

(No Model.)

3 Sheets—Sheet 1.

E. L. WALKER.

PROCESS OF MAKING EGG CASES.

No. 380,960.

Patented Apr. 10, 1888.

Fig. I.

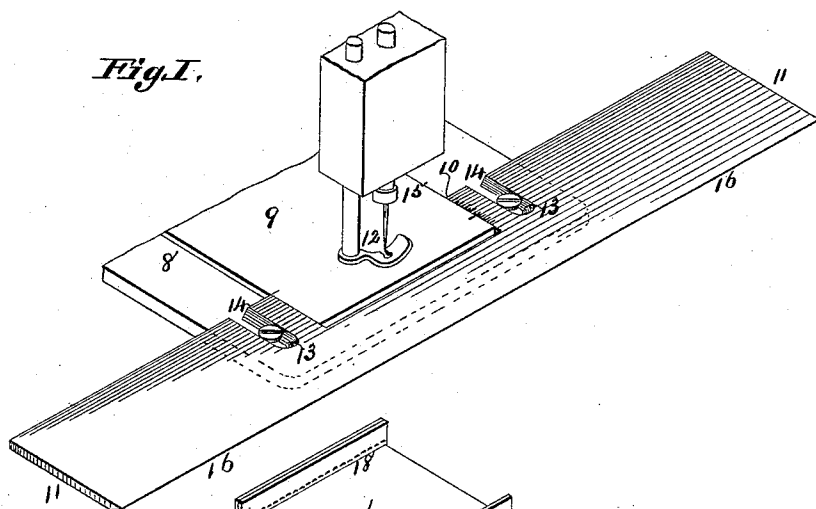
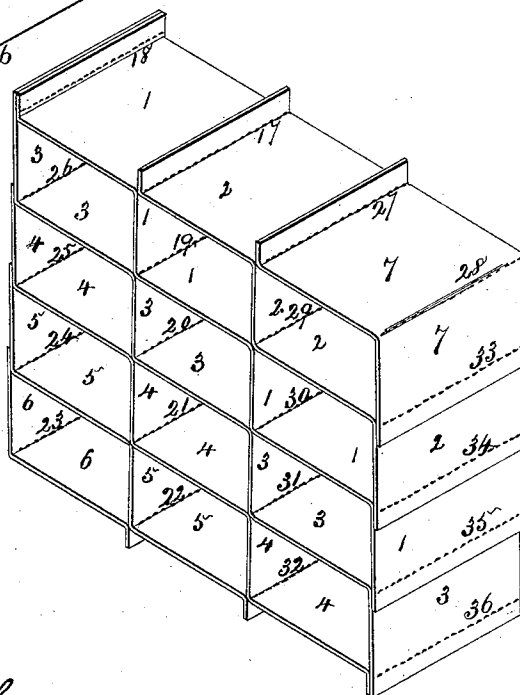


Fig. II



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(No Model.)

