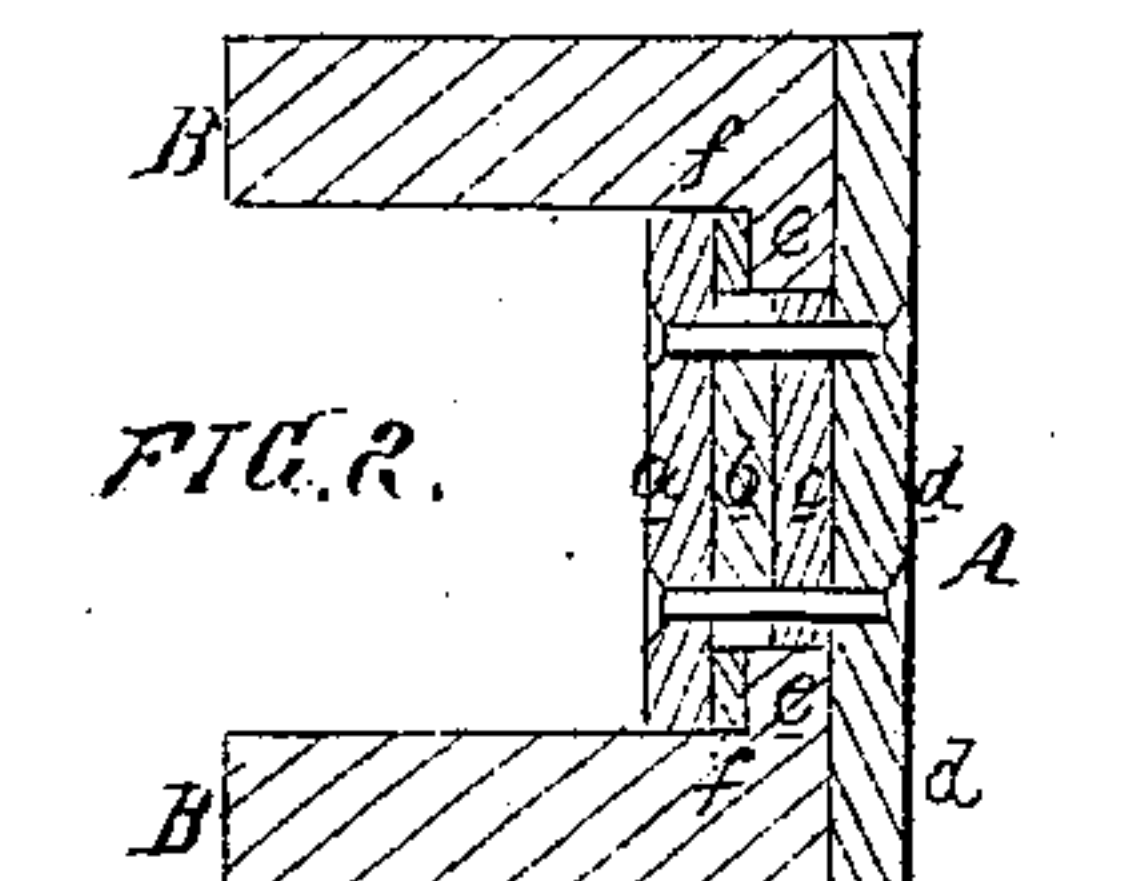
