

(No Model.)

2 Sheets—Sheet 1.

A. CRAWFORD.  
FRUIT DRIER.

No. 279,719.

Patented June 19, 1883.

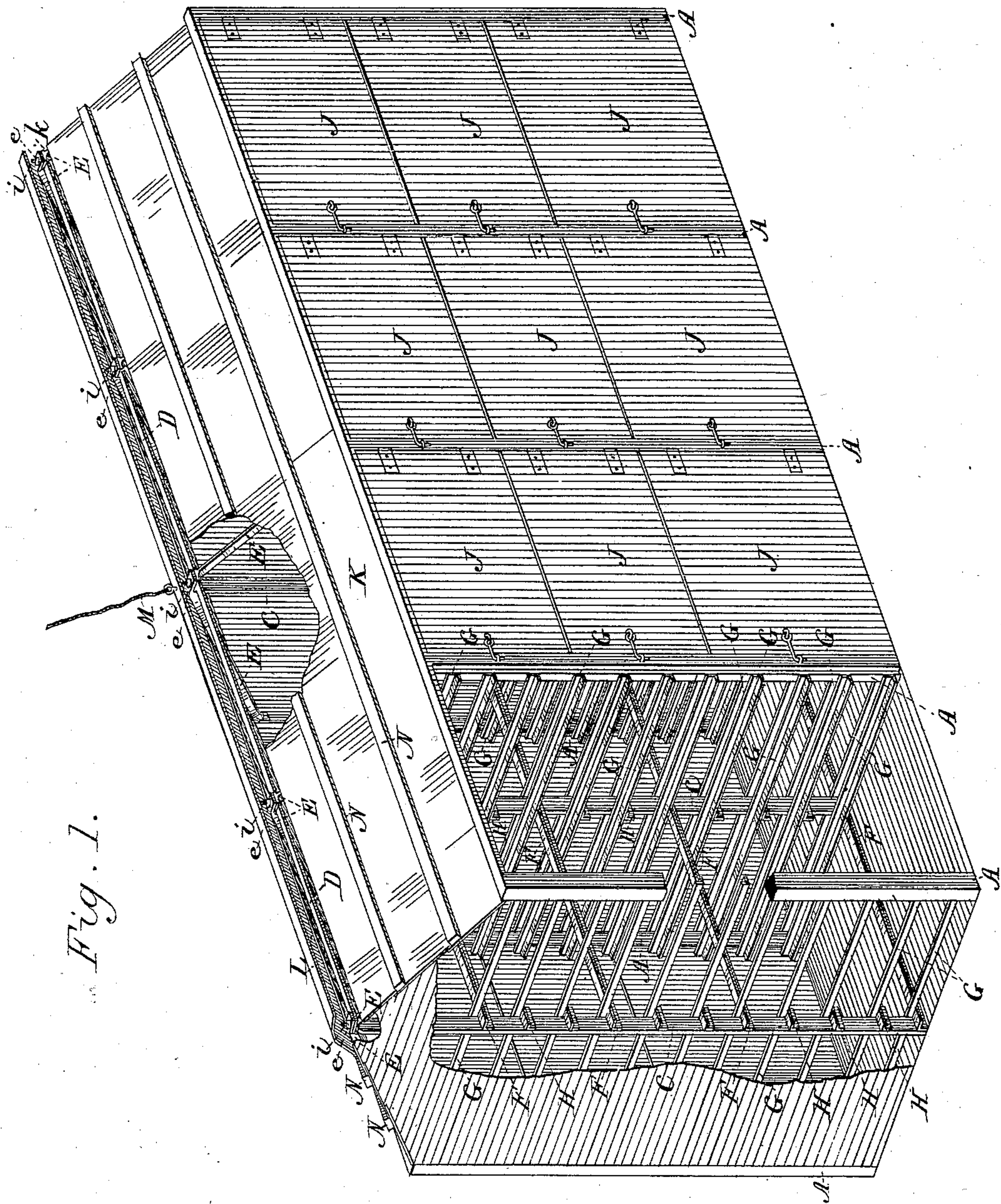


Fig. 1.

