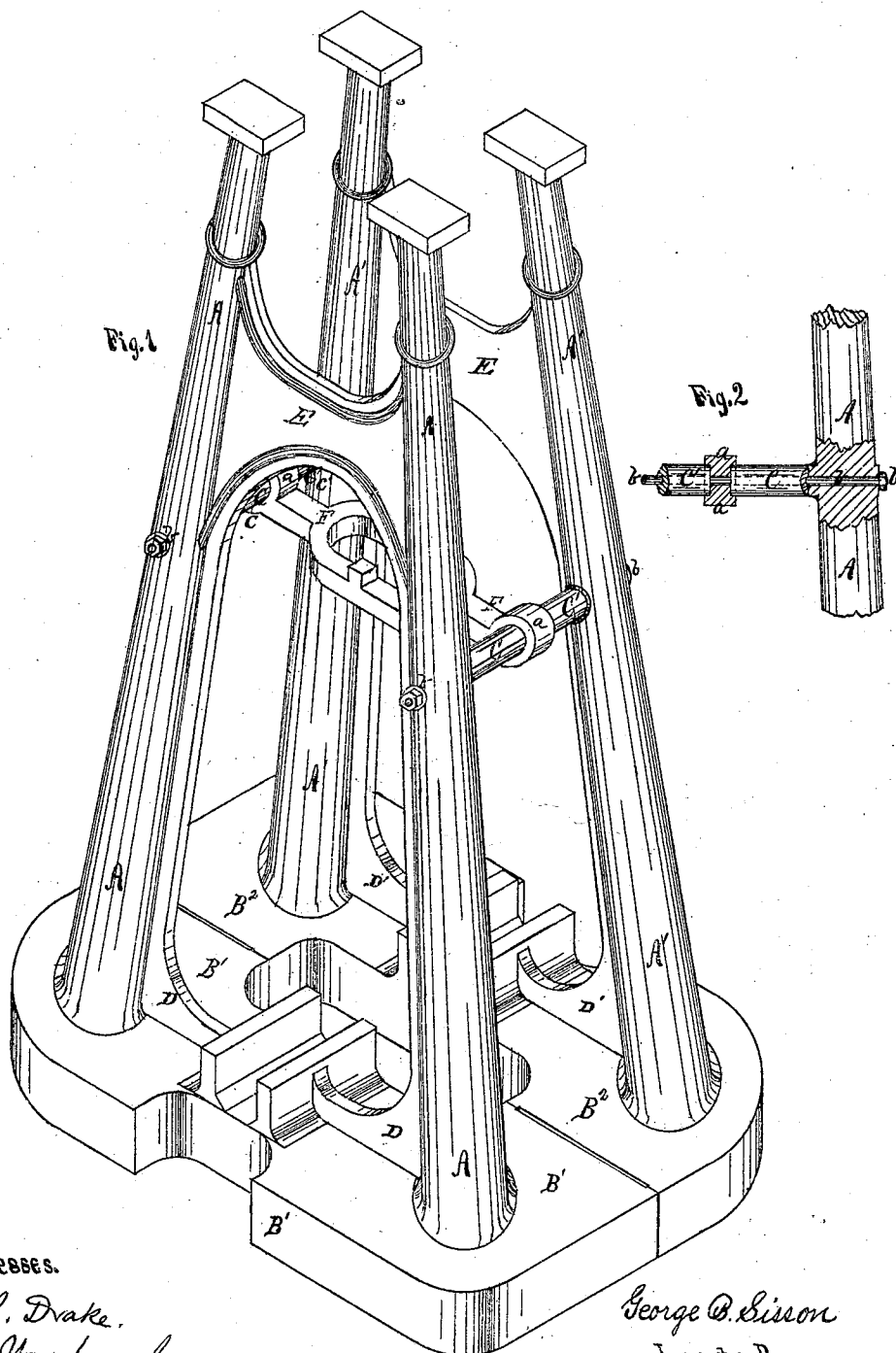


G. B. SISSON.

Frames for Vertical-Engines.

No. 141,467.

Patented August 5, 1873.



Witnesses.

J. R. Drake.
C. H. Woodward

George B. Sisson
Inventor, By
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Atty.

UNITED STATES PATENT OFFICE.

GEORGE B. SISSON, OF BUFFALO, NEW YORK.

IMPROVEMENT IN FRAMES FOR VERTICAL ENGINES.

Specification forming part of Letters Patent No. **141,467**, dated August 5, 1873; application filed March 22, 1873.

To all whom it may concern:

Be it known that I, GEORGE B. SISSON, of the city of Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Frames for Vertical Engines, of which the following is a specification:

This invention relates to the frames of vertical engines; and the invention consists in forming or casting the said frame in two parts or halves having a cored bed-plate, and each of the four standards having a knee at its base. It further consists in casting these standards with permanent tubes, through which bolts are passed, in connection with a guide-yoke, and combining the latter with ream-fittings between the two standards, thus bringing the two castings together and uniting the frame; the whole formed of three pieces of casting, as hereinafter fully explained.

In the drawings, Figure 1 is a perspective view of the whole frame. Fig. 2 is a cross-section of a portion of the frame and yoke.

A A' represent the four standards; B¹ B², the bed-plates; and C C, the permanent tubes cast on the standards. Each of these bed-plates, with its two standards A and tubes C, is cast in one piece, the bed-plate and each standard and tube being cored, making them very light, but not at the expense of strength. The base of each standard has a trumpet-mouthed fillet. Cast with these are knees or webs D D, which give great additional strength to the frame, and do away with any necessity for bolting or in any way "staying" the standards or frame,

except through these knees, where thrust-bolts may be passed through, if desired. The cored bed-plates are finished up so as to fit closely together, and are tightly bolted underneath, thus making a sufficient bottom connection. The four posts slant inwardly, and each pair has cast on them a side piece or connection, E, to add to their strength and assist in holding them in position. Just below these connections, and between the four posts, is arranged a yoke, F, cast in one piece, its ends *a a'* coming in contact and between the ends of the permanent tubes C C, and through which bolts *b b* are passed, and are secured outside each post by nuts, thus uniting the frame in a solid manner, and which allows the engine to be worked at a high rate of speed without jarring or loosening, and making an exceedingly simple construction. The inner ends of the tubes C C are cast with fillets to add to their strength.

I claim—

The vertical engine-frame cast in two pieces or halves, each half comprising the standards A A', bed-plate B, permanent tubes C C, and having the yoke F connected therewith, the whole arranged and constructed substantially as hereinbefore specified.

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

GEORGE B. SISSON.

Witnesses:

J. R. DRAKE,
C. N. WOODWARD.