

No Model.)

C. W. GAY.
MANUFACTURE OF PAPER BOXES.

No. 549,064.

Patented Oct. 29, 1895.

Fig. 1.

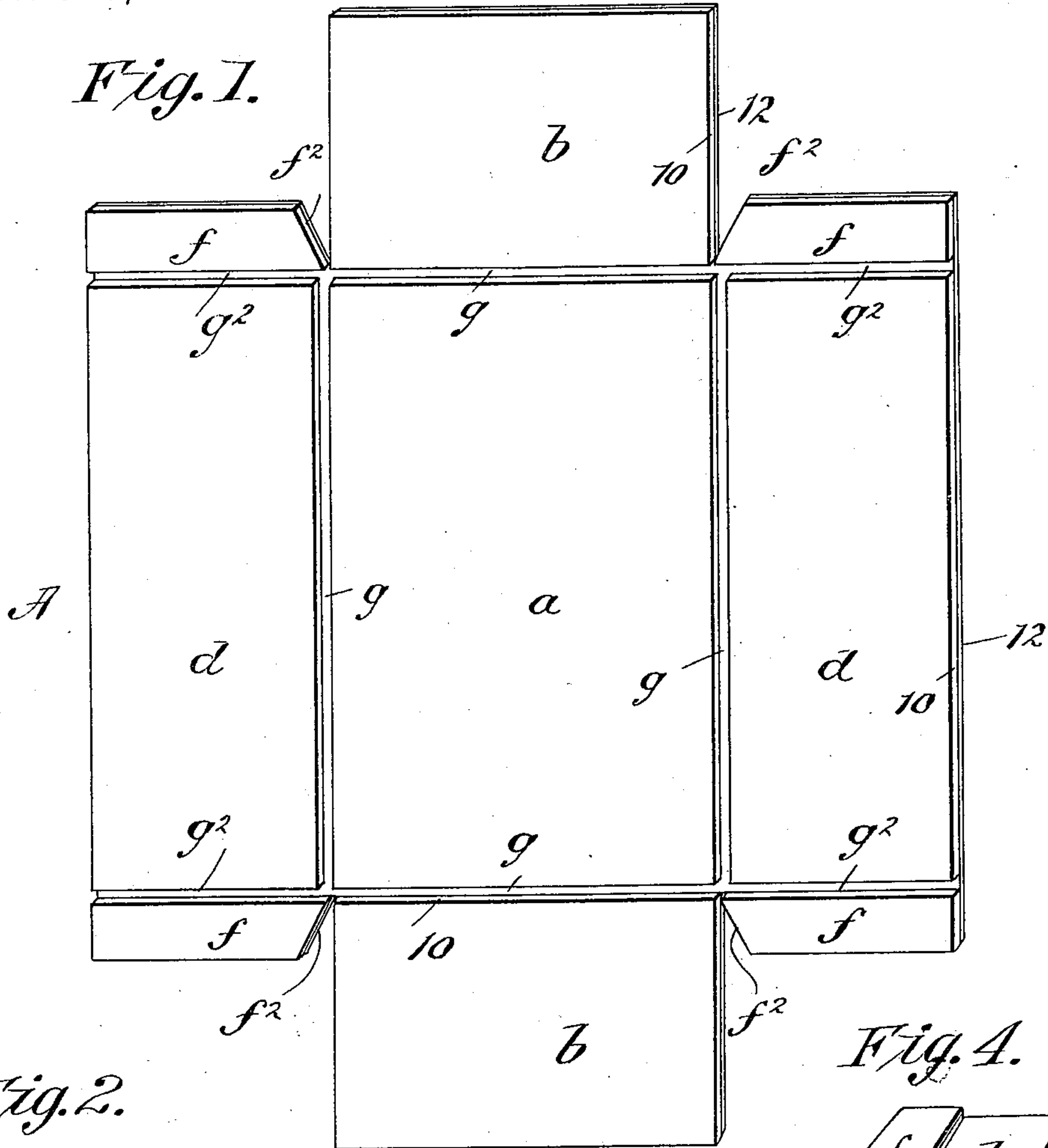


Fig. 2.

