

No. 840,553.

PATENTED JAN. 8, 1907.

C. D. BRADT.

MACHINE FOR CUTTING PAPER, CARDBOARD, OR OTHER STOCK.

APPLICATION FILED JULY 20, 1906.

4 SHEETS—SHEET 1.

FIG. 7

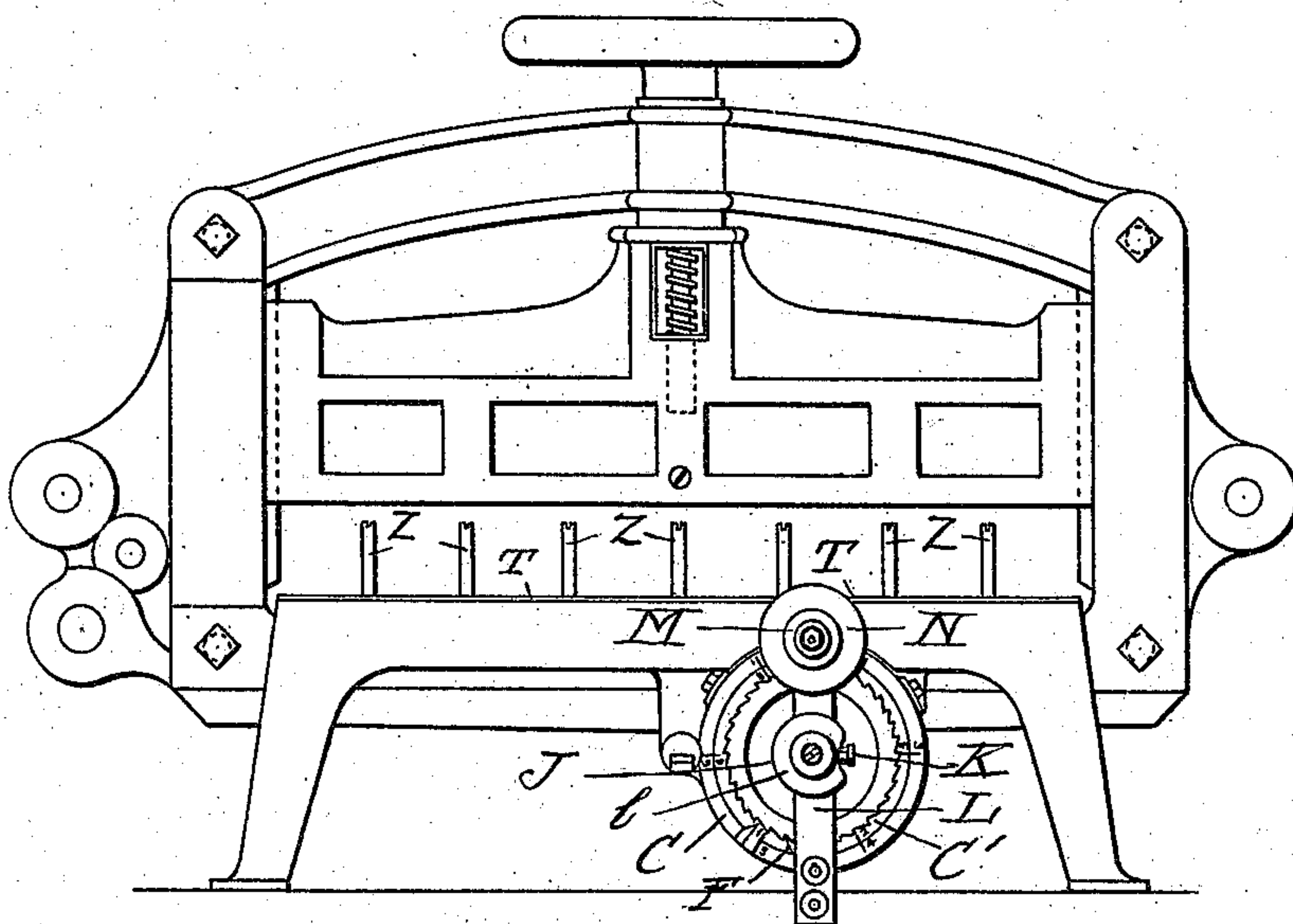
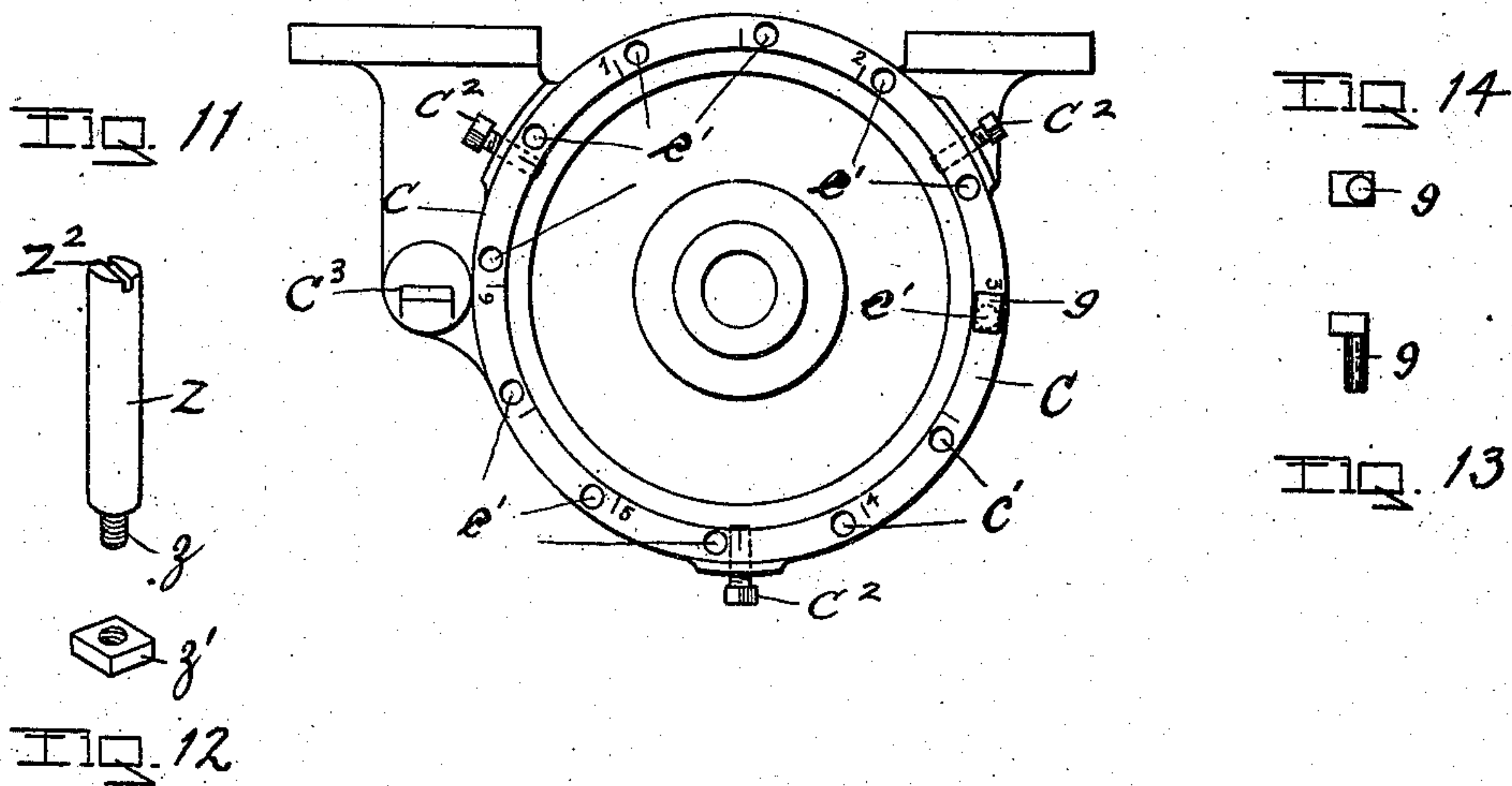


