

UNITED STATES PATENT OFFICE.

GEORGE S. GRIER, OF MILFORD, DELAWARE.

FRUIT-DRIER.

SPECIFICATION forming part of Letters Patent No. 241,354, dated May 10, 1881.

Application filed February 17, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE S. GRIER, of Milford, in the county of Kent and State of Delaware, have invented a new and useful Improvement in Fruit-Driers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view, showing the doors of the outer case opened. Fig. 2 is a vertical section. In both these views the drier is shown much shorter than it is in actual use. Fig. 3 is a detail, in perspective, showing the connection between the pawls and the trays.

My invention relates to certain improvements upon the fruit-drier patented by me October 28, 1879, in which a vertical series of trays were used, each of which was supported upon pawls attached to four vertically-sliding posts, and the whole raised or lowered and sustained one above the other, while heated air passes up through the open bottom of the same.

The improvement consists, first, in a fruit-drier composed of a vertical series of trays whose sides fit one upon the next and form a flue, a cover surmounting said series of trays and moving up and down with them, a set of stationary posts carrying gearing for raising or lowering the trays, and an outer casing inclosing the sides of the series of trays, but open at the top; secondly, in the combination, with a vertically-ascending series of fruit-trays, of a set of stationary posts with pawls or catches at the top, and a corresponding set of vertically-sliding posts having pawls at their lower ends, the said pawls being made capable of movement into the range of the stationary pawls above for progressive upward movement, or adapted to open a space between two sets of trays, for inspecting the fruit or relieving too great heat; thirdly, the combination, in a fruit-drier, of a vertically-adjustable series of fruit-trays, with means for operating them, and a cover having in its discharge-flue an extension-joint, the said cover being arranged to rest upon the series of trays and rise and fall with the same, all as hereinafter more fully described:

In the drawings, A represents the base-

frame, within which are arranged the four series of deflector-plates B, for throwing the hot air outwardly, to cause it to be uniformly distributed into the corners, as shown in my prior patent. This base-frame is extended out to one side of the drier, as at A', so as to form a support for the tray as it is being slid into the line of the series at the bottom.

C are the four corner-posts, which are stationary, and D are the four vertically-sliding posts, arranged beside the stationary posts, and carrying rack-bars *a*, that are engaged by pinions *b* on horizontal shafts E, which horizontal shafts are arranged one on each side of the drier, and are provided with worm-wheels *c*, meshing with worms *d* on a cross-shaft, F, bearing hand-wheels. This affords the means for adjusting the sliding posts, and, so far as described, this construction does not differ substantially from that described in my prior patent. I have found, however, that when the edges of the trays are arranged in close contact the hot current within is affected by the wind which passes in through the cracks or joints, so as to interfere with the best effects of evaporation. To remedy this I inclose the trays by a housing or outer casing, G, which is suitably supported by the corner-posts and stationary parts of the frame, and which outer casing is provided on two of its sides with doors H, which allow access to the two sides of the series of trays, to allow them to be pulled out and inspected or removed.

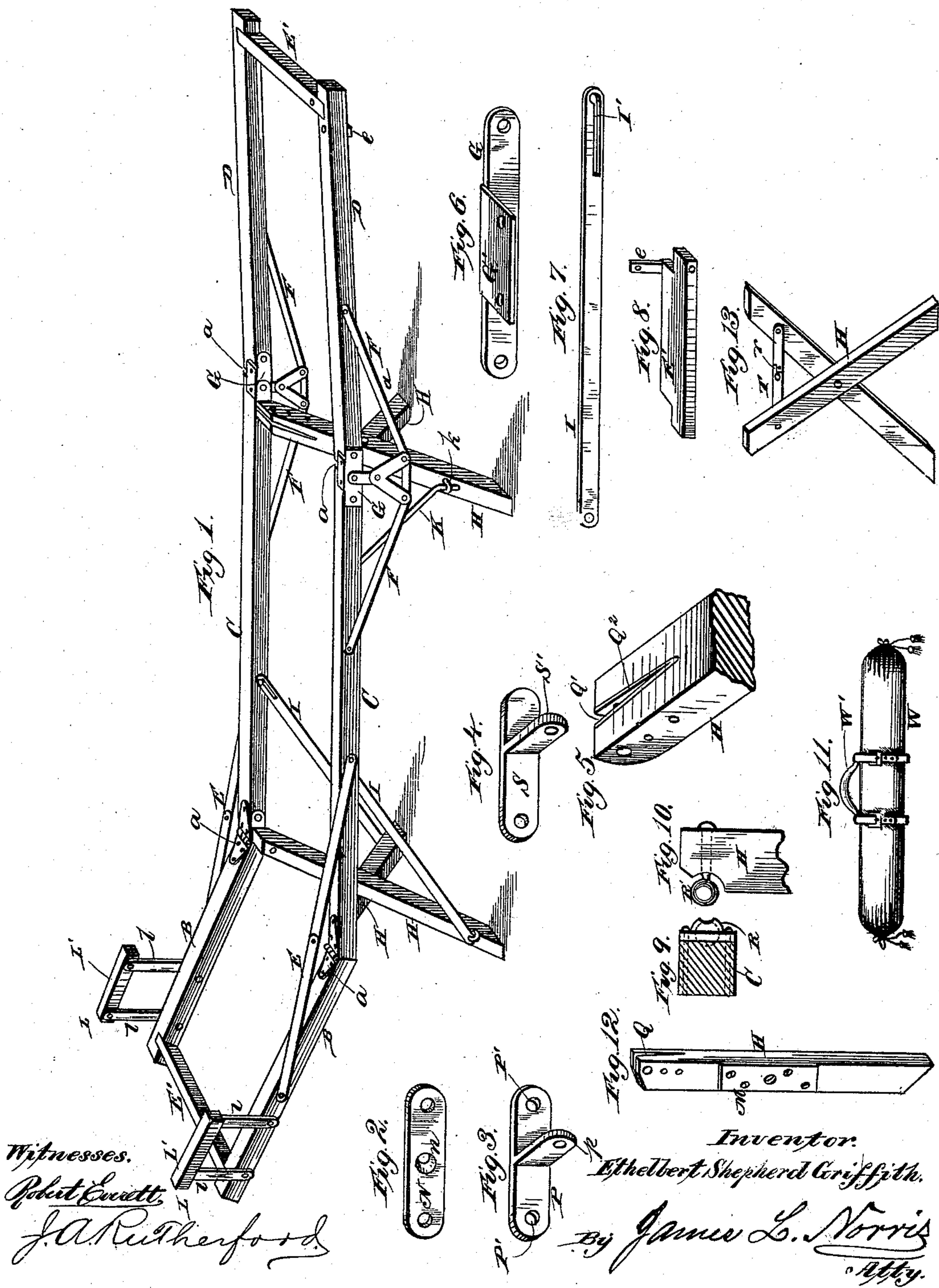
As the edges of the trays rest upon each other it will be seen that the drier really has a double case, with an air-chamber between.

