

(No Model.)

J. B. F. HERRESHOFF.
CHIMNEY.

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Fig 1

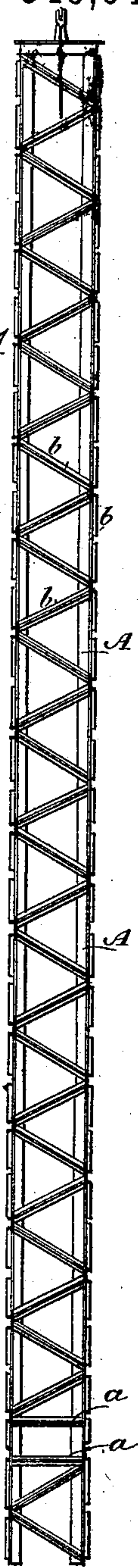


Fig 2

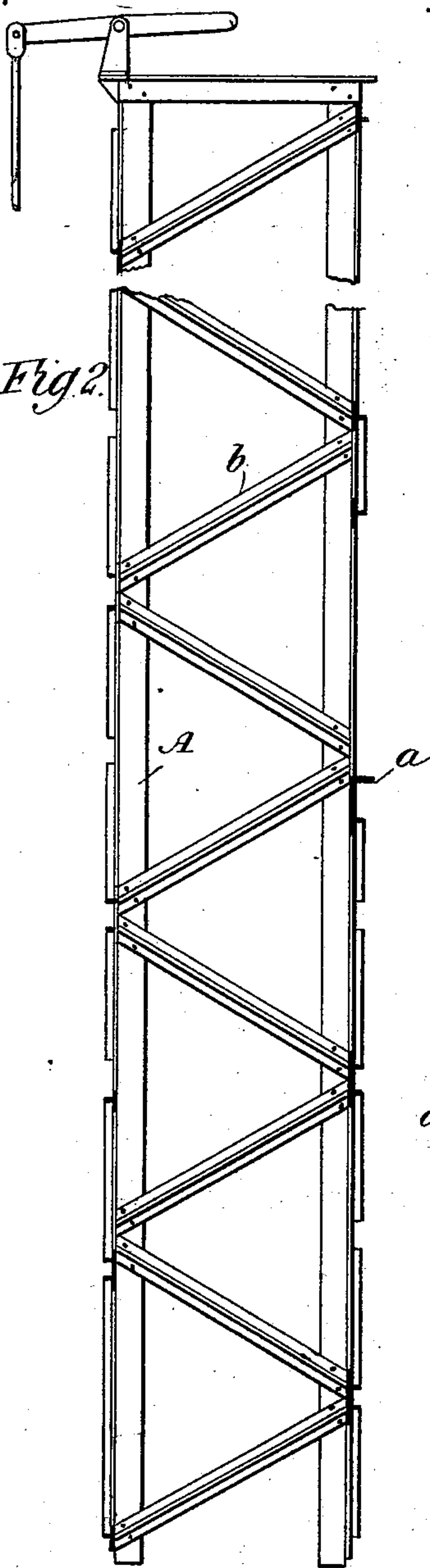


Fig 3

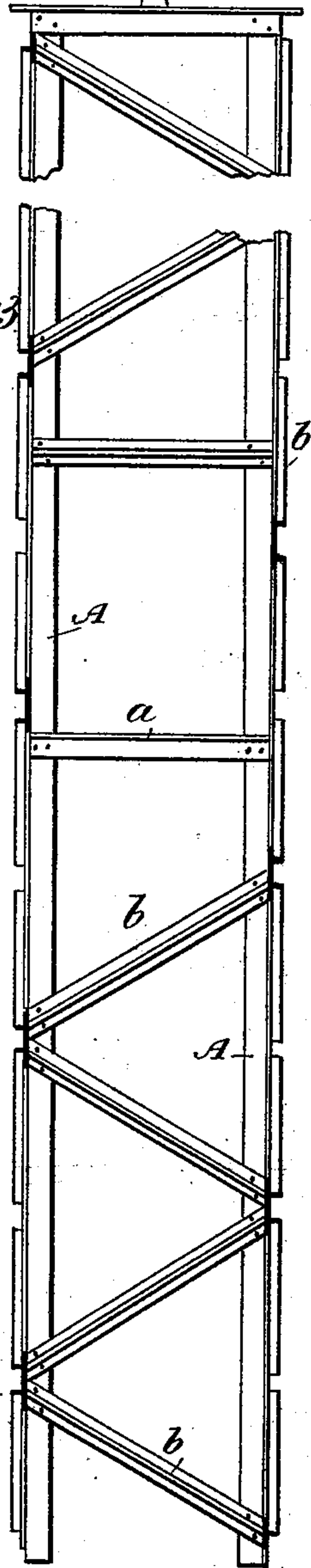


