

No. 684,957.

Patented Oct. 22, 1901.

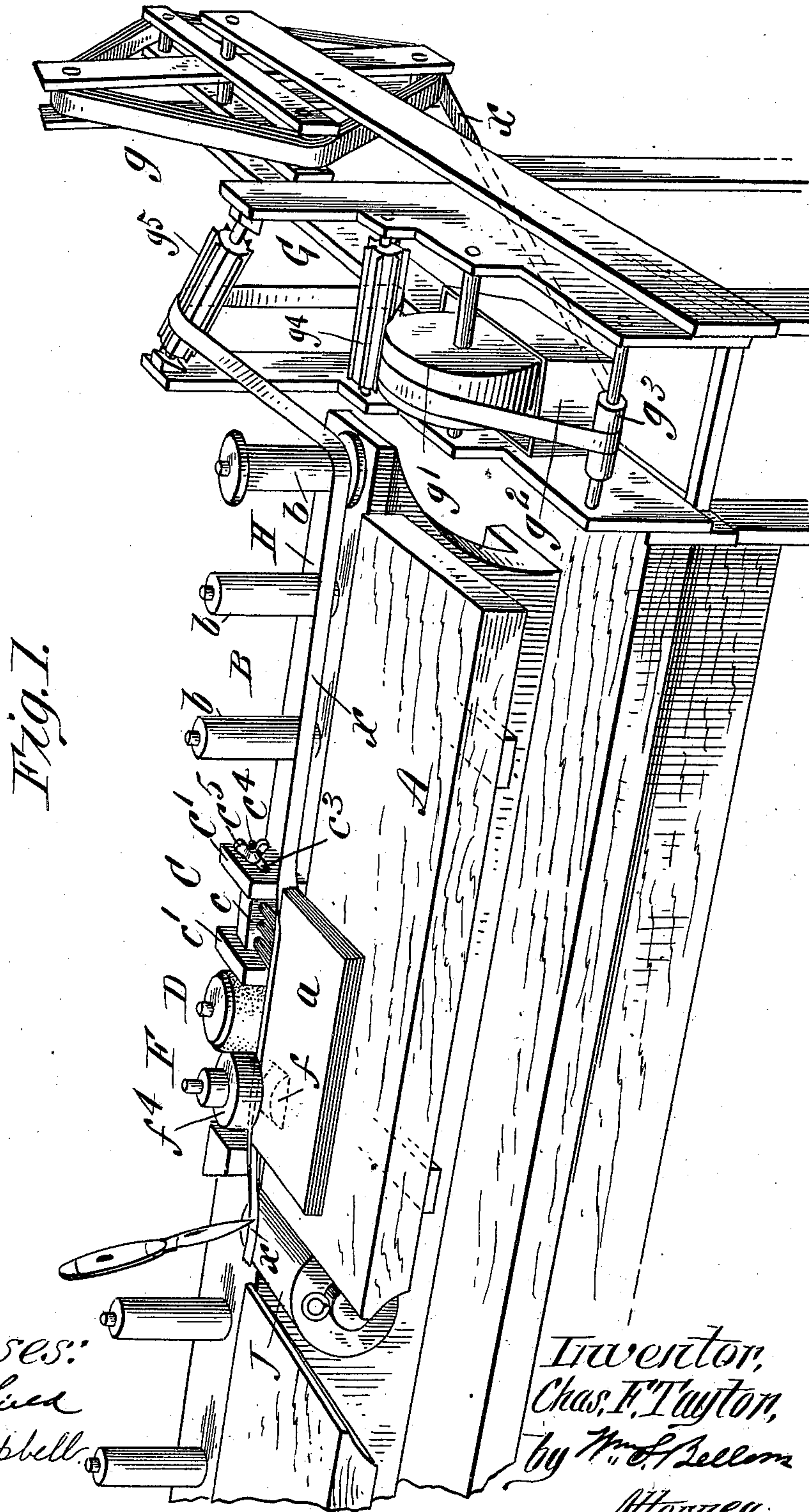
C. F. TAYLOR.

