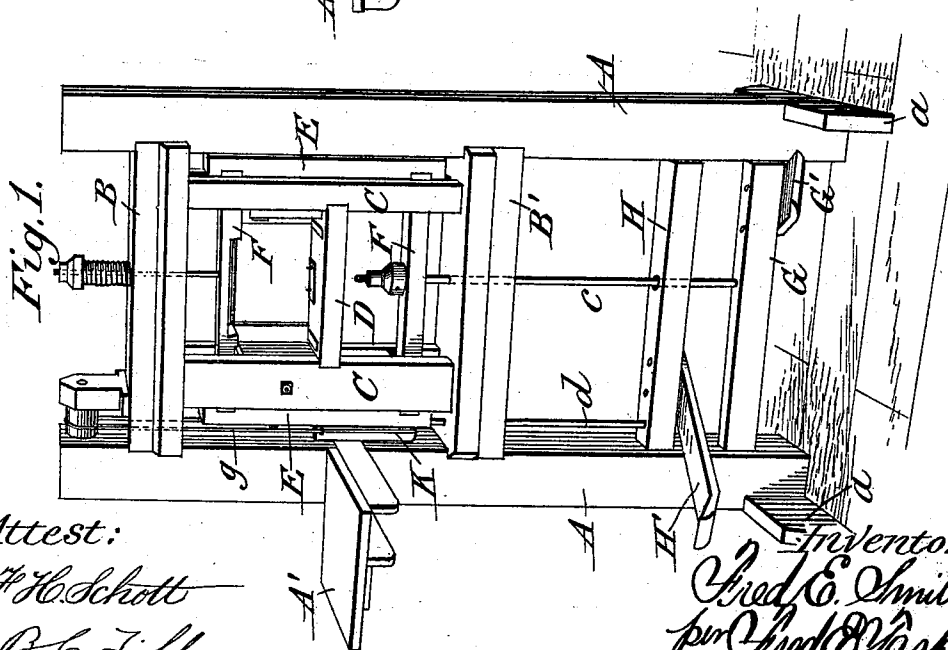
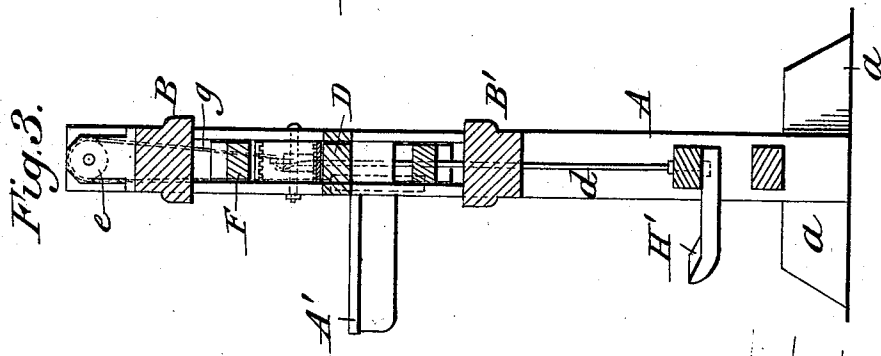
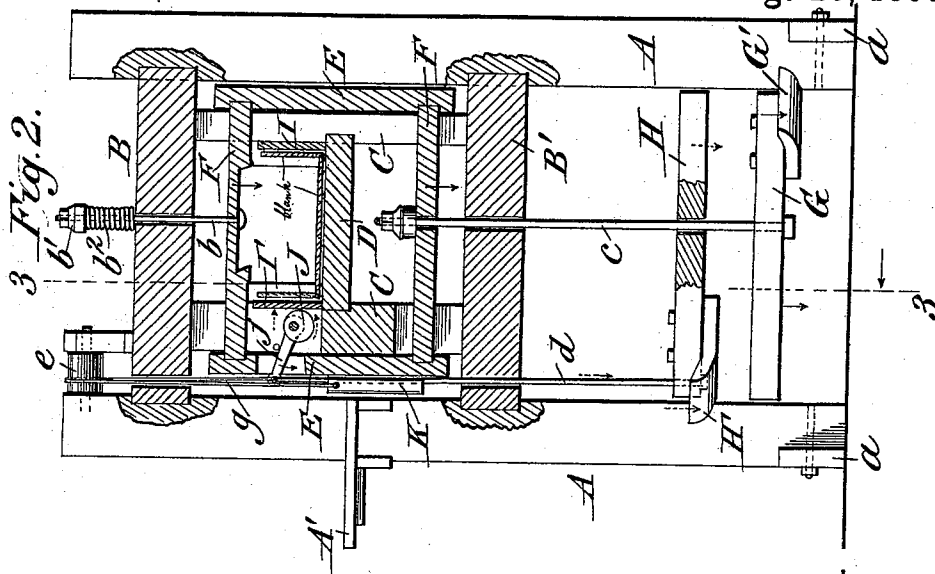


(No Model.)

F. E. SMITH.
MACHINE FOR MAKING BUTTER BOXES.

No. 544,775.

