

C. H. KELLOGG.
Wrought-Iron Columns.

No. 147,011.

Patented Feb. 3, 1874.

Fig. 2.

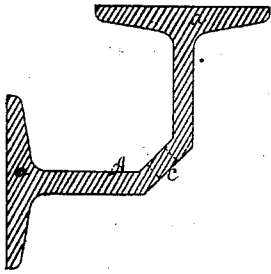


Fig. 1.

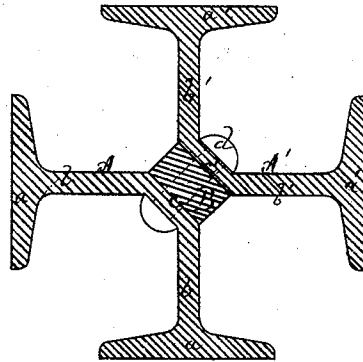
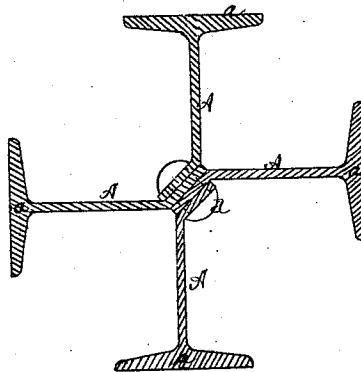


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

CHARLES H. KELLOGG, OF BUFFALO, NEW YORK.

IMPROVEMENT IN WROUGHT-IRON COLUMNS.

Specification forming part of Letters Patent No. **147,011**, dated February 3, 1874; application filed December 3, 1873.

To all whom it may concern:

Be it known that I, CHARLES HENRY KELLOGG, of Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Wrought-Iron Columns or Supports, of which the following is a specification:

The object of this invention is to furnish an iron column that combines simplicity of construction with great strength and resistance to lateral pressure; and the invention consists in forming each column of two upright pieces, each constructed of a single piece of iron with projecting flanged ends, and fastened together in the middle by a single line of bolts or rivets and with or without an interposed filling, as hereinafter fully described.

The columns are especially provided for use in the construction of bridges, docks, viaducts, piers, light-houses, buildings, and all other places where columns or pillars are required that are to be subjected to a great compression or a mixed strain.

In the drawings, Figure 1 is a transverse section of a column; Fig. 2, transverse section of one of the columns upright; Fig. 3, a modification of my invention.

A A' represent two vertical iron uprights, each having two flanges, *a a'*, formed on the ends of the projecting webs or arms *b b'* of said columns. The inner faces *c c'* of these webs are flat, and either meet together or have an interposed filling-piece, B, as shown in Fig. 1. These are all fastened together by a single line of bolts or rivets, *d d*.

It is obvious that the filling B may be dispensed with in some cases, and the two web faces *c c'* come directly in contact and be fastened together by the single vertical row of bolts *d*.

Fig. 3 shows the web and flanges made of four separate pieces, the four inner flanges laid one over the other and bolted together with a single row of bolts.

The important advantages to be derived from my construction are, among others, the greatest amount of material used is placed at the greatest distance from the center of the column, the center being a neutral axis, and the addition of the flanges give each column great stiffness and power to resist lateral pressure. There are no concealed surfaces to corrode, all being exposed, so that they can be scraped and painted at any time. Their simplicity and cheapness of construction are important advantages also—only two pieces and a single line of bolts.

These columns will be preferably of a cruciform shape, but the angles of the flanged arms *a b* may be varied to suit taste.

There are many varieties of form possible, and I am acquainted with columns with these webbed flanges, but none in only two pieces and united by a single row of bolts, in which features consists my invention.

I claim—

A wrought-iron column for bridges and other purposes composed of the uprights A A', formed with the webs *b b'* and flanges *a a'* at right angles to the webs, said uprights being secured together by a single row of bolts, in the manner and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CHARLES H. KELLOGG.

Witnesses:

J. R. DRAKE,

T. H. PARSONS.