APPARATUS FOR BACKING TABLETS.

(Application filed Apr. 20, 1900.)

(No Model.)

2 Sheets—Sheet 1.



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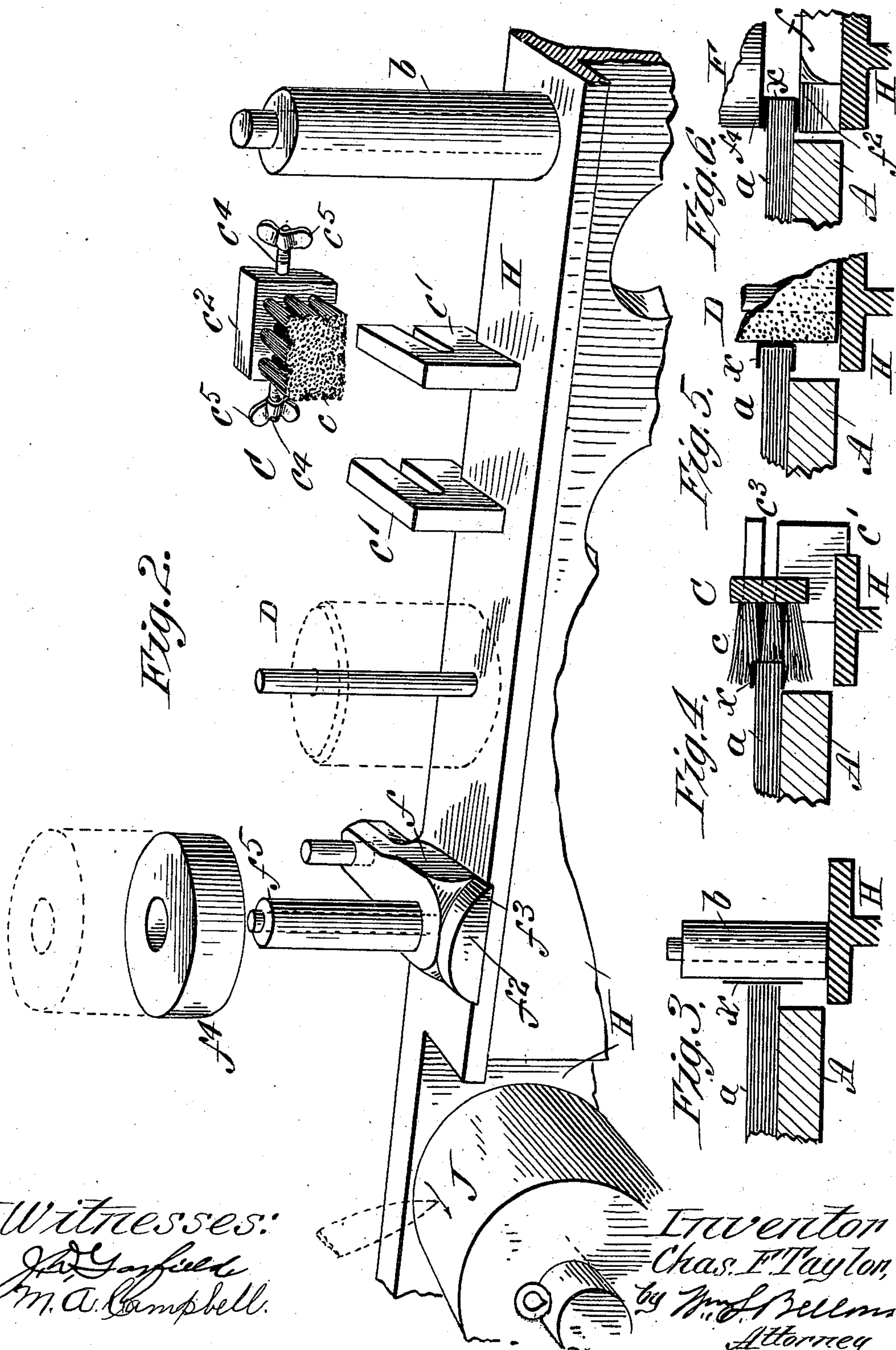
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UNITED STATES PATENT OFFICE.