FIG. 1

WITNESSES

Charles W. ...
Lucia D. ...

INVENTOR

Chauncey D. Bradt
By Ward Cameron.
Attorneys.

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4 SHEETS—SHEET 2.

Fig. 16.

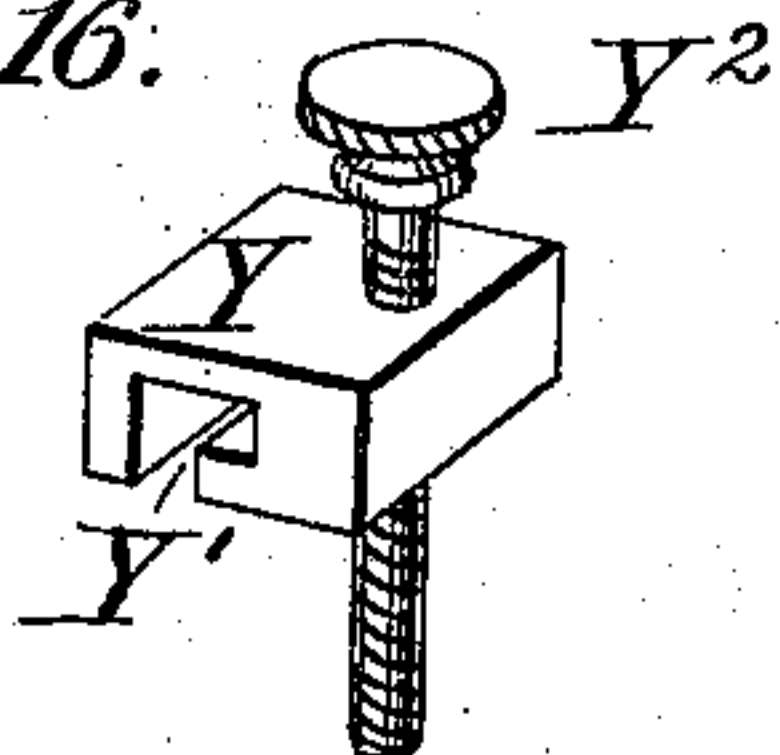


Fig. 10.

