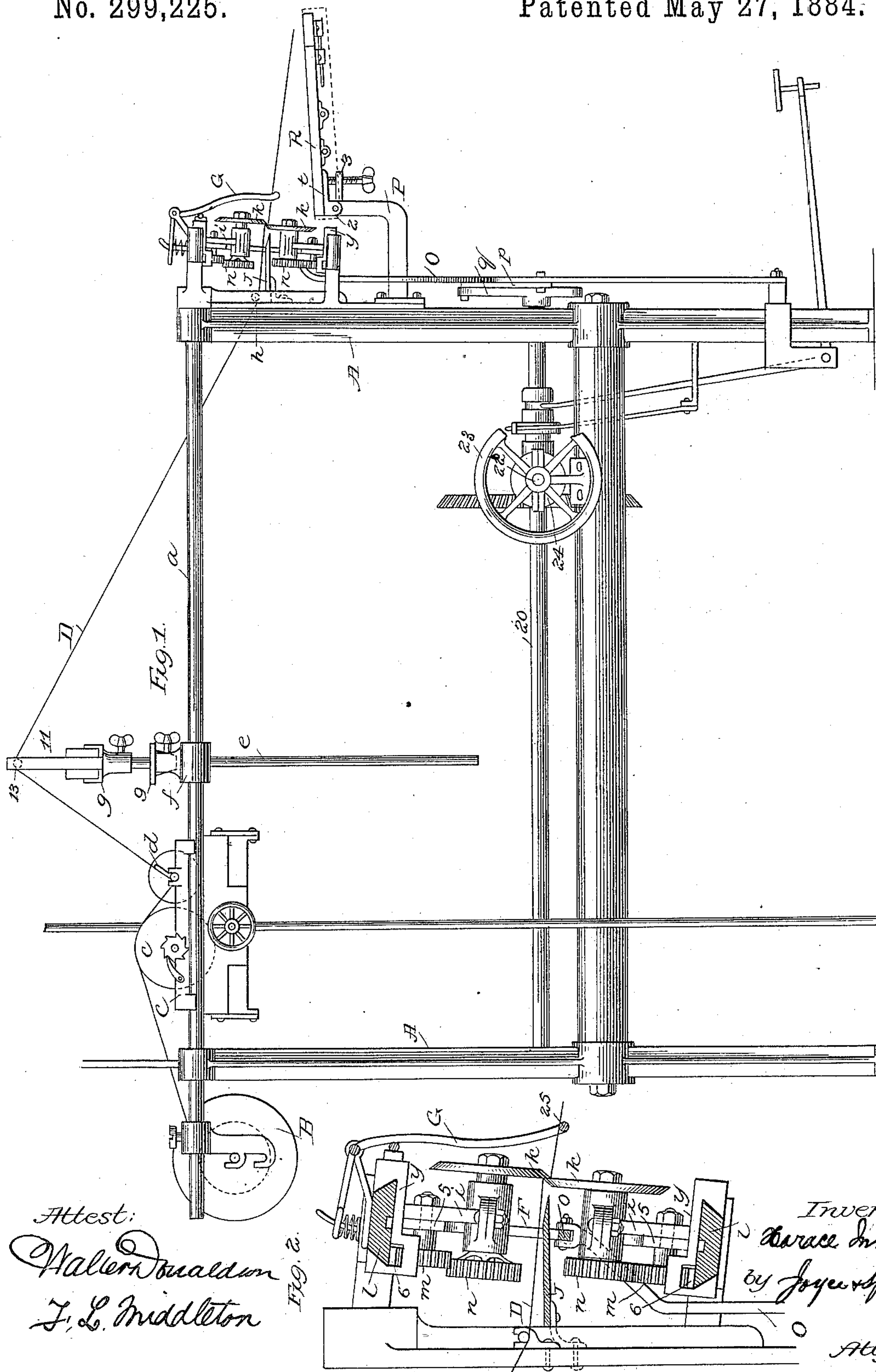


2 Sheets—Sheet 1.

MACHINE FOR LABELING OR COVERING THE TOPS OF BOXES.

Patented May 27, 1884.