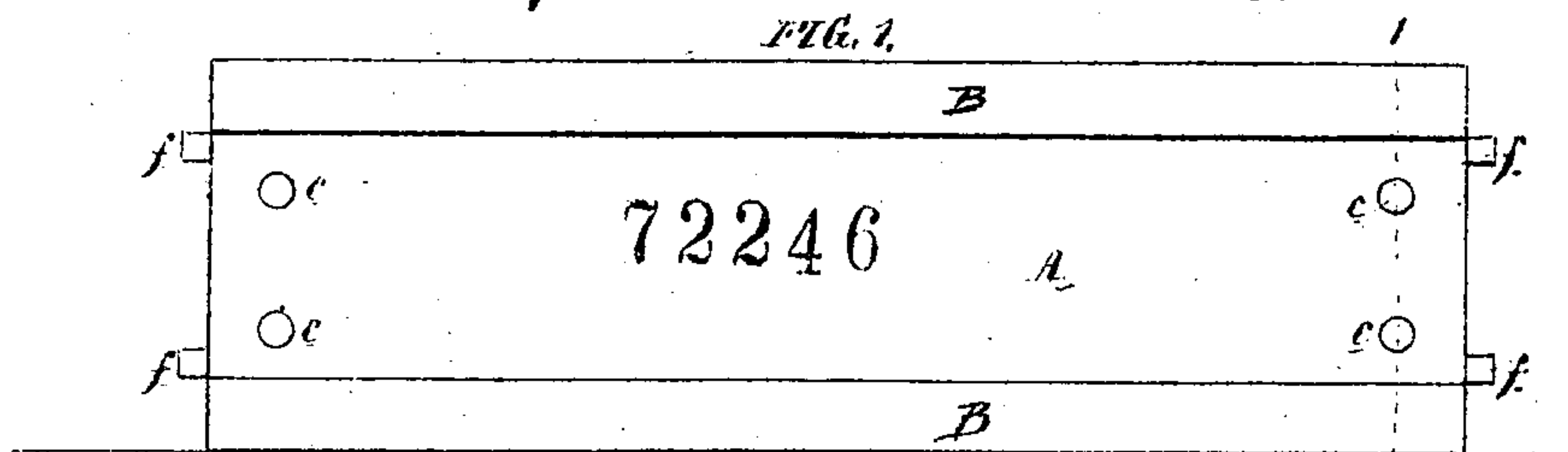
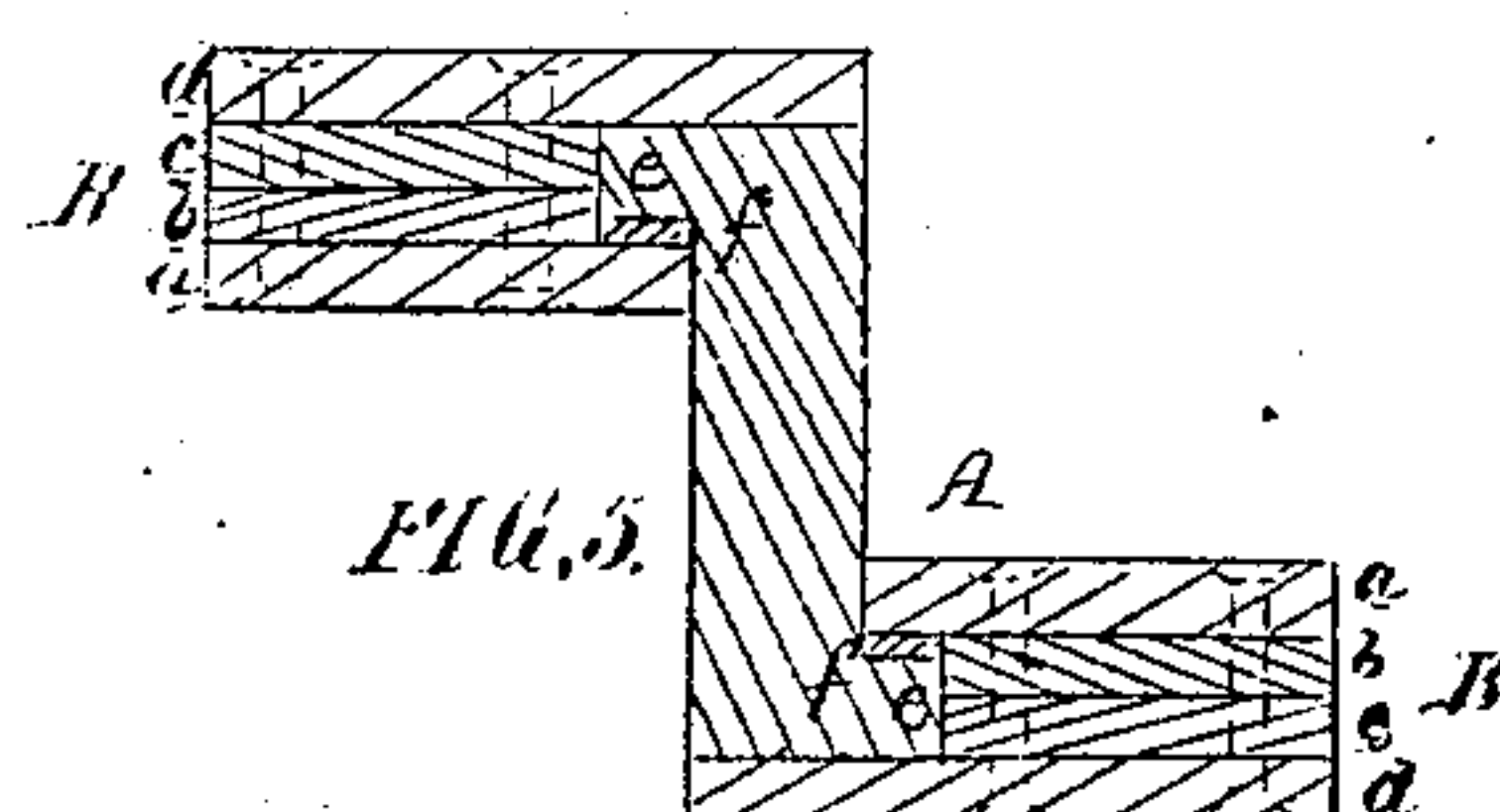
