C. C. CLAWSON.

Tobacco Measuring and Packing Machines.

No. 198,793. Patented Jan. 1, 1878.

Fig: 1.

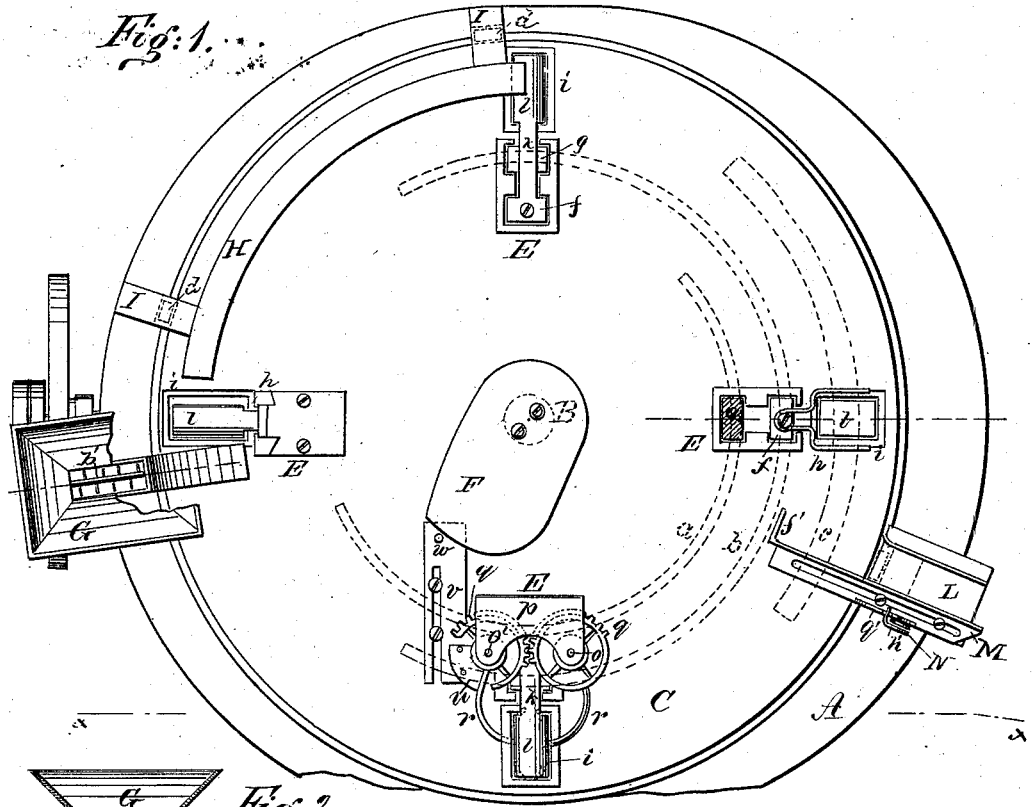
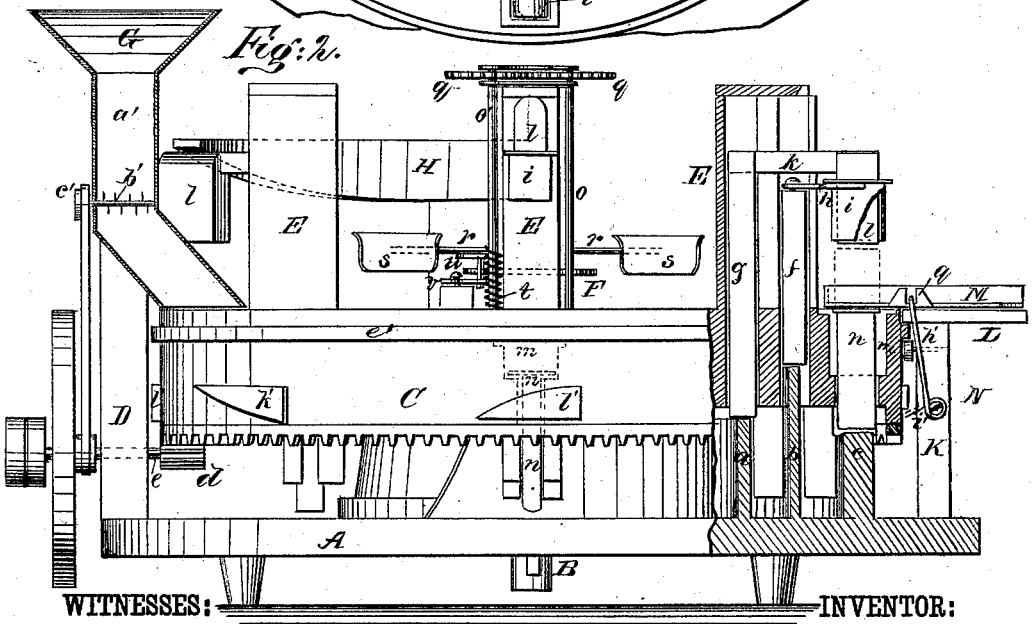


Fig: 2.



WITNESSES:

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CLEMENT C. CLAWSON, OF RALEIGH, NORTH CAROLINA.

IMPROVEMENT IN TOBACCO MEASURING AND PACKING MACHINES.