(No Model.)

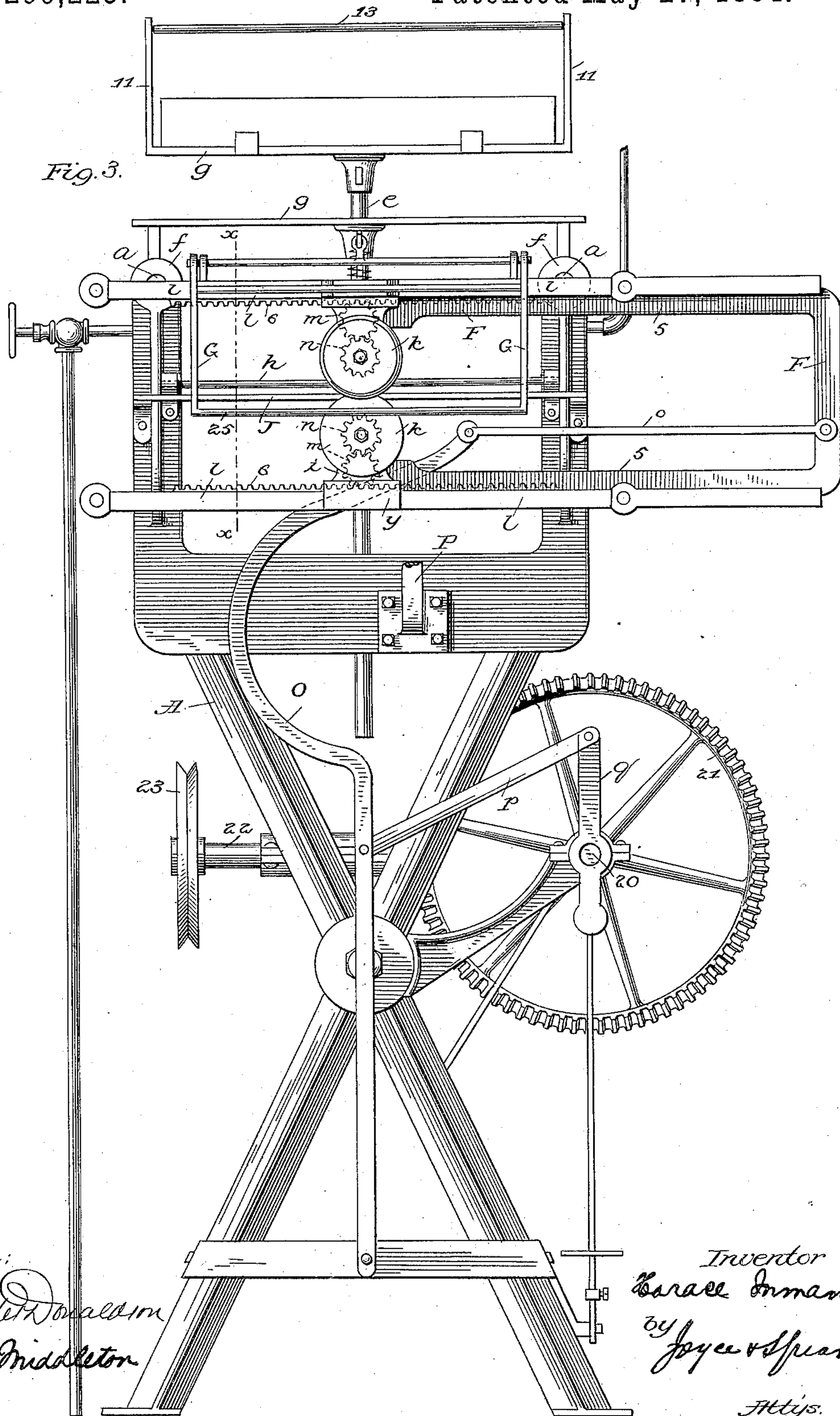
2 Sheets—Sheet 2.

H. INMAN.

MACHINE FOR LABELING OR COVERING THE TOPS OF BOXES.

No. 299,225.

Patented May 27, 1884.