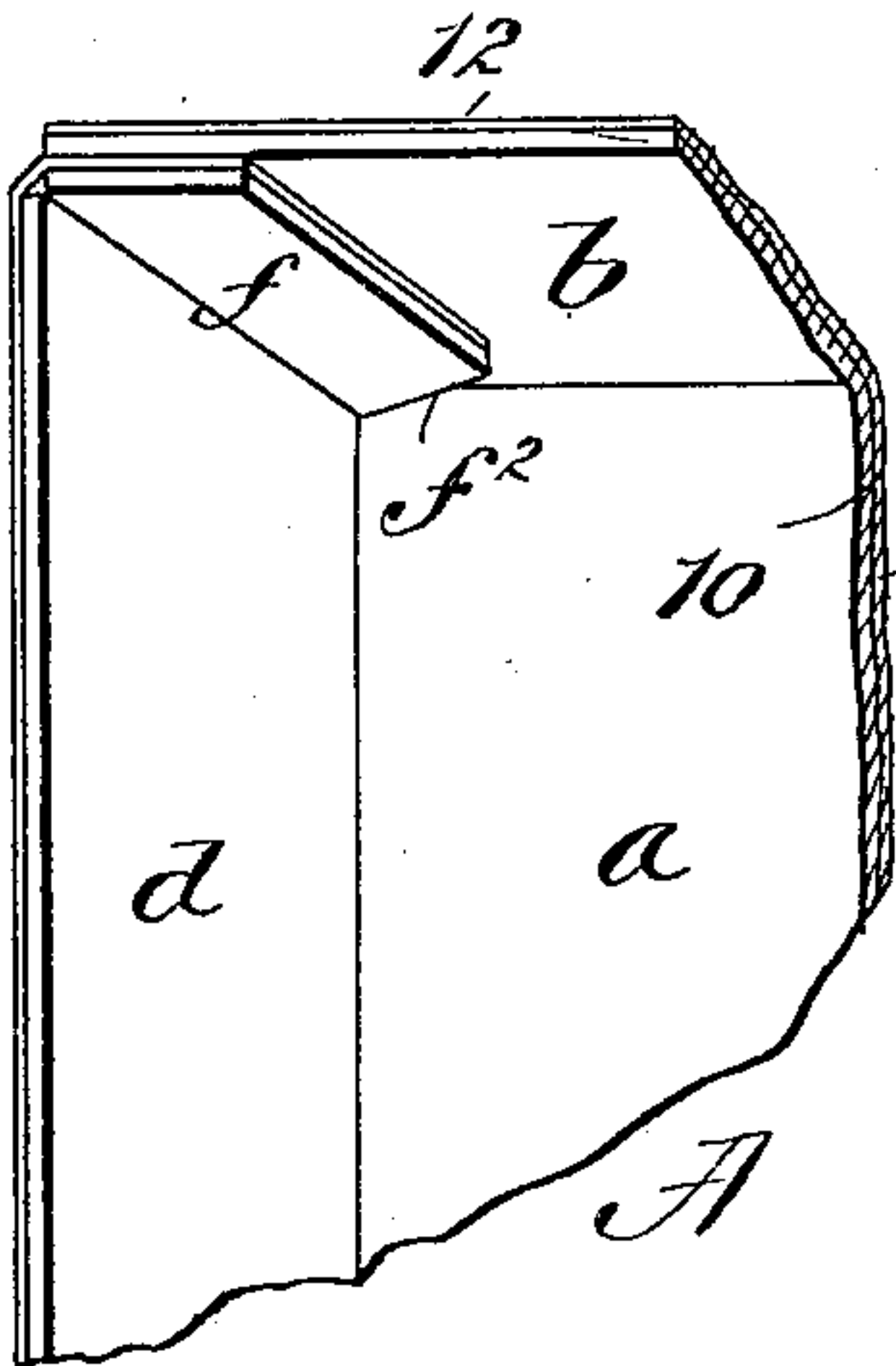


Fig. 3.