Specification forming part of Letters Patent No. **198,793**, dated January 1, 1878; application filed July 30, 1877.

To all whom it may concern:

Be it known that I, CLEMENT COLERIDGE CLAWSON, of Raleigh, county of Wake, and State of North Carolina, have invented a new and Improved Machine for Measuring and Packing Tobacco and other articles, of which the following is a specification:

Figure 1 is a plan view of my improved machine. Fig. 2 is a side elevation partly in section.

Similar letters of reference indicate corresponding parts.

The object of my invention is to provide apparatus for accurately measuring smoking-tobacco and other articles, and packing it in bags and other holders, with rapidity.

Referring to the drawings, A is the bed of the machine, upon which three concentrically-arranged cams, *a b c*, are fixed, and are arranged around a post, B, which is fixed in the center of the bed A. C is a rotating table, that is placed on the post B, and is provided with a circle of cogs on its under surface, that are engaged by a pinion, *d*, on the shaft *e*, which shaft is journaled in the post D, that is secured to the bed of the machine. Four vertical guides, E, project upward from the table C, and in each of them two vertically-sliding bars, *f g*, are placed. To the upper end of the bar *f* an arm, *h*, is attached at right angles, upon which a sheet-metal form, *i*, is fixed. To upper end of the bar *g* an arm, *k*, is attached, that extends outward parallel to the arm *h*, and carries a plunger, *l*, that fits into the form *i*. In the table C, below the form *i*, a recess, *m*, is made, of sufficient size to receive the said form, and in this recess there is a follower, *n*, the lower end of which extends downward through the table.

At the sides of the vertical guides E shafts *o o'* are placed, the lower ends of which are journaled in the table, and the upper ends in a plate, *p*, at the upper end of the guide. These shafts are provided with segmental wheels *q*, which mesh together, and transmit motion from one to the other, so that they are moved in opposite directions. To the shafts *o o'* arms *r* are attached, to which plates *s* are fixed, that are of sufficient size to receive and hold the tobacco-bag until taken by the form *i*. A spring, *t*, is placed on the shaft *o'*, which throws the arms *r* and plates *s* apart, and upon the same shaft a sector-shaped plate, *u*, is fixed, from which two pins project downward. Said pins are engaged by notches in a slide, *v*, that is carried by the table C. A pin, *w*, projects from the upper surface of this slide, and is engaged by a cam, F, that is fixed to the top of the post B.

G is a hopper, having a chute, *a'*, the lower part of which is inclined and fitted to the face of the table C. The mouth of the chute is of the same size and shape as the form *i*. Below the hopper, in the vertical portion of the chute *a'*, a toothed shaft, *b'*, is journaled, which is provided with a pulley, *c'*, that is driven by a belt from a pulley on the shaft *e*.

A curved cam, H, is supported above the table C by posts I, said posts being secured to the bed A. There are rollers *d* on the inner side of the posts I which support the table C by engaging the flange *e'*, formed thereon. On the side of the bed nearly opposite the posts I there is a post, K, to the top of which a table, L, is attached, which is of the same height as the table C. Upon this table there is a slide, M, that is provided with a right-angled arm, *f'*, and with a notched ear, *g'*, that is engaged by the arm *h'* of the right-angled lever *n*. This lever is pivoted to the post K, and its shorter arm *i* is engaged by cams *k' l'*, arranged on the periphery of the table C.

The operation of the machine is as follows: A quantity of tobacco is placed in the hopper G, which passes downward through the chute *a'*, and rests upon the surface of the table C. The mouth of a bag is placed around the plates *s*, while the form *i* and plunger *l* are at the highest part of their stroke. Motion is imparted to the shaft *e* in any convenient way, causing the table C to rotate from right to left. The slide *v* is released by the cam F, and the spring *t* throws the plates *s* apart, so that they hold the bag until the form *i* descends into the bag and carries it downward into the recess *m*. When the said recess passes under the chute *a'* the form *i* is filled with tobacco, and when the form passes the chute the plunger *l* descends, and as the table rotates the plunger comes under the cam H, and is forced downward into the form, compressing the tobacco. Before the plunger es-

capes from the cam the form *i* is raised by its cam *b*, leaving the tobacco in the bag, between the plunger *l* and the follower *n*. When the plunger *l* escapes from the cam H the follower *n*, the form *i*, and plunger *l* are raised by their respective cams *c b a* until the upper surface of the follower *n* is even with the top of the table C, when the said follower remains stationary, and the form *i* and follower *l* continue to rise, to release the bag, which is now taken by the slide M and delivered to the table L, said slide being moved at the proper instant by the lever *n*, which is engaged by the cams *k' l'*. The plates *s* are now brought together by the cam F, and the operation repeated.

The bags are taken from the table L, and tied by hand.

Any required number of followers, forms, and plungers may be employed.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of the bed A, having cams *a b c*, the table C, carrying the vertical guide E, the follower *h*, form *i*, plunger *l*, and the sliding bars *f g*, substantially as shown and described.

2. The plates *s*, arms *r*, shafts *o o'*, spring *t*, slide *v*, and cam F, in combination, substantially as shown and described.

3. The table L, slide M, and lever *n*, in combination with the table C, having on its periphery cams *k' l'*, substantially as shown and described.

CLEMENT C. CLAWSON.

Witnesses:

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