CHARLES F. TAYLOR, OF HOLYOKE, MASSACHUSETTS.

APPARATUS FOR BACKING TABLETS.

SPECIFICATION forming part of Letters Patent No. 684,957, dated October 22, 1901.

Application filed April 20, 1900. Serial No. 13,573. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. TAYLOR, a citizen of the United States of America, and a resident of Holyoke, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Apparatus for Backing Tablets, &c., of which the following is a full, clear, and exact description.

10 This invention relates to improvements in a machine or apparatus for affixing the strip of cloth or tape or other suitable material at and upon the backs of tablets of paper. These tablets, as I have usually produced them, have
15 consisted of a suitable number of sheets of writing-paper having at the upper and lower sides, one or both, of the bunch or pile a cover or covers of card or pasteboard, the sheets or cover layers being superimposed one upon another with the edges evened, and the securing-strip of textile or other suitable material has been secured by a suitable adhesive to the back of the paper and cover-sheets and also overlapped and secured by sticking upon the
25 outer or cover layers along the adjacent edges thereof, forming the backing or binder.

The object of the present improved machine or apparatus is to provide means whereby the layers comprised in the tablet, together with
30 the back-forming strip or binder, which for brevity herein will be termed the "tape," may be properly and expeditiously brought together, the gummed or glued tape along and against the layers, the tape pressed firmly
35 against the rear edges of the layers, its opposite edge portions overlapped or folded upon the marginal portion of the upper and lower layers and firmly pressed and set thereagainst, and, in conjunction with the above,
40 the invention contemplates the provision and arrangement of parts whereby the tape between one backed or bound tablet and the succeeding one may be conveniently severed, and all so that the work of backing the tablets becomes simple and easy and susceptible
45 of comparatively rapid performance and with most satisfactory results in respect of the perfect character of the work done.

The invention consists in the constructions
50 and combinations or arrangements of parts, all substantially as hereinafter described, and set forth in the claims.

Reference is to be had to the accompanying drawings, in which the tablet apparatus is illustrated both structurally and in its manner of utilization, and in which—

Figure 1 is a perspective view of substantially the entire machine. Fig. 2 is a perspective view of parts of the machine which are at the rear of the tablet-support, some of such parts being separated or removed. Figs. 3, 4, 5, and 6 are cross-sectional views illustrative of the tablet-backing operations which are rendered practicable by the present appliances.

Similar characters of reference indicate corresponding parts in all the views.

A represents the support for the pile *a* or piles of sheets or layers comprised in the tablet, on which support each pile is placed and along which it is slid or moved, and to the rear of the said support are parts and appliances B, which constitute both the tape and tablet guide, the tape-edge-overturning device C, the means at D whereby the pressure of the edges of the sheets against the gummed tape or the edge against such edges may be acquired, and at F the means whereby the overturning edge portions of the tape are pressed to be set firmly upon and against the sides of the outer layers.

At G is represented the tape supplying and gumming mechanism and means for imparting its initiatory guiding and delivery previous to its being brought to the means for guiding at B for both the tape and tablet.

The guide B for and in common to both the tape and tablet consists in a series of vertical rollers *b b*, having their forward peripheral portions in a common vertical plane just to the rear of and parallel to the length of the support A.

As the apparatus is viewed in Fig. 1 the tape *x* is drawn from the supplying and gumming rolls horizontally forwardly and to the left in running contact on said rolls *b b*, the pile being placed with its rear edge against the forward gummed face of the tape.

To the rear of the tablet support or table A is a support or frame H, parallel therewith, the top of which is slightly below the top of the table, and upon this support or frame H the rolls *b b b* and the devices C, D, and F are supported. Next beyond the rolls *b* is the

overturning device C for the edges of the backing-tape, the same, as shown, consisting simply of a brush c , having long and comparatively stiff bristles, suitably held in its place

5 on the support H, with its bristles projecting forwardly across the plane along which the tablet-back and the tape thereagainst are moved, the height or thickness of the brush being greater than the thickness of the tablet.

