

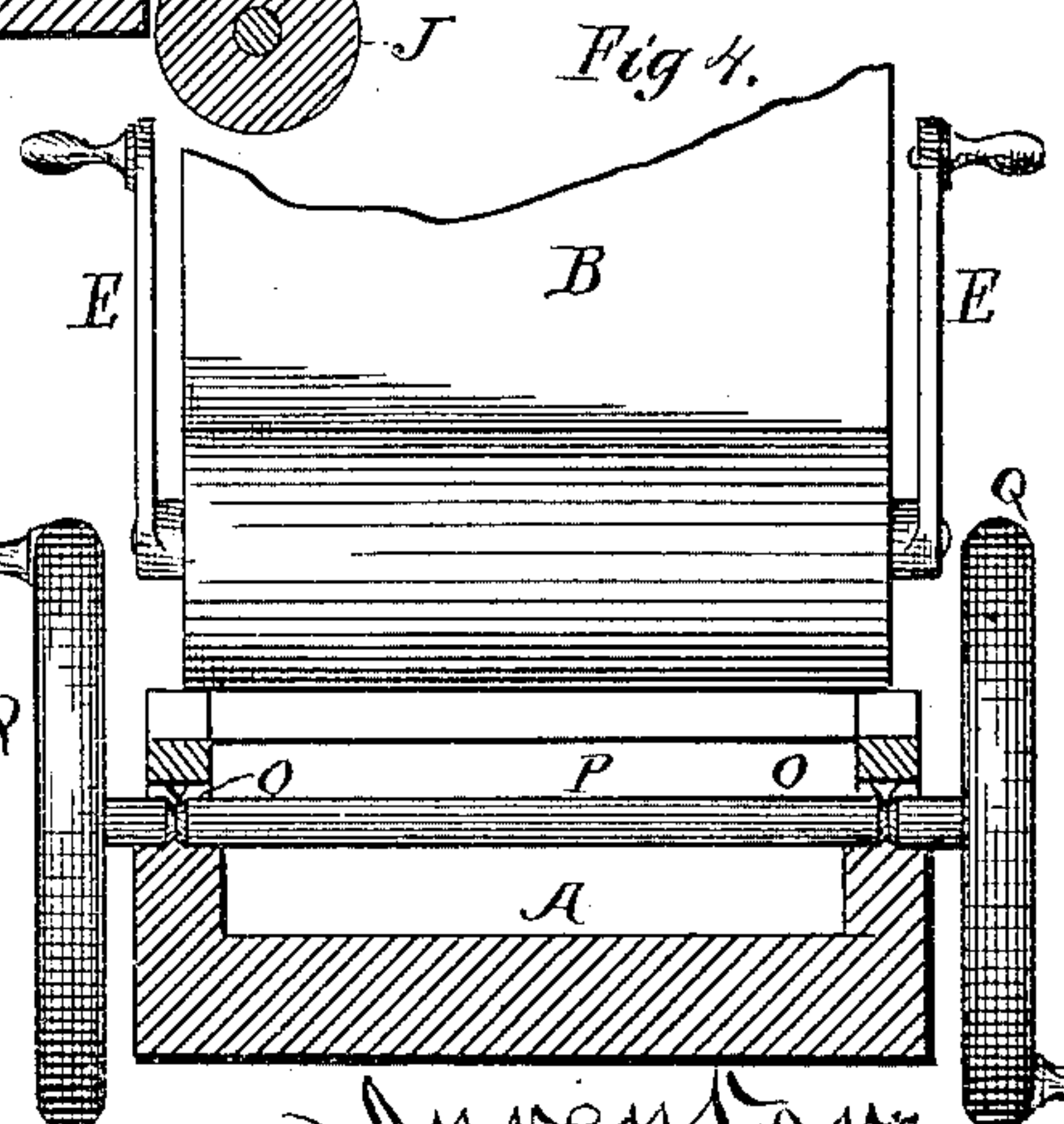
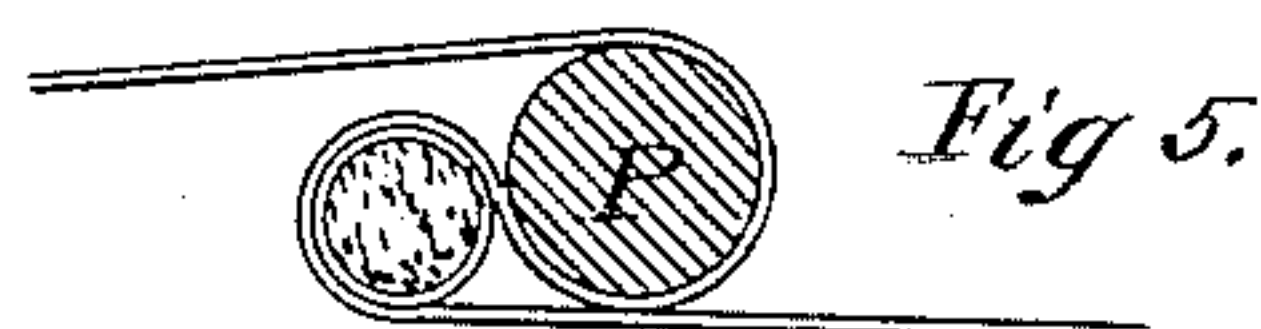