Fig 6

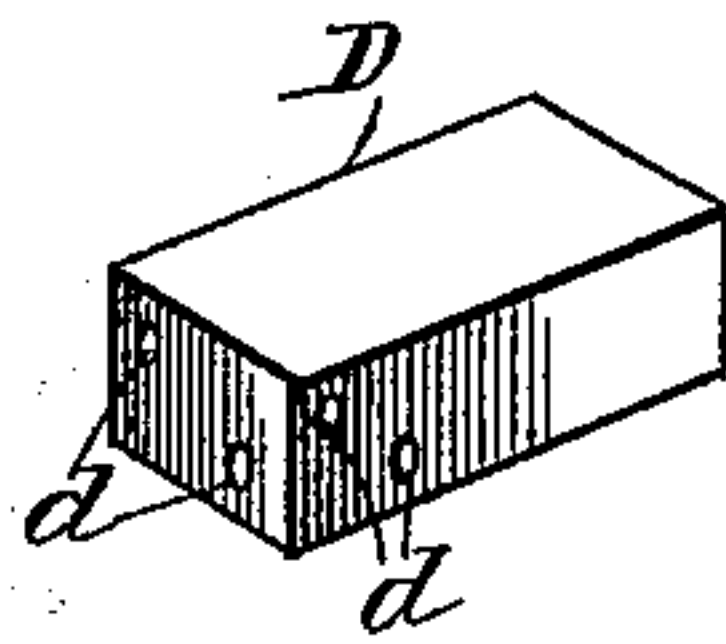


Fig 4

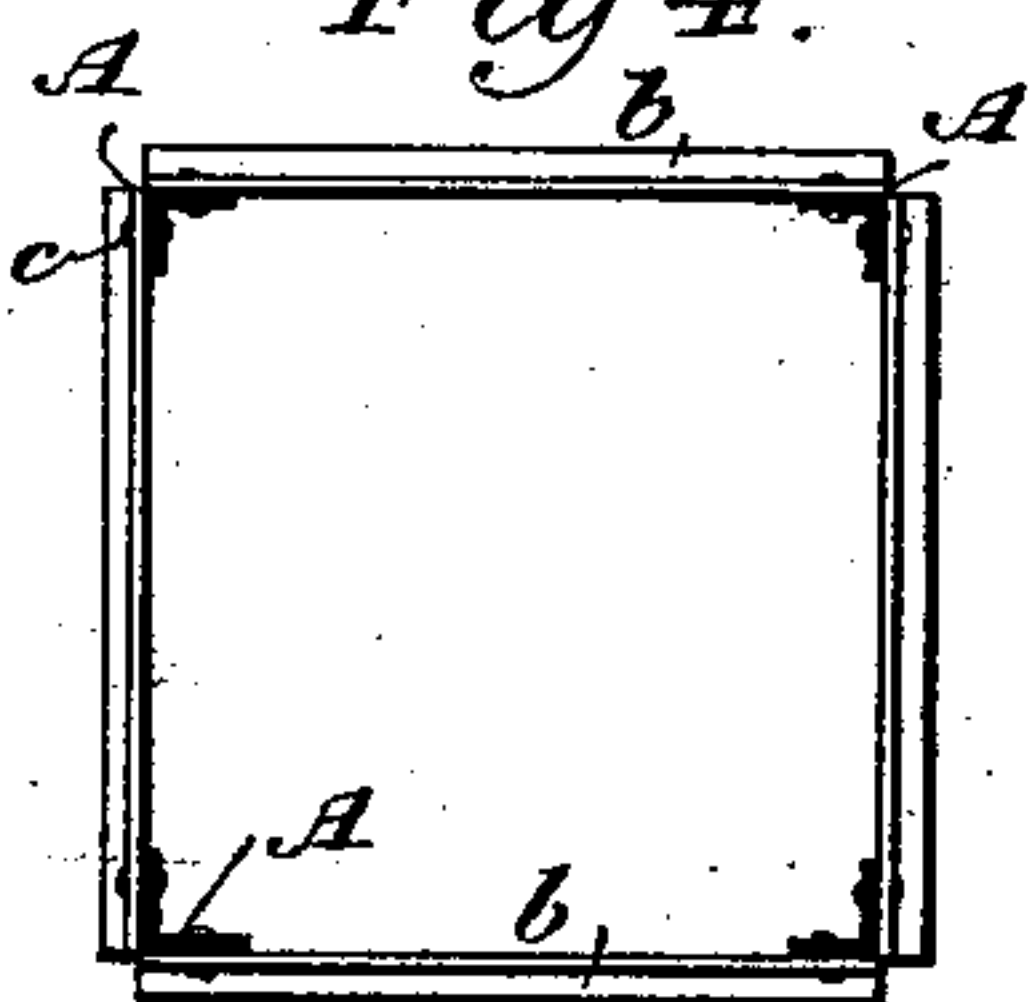
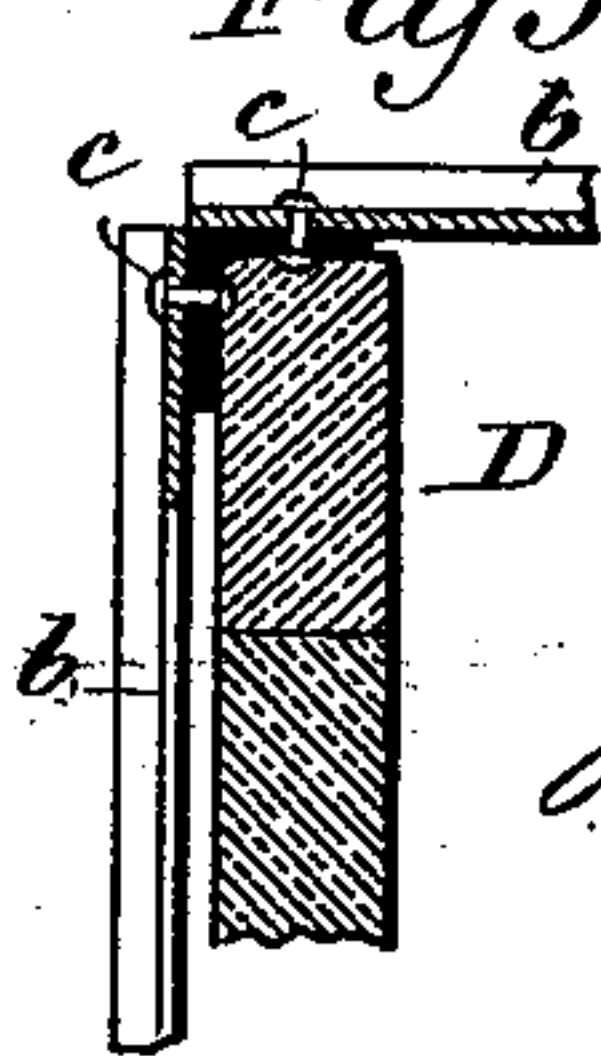


Fig 5



WITNESSES:

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Application filed March 29, 1895. Serial No. 543,629. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. FRANCIS HERRESHOFF, a resident of Brooklyn, Kings county, State of New York, have invented certain new and useful Improvements in Chimneys, of which the following is a specification.