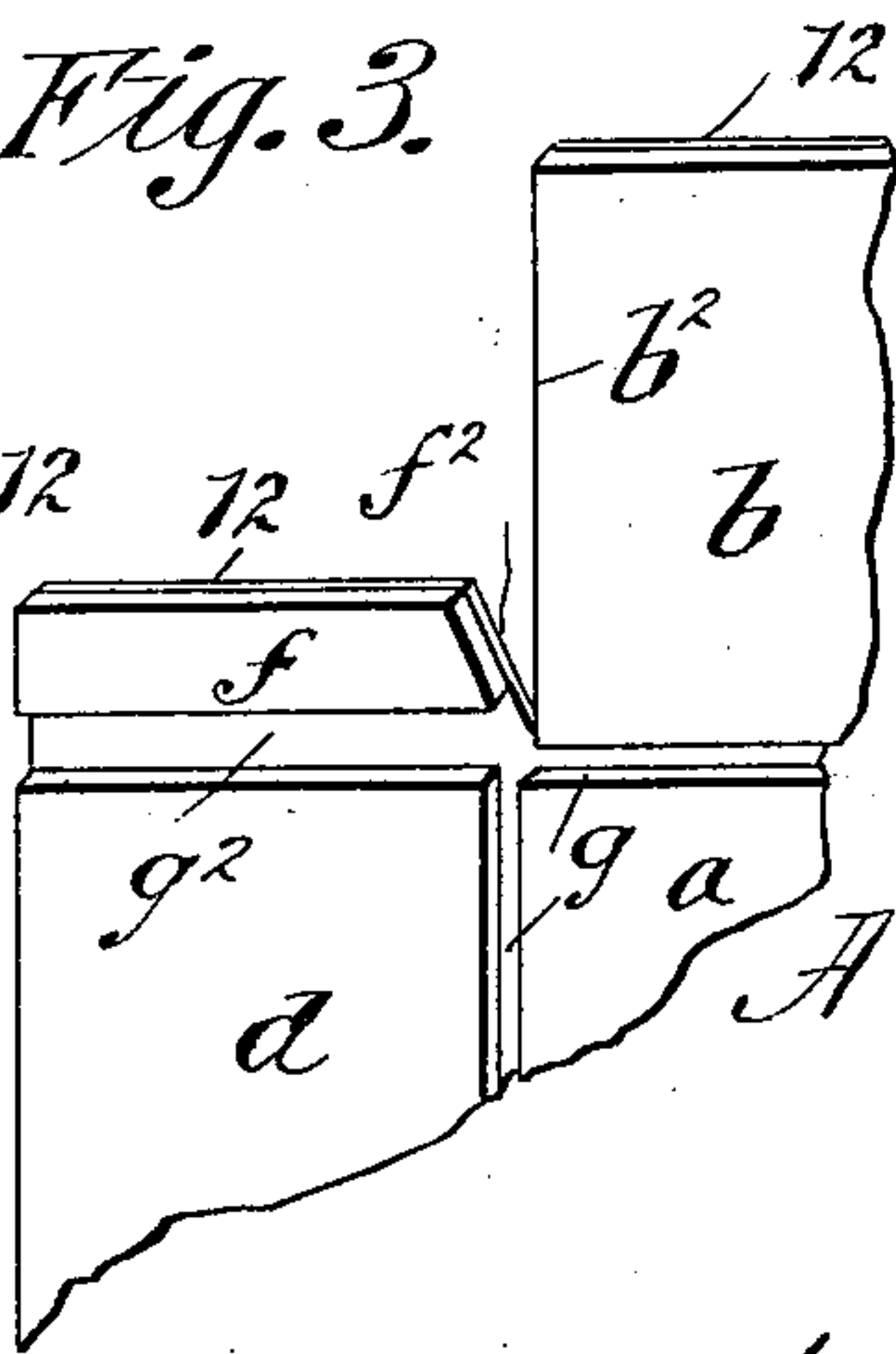