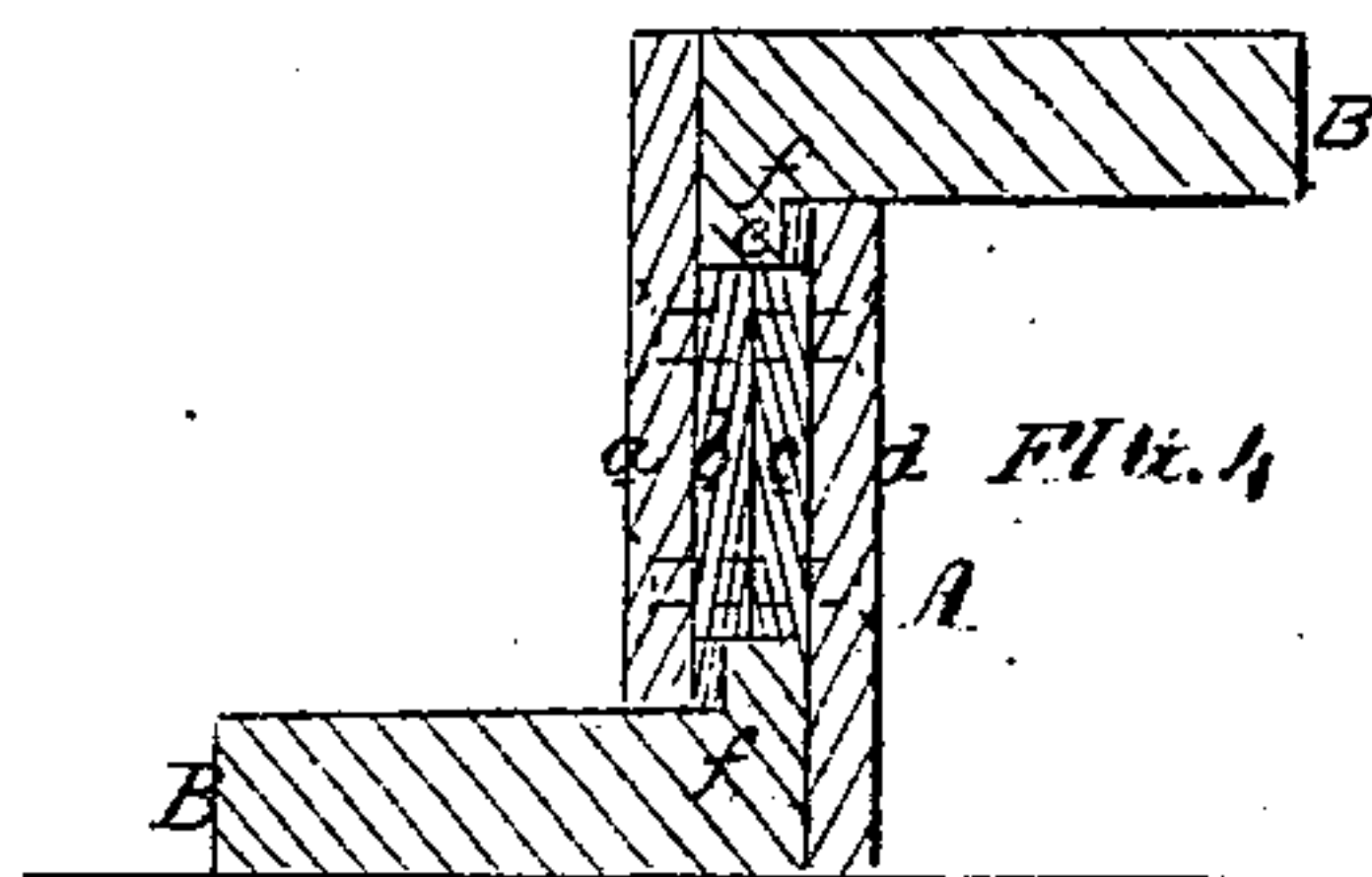