My invention relates to chimneys, and has for its object to produce a durable chimney or flue for carrying off hot gases, &c., and one in which the bricks may be readily inspected, in order that when they become damaged they may be removed.

To this end my invention consists of a chimney comprising a metallic framework supporting the fire-brick, or other suitable resisting material, which fire-brick are held in place by the frame, substantially as hereinafter set forth, so that a brick may be removed and replaced by a new brick without disturbing the equilibrium of the structure.

My invention will be understood by reference to the accompanying drawings, in which—

Figure 1 is a side elevation of a chimney made according to my invention. Fig. 2 is a broken-away front elevation of the same, on an enlarged scale. Fig. 3 is a view similar to Fig. 2, taken from the opposite side of the chimney to that exhibited in Fig. 1. Fig. 4 is a horizontal section taken through the framework of the chimney. Fig. 5 is a fragmentary section of the chimney, showing the method of supporting the bricks or tiles in place; and Fig. 6 is a detail isometric figure of a brick or tile suitable for constructing my chimney, as will be hereinafter set forth.

Heretofore in chimneys for establishments producing gases heated to a very high degree, the principal difficulty was the question of repair. The fire-brick linings are liable by reason of the great heat to flux, and as they are worn through by the heat the surrounding lining of ordinary brick frequently employed in chimneys is finally affected, whereupon repair will be expensive and very difficult. This applies to chimneys of angular cross-section. As to chimneys of circular cross-section when built wholly of brick, the danger is still greater, since the very safety of the structure at times becomes impaired when the inner lining of the brick is torn

away and the outer reached, and the entire sustaining power may be lost. The same remarks apply to lined-up stacks. Now by my invention I construct a skeleton metallic framing which is intended to hold fire-brick only, and which, because of the peculiarities of construction, will always be safe.

In the drawings, A are four angle-irons, which are set up and joined by transverse and diagonal braces *a b*. These braces are riveted to the angle-irons by rivets *c* and are firmly held, constituting a skeleton metallic framing. Within this framing a fire-brick or tile lining is built of individual bricks or tiles D in the ordinary manner, and whenever a brick faces a rivet *c* the brick D is hollowed out or recessed, as at *d*, for the reception of these rivets. It will thus be obvious that each course, and in many cases the individual bricks, will be held firmly in place, independently of the remainder of the structure, by the support which is afforded by these rivet-heads, so that when the fire-bricks have become affected by the heat and have turned the usual red color they may be readily observed from the outside and removed and replaced without disturbing the position of the remaining bricks in the chimney. It will likewise be obvious that on account of the open character of the ironwork I may readily inspect the chimney for imperfections and deterioration of the bricks.

It will of course be obvious that my metallic framing may be made of great varieties of metals, and wherever in the specification I have referred to angle-irons, braces, &c., I would have it understood that I do not thereby mean to confine myself to iron, but have used these terms in their ordinary significance.

What I claim, and desire to secure by Letters Patent, is—

1. In a chimney, the combination with a skeleton metallic framing, constructed and arranged substantially in parallelism with the lining of a fire-brick lining therefor built into said framing and engaging means intervening between the lining and framing for causing the said framing to support part of the weight of said lining, substantially as described.

2. In a chimney, the combination of vertical
angle-irons A, braces uniting the said angle-
irons and riveted to the angle-irons, and a
fire-brick lining built into the space sur-
5 rounded by the angle-irons and braces and
engaged with the rivet heads to hold the same
in place, substantially as described.

3. In a chimney, the combination of a skele-

ton metallic framing, rivets therein, and a
fire resisting lining built into the framing 10
and engaged with the rivets to hold the lin-
ing in place, substantially as described.

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Witnesses:

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