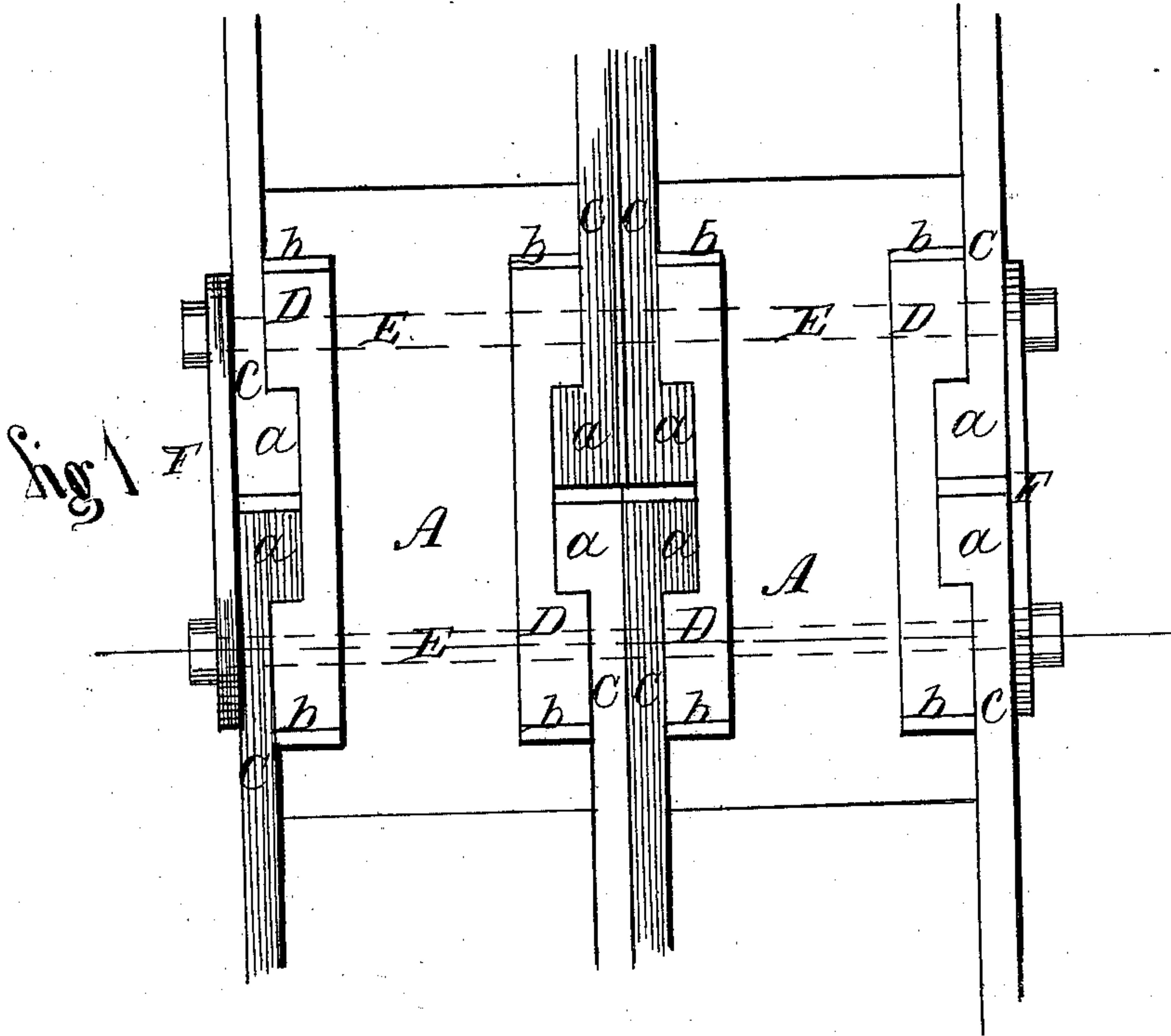


J.R. Smith, Truss Bridge.

No. 72,869.

Patented July 14, 1868.



Inventor

J.R. Smith by his attys
Gardner & Hyde

Witnesses

W. H. Emerson
Howes Norris

United States Patent Office.

J. R. SMITH, OF SPRINGFIELD, MASSACHUSETTS.

Letters Patent No. 79,869, dated July 14, 1868.

IMPROVED BRIDGE-BLOCK.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, J. R. SMITH, of Springfield, Hampden county, Commonwealth of Massachusetts, have invented a new and useful Improved Bridge-Block; and I do hereby declare that the following is a full and clear description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

In the drawings—

Figure 1 is a plan view of the arrangement of my block in the interior, and

Figure 2 is a sectional view of the block through the line K K of fig. 1.

This invention consists of a new and improved arrangement of the block and lock of the wrought-iron chords of a bridge, whereby they are connected strongly together, and prevented from springing loose.

My invention also enables these chords to be joined without reducing their sectional area, by putting bolts through them.

In construction, I form my block of two parts, A and B, A being the main body of the block, and B a cap fitting upon it.

In fig. 1 the part A is shown with the ends of the chords C C C, &c., locked in it by means of the locks D D, &c., and these, instead of being bolted to the chords, as heretofore, are completely surrounded by the solid metal of the block, so that when the cap B is fastened on, it is impossible to stir the chords apart, unless such an enormous strain be put upon them as to force the block apart.

The tendency of the chords is to pull apart, and for this reason rectangular heads *a a a*, &c., are formed upon them, and the locks formed correspondingly. As, however, the chords are forged, it often happens that they do not exactly fit with the locks, which are also wrought. In view of this, I insert wedges *b b b* between the ends of the chords, shoulders of the chords, and locks, &c., and thus make up the variation.

When the parts are arranged as in fig. 1, and the part B placed over them, the latter is bolted on by means of bolts E E, passing through plates F F at each side, and through the block, these being headed and nuted on the outside of each plate F, respectively.

By this means I obtain a clamp-block, which prevents the possibility of the chords separating under a strain commensurate with their strength of stock, and also renders the chords fastened in this way stronger than would be the case if bolt-holes were cut through them, and the lock fastened by bolts, for each bolt-hole, makes the chord of so much inoperative stock as is contained in the width of the hole carried through the whole length of the chord.

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

In combination with the wrought-iron locks D D, connecting the heads *a a* of the chords, the cast-iron block, filling in closely around the joints, substantially as and for the purpose herein described.

J. R. SMITH.

Witnesses:

EDWARD H. HYDE,

J. B. GARDINER.