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Attorneys



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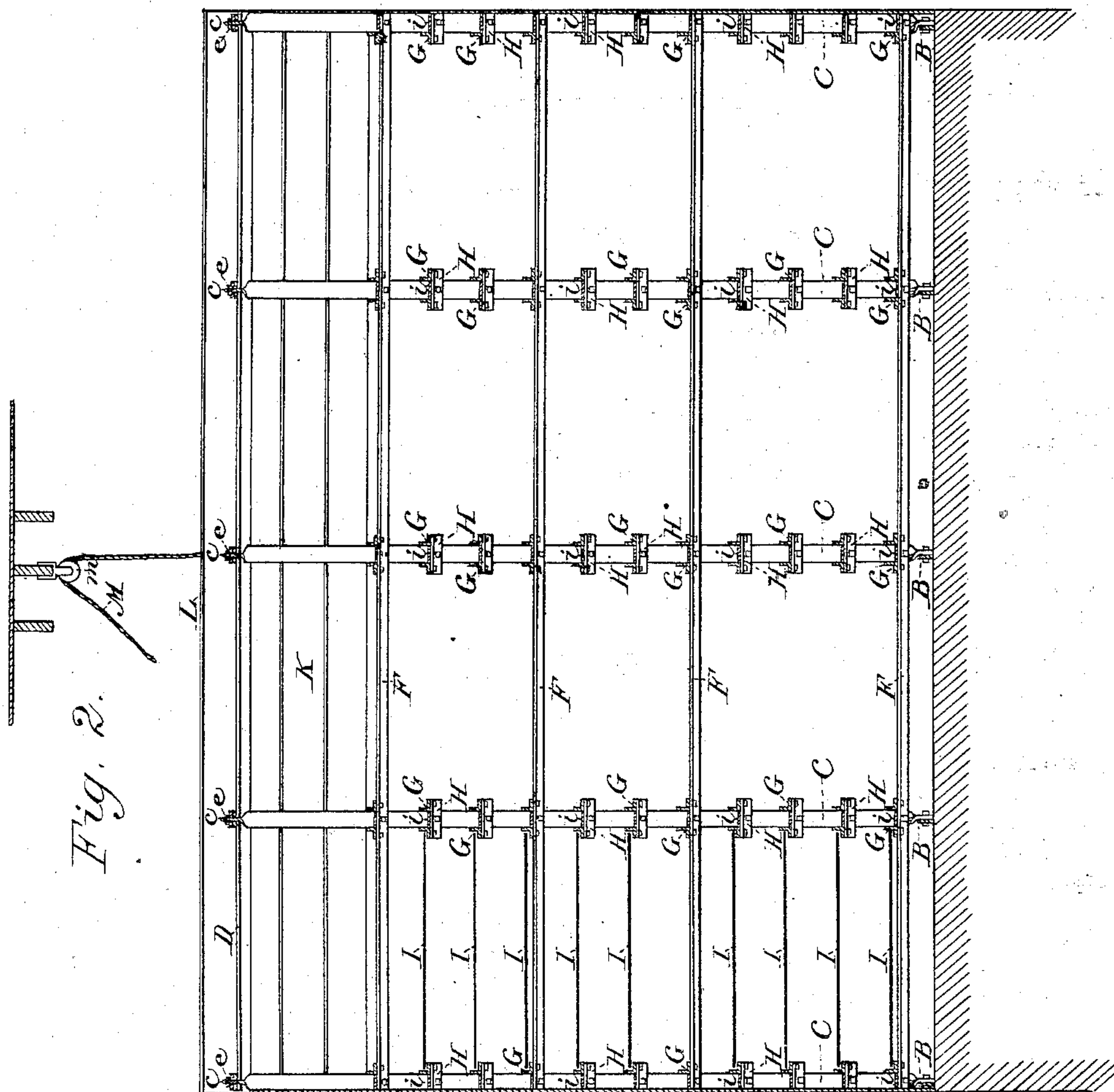
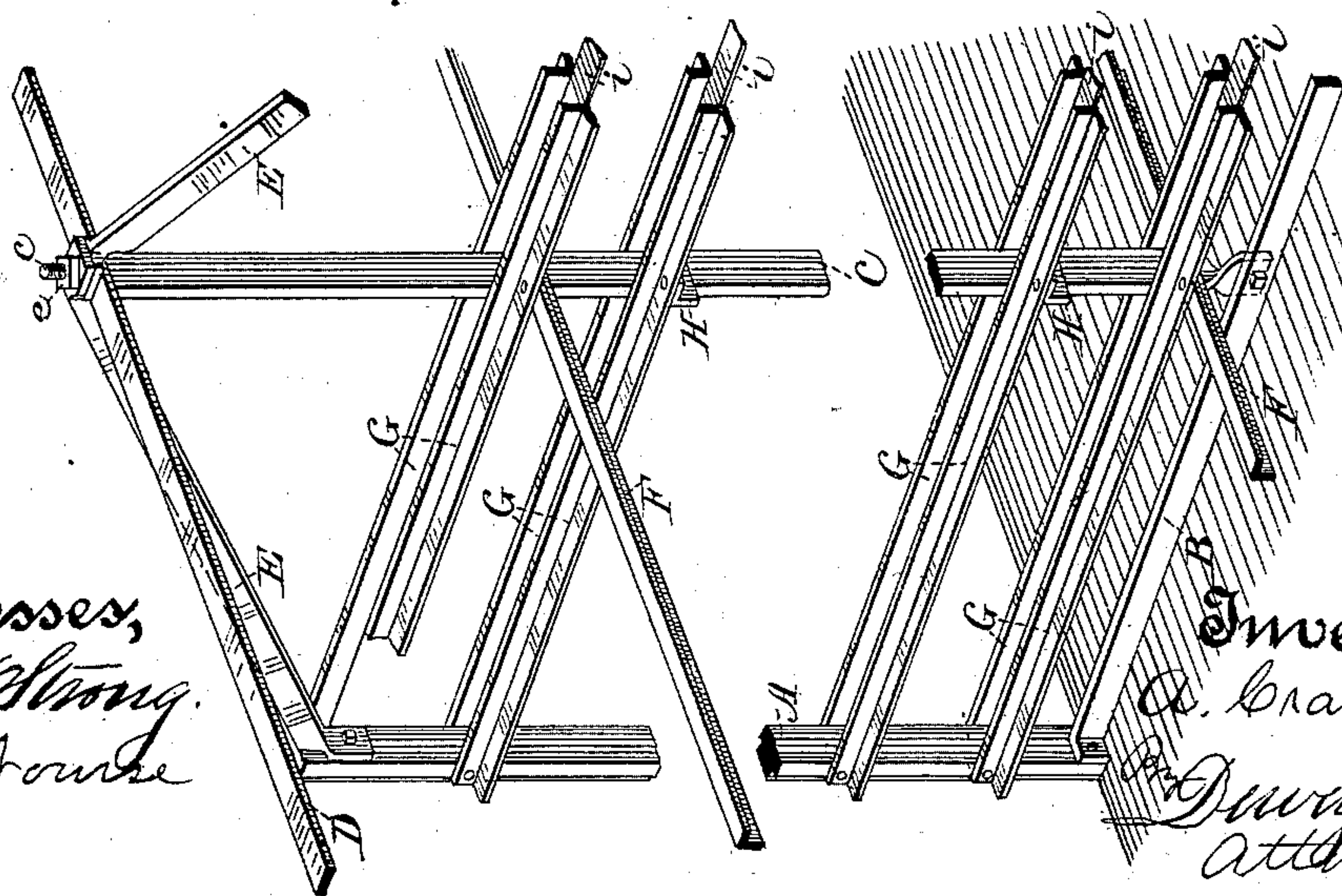


