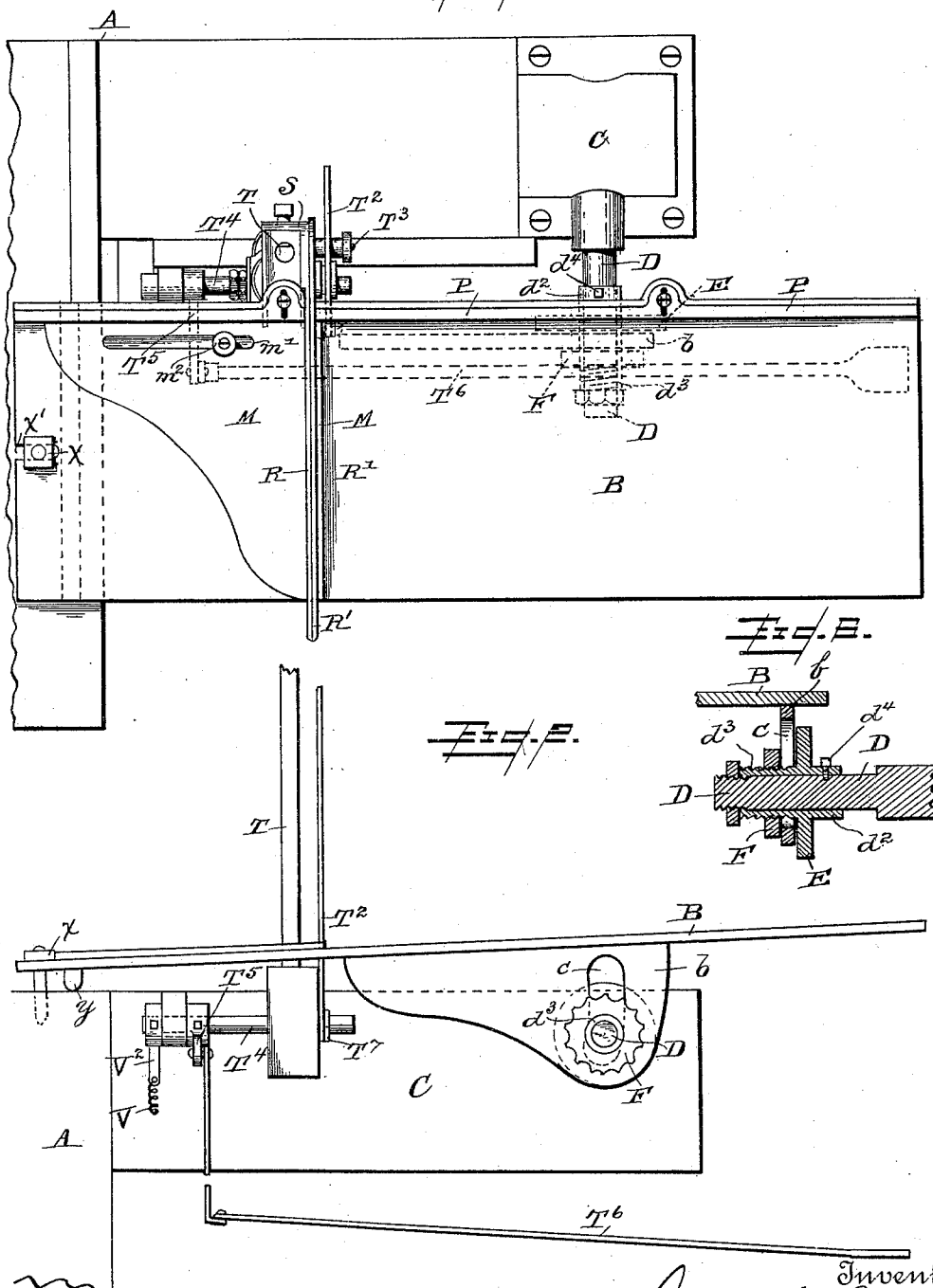


2 Sheets—Sheet 1.

No. 463,196.

Patented Nov. 17, 1891.