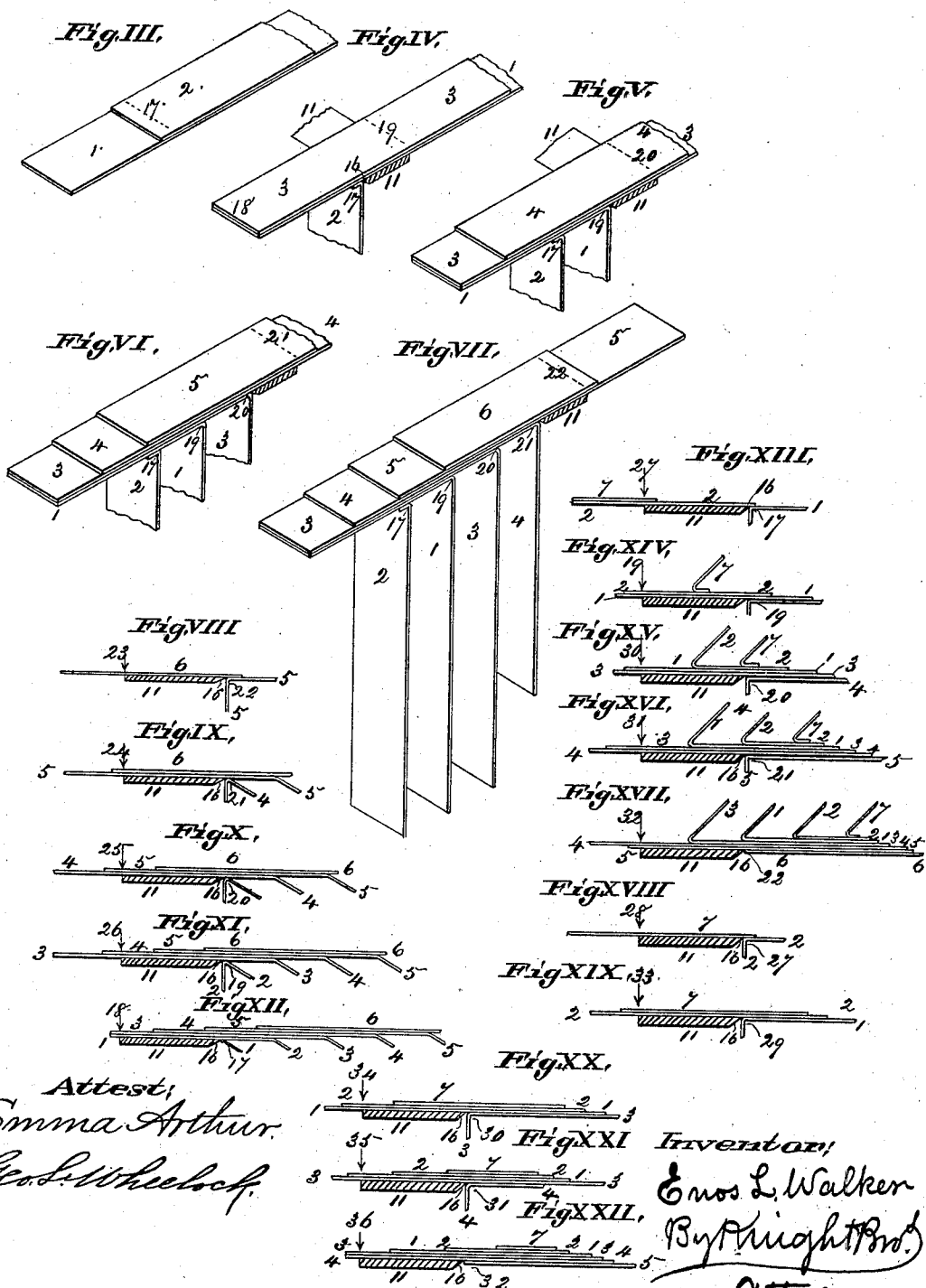
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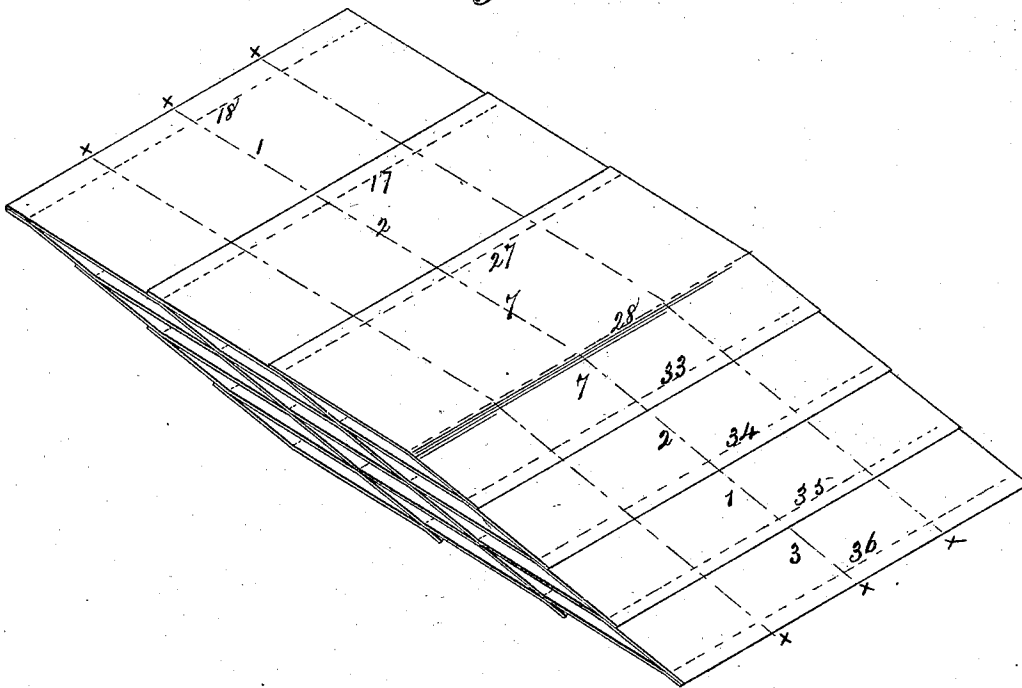
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Fig. XXIII



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UNITED STATES PATENT OFFICE.

