

(No Model.)

A. G. POTTER.

MEASURING DEVICE FOR BOX COVERING MACHINES.

No. 507,451.

Patented Oct. 24, 1893.

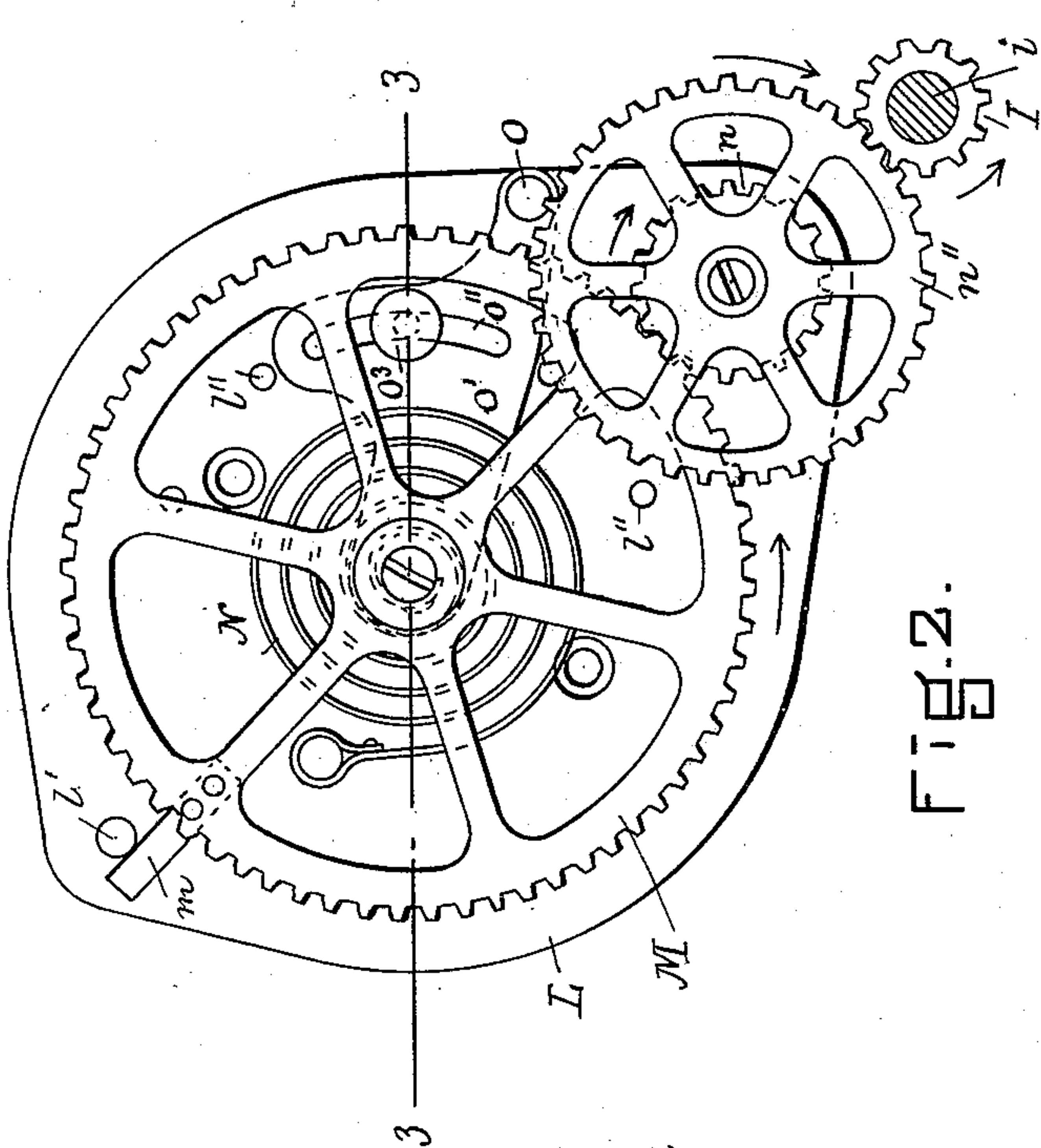


FIG. 2.