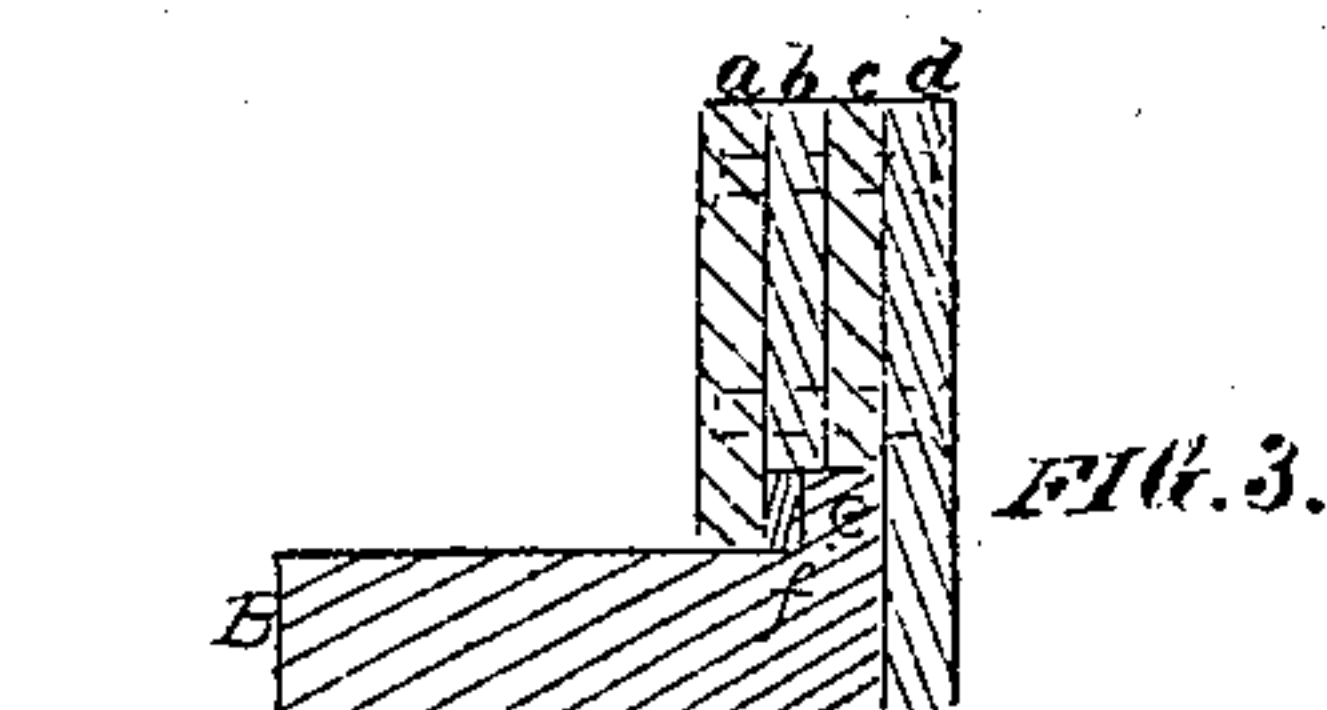