10 As a holder for the brush the support H is provided with the opposing cheeks or standards c' c' forwardly open, between which is fitted the body c^2 of the brush, its bristles projecting beyond the forward ends of said

15 cheeks, which forward cheek ends are at least as far back as the forward surfaces of the rolls b , whereby said ends will present no obstruction to the drawing of the tablet and tape past and subject to the action of the brush. The

20 cheeks are provided with the slots c^3 c^3 , through which the screw-stems c^4 c^4 of the brush are passed, receiving on their outer ends the thumb-nuts c^5 c^5 , which when set up against the outer sides of the cheeks confine

25 the brush in any given adjusted position.

The pressure device D consists of a roll mounted axially vertically to rotate on the said support H, said roll being covered with felt, although not necessarily so covered, and

30 it has a forward portion of its periphery merging into or a little forward across the aforementioned plane along which the tablet-back and tape are drawn.

The pressing and setting device F for the

35 overturned edge portions of the tape, whereby they are positively made to adhere to the sides of the outer tablet layers next to the back edge thereof, consists in part of a plate or lug f , formed on or attached to the support

40 H, a portion f^2 thereof forwardly projecting across the aforementioned plane in which the tablet-back and tape are drawn, the top of this portion f^2 being substantially on the level of the under side of the tablet, which

45 is the level of the top of the tablet-support A. The upper surface of the portion f^2 of the lug f , which is toward the pressure and back setting roll D, is beveled, as shown at f^3 . The said setting device F furthermore consists in a suitably vertically guided weight

50 member f^4 , exerting by the stress of its weight a pressure toward the top of said portion f^2 . The lug is provided with an upstanding rod f^5 or a rod with a sleeve thereon, as

55 shown in Fig. 2, over which fits and by which is guided the circular centrally-apertured weight, which is here shown as the example of the form of the weight member which I prefer to employ.

60 The relations of the successive parts of the apparatus and their successive actions on or relative to the tablet-back and tape are clearly indicated not only in Fig. 1, but also in Figs. 3, 4, 5, and 6.

65 Fig. 3 shows the relations of tape and tablet, whereby as they are together forwardly or longitudinally drawn by hand by the op-

erative they will be guided, the tape being held properly in relation to the tablet-back. As the forward rear corner of the tablet and the tape thereagainst after passing the pressure device D reach the brush it furrows through, deflecting the intermediate bristles, while those above and below the upper and lower surfaces of the tablet-back overlap, and by their elasticity and resistance deflect the tape and fold it down onto the tablet sides, said folded-down portions of the tape to be next set as they pass between and subject to the pressure of the parts f^2 f^4 , one of which has a pressure movement toward the other.

In tableting, using the means shown, two persons advantageously work together, one for placing succeeding piles on support A, backed against the tape, the front face of which is gummed, while the second person slides the piles forward together with the tape thereagainst to the actions of the overturning and setting means described, and in practice the longitudinally rear edge of one pile a has abutted thereagainst the forward edge of the next pile, so that the weight f^4 does not fall down onto lug f after one pile has been passed through and before the next is brought to device F.

Of course should there be a break in the continuity of running the succeeding tablets through and the pressure-weight f^4 should fall it is free to be lifted for the introduction to its pressure-contact thereunder of the next pile. Next longitudinally forward of the setting device F, crosswise of tablet-support A, is provided a roller J, over which the completed tablets are brought and which serves as a cutting-base, whereby the operator may with a knife cut the tape between the successively-backed tablets.

In practice each pile is of a length sufficient to comprise two or more tablets of the size to be marketed, the division of the tape-backed pile into two, three, or four tablets, as desired, being performed on a cutting-press, which is most practicable, as well known.