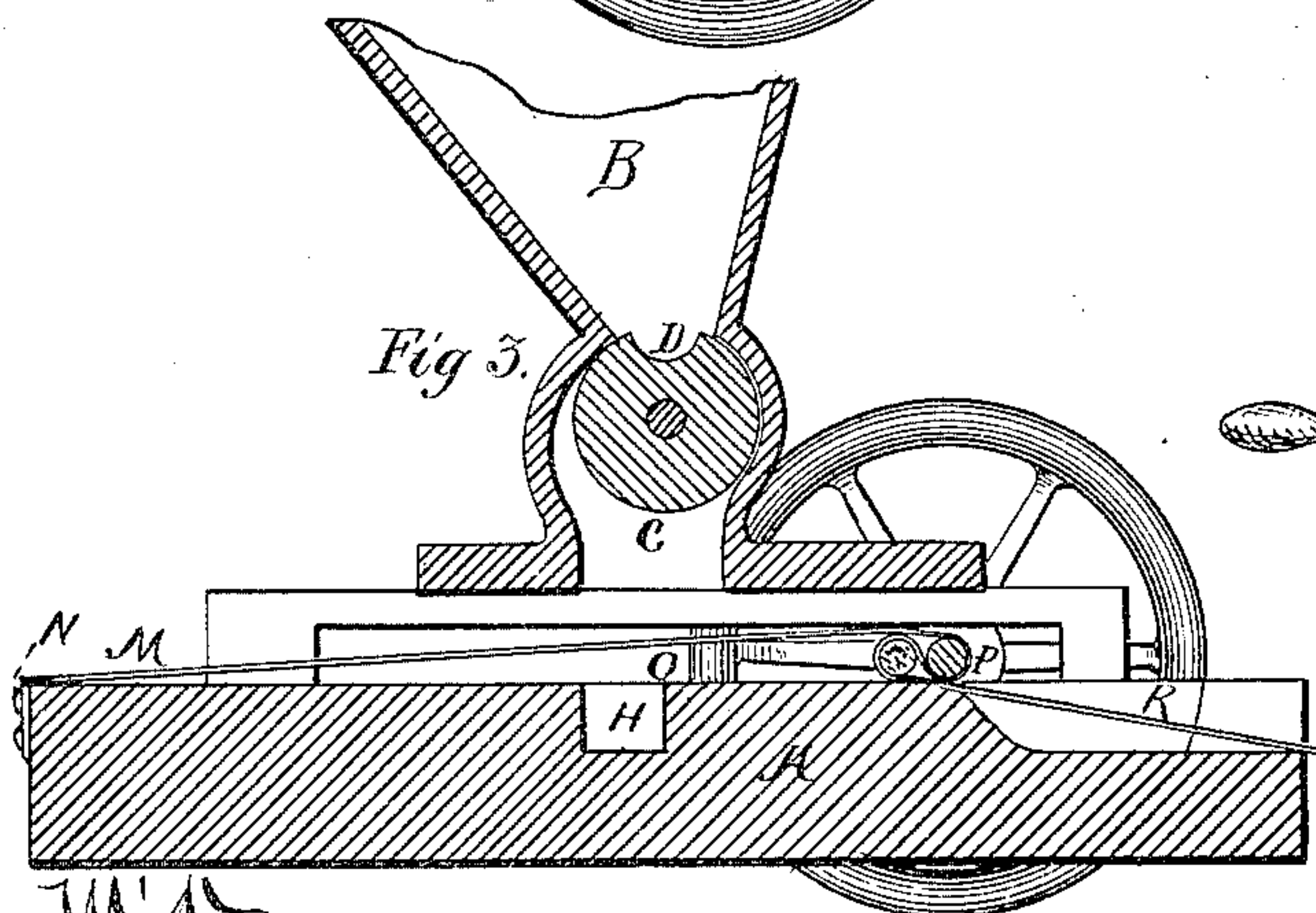