*G. Walters & T. Shaffer.-Improvement in Piles or Faggots for
Wrought Iron Beams or Girders.*



PATENTED
DEC 17 1867



Witnesses { *Wm. Albert Steel.*
John Parker

G. Walters
T. Shaffer
By their attorney
H. Horison

United States Patent Office.

GEORGE WALTERS AND THOMAS SHAFFER, OF PHOENIXVILLE, PENNSYLVANIA.

Letters Patent No. 72,246, dated December 17, 1867.

IMPROVED MODE OF PREPARING FAGOTS FOR MANUFACTURING WROUGHT BEAMS OR GIRDERS.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that we, GEORGE WALTERS and THOMAS SHAFFER, of Phoenixville, Chester county, Pennsylvania, have invented an Improvement in Piles or Fagots for Wrought-Iron Beams or Girders; and we do hereby declare the following to be a full, clear, and exact description of the same.

Our invention consists of a pile or fagot (for wrought-iron beams or girders,) composed in part of a solid beam or beams, having a rib or ribs, and in part of a number of bars riveted together, and wedged to the said rib or ribs, all as described hereafter; the parts of the pile thus composed being held firmly together while in the furnace, and forming, (after being subjected to the action of rolls,) a perfect beam or girder of more than ordinary solidity.

In order to enable others skilled in the art to make our invention, we will now proceed to describe the mode of carrying the same into effect, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figure 1 is a side view of our improved pile or fagot for wrought-iron beams or girders.

Figure 2, a transverse section of the same on the line 1-2, fig. 1, and

Figures 3, 4, and 5, sectional views of our improved piles or fagots for wrought-iron beams of different shapes.

On reference to figs. 1 and 2, A represents the web of the pile or fagot, and B and B' the two flanges. The web is, in the present instance, composed of four plain bars *a*, *b*, *c*, and *d*, riveted together, and each of the flanges B and B' is composed of a single solid beam or bar, from one face of which, near one edge of the bar, projects a rib, *e*. The bar *a* of the web fits snugly between the flanges B and B', but the bar *d* is as wide as the pile or fagot is deep, while the intermediate bars *b* and *c* fit snugly between the ribs *e* of the two flanges B and B', all as seen in fig. 2. Whether a single bar, or more than two bars, are interposed between the bars *a* and *d*, the space between the latter should be wider than the ribs *e* of the flanges are thick, so that when these ribs are confined between the said bars, there may be a narrow space between the ribs and the bar *a* for the introduction of wedges *f*, by driving which tight the whole of the parts composing the pile are held together. Four wedges are used, and are driven into their places at the two ends of the pile, the rivets *c* being situated near the wedges, and preventing the latter from forcing the bars *a* and *d* apart. The pile or fagot thus constructed is raised to a welding-heat in an ordinary furnace, and is then subjected to the action of the usual rolls, and thereby converted into a solid and rigid beam or girder.

Fig. 3 represents a pile or fagot for a beam of angular form, and is constructed according to our improvement, in a manner which will be readily understood without explanation.

Fig. 4 represents a pile or fagot for a beam having a different sectional form, the web A being composed of a number of plain bars, while the flanges B and B' are solid, as described in reference to the beam, fig. 2.

In fig. 5 the pile or fagot is of the same sectional form as in fig. 4, but its flanges B and B' are composed of a number of bars riveted together and wedged to ribs *e* on a web consisting of a solid bar.

We claim as our invention, and desire to secure by Letters Patent—

A pile or fagot (for wrought-iron beams) composed in part of a solid bar or bars, with a rib or ribs, *e*, and in part of a number of bars riveted together, and wedged to the said rib or ribs, all as set forth for the purpose specified.

In testimony whereof, we have signed our names to this specification in the presence of two subscribing witnesses.

GEORGE WALTERS,
THOMAS SHAFFER.

Witnesses:

H. HOWSON,
W. J. R. DELANY.