Fig. 3.



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# UNITED STATES PATENT OFFICE.

ADAM CRAWFORD, OF SEBASTOPOL, CALIFORNIA.

## FRUIT-DRIER.

SPECIFICATION forming part of Letters Patent No. 279,719, dated June 19, 1883.

Application filed March 13, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, ADAM CRAWFORD, of Sebastopol, county of Sonoma, State of California, have invented an Improved Fruit-Drier; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to a new and useful fruit-drier; and it consists in an iron frame or building constructed in the manner I shall hereinafter particularly describe.

The object of my invention is to provide a strong and durable apparatus adapted to withstand the heat, being fire-proof, and specially adapted for the free circulation of the heat, all of which will hereinafter appear.

Referring to the accompanying drawings, Figure 1, Sheet 1, is a perspective view of my drier with a portion of the end, the side, and the roof broken away to show the interior. Fig. 2, Sheet 2, is a longitudinal section. Fig. 3 is a perspective view of a portion of the interior.

In a suitable structure or house I build a brick wall, inclosing an elongated rectangular space or parallelogram. In order to give a proper idea of the general shape of this foundation, I will state that, upon a large scale, it is about thirty-three feet long by nine feet wide. This foundation is simply indicated in Fig. 2, and is not otherwise shown. Upon the foundation are set studding or posts A, of wood, standing on the outer edge of the wall, which, being thicker, furnishes some protection against the heat. Bolted to the posts A, at their bottoms, are transverse iron bars forming the sills B of the structure, Fig. 3. These are placed at intervals of, say, three feet throughout the length of the drier. To the side of the sills are bolted vertical iron bars C. These have their bottoms twisted, as shown in Fig. 3, in order to bolt them in the manner shown—that is, with their sides parallel to the sides of the drier. They occupy the center of the structure, in line with the outside posts, A, and extend up above the posts to support the iron bar D, which forms the ridge-pole, and is seen in Fig. 3.

E are the rafters, made of iron bars having twisted ends, whereby they may be bolted to posts A, and may fit over and lie upon the ridge-pole D, as shown in Fig. 3. The top of the central bars, C, is formed into a bolt, e, which passes up through the ridge-pole and through

the overlapping ends of the rafters E, and receives a nut, e, on top, whereby the parts may be tightened up.