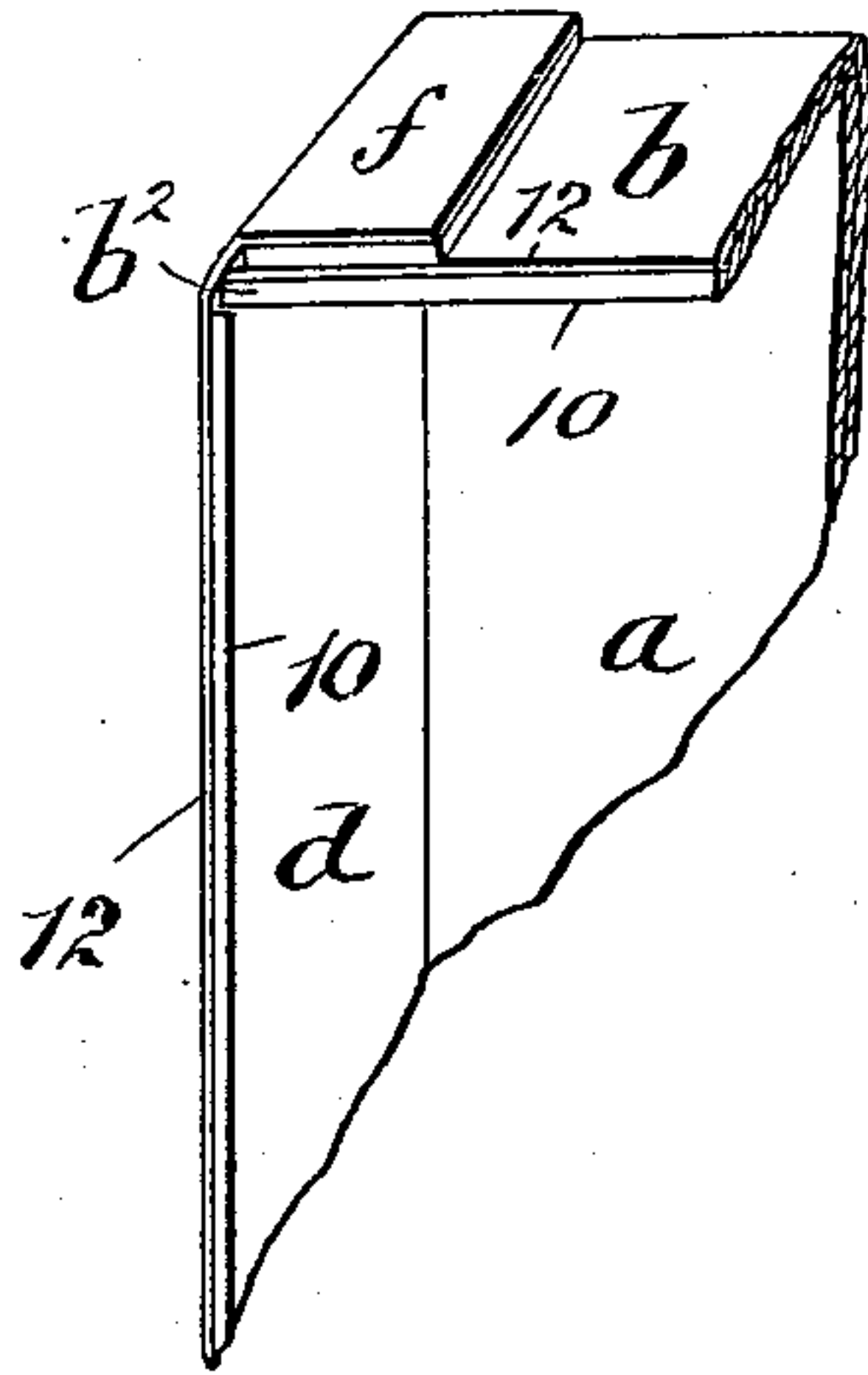