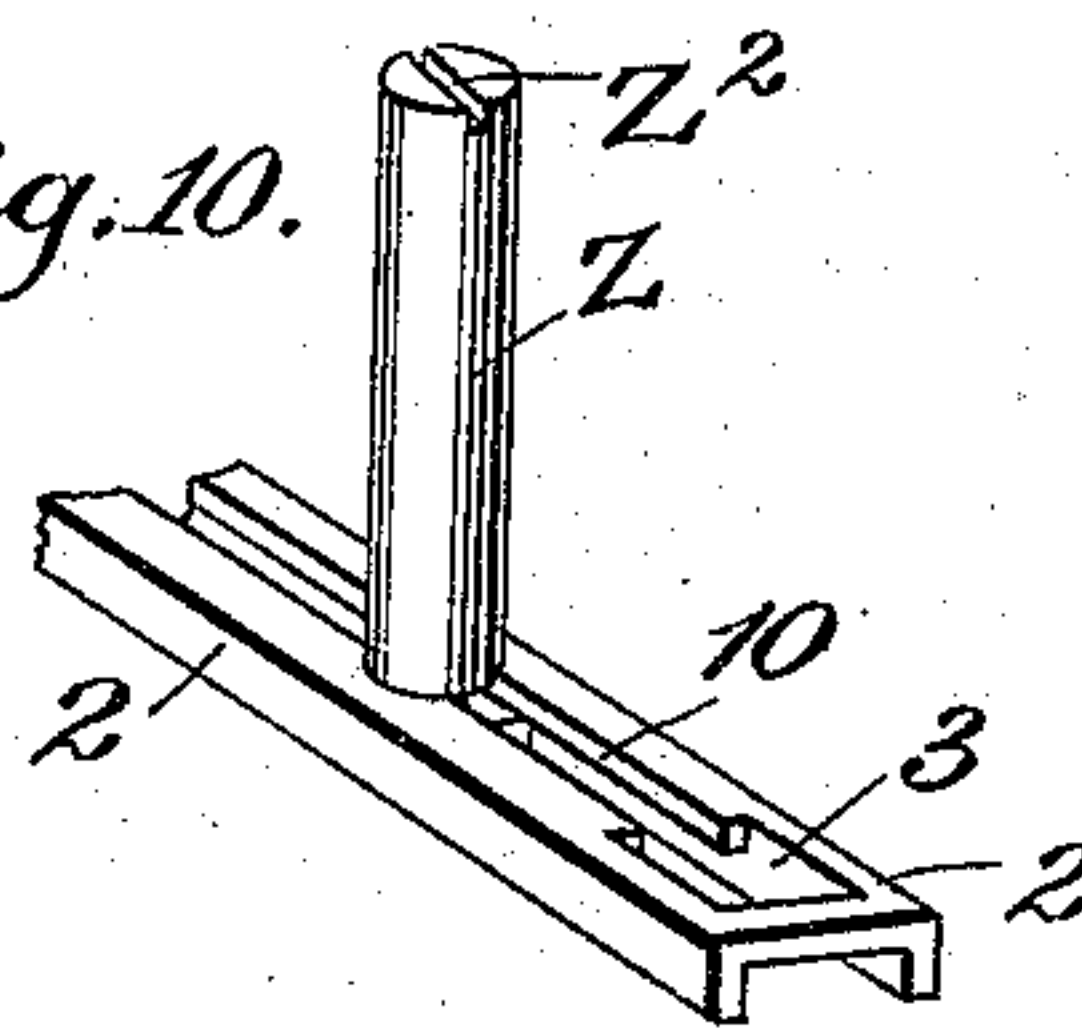
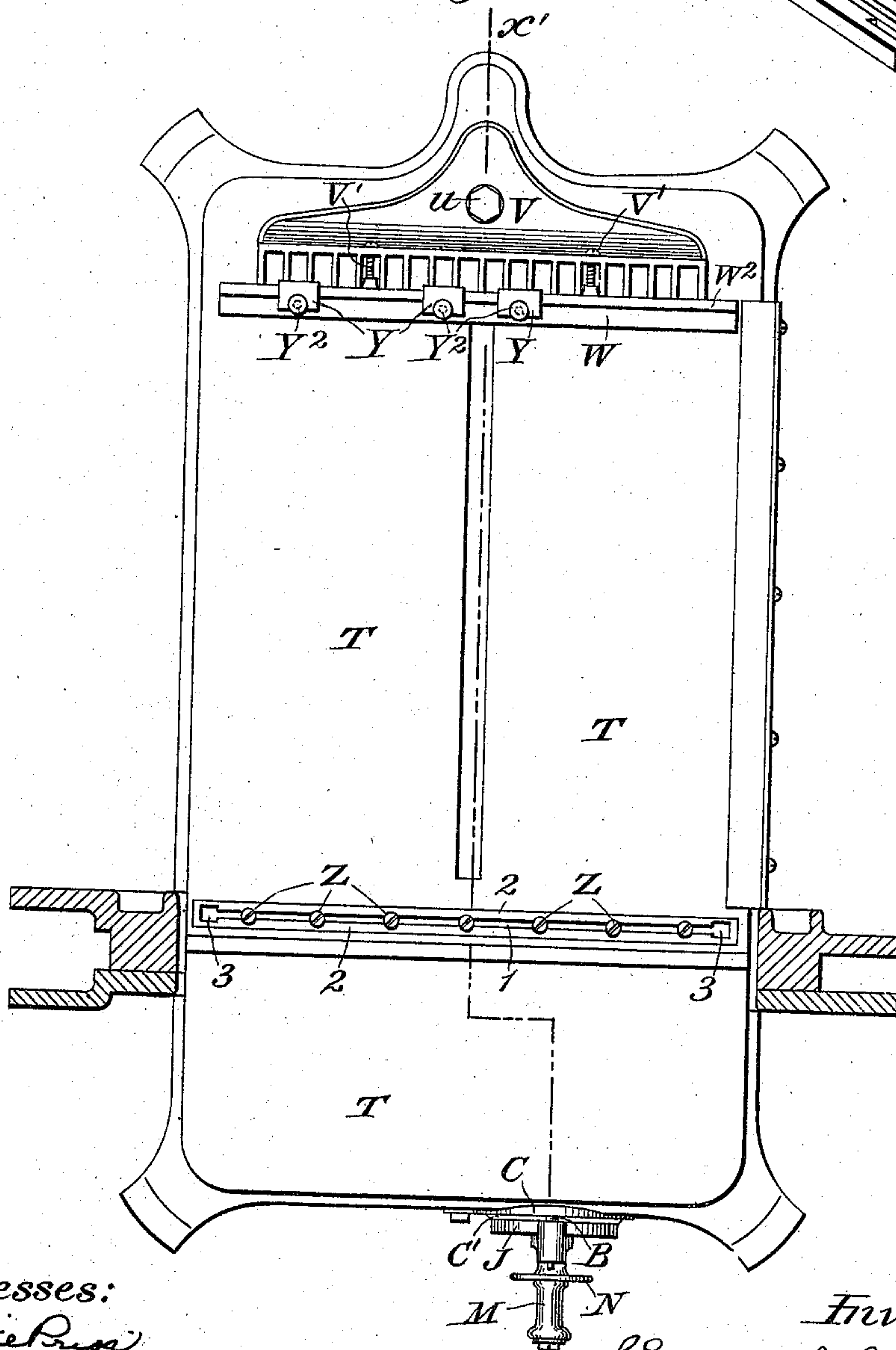