In my prior patent I sustained the trays by a separate set of pawls for each tray fixed to the movable posts, and when I desired to inspect a tray about the middle of the series I was obliged to throw out the pawls of all the trays beneath the one which I desired to pull out. I could not, however, open a space in the middle of the series, so as to divide the upper section of the trays from the lower section, without this tedious work of adjusting the pawls. To avoid this I place one set of pawls, *h*, on each of the movable posts, and another set, *g*, on the stationary posts. Now, when it is desired to separate the series into two sections to form a space between the trays, the pawls on the

E. S. GRIFFITH.
Bed.

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Witnesses.

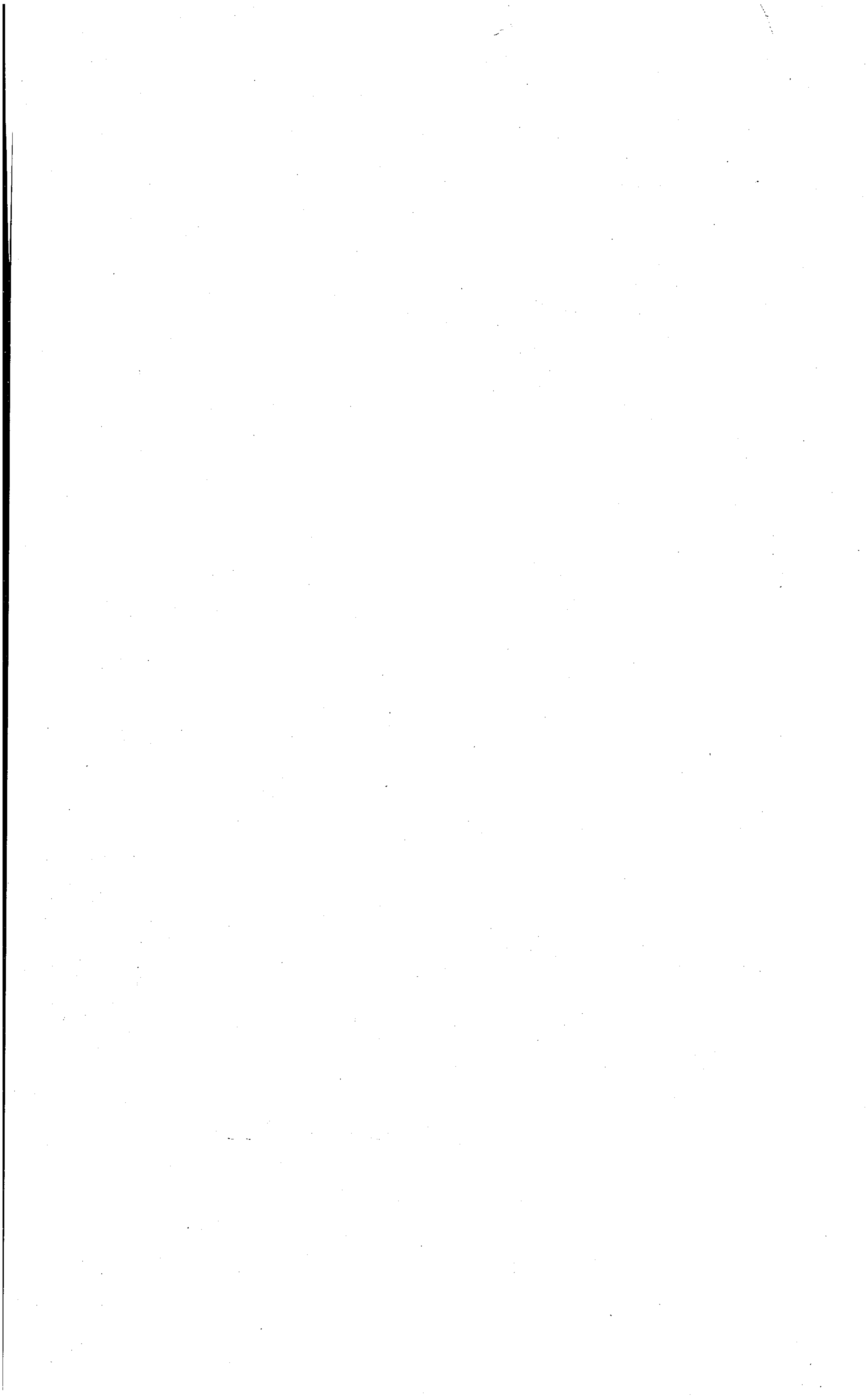
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UNITED STATES PATENT OFFICE.