Attest:

Walter D. Mason
J. L. Middleton

Inventor
Harace Inman
by *Joyce & Spear*

Attys.

UNITED STATES PATENT OFFICE.

HORACE INMAN, OF AMSTERDAM, NEW YORK.

MACHINE FOR LABELING OR COVERING THE TOPS OF BOXES.

SPECIFICATION forming part of Letters Patent No. 299,225, dated May 27, 1884.

Application filed May 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, HORACE INMAN, of Amsterdam, in the county of Dutchess and State of New York, have invented a new and useful
5 Improvement in Machines for Labeling or Covering the Tops of Boxes; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention is a machine for labeling or
10 covering the tops and bottoms of boxes.

In the accompanying drawings, Figure 1 is a side elevation of my improved machine. Fig. 2 is a detail view of a section on line *xx* of Fig. 3, showing the cutters and their operating mechanism. Fig. 3 represents a front
15 elevation of the machine, the box-supporting frame being broken away to better illustrate the invention.

In these drawings, A A represent the end
20 frames on which the working apparatus is supported. It is braced in any suitable manner, and upon the top are rods *a*, as in my reissued Patent No. 10,286, granted February 13, 1883.

On the left-hand end of Fig. 1 is placed the
25 roll of paper B, which is of suitable width for the boxes to which it is to be applied. Next in order on the same rods is the glue-box C, provided with means for keeping the glue hot.
30 In this is a roller, *c*, and a scraper, *d*. Over these devices the web of paper is laid and receives the glue or paste. These devices are old in similar machines.

In order to lengthen the path of the paper
35 without increasing the length of the machine, I have devised an improved appliance, by means of which the length of the web between the glue-box and the position of the box may be increased or diminished at will. This consists of a standard, *e*, which passes through a
40 bar, 9, supported on the sleeves *f*, which slide on the rods *a*, these sleeves being the same as those in my aforesaid patent. The standard is held in the bar by means of a set-screw.

On the upper end of the standard is a cross-
45 bar, *g*, having upturned arms 11, in which is supported a roller, 13. Over this the web D passes. It will be plain that by raising or lowering the standard, the length of that part
50 of the web between the glue-pot and the other end of the machine may be increased or diminished. From this upper roller the web

passes down to a lower roller, *h*. It is thus deflected upward and then downward, and this deflection over the rollers serves to prevent
55 the paper from curling. The length of the web between the glue-box and the end of the machine gives the paper time to soak up the glue and takes the stretch out of the web. At the front end of the machine I place the cut-
60 ting mechanism. This may be of any ordinary construction; but I have devised a preferred form, which is shown more clearly in Figs. 2 and 3. This consists of a pair of cutting-disks, *k k*, which overlap slightly, and are carried in
65 a reciprocating frame, F. The cutting-disks act as shears, and sever the web by passing across from side to side. It is necessary, in order to avoid dragging, and thereby tearing the paper, to give the cutting-disks a positive
70 rotary motion, and the movement of the edges should be at least as fast as the lateral movement of the frame or carriage in which the cutting-disks are mounted. The leading feature, therefore, of this part of the invention lies
75 in the laterally-moving frame carrying cutting-disks with mechanism for giving positive rotary motion to the disks, and with mechanism for laterally moving the frame. The mechanism found best for this purpose is shown
80 in Figs. 2 and 3. In these figures, F is a frame or carriage open at the left-hand end. The arms 5 5 are provided with hangers *i i*, in which the cutting-disks *k k* have their bearings. These hangers have upon their ends
85 grooved blocks *y y*, which receive the guideways *l l*, and slide thereon when the frame F is in motion. These disks are fast on their shafts, which project beyond their bearings, and are provided with pinions *n n* in line with
90 rack-bars 6 6 on guideways *l l*, on which the supporting-frame moves. Loose pinions *m m*, on pins set in the frame F, connect the rack-bar with the cutter-pinions *n n*, and give motion to the cutters in the right direction. The
95 pinions are so proportioned as to diameters that the rotary motion of the cutters will be equal to or greater (preferably equal) than the lateral movement of said cutters, so that tearing or dragging of the paper is prevented.
100 The frame is connected to the guideways by means of the grooved blocks *y y*, which give it proper steadiness of movement and prevent any binding.