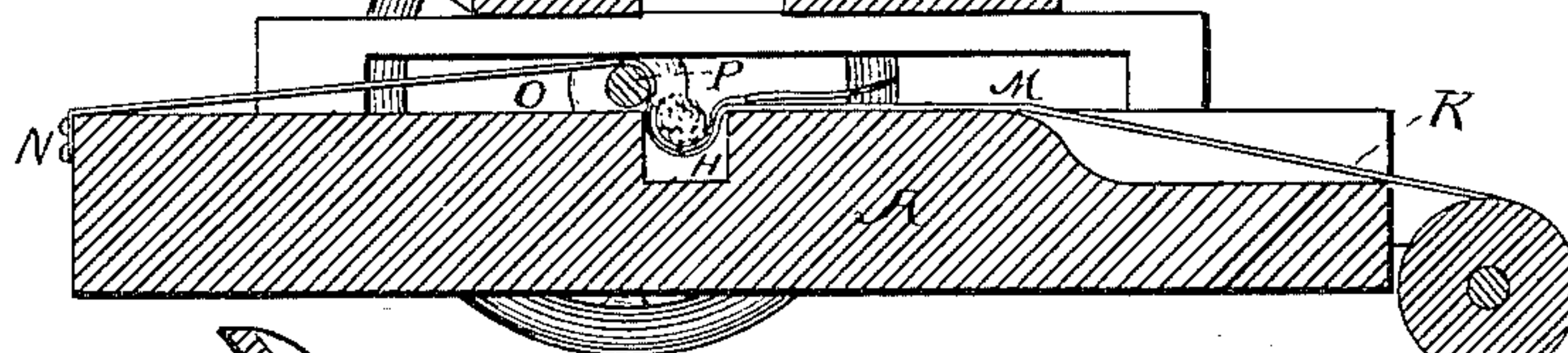
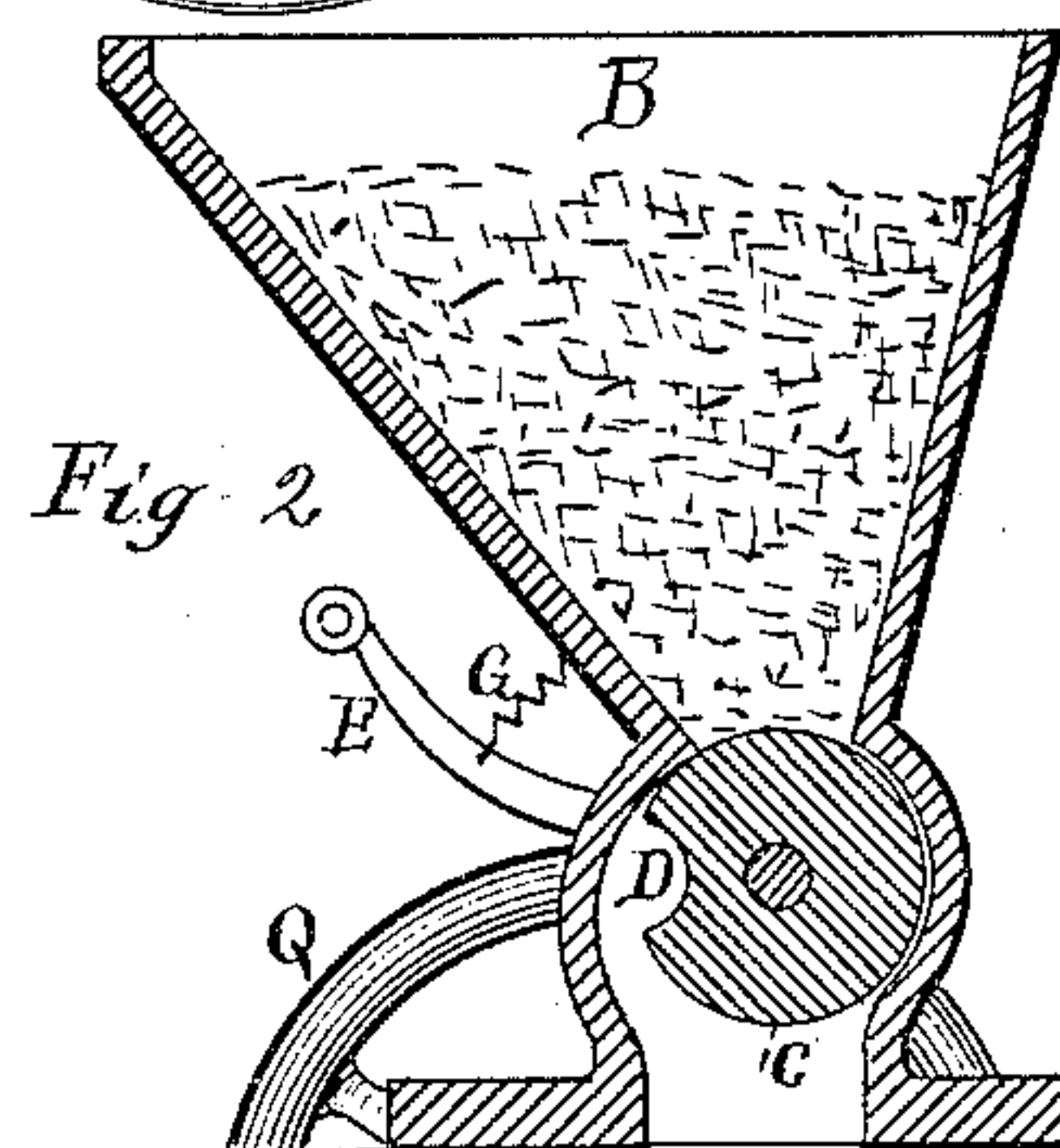