Fig. 2.



Witnesses:

Lottie Russell
D. L. Swasey

Inventor:

Chauncey W. Bradt.

By
Ward Cameron
Attorneys.

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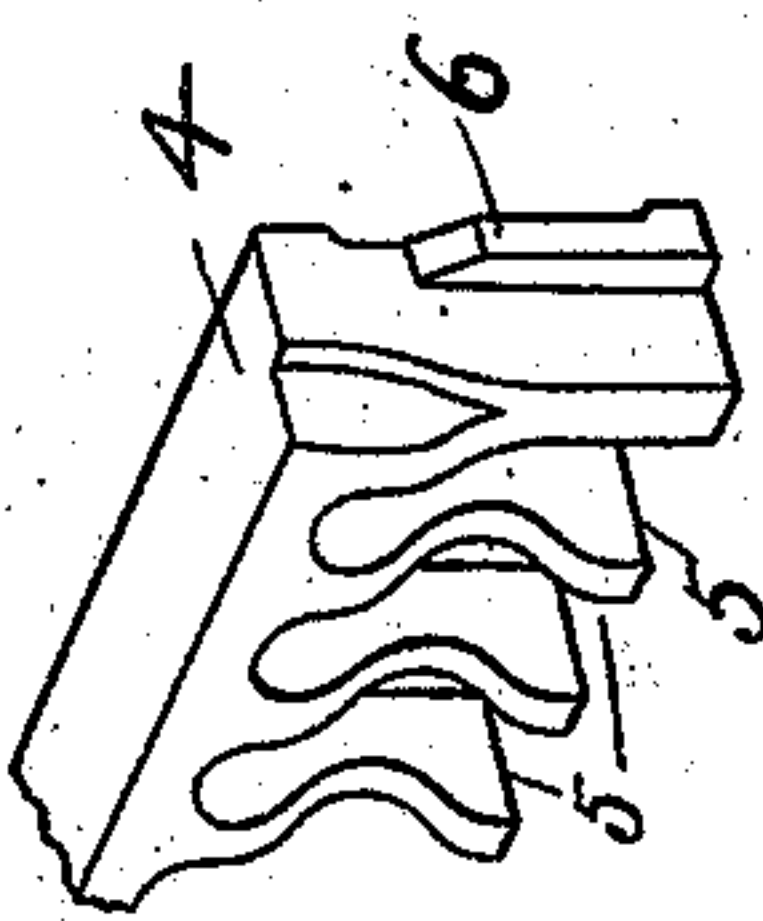
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4 SHEETS—SHEET 3.