ETHELBERT S. GRIFFITH, OF TOLEDO, OHIO.

BED.

SPECIFICATION forming part of Letters Patent No. 241,355, dated May 10, 1881.

Application filed May 26, 1880. (No model.)

To all whom it may concern:

Be it known that I, ETHELBERT S. GRIFFITH, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Folding Beds, of which the following is a specification.

My invention relates to folding beds in which the side rails are adapted to be folded into contact, or nearly so, and the supports of the bed to be folded into a position parallel, or nearly so, with said rails when the bed is closed.

The objects of my invention are, first, to adapt the bed to be folded into a small compact bulk; second, to provide suitable appendages whereby the side rails and supports of the bed may be opened for use with as few special fastenings or locking attachments, that require special manipulation, as may be; third, to provide a means by which the sectional side rails may be folded and the several parts move and remain in the same plane irrespective of the position of the supports of the bed relative to said rails; fourth, to provide a suitable means by which the upper ends of the cross-supports may be attached to the side rails, to the end that said supports may be folded into a position parallel with the side rails when the said rails are apart; fifth, to secure the greatest length of cross supports or legs which is necessary to give the bed the proper width and to raise it the proper height from the floor, and at the same time to adapt the said legs to be folded within the length of the sections of the side rails to which they are attached; sixth, to provide an adjustable head-rest or bolster-supporting frame, whereby the said head-rest or bolster may be raised or lowered relative to the rail to which it is attached by the said frame, at the will of the occupant of the bed; seventh, to provide a suitable appendage by which the cross-supports at either end of the bed may be maintained at a proper distance apart when the bed is in use, whereby the strain on the canvas or other covering of the bed is materially lessened. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective of the bed-frame. 50
Figs. 2, 3, 4, 5, 9, and 10 are illustrations of several devices for attaching the upper ends of the cross-supports to the side rails. Fig. 6 is a flanged metal plate, by which the foot-extension of the bed-frame is attached to the middle section of the same, and to which flanged plate the jointed truss-supporting said extension is fastened, as shown in Fig. 1. Fig. 7 is a slotted brace attached at its lower end to either of the cross-legs, and its upper slotted end to the side rails, by which the said supports are permitted to be folded between the side rails before said rails are brought together and before the said supports are closed. Fig. 8 is the cross-bar at the head and foot of the bed-frame respectively, by which the extensions of the same are kept the proper distance apart when the bed is in use. Fig. 11 is the form of package in which the bed is designed to be put up when ready for transportation. 70
Fig. 12 exhibits a wear-plate placed at the intersection of the two cross-supports at either end of the middle section of the side rails. Fig. 13 exhibits a jointed stay pivoted to the upper ends of the cross-legs of the bed, and designed to stand in a horizontal position, as shown, when the bed is in use. 75

Similar letters refer to similar parts throughout the drawings.

The middle sections, C, of the side rails have the extensions B and D of the same hinged or coupled to the middle sections at the points a, Fig. 1. 80

The extensions B stand on an angle relative to the middle sections, C, and are supported, as shown in Fig. 1, by a jointed stay, E, across the angle formed by these two sections. The extensions B are adapted to be folded upon the middle section of the bed-frame. 85

The extensions D are supported on a level with the middle sections, C, by means of the jointed truss F, as shown in Fig. 1, and said extensions D are adapted, by means of the flanged coupling or plate G, Fig. 6, to be folded over and upon the extensions B. 95

The cross-bars E' have notched ends and an arm, e, pivoted to one of the bars of the extensions, whereby they are adapted to be thrown