Movement may be imparted to the carriage by various mechanisms, such as a double screw, or by belts, or by a reversing-screw, or other suitable reversible device. In the drawings is shown a lever, O, pivoted at the lower end upon the frame of the machine, and connected to the carriage-frame by bar o. By bar p it is also connected to a crank-arm, q, of a shaft, 20. This shaft is driven through beveled gear 21 from a counter-shaft 22, which is provided with pulley 23 and bevel-pinion 24. Any suitable clutch device with treadle-connections, as shown, may be used for operating the machine. It may also have any ordinary stop or clutch mechanism, by means of which the movement of the carriage, when it reaches either end, will throw the mechanism out of gear and stop the cutters. The better way is to adjust the devices so that the cutters will operate in both directions—that is to say, to move to one side and remain until required to cut again, then, by pressure on the treadle, they are started and cut in returning to the other side. Thus a half-revolution of the shaft carrying the crank takes place before the clutch or other stop mechanism is thrown out of gear. When thrown into gear, a completion of the revolution carries the cutters back.

Underneath the web and just behind the cutters, but in the same plane with their meeting edges, is a supporting-plate, J. This prevents the paper from falling upon the mechanism for operating the cutters.

In front of the cutters is a supporting-frame, G, pivoted or connected above, and having a rod, 25, extending under the web. A spiral spring draws this back. The carriage, in passing each way, presses the frame forward, so as to bring the rod under that part of the web to be severed, and holds the paper while it is cut, and then the spring draws the frame back, letting the severed piece fall at once and evenly upon the box.

The box-supporting mechanism is mounted upon a bracket, P. The box-form R is of any suitable size, and is preferably extensible. It is fixed to the support t, hinged at 2 on bracket P. Underneath the hinged part t is an arm, 3, rigid on the bracket P, and in it is an adjusting-screw, extending up through the arm 3, to bear upon the part t. This is for the purpose of setting the box-form at any desired angle. It will be plain that the cutting devices must cut outside of the box; but it is necessary in many cases to leave more or less of margin between the edges of the covering or label and the edge of the box, for the purpose of showing the trimming on the box, and therefore to cut the piece shorter than the box. This is in part accomplished by inclining the

cutting devices, as shown in Fig. 2; but a further and variable adjustment for the same purpose is obtained by means of the variable inclination given to the box-form. By inclining it more, the piece is cut shorter and drops, leaving a wider margin.

I am aware of the patent granted Orr and Wright, No. 67,669, of August 13, 1867, which consists in the use of a continuous roll of paper, pasting devices, over which the paper is drawn, devices to sever the paper after it is wound around the box, devices for pressing the paper upon the box, and a revolving box-holder, the machine being adapted to cover the sides of a box by winding thereon a web of sufficient length.

Having thus described my invention, what I claim is—

1. A machine for labeling or covering the tops and bottoms of boxes, consisting of a suitable supporting-frame having bearings for the roll of paper, of paste or glue applying devices, non-revolving box, supporting devices, and mechanisms for supporting and cutting the web, all substantially as described.

2. The combination of the bracket, the box-form pivoted therein, and the adjusting devices, substantially as described, whereby the inclination of the box may be varied, substantially as described.

3. In the described machine, the positively-operated cutters k k, adapted to move transversely across the web, substantially as described.

4. The transversely-moving carriage having rotary cutters, and pinions on the journals of said cutters, said pinions being connected to rack-bars by intermediate loose pinions, whereby the cutters are made to revolve as the carriage moves, substantially as described.

5. The laterally-moving carriage having positively-revolving cutters, and a lever and suitable connections to a crank, in combination with devices, substantially as described, for stopping and starting the cutting mechanism, substantially as described.

6. In combination with the web-cutting devices, the frame F, and mechanism, substantially as described, to actuate the same, said mechanism being operated by the treadle-lever to throw the said frame forward and return the same, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses.

HORACE INMAN.

Witnesses:

L. W. SEELY,

JOHN B. THOMPSON.