FIG. 15



WITNESSES
[Signature]
Louis C. Damarell

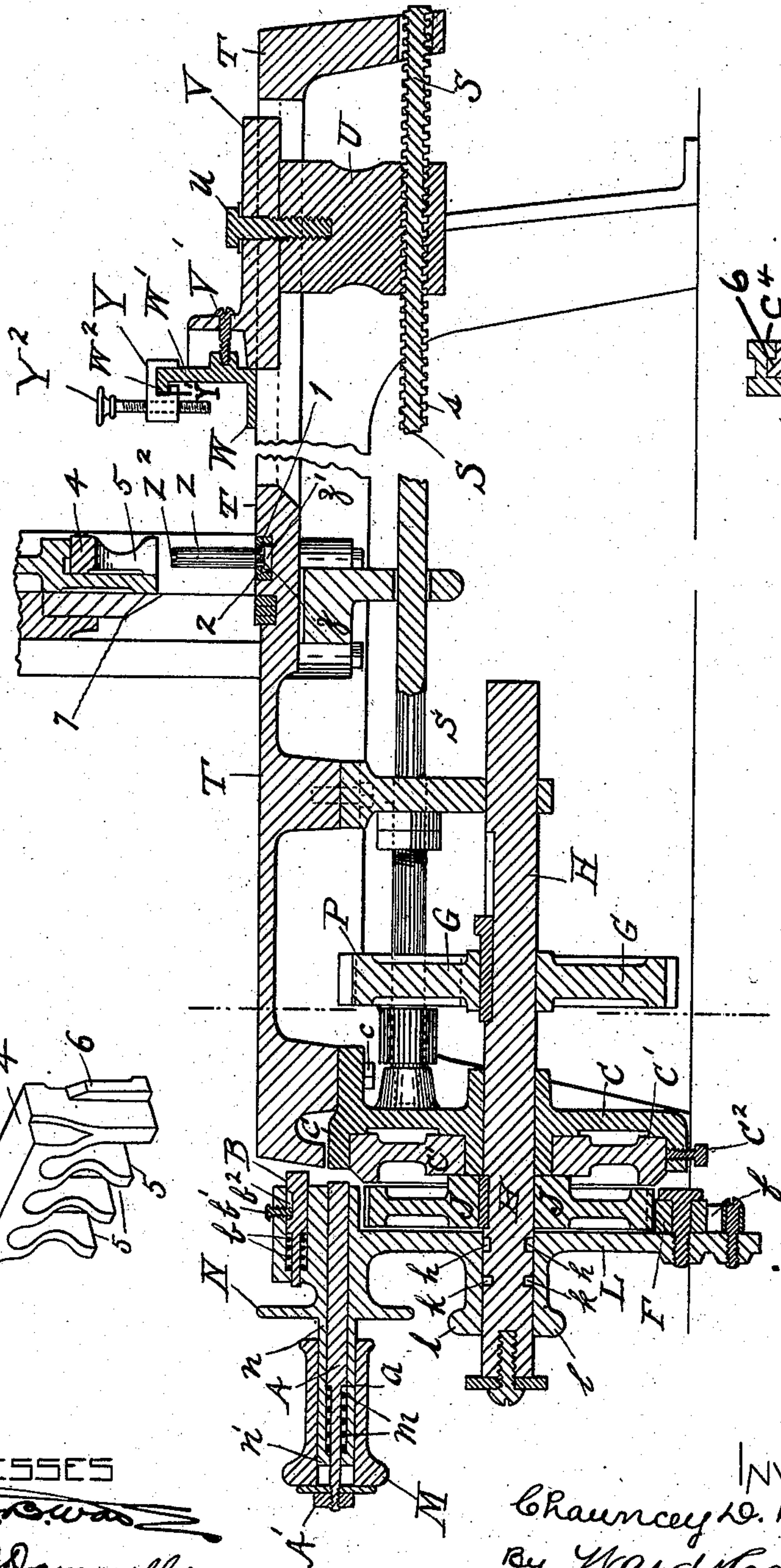


FIG. 3

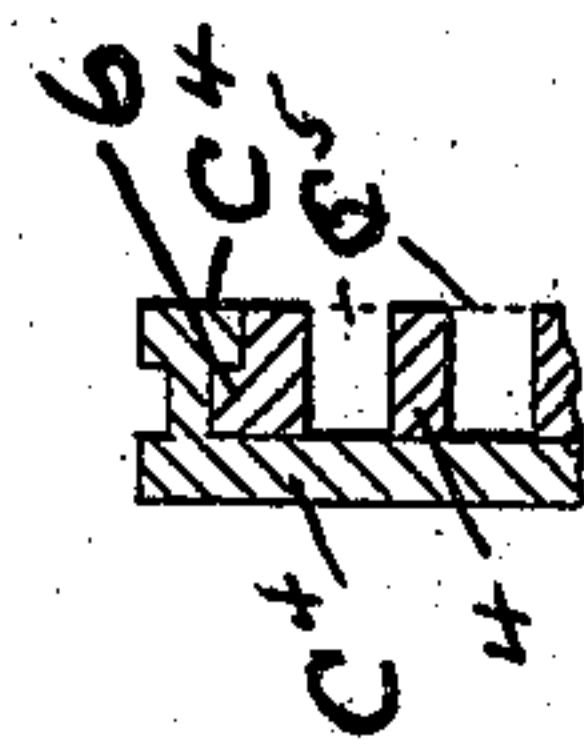


FIG. 17

INVENTOR
Chauncey D. Bradt
By Ward Cameron
Attorneys

No. 840,553.