~~Fig. 1.~~



Witnesses

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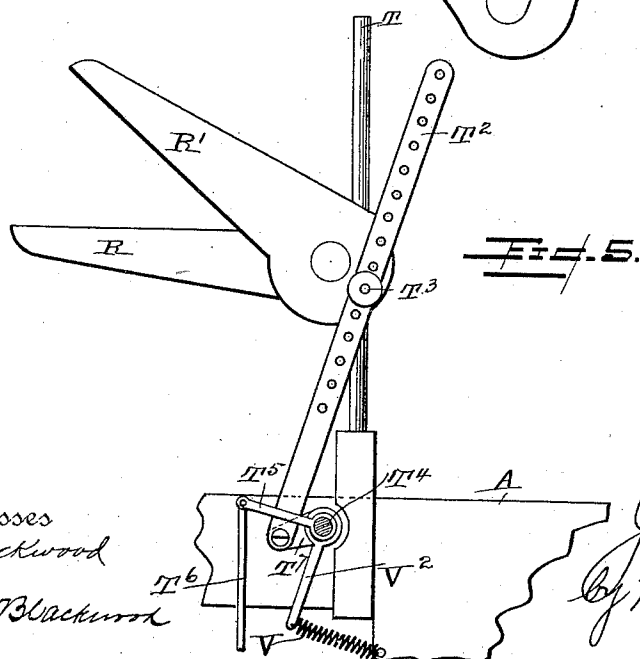
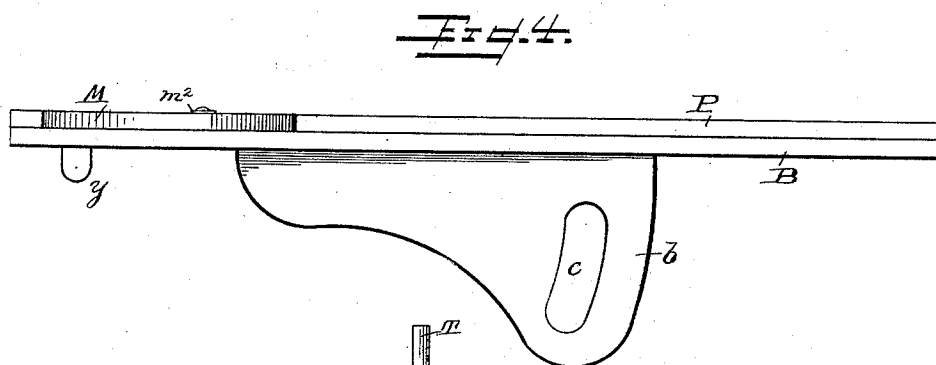
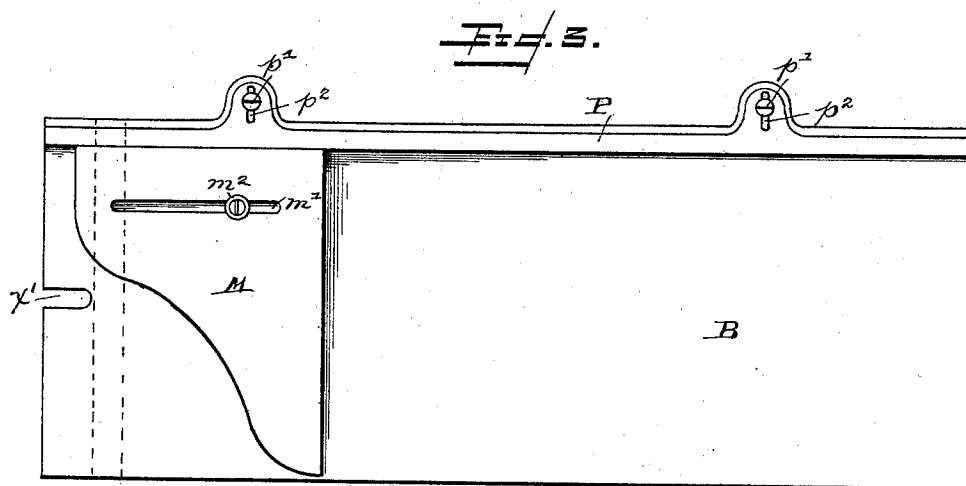
(No Model.)

2 Sheets—Sheet 2.

J. A. LIVERS.
PAPER BOX COVERING MACHINE.

No. 463,196.

Patented Nov. 17, 1891.



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UNITED STATES PATENT OFFICE.

JOHN ALBERT LIVERS, OF GETTYSBURG, PENNSYLVANIA.

PAPER-BOX-COVERING MACHINE.

SPECIFICATION forming part of Letters Patent No. 463,196, dated November 17, 1891.

Application filed December 26, 1890. Serial No. 375,818. (No model.)

To all whom it may concern:

Be it known that I, JOHN ALBERT LIVERS, a citizen of the United States, residing at Gettysburg, in the county of Adams and State of Pennsylvania, have invented certain new and useful Improvements in Paper-Box-Covering Machines; 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.

My invention relates to box-covering machines; and it consists of a certain form of supporting-table on which the box is held while covered, arranged and constructed as hereinafter described and particularly claimed, whereby the work of covering the tops and bottoms, sides, and ends of a box may be done on one machine.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a plan; Fig. 2, a side view in elevation, showing details of treadle mechanism and shears for severing the paper. Figs. 3 and 4 are details of table for supporting the boxes to be covered top and bottom. Fig. 5 is a side view in elevation of paper-cutting mechanism and its connection with the table; and Fig. 6, a detail sectional view of shaft, sleeve, and connections.

Referring to the drawings, A represents the head of a box-covering machine to which my improvements are attached.