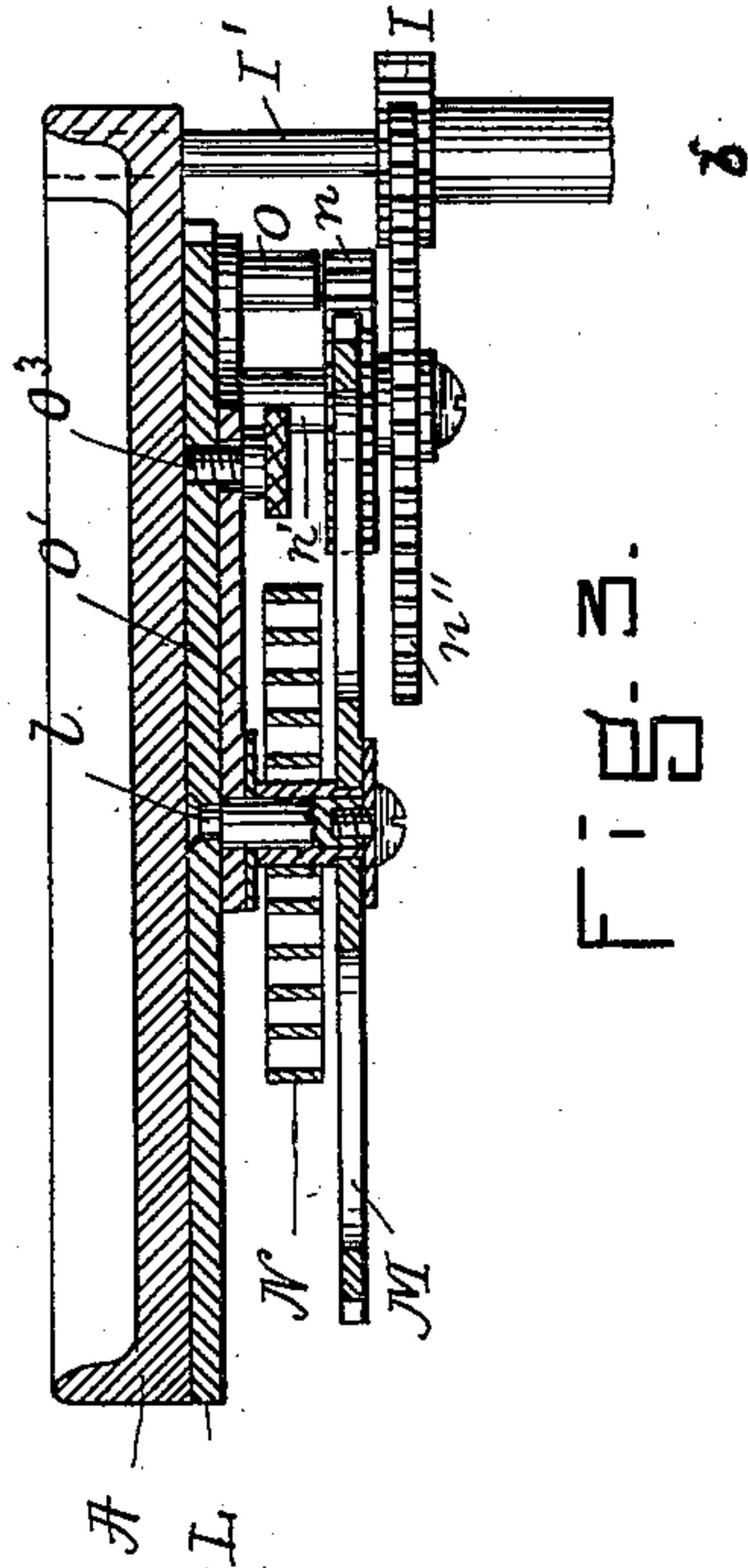


FIG. 3.