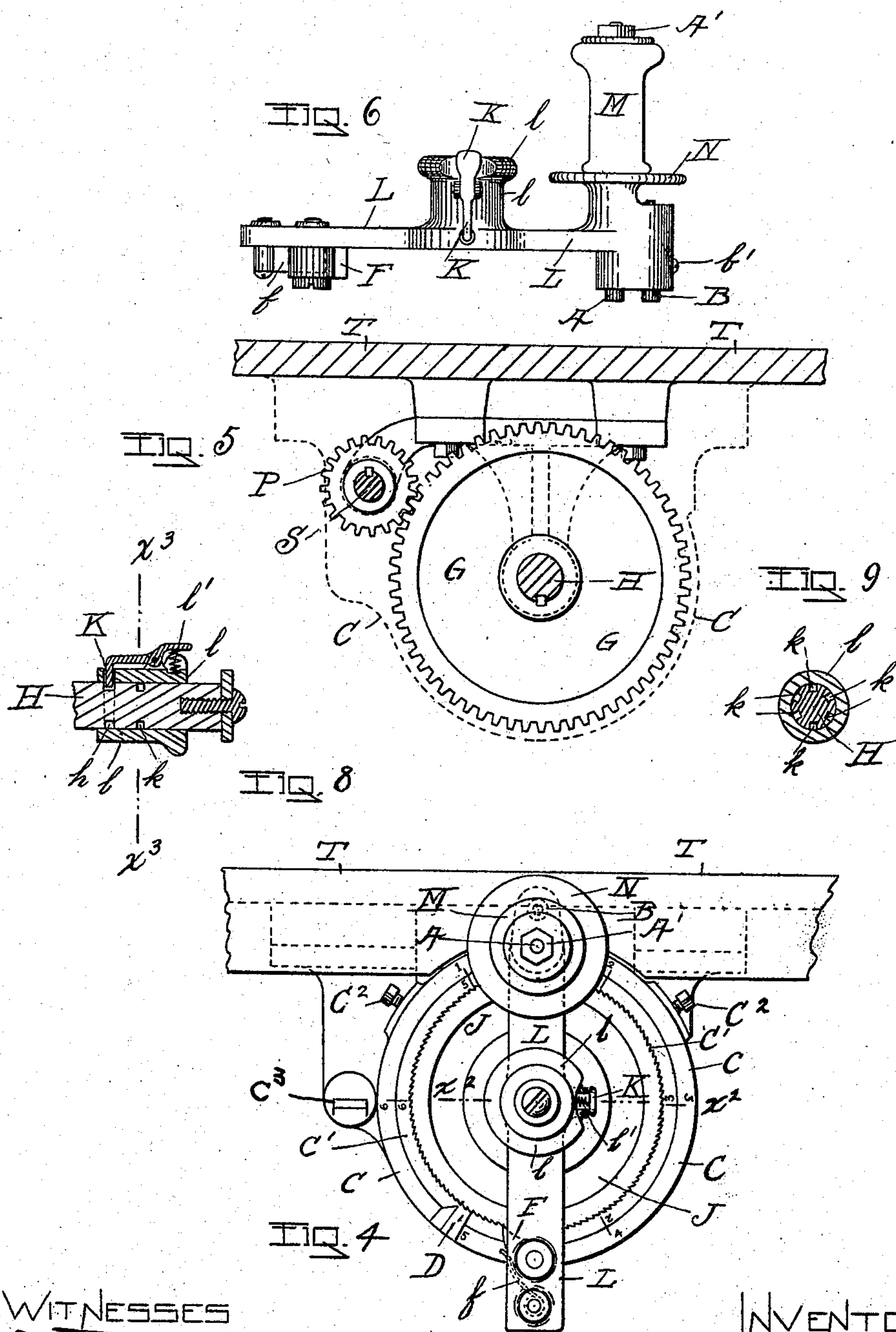
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4 SHEETS—SHEET 4.



WITNESSES

Charles W. ...
Lucia Damarell

INVENTOR

Chauncey D. Bradt.
By Ward Cameron.
Attorneys

UNITED STATES PATENT OFFICE.

CHAUNCEY D. BRADT, OF TROY, NEW YORK.

MACHINE FOR CUTTING PAPER, CARDBOARD, OR OTHER STOCK.

No. 840,553.

Specification of Letters Patent.

Patented Jan. 8, 1907.

Application filed July 20, 1906. Serial No. 327,016.

To all whom it may concern:

Be it known that I, CHAUNCEY D. BRADT, a citizen of the United States, residing at Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Machines for Cutting Paper, Cardboard, or other Stock, of which the following is a specification.

My invention relates to machines for cutting paper; and the object of my invention is to provide a means for feeding the paper or card to the cutters whereby the position of the paper or card in reference to the knife may be adjusted and predetermined, with means for changing the adjustment, and such other elements and combinations as are hereinafter more particularly specified and claimed. I attain these objects by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation with cutter-bar removed. Fig. 2 is a plan. Fig. 3 is a section along the lines X' X' on Fig. 2. Fig. 4 is an enlarged front elevation with parts broken away, showing the feed and scale. Fig. 5 is an enlarged elevation of the gear and pinion. Fig. 6, Sheet 4, is a side elevation of the crank. Fig. 7, Sheet 1, is an elevation of a modified form of casing. Fig. 8, Sheet 4, is a section along the line X² X² on Fig. 4. Fig. 9 is a section along the line X³ X³ on Fig. 8. Fig. 10, Sheet 2, is a perspective view of one end of the clamp-plate and guide-post; Fig. 11, Sheet 1, an elevation of the guide-post; Fig. 12, the nut for the guide-post; Fig. 13, an elevation of a taper pin; Fig. 14, a plan of taper pin; Fig. 15, Sheet 3, a perspective view of detachable portion of clamp; Fig. 16, Sheet 2, a perspective view of the rear clamp. Fig. 17, Sheet 3, is a detail sectional view with parts broken away, showing the position of the clamp 4 in connection with clamp-bar C⁴.