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

CHAUNCEY W. GAY, OF WEST SPRINGFIELD, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE BRIGHTWOOD BOX MACHINERY COMPANY, OF SPRINGFIELD, MASSACHUSETTS.

MANUFACTURE OF PAPER BOXES.

SPECIFICATION forming part of Letters Patent No. 549,064, dated October 29, 1895.

Application filed July 16, 1894. Serial No. 517,670. (No model.)

To all whom it may concern:

Be it known that I, CHAUNCEY W. GAY, a citizen of the United States of America, residing at West Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in the Manufacture of Paper Boxes, of which the following is a specification.

The object of this invention is to produce a paper box of rectangular form which shall be strong, true at the corners, durable, and susceptible of production from inexpensive material and with great rapidity by machinery.

The improved box is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the blank, showing the excavations at the bending-lines. Fig. 2 is a perspective view at the corner portion of the box. Fig. 3 is a perspective view of the corner portion of the blank with a widened excavation for a purpose to be hereinafter explained. Fig. 4 is a perspective view of a corner portion of the box as made up from the character of blank seen in Fig. 3.

In the drawings, A represents the blank for the box, of which the central portion *a* is the bottom section, *b b* are the end sections, and *d d* are the side sections, which carry at their ends the stay-sections *f f*. The stay-sections *f* have a width less than the width of the end sections *b*, and the inner portions of the said stay-sections are while in the blank outwardly cut away, inclined, or divergent to the adjacent ends of the end sections, as seen at *f*². When the box is made up, the end sections are upturned at right angles to the bottom, as are also the side sections with the stay-sections, which latter are then inwardly turned at right angles to the side sections against and secured by paste, glue, or other adhesive to the said end sections, the cut-away portions permitting this disposition.

Now the blank, to materially facilitate the bending up of the several border-sections, has on its "inner" side excavated lines *g* at the junction of the bottom with the side and end sections, and the excavated lines *g*² at the

junction of the stay-sections with the ends of the side sections. These lines of excavation between the side sections and stay-sections, to a depth equal to a portion of the whole thickness of the blank, by reason of the removal of the stock thereat, permit the bending upwardly and inwardly of the stay-sections at right angles to the sides, to assure the square shaping at the corners not only at the time the blank is in the box-forming or setting machine, but permanently thereafter.

In this construction of box it is preferred to employ a stock which consists of a layer 10, which may be of strawboard or wood-pulp board, with another layer 12 for the outer side of the box blank, of a tougher nature, as manila or other paper having similar tenacious characteristics, which, as it were, forms an outer skin for the blank. In practice the lines of excavation of the blank may be made through the inner layer and down to the said outer layer or skin, which may be readily and accurately performed by means which I have devised. The said outer and more tenacious layer 12 may be a fancy or figured paper, and the box made up in this manner and by the method set forth entirely obviates the second operation of covering the box, as has heretofore been generally necessary in the manufacture of the better class of paper boxes, such as used for stationery and many other purposes.

While it is with me usually customary and preferable to have the stay-section set upon the inside of the end section of the box, such section may very readily be set against the outer side of the end section, as seen in Fig. 4, whereupon the sufficiently-wide excavation *g*² across the stay-section not only permits the bending at the corner without obtaining any bulging thereat, but accommodates the end edge *b*² of the end section, as seen in Fig. 4, which stiffens and affords a strengthening element at the corner of the box.

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

In the manufacture of paper boxes, the pro-

cess described of forming the blanks, consisting in taking a blank formed of an inner layer of straw or pulp board, and an outer layer of a tougher nature; grooving the inner layer,
5 along the lines upon which the sides and ends are to be turned up, down to the outer tough layer, and suitably shaping the corners;

whereby when the sides and ends are turned up only the outer tough layer is bent, substantially as described.

CHAUNCEY W. GAY.

Witnesses:

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