ENOS L. WALKER, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO
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PROCESS OF MAKING EGG-CASES.

SPECIFICATION forming part of Letters Patent No. 380,960, dated April 10, 1888.

Application filed July 19, 1887. Serial No. 244,787. (No model.)

To all whom it may concern:

Be it known that I, ENOS L. WALKER, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in the Process of Making Egg and Bottle Cases, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

10 This is a process by which, with the use of any ordinary sewing-machine and a guide, the cases may be constructed with a line of stitching at each corner of every cell.

15 Figure I is a perspective view showing the guide and a part of a sewing-machine to which it is attached. Fig. II is a perspective view of a case. Figs. III to VII, inclusive, are detail perspective views; and Figs. VIII to XXII are detail edge views illustrating the various steps in the process of manufacture. In these figures the guide is shown in cross-section. Fig. XXIII is a perspective view of a case folded for shipment or packing.

25 In the case illustrated the cells are oblong in transverse section and number twelve. The same process may be used in making cases having a larger or smaller number of cells. The case of this character is composed of seven strips having one of greater length than any of the others and the remaining six made in pairs of equal length, but each pair differing in length from the other pairs and decreasing in the same proportion on each side of the long strip. These strips are indicated by numbers 1 to 7, inclusive. Nos. 6 and 7 form the short pair, Nos. 2 and 5 are longer, and Nos. 1 and 4 longer still. The longest strip is numbered 3.

35 8 is the sewing-machine table.
40 9 is a plate or elevation on the table, which occupies a recess, 10, of the guide 11. The plate or elevation 9 thus forms a guide for the guide 11, keeping its outer edge parallel with the travel of the work beneath the presser-foot 12.

45 13 are set-screws passing through the transverse slots 14 of the guide and screwing into the table to hold the guide 11 in place.

50 15 is the needle-bar.

The process of making the case is as follows:

The guide 11 is placed so that the distance between the edge 16 and the needle equals one long side of a cell. First 1 and 2 are connected by the seam 17 at what is the upper inner edge or angle of the first upper cell, and which is somewhat more than the width of a cell from the end of the strip 1 and quite near to the end of the strip 2. (See Fig. III.) The two strips 1 and 2 are now inverted, the strip 2 being passed beneath the guide 11 and the seam 17 brought to the edge 16 of the guide. This will bring beneath the point of the needle a part of strip 1 the length of one side of a cell from the seam 17. The strip 3 is now laid on the strip 1, so that their ends shall coincide at 18 (where they are subsequently connected by a seam) at what is the upper outer edge or angle of the first upper cell. The seam 19 is now made, connecting the strip 3 to the strip 1. (See Fig. IV.) The strip 1 is now dropped under the guide and the seam 19 brought to the edge of the guide. The strip 4 is now laid on the strip 3, with the farther end of the strip 3 extending about the width of a cell beyond the end of the strip 4. The seam 20 is now sewed, connecting the strips 3 and 4. (See Fig. V.) The work is again pulled back and the strip 3 dropped beneath the guide, and the seam 20 brought to the edge of the guide. The strip 5 is now laid on the strip 4 with its farther end the width of a cell short of the end of strip 4, and the seam 21 is sewed, connecting the strips 4 and 5. (See Fig. VI.) The strip 4 is now dropped beneath the guide, and the seam 21 brought to the edge of the guide. The strip 6 is now laid on strip 5, with its farther end short of the end of the strip 4 about the width of a cell, and the seam 22 is sewed, uniting the pieces 5 and 6. (See Fig. VII.) These seams 19, 20, 21, and 22 will be at the inner edges or angles of the cells below the first upper cell. It will now be seen that the strips 1 to 6, inclusive, are all connected together in one place. If the cells are to be square, no change is made in the position of the guide 11; but if the cells are wider in one direction than the other the position of the guide must be changed. The work is now turned end for end and all the strips, except 6, turned beneath the guide. The seam 22 is now brought to the edge of the guide,

and a row of stitches, 23, made across the strip 6. (See Fig. VIII.) This row I call a "break-seam," as it serves to mark the place where the strip must be bent to form one corner of a cell.