Bolted to the central bars, C, throughout the length of the structure are the longitudinal braces F. These consist of angle-iron, and, while serving to brace the device, serve also as supports for the transverse guides G. These are also made of angle-iron, and their ends are bolted to the posts A and their centers to the braces F. In order to support them, I bolt short strips of angle-iron H to the upright bars C, as many as may be desired, between the long bars F. These support other guides G, and thus the structure is provided with as many guides as I may desire. These angled bars G form guides for the trays I, (shown in Fig. 2,) which are slid in upon them, one above the other.

In order to direct all the heat up through the trays, I lay sheet-metal strips or plates i upon the angled supports F H, between the adjacent guides G, thus preventing the heat from being wasted between the trays.

J represents the hinged doors to afford access to the trays. The ends of the structure are inclosed with timber. The roof is formed of sheet-iron, extending from the eaves to within a short distance of the ridge-pole, where it stops, thus leaving an opening, k, for ventilation the entire length of the device. This opening is necessary to allow the moisture to escape, but in case of a fire within it would afford too strong a draft. In order to provide for this, I hinge on one side, to the upper edge of the sheet-iron roof, a curved cap, L, also made of sheet-iron, which is adapted to fit down over the ridge and close the opening k. Normally it is held open by means of a rope, M, which passes up over a pulley, m, Fig. 2, in the main building and down to some convenient fastening. When it is desired to close opening k, the rope is released and the cap L falls down over it of its own weight.

Upon the roof K are longitudinal timbers N, which are placed in such position that they abut against the lower edge of each overlapping sheet of metal. These laps are downward on the outside, from the top, and hence, necessarily, upward inside, and thus the heat is prevented from escaping, not only by the



manner in which the sheets are lapped, but by the timbers N effectually covering the corners. The sheet-iron roofing is bolted from below to these timbers, the bolts passing down through the rafters E, which at this point are in contact with the under side of the sheets, since at this edge the sheet is the under one of the lapping edges. The beams N are not put inside, because of the heat, but outside there is no danger, and they answer the purpose as well. The high degree of heat which the fruit-drying process requires makes it a matter of importance to have as little wood about the drier as possible. The center of the device is always the hottest, while the moisture keeps the temperature of the sides and ends somewhat reduced, and therefore in my structure I have made the center of the machine of iron, and have placed what little wood is necessary upon the sides and ends.

This device cannot burn up, but is durable and strong. It is constructed in the simplest manner, and yet in the most efficient. The angle-guides are well adapted for the trays, and all the supports are well and advantageously placed.

In the brick foundation any suitable arrangement of pipe and heating apparatus may be used.

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

1. In a fruit-drier, the studding or posts and the iron cross-sills B, in combination with the central iron bars C, bolted to the sills and having their tops formed into bolts *c*, the iron ridge-pole D, and iron rafters E, said pole and rafters fitting down over bolts *c*, and secured by nuts *e*, substantially as herein described.

2. In a fruit-drier, the studding or posts A and iron sills B, in combination with vertical iron bars C, the longitudinal angle-iron braces

or supports F, the intervening horizontal short angle-iron supports, H, and the angle-iron tray-guides G, substantially as herein described.

3. In a fruit-drier, the studding or posts A and iron sills B, in combination with the vertical iron bars C, the angle-iron braces or supports F, the horizontal short angle-iron supports H, the angle-iron tray-guides G, and the sheets of metal *i*, laid upon the supports F H between the adjacent tray-guides, substantially as and for the purpose herein described.

4. In a fruit-drier, the studding or posts A, iron sills B, and vertical iron bars C, in combination with the iron ridge-pole D and the iron rafters E, bolted to the posts A and secured upon the bars C, as described, and the sheet-metal roof K and longitudinal timbers N thereon, to which it is bolted, substantially as herein described.

5. In a fruit-drier, the studding or posts A, the iron sills B, and vertical iron bars C, in combination with the iron ridge-pole D, iron rafters E, sheet-iron roof K, said roof stopping short of the ridge-pole on each side, whereby an opening, *k*, is formed, and the hinged curved sheet-iron cap L, adapted to close the opening when necessary, substantially as and for the purpose herein described.

6. A fruit-drier consisting of the studding or posts A, the iron sills B, vertical iron bars C, angle-iron supports F H, angle-iron tray-guides G, iron ridge-pole D, iron rafters E, sheet-iron roof K, having opening *k*, and hinged iron cap L, all arranged and secured together in the manner described, and for the purpose set forth.

In witness whereof I hereunto set my hand.

ADAM CRAWFORD.

Witnesses:

W. H. WILSON,  
THOMAS BEACOM.