Patented Aug. 20, 1895.



Attest:

H. H. Schott
B. C. Tiffany

Inventor
Fred E. Smith
per Fred W. Asker
Atty.

UNITED STATES PATENT OFFICE.

FRED E. SMITH, OF MOSCOW, VERMONT.

MACHINE FOR MAKING BUTTER-BOXES.

SPECIFICATION forming part of Letters Patent No. 544,775, dated August 20, 1895.

Application filed November 27, 1894. Serial No. 530,156. (No model.)

To all whom it may concern:

Be it known that I, FRED E. SMITH, a citizen of the United States, residing at Moscow, in the county of Lamoille and State of Vermont, have invented certain new and useful Improvements in Machines for Making Butter-Boxes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has reference to a pressing-machine for use in the construction of butter-boxes and similar light packages whose parts are dovetailed together at the corners, the object being to provide mechanism for quickly pressing the parts of such boxes tightly together at the joints; and the invention therefore consists in the construction, arrangement, and combination of parts, substantially as will be hereinafter described and claimed.

In the annexed drawings, illustrating my invention, Figure 1 is a front elevation of my improved butter-box-making machine. Fig. 2 is a vertical section of the same. Fig. 3 is a transverse vertical section on the line 3 3 of Fig. 2.

Like letters of reference denote like parts in all the figures.

The main frame of my improved machine consists, essentially, of the parallel upright posts A A, having the foot-pieces a a, which rest on the floor or ground and keep the posts erect, said posts being connected together by the horizontal girders B and B'. Between the horizontal girders B B' are situated two parallel vertical girders C C, which are properly framed into the girders B B'; also there is another platen or bar D, which connects the girders C C, and serves as a bed on which the parts of the box rest when being assembled together and pressed under the action of the machine.

The vertical girders C C are slotted to permit the arrangement therein of a vertically-movable rectangular frame consisting of the vertical bars E E and the horizontal connecting-bars F F. This frame, therefore, is guided in its movements by the girders C C.

G' denotes a treadle which is carried by a bar G, which is connected to the movable frame by means of the vertical connecting-

rod c, that passes through the lower bar F. A rod b connects with the upper bar F and passes upward through the girder B, the part of the rod b above the girder B being provided with a spring b², which is tensioned between the girder B and a nut b' on the end of rod b, and which acts normally, therefore, to draw the said movable frame upward and to return it to its upper position after it has been temporarily depressed by the action of the operator's foot upon treadle G'. Thus it will be seen that with this arrangement I provide a movable part (the upper bar F) which may descend at times toward the bed D, whenever the operator so desires, for the purpose of compressing together such parts of the box as may rest on bed D.

On the right-hand end of the bed D is a vertical plate I, which is fixed against the right-hand girder C, and on the left-hand end of bed D is a similar vertical plate I', which is laterally movable toward the plate I.

J denotes a cam which is mounted on a bolt passing through the left girder C. This cam acts against the movable plate I'. It has an arm j, to which is connected the upper end of a vertical rod d, the lower end of which is attached to a horizontal bar H, that carries a treadle H'; also a rope passes from the cam-arm j upward around the pulley e, and is provided at its other end with a depending weight K. When the operator presses on the treadle H', the cam J will be rotated and the movable plate I' moved, and when the operator releases his foot the cam J will, through the action of the weight K, be restored to its former position.

The operation of the machine will be easily understood. One of the sides of the box is first laid flat upon the bed D, and the two ends of the box are placed in vertical positions at each end of this side and upon it, as shown in Fig. 2. The operator by pressing upon the treadle G' then actuates the movable frame, and causes the upper bar F thereof to descend upon the vertical end pieces of the box and cause the dovetailed edges of these ends to engage the corresponding dovetailed edges of the side pieces. The three parts of the box thus connected together are now removed from the press and the bottom of the box inserted therein, it being crozed to fit the sides

and ends. The partially-constructed box is then replaced into the press in the same position as before and the other side is added thereto, it being placed in horizontal position
5 supported upon the two ends, after which the treadle G' is then operated and this last side caused to dovetail with the ends. The box has now been pressed together sidewise. The operator will now operate the treadle H',
10 thereby actuating the cam J and pressing all the dovetailed joints of the box closely together endwise.

The main frame is preferably provided with a horizontal shelf A' to support the loose parts
15 of the boxes before they are assembled together.

There are many details of construction that are susceptible of change or modification which may be made without departing from
20 the principle of the invention, and therefore

I do not wish to be understood as confining myself to exact details of construction herein described and shown.

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

The combination of the main frame, the vertically-movable frame, an operating treadle and a lifting spring therefor, a fixed bed, a pivoted cam for exerting a lateral pressure, an
30 operating pedal for said cam, and a weighted rope attached to the cam and passing over a pulley.

In testimony whereof I affix my signature in presence of two witnesses.

FRED E. SMITH.

Witnesses:

J. B. HYDE,

J. W. SMITH.