5 The strips 5 and 6 are now passed over the guide 11, and the seam 21 brought against the edge of the guide. Then the seam 24 is made, connecting together the strips 5 and 6 at that place. (See Fig. IX.) Then the strip 4 is

10 passed over the guide and the seam 20 brought to the edge of the guide, and the seam 25 is made between the strips 4 and 5. (See Fig. X.) The strip 3 is then passed over the guide and the seam 19 brought to the edge of the

15 guide, and the seam 26 is made between the strips 3 and 4. (See Fig. XI.) The seams 23, 24, 25, and 26 will be at the outer edges or angles of the cells below the first upper cell. The strip 1 is now passed over the guide and

20 the seam 17 brought to the edge of the guide, and the seam 18 made between the strips 1 and 3. (See Fig. XII.) The work is now inverted and turned end for end, bringing the seam 18 toward the operator and the strip 2

25 on top. The strip 2 is alone passed over the guide 11, and the seam 17 brought to the edge of the guide. The strip 7 is then laid on the strip 2, and the seam 27 made at the unstitched edge or angle of the second upper cell and near

30 the end of strip 7, and securing the strip 7 to strip 2. (See Fig. XIII.) The work is now drawn back, and the strip 7 alone being passed over the guide and the break-seam 28 is made at the upper outer edge or angle of the third

35 upper cell. (See Fig. XVIII.) The strip 1 is now passed over the guide and the seam 19 brought to the edge of the guide. The strip 7 is bent back at seam 27, and the seam 29 is made connecting the strips 2 and 1. (See

40 Fig. XIV.) The strip 3 is now run over the guide, and the seam 20 brought against the edge of the guide. The strips 7 and 2 are now turned back and the seam 30 made, connecting the strips 1 and 3. (See Fig. XV.)

45 Next, the strip 4 is passed over the guide and the seam 21 brought against the edge of the guide, the strips 7, 2, and 6 being turned back, and the seam 31 is made between the strips 3 and 4. (See Fig. XVI.) Next,

50 the strips 7, 2, 1, and 3 are bent back, and the strip 5 is passed over the guide, the seam 22 being brought to the edge of the guide. The seam 32 is now made, uniting the edge of strip 5 to strip 4. (See Fig. XXII.) The

55 seams 29, 30, 31, and 32 will be at the previously-unstitched edges or angles of the cells below the second upper cell. The work is now drawn back and the strips 7 and 2 passed over the guide until the edge of the guide

60 comes in contact with seam 29. Then the seam 33 is made connecting the end of strip 7 to strip 2. (See Fig. XIX.) Next, the end of strip 1 is passed over the guide until the edge of the guide rests against the seam 30,

and seam 34 is made connecting the end of 65 strip 2 to strip 1. (See Fig. XX.) Next, the end of strip 3 is passed over the guide and the edge of the seam 31 brought to the edge of the guide. The seam 35 is now made, connecting the end of strip 1 to strip 3. (See 70 Fig. XXI.) Next, the end of strip 4 is passed over the guide and the seam 32 brought to the edge of the guide. The seam 36 is now made, connecting the ends of the strips 3 and 4. The seams 33, 34, 35, and 36 will be at the 75 previously-unstitched edges or angles of the cells below the third upper cell. The strips will now have been stitched in the following order: Strips 1 and 4 (the longest pair) will be stitched on each side of the longest strip, 3, 80 strips 2 and 5 (the next longest pair) will be stitched to strips 1 and 4, respectively, and strips 6 and 7 (the short pair) will be stitched to strips 5 and 2, respectively, the sizes of the strips decreasing in the same proportion 85 on each side of the long strip in a complete cell-case.

In order to save time in making the strips are generally made two or more times as wide 50 as is required for the finished case, and then separated after sewing by cutting longitudinally. This is shown in Fig. XXIII, where the strips are represented as four times the width of the finished cases and the lines of cuts are represented by broken lines *x x*. 95

I claim—

The process of making cell-cases, which consists in taking a suitable number of pairs of strips, each pair being of different lengths, and stitching them on each side of a single 100 long strip, each strip of the longest pair being stitched on opposite sides to the long strip, each strip of the next longest pair to each strip of the longest pair, and so on, the sizes of the strips decreasing in the same propor- 105 tion on each side of the long strip in a complete cell-case, said stitching operation consisting in the following steps: first, forming a line of stitching at the upper inner edge or angle of the first upper cell, then at the inner 110 edges or angles of the cells below the first upper cell, then at the outer edges or angles of said cells, then at the upper outer edge or angle of the first upper cell, then at the upper unstitched edge or angle of the second 115 upper cell and the unstitched upper outer edge of the third upper cell, then at the unstitched edges or angles of the cells below the second upper cell, then at the unstitched edges or angles of the cells below the third 120 upper cell, and so on in the same manner stitching as many cells as there are strips provided for them, substantially as described, and for the purpose set forth.

ENOS L. WALKER.

In presence of—

JAS. E. KNIGHT,
SAML. KNIGHT.