While in connection with the backing means described various arrangements of parts constituting the tape gumming or gluing and delivering devices may be employed and the operation of the parts which constitute the more important portion of the invention are not dependent on any one particular tape-gumming mechanism, the mechanism here shown for gumming the tape is adequate and satisfactory, consisting in a tape-reel or tape-supply roll g , a gum-box g^2 , with a gum-roll g' therein, a guide-roll g^3 , around which the tape is passed from the reel to and over the upper portion of the gum-roll, standing outside of and above the gum or glue in the box, and the bladed guide-rolls g^4 g^5 , one of which is axially angular to the other and to the first one b of the tape and tablet support rolls, whereby the tape may while running flatwise in lines at right angles to the line of said rolls

b b be deflected, so as to be brought to said line, all as plainly indicated in Fig. 1.

In lieu of using the brush *c* as the means for overturning the edge portions of the tape 5 onto the sides of the tablet other descriptions of edge-turning means may be employed without entirely departing from this invention.

In this specification "gum" and "gum- 10 ming" are to be understood as interchangeably or synonymously used with "glue" and "gluing" and "paste" and "pasting."

Having thus described my invention, what I claim, and desire to secure by Letters Pat- 15 ent, is—

1. The combination with a tablet support or table A, of a tape guiding and gumming device, a set of vertical rolls *b b* at the rear of the table arranged in a line to constitute a guide 20 and rest in common to both the tape and the edge of the tablet thereagainst, a brush having its bristles extending forwardly across the plane in which the tape and tablet edge are moved, constituting a tape-edge-overturning device, subject to the action of which the 25 tape and tablet are moved, and upper and lower members beyond the overturning device, one of which exerts a pressure toward the other, and between which the tape-backed portion of the tablet is passed, substantially 30 as described.

2. The combination with a tablet support or table A, of tape guiding and gumming device, a set of vertical rolls *b b* at the rear of 35 the table arranged in a line to constitute a guide and rest in common to both the tape and the edge of the tablet thereagainst, a brush having its bristles extending forwardly across the plane in which the tape and tablet 40 edge are moved, constituting a tape-edge-overturning device, a holder *c'* in which said brush is removably and adjustably set, and upper and lower members beyond the overturning device, one of which exerts a pres- 45 sure toward the other, and between which the tape-backed portion of the tablet is passed, substantially as described.

3. The combination with tape supplying, gumming and delivery guide devices, of a 50 tablet support or table A and the support H

at the rear thereof having its top lower than the table, and provided with the alined rollers *b b*, the brush box or holder forwardly open and the brush adjustably provided in said holder, and having its bristles extending 55 forwardly therebeyond, the upstanding roll D, and the lug *f* transversely arranged provided with a post and an apertured weight guided over said post, and exerting its weight-pressure against the top of the lug, and con- 60 stituting in conjunction therewith, a pressure device for setting the overturned tape portion of the tablet-backing, substantially as described.

4. The combination with tape supplying, 65 gumming and delivery guide devices, of a tablet support or table A and the support H at the rear thereof having its top lower than the table, and provided with the alined rollers *b b*, the brush box or holder forwardly 70 open and the brush adjustably provided in said holder, and having its bristles extending forwardly therebeyond, the upstanding roll D, the lug *f* transversely arranged on said support H and forwardly extended provided 75 with a post and an apertured weight guided over said post, and exerting its weight-pressure against the top of the lug, and constituting in conjunction therewith, a pressure device for setting the overturned tape portion 80 of the tablet-backing, and the horizontal roll J, endwise beyond the overturning and setting devices constituted as above, substantially as described.

5. In a backing apparatus, the combination 85 with a support or table for the pile of sheets or layers, a tape supplying and gumming device, a series of vertical rollers at the rear of the table arranged in a common line parallel with the length of the table, and having a sup- 90 port therefor, the top of which is lower than the top of the said table, substantially as described.

Signed by me at Springfield, Massachusetts, in presence of two subscribing witnesses.

CHARLES F. TAYLOR.

Witnesses:

CHARLES E. TAYLOR,
WM. S. BELLOWS.