Similar letters and numerals refer to similar parts throughout the several views.

For the purpose of cutting paper or pasteboard a table, knife, and screw for causing the back gage to move forward toward the knife have heretofore been used. In order to cut narrow strips of paper which may be used for displaying the different colors of paint when said strips are colored, (said strips for designating the color of paint placed in pails or packages usually indicated by numbers and said strips attached to folders or boards or display-cards for the purpose

of enabling a customer to select by seeing the color of the paint that he wishes,) I have arranged a means for regulating the feed of the cutting-machine and adjusting same so that the stock placed on the bed of the cutting-machine may be brought forward by the operator to exactly the desired position without requiring attention upon his part to see the position to which he moves the crank-handle governing the screw and back gage.

The shaft S carries a screw-thread *s* and is mounted beneath a table T. A nut U is placed on the threaded portion *s* of the shaft S and is connected, by means of the bolt *u*, with the back gage V. The shaft S carries a pinion P thereon, which meshes with the gear G on the shaft H and to which shaft H is keyed the ratchet-wheel J. I preferably place an annular groove *h* in the shaft H, in which the dog K engages, and nearer to the end of the shaft H, I place a series of holes *k*, in which the dog K may project when it is desired to key the crank L to the shaft H. Loosely mounted on the shaft H, I place the crank L, which is provided with a handle M, preferably near one end, and a sleeve *l*, which is placed upon shaft H. Adjacent to the handle M on the crank L, I preferably place a disk N, the disk being attached to or formed integral with the sleeve *n*, which has at its end farthest from the disk a shoulder *n'*, which engages one end of a spiral spring *m*. The other end of said spring engages a shoulder *a* of the stop-bolt A, there being opportunity for the movement of the handle M between the end of the shoulder *n'* and the end of the handle, the bolt A, passing through the handle M, being secured by nut A' or any other suitable manner to the end of the handle. As thus arranged the spring *m* will force the bolt A forward by moving the handle M upon the sleeve *n* of the crank L, as shown in Fig. 6. The bolt will be withdrawn by moving the handle M to the position shown in Fig. 3.

The bolt A will act as a stop for the crank L when it projects from the crank. When the bolt A is drawn into the crank, it will pass the projection against which it would engage were it acting as a stop. I also arrange on the crank L a stop-bolt B, which is preferably arranged nearer the end of the crank than the stop-bolt A, as shown in Fig. 3, and preferably has an inclined working face adapted to pass the permanent stop C³, Fig. 4, when moved in one direction, but to en-

gage the same when moving in the opposite direction, and which has a spring b , engaging a shoulder in the shank of the bolt and the seat of the recess in which the bolt is housed within the crank L , tending to project the bolt beyond the face of the crank, as shown in Fig. 3. I also preferably arrange a screw b' in the end of the crank L , which engages the groove b^2 in the side of the bolt B and holds the bolt in position.

Crank-sleeve l , which is mounted upon the shaft H , as aforesaid, carries the dog K , which is in the form of a lever pivoted to the sleeve and preferably having a spring l' , which tends to keep the opposite end of the lever or dog in engagement with the shaft H by projecting it into the annular groove h or within one of the holes k in said shaft, depending upon the position of the crank-sleeve thereon. The crank L also carries near its end opposite the stop-bolts A and B the dog F , adapted to engage the ratchet-wheel J and is preferably provided with a spring f , resting against one side of the dog F , tending to keep said dog in engagement with the teeth of said ratchet-wheel, as shown in Fig. 4, and as thus arranged it will be seen that as the operator rotates the crank it will cause the shaft H to rotate, which will set in motion the screw-shaft S and move forward the back gage V . The opposite rotary movement of the crank L may be made without moving the ratchet-wheel, because the dog F will ride loosely over the teeth thereof. When it is desired to move the back gage toward the rear of the machine, I place the dog K in engagement with one of the holes k in the shaft H and then rotate the crank to the left, which will, because the crank is then attached to the shaft H , rotate the screw so as to move the back gage toward the rear.

For the purpose of limiting the extent of the rotation of the screw-shaft, and therefore the forward movement of the back gage, and therefore provide for the width of the strips of paper to be cut, I provide, preferably, one stop D , which may be formed upon the stop-wheel C' , which fits within the case C , which case is mounted to the under side of the table T by bolt c or in any suitable manner and through which case the shaft H passes.

The position of the stop-wheel within the case C is regulated as to its rotatable position in said case by means of the regulating-bolts C^2 . I preferably graduate both the case C and the stop-wheel C' , as shown in Fig. 4, for the purpose of enabling me to determine the position in which the stop-wheel should be placed within said case, since it is necessary to arrange for having the stop on the stop-wheel located in proper position by means of the clamping-bolts C^2 , so that the stop-bolts will engage the same at the proper degree of rotation of the screw S to make the strip of paper to be cut of the desired width.