B is a table for supporting the box to be covered, detachably secured to one end of the head A of the machine by means of a screw-bolt X, passed into the head A through an open-ended slot X', formed in the table, and supported near its opposite end on a shaft D, which is fixed in a bracket C, extending from the head of the machine. The purpose of leaving the slot open at one end is to permit the table to be pulled off the screw-bolt X on head A when it is desired to remove it.

y is a downwardly-projecting lug on under side of the table adjacent to the screw X and bearing on the head A, on which the table is rocked or tilted as it is raised or lowered. It will be noticed, also, that this end of the table beyond the lug y has an up-and-down movement on the screw-bolt X, which thus permits the opposite end to be tilted. The

table B has on one side a dependent lug or wing b, with an oblong slot c formed in the lug. The shaft D is provided with a disk E, mounted on a sleeve which on one side of the disk forms a short smooth hub d², while on the opposite side of the disk the sleeve part d³ is externally screw-threaded. A bolt d⁴, inserted through the hub d², is employed to hold the disk to the shaft D. When the table is put in place on the shaft, the slotted lug is slipped over the end of the shaft and the sleeve part d³ and pushed against the disk E. A milled thumb-nut F is then put on the screw-threaded end of the sleeve and screwed up tight against the lug to hold the table in place. The table being secured, as before stated, to the head of the machine, the opposite end can be raised or lowered and fixed at the desired height by means of the thumb-nut F. The box to be covered top and bottom is placed on this table, and the object of thus tilting or inclining up or down one end of the table is to shorten the distance between the outer edge of the box or top and the shears employed to cut the paper, so as to accommodate the cutting to different lengths of the boxes and so that the piece of paper when cut off will be a little less than the length of the box and not overlap the same.

When the table is placed on the machine, the slotted dependent wing is slipped over the shaft and the thumb-nut F tightened, as heretofore stated, and the slotted end of the table is placed on the end bolt X. When it is desired to remove the table, the thumb-nut F is unscrewed and taken off from the shaft D, and then the table is moved sidewise on the shaft D and at the same time swung laterally on the end bolt X. If the shaft D binds in the curved slot C, the table is moved forward or backward a little on the bolt X, which it is permitted to do by means of slot X', so that the table may be again moved sidewise until it is passed off the shaft D, whereupon it is pushed or pulled off the bolt X.

The table is provided on top with a gage-board M, having a slot m' and a set-screw m². The box to be covered is placed against this board to hold it in position for covering and cutting the paper, and the function of the slot and set-screw is to set and hold the board in relative position to the shears. The table

is also provided with a side adjustable strip P, which is moved in and out to preserve the box in line with the paper when it is desired to cover exactly the width of the box or less than its width. It is thus moved and set by means of a set-screw p' and slot p^2 . With this form of table the usual box form is dispensed with and the boxes themselves manipulated by hand on the table. It is preferable, therefore, with this form of table to use a paper-severing device operated by a treadle, so that the operator may control the cutting of the paper to agree exactly with the time of his covering the box, be it fast or slow. The severing device consists of a pair of shears R R', pivoted together, and the blade R is fastened to a block S, secured to a vertical rod T, and is held thereon rigidly in a horizontal position. The blade R' is secured to a connecting-rod T^2 by means of a pin T^3 . At its lower end the rod T^2 is secured to a short crank-arm T^7 , secured to a shaft T^4 .

T^5 is a crank-arm fixed on the shaft T^4 , said crank-arm being operated by means of a treadle T^6 . By operating the treadle and arm T^6 the shaft T^4 is caused to rock and operate the shears.

V is a coiled spring, one end of which is connected to the frame of the machine and the other end to an arm V^2 on shaft T^4 . The action of the spring V, through the arm V^2 , is to hold the horizontal shaft T^4 in such position that the vertical rod T^2 , to which the upper blade R' is pivoted, is normally held open, so that the upper blade R' will be held up until forced down by the action of the treadle T^6 . The paper provided with paste or glue is carried over a cross-piece above the head of the machine and between the blades of the shears within convenient reach of the operator in a well-known manner not necessary here to describe.

By the construction of my table the same can be placed on the shaft of a machine operating a box form for covering the sides and

ends of a box or lid by removing the box form and putting the table in place thereof, so that one machine is all that is necessary to use to cover the entire box.

I am aware that it is old in paper-box-covering machines to give the box an inclined position on a tilting table, and I do not therefore claim, broadly, that idea; but

What I claim is—

1. In a box-covering machine, a supporting, detachable, and tilting table provided on one side with a depending wing having an oblong slot, in combination with a bracket on the machine, a shaft extending from said bracket through said slot for supporting said table, and a thumb-nut and disk for securing the table to said shaft, said table also provided at one end with an under lug and an open slot, and a headed bolt on the head of the machine passing through said slot and on which bolt the table is held while it is tilted on said lug, substantially as described.

2. In a box-covering machine, a table detachably secured at one end to the head of the machine and provided on its under side near said end with a lug which bears upon the head of the machine and on which the table is tilted, substantially as and for the purpose described.

3. In a box-covering machine, in combination with a table, a headed bolt in the head of the machine passing through a slot with which the end of said table is provided, said table also provided on its under side near said bolt and slot with a lug bearing on the end of the machine, whereby the table is detachably secured to said head and is rocked and tilted on said lug and bolt, substantially as described.

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

JOHN ALBERT LIVERS.

Witnesses:

C. E. ARMOR,
WM. F. ROWE.