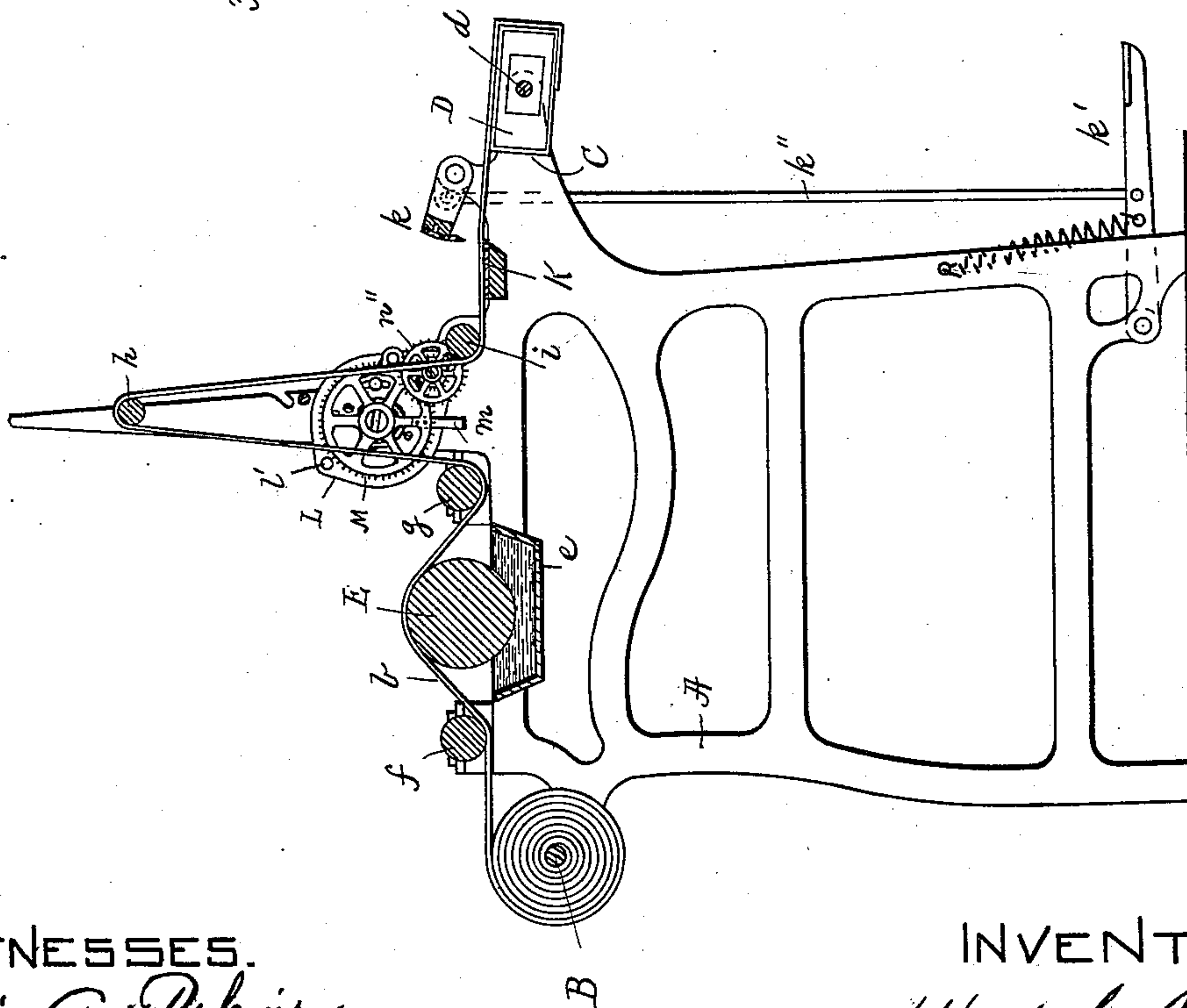


FIG. 4.

WITNESSES.

*Alice A. Perkins*

*Wm W. Lummus*

INVENTOR.

*Albert G. Potter*

*Alvan F. Frazier*

*his* ATT'Y.



# UNITED STATES PATENT OFFICE.

ALBERT G. POTTER, OF LYNN, MASSACHUSETTS.

## MEASURING DEVICE FOR BOX-COVERING MACHINES.

SPECIFICATION forming part of Letter Patent No. 507,451, dated October 24, 1893.

Application filed March 13, 1893. Serial No. 465,811. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT G. POTTER, a citizen of the United States, and a resident of Lynn, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Paper-Measuring Devices for Paper-Box-Covering Machines, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in a paper measuring device for paper box covering machines, and it has for its object the measuring of the strip needed for covering or trimming the sides, or tops or bottoms preparatory to cutting said strips, thus preventing a waste of paper or the liability of cutting too short a strip for the trimming or covering of the box as will hereinafter be more fully shown and described reference being had to the accompanying drawings, wherein—

Figure 1 represents a vertical section of a paper box covering machine provided with my improved measuring device. Fig. 2 represents a detail side elevation of said measuring device; and Fig. 3 represents a cross-section on the line 3—3 shown in Fig. 2.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

In Fig. 1, A represents the frame of a paper box covering machine, and B represents the paper roll as usual mounted in bearings therein and *b* represents the paper strip or ribbon which after being pasted and cut off to the required length is pasted on the paper box C, which is temporarily held on the box former D and rotated on the spindle *d* as is common in machines for covering the sides and ends of paper boxes.