I have shown in Fig. 7 a modified form of the face of the case C , placing therein a series of rounded openings c' , within which I may place the taper pins 9, Fig. 14, instead of using the stop-wheel. Of course I do not limit myself to the shape of the opening c nor to their position on the face of the case C .

For the purpose of securing the various piles of paper one arranged on top of the other upon the table T of the machine I place at the rear of the machine a back gage V , which, as hereinbefore stated, is moved by the rotation of the screw S , and to the front of the back gage V , I arrange a clamping device by means of which the rear ends of the paper may be held securely together. The clamping device consists of a rail W , which rests upon the table and which is provided with an upwardly-extending plate W' , secured to the back gage V by screw V' , or in any suitable manner. The vertical plate W' is provided with a projecting flange W^2 , extending along the front or face from one end to the other, and upon the end of the vertical plate W' a series of blocks Y are mounted, the blocks Y being provided with an opening Y' , which fits upon the end of the vertical plate W' , which opening Y' is so constructed as to conform with the flange W^2 , being provided with a wall which fits beneath said flange, as shown in Fig. 3. Through the block Y the clamp-bolt Y^2 is screwed. The blocks Y being movable upon the plate W' may be placed in any desired position, and clamp-bolt Y^2 may be screwed down in contact with the paper placed on the horizontal rail W . A clamping device attached to the back gage is particularly desirable when the paper on the table is made up of several piles of narrow strips, and each clamp-bolt Y^2 may engage one of said piles.

For the purpose of guiding the paper at its end farthest from the back gage I arrange a series of guide-posts Z , which are provided with a threaded projection z at one end, adapted to extend through a slot 10 in the clamp-plate 2. (See Fig. 10.) A bolt z' may be threaded on the projection z beneath said slot 10. The clamp-plate 2 is provided with an enlarged opening 3, with which said slot 10 connects and through which the bolt z' may pass after being attached to the projection z . The guide-posts Z may thus be placed in such position as is desired along the slot 10, as shown in Fig. 2, and I preferably place a slot Z^2 on top of the guide-posts Z to secure same to the clamp-plate.

It is sometimes desirable to arrange my machine for cutting ordinary stock which extends across the whole table instead of being divided into narrow strips. To do that, I may increase the bearing-surface of the stock-retaining device by placing the clamp 4, which is preferably provided with a series of openings 5, into which the projections of the

back gage V enter after the rail W has been removed. The end of the clamp 4 is preferably provided with a tongue 6, which engages with a groove in the clamp-bar C⁴.
5 (See Fig. 17.) I place a knife 7 as shown in Fig. 3, which may be brought in contact with the stock placed on the table.

What I claim as my invention, and desire to secure by Letters Patent, is—

10 1. In a machine adapted to cut paper, cardboard or other stock, a table; a back gage; a screw-shaft; a means for connecting said back gage with said screw-shaft; a pinion on said screw-shaft; a shaft; a gear there-
15 on meshing with said pinion; a ratchet mounted on said shaft; a crank loosely mounted on said shaft; a dog connected with said crank adapted to engage said ratchet; a means for stopping the rotation of said crank
20 at a predetermined point.

2. In a machine adapted to cut paper, cardboard or other stock, a table; a movable gage mounted thereon; a screw-shaft, a means for connecting said gage with said
25 screw-shaft; a crank-shaft; a means for connecting said crank-shaft with said screw-shaft, whereby the screw-shaft may be operated by said crank-shaft; a crank loosely mounted on said crank-shaft; a means for
30 making and breaking engagement between said crank and said crank-shaft; an adjustable means for determining the extent of rotation of said crank.

3. In a machine adapted to cut paper,
35 cardboard or other stock, a table; a crank-shaft; a crank loosely mounted thereon; a dog carried by said crank engaging with an annular groove in the crank-shaft; a series of openings in said crank-shaft; a means for
40 transferring said dog from engagement with

said groove to engage with one of said openings in the crank-shaft, substantially as described.

4. In a machine adapted to cut paper, cardboard or other stock; a table; a crank- 45 shaft; a crank mounted thereon; a spring-actuated bolt carried by said crank; a handle mounted on said crank; a bolt controlled by said handle; adjustable stop or stops in the path of the rotary movement of said crank, 50 substantially as described.

5. In a machine adapted to cut paper, cardboard or other stock; a table; a gage movable thereon; a clamp consisting of a metal block provided with a groove, adapted 55 to engage the top flange of the rail secured to a bar at the top of said gage; with a bolt passing through said clamp adapted to engage the end of the work to the horizontal rail; means for moving said gage on said ta- 60 ble; with a means for adjusting the amount of the movement of said gage, substantially as described.

6. In a machine adapted to cut paper, cardboard or other stock, a table; a gage 65 mounted thereon; a means for moving said gage backward and forward along said table; a guide-post provided with a screw-threaded portion at one end; a plate provided with a slot through which said screw-threaded por- 70 tion of the guide-post may project; a nut engaging said screw-threaded portion of the guide-post beneath said plate; substantially as described.

In testimony whereof I have affixed my 75 signature in presence of two witnesses.

CHAUNCEY D. BRADT.

Witnesses:

LOTTIE PRIOR,

FREDERICK W. CAMERON.