E is the paste roller, *e* the paste containing trough, and *f*, *g*, *h*, and *i* are guide rollers for the paper strip as usual.

K is the stationary knife and *k* is the movable rocker knife by means of which the paper strip is severed at the desired time, preferably by the depression of a spring pressed treadle *k'* which is shown as being connected to the rocker knife by means of a link *k''* in Fig. 1.

The above is a general description of an ordinary paper box covering machine for covering the sides and ends of paper boxes and

their covers, which machine is equally applicable for covering the tops of box covers and bottom of the box bodies by the substitution for the rotary box frame D of a corresponding box former one kind of which is fully shown in the Patent No. 410,920, granted to me September 10, 1889. It is to this class of machines that my paper measuring device is applicable and the above is merely shown and described for the better understanding of the working and operation of said measuring device which is constructed as follows:

To the under side of the frame A above the guide roller *i* is secured a plate L having a stud *l* attached to it on which is loosely journaled the measuring gear M.

N is a coiled spring, one end of which is attached to the hub of said measuring gear M and the other end attached to the plate L as shown in Fig. 2.

*m* is a projection on the measuring gear M which is normally held in contact with a stop projection *l'* on the plate L by the influence of the spring N shown in Fig. 2.

The teeth of the measuring gear M mesh in the teeth of a pinion *n*, which is loosely journaled on a stud or pin *n'* attached to the plate L.

*n''* is a gear attached to the pinion *n* and having its teeth meshing in the teeth of a pinion I attached to the shaft I' of the guide roller *i* as shown in Figs. 2 and 3.

O is an adjustable stop projection preferably made on a plate or wing O' pivoted on the stud *l* and having a curved slot O'' through which a binder screw O<sup>3</sup> passes, which latter is screwed through one of several screw threaded perforations *l''*, *l'''*, in the frame L as shown.

The pasted paper strip *b*, as it is being drawn forward by the operator and pasted on the box C, causes the roller *i* to rotate by which, and the intermediate bearing above described, a partial rotary motion is imparted to the gear M until its projection *m* comes in contact with the adjustable projection *o*, when it and the roller *i* are stopped causing an increased tension on the paper strip to be given to it by the frictional resistance to be overcome against the now stationary roller *i* by which the operator will know that the proper length of paper strip for covering the box has been



drawn forward, and he therefore severs the strip by depressing the treadle  $k'$  and its knife  $k$ . As soon as the paper is cut the roller  $i$  is liberated and caused to turn backward by the influence of the spring  $N$  until the projection  $m$  on the gear  $M$  comes against the stop projection  $l'$  on the frame or plate  $L$  as shown in Fig. 2.

By adjusting the position of the stop projection  $O$  relative to the stop projection  $l'$  the length of strip needed for various sizes of boxes is regulated. Instead of the spring  $N$  may be used a cord and weight to equal advantage without departing from the essence of my invention.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent and claim—

1. The combination with a paper box covering machine, of a paper strip measuring device, consisting of a measuring-gear, a paper guide roller rotated by the movement of the paper through the machine and geared to the measuring-gear, means for limiting the rotation of the measuring gear in one direction, and means for rotating said measuring-gear back to its normal position, substantially as and for the purposes described.

2. The combination with a paper box-covering machine, of a paper guide-roller rotated by the movement of the paper through the machine, a measuring-gear geared to said guide-roller, a cutter for severing the paper, a stop mechanism for limiting the motion of the measuring-gear in one direction, and means for rotating the measuring-gear back to its normal position when the paper is severed by the cutter, substantially as described.

3. The combination with a paper box-covering machine, of a paper guide-roller rotated by the movement of the paper through the machine, a measuring-gear geared to the paper guide-roller, a stop mechanism for limiting the motion of the measuring-gear in one direction, and a restoring spring for turning the measuring-gear back to its normal position, substantially as and for the purposes specified.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 20th day of February, A. D. 1893.

ALBERT G. POTTER.

Witnesses:

ALBAN ANDRÉN,  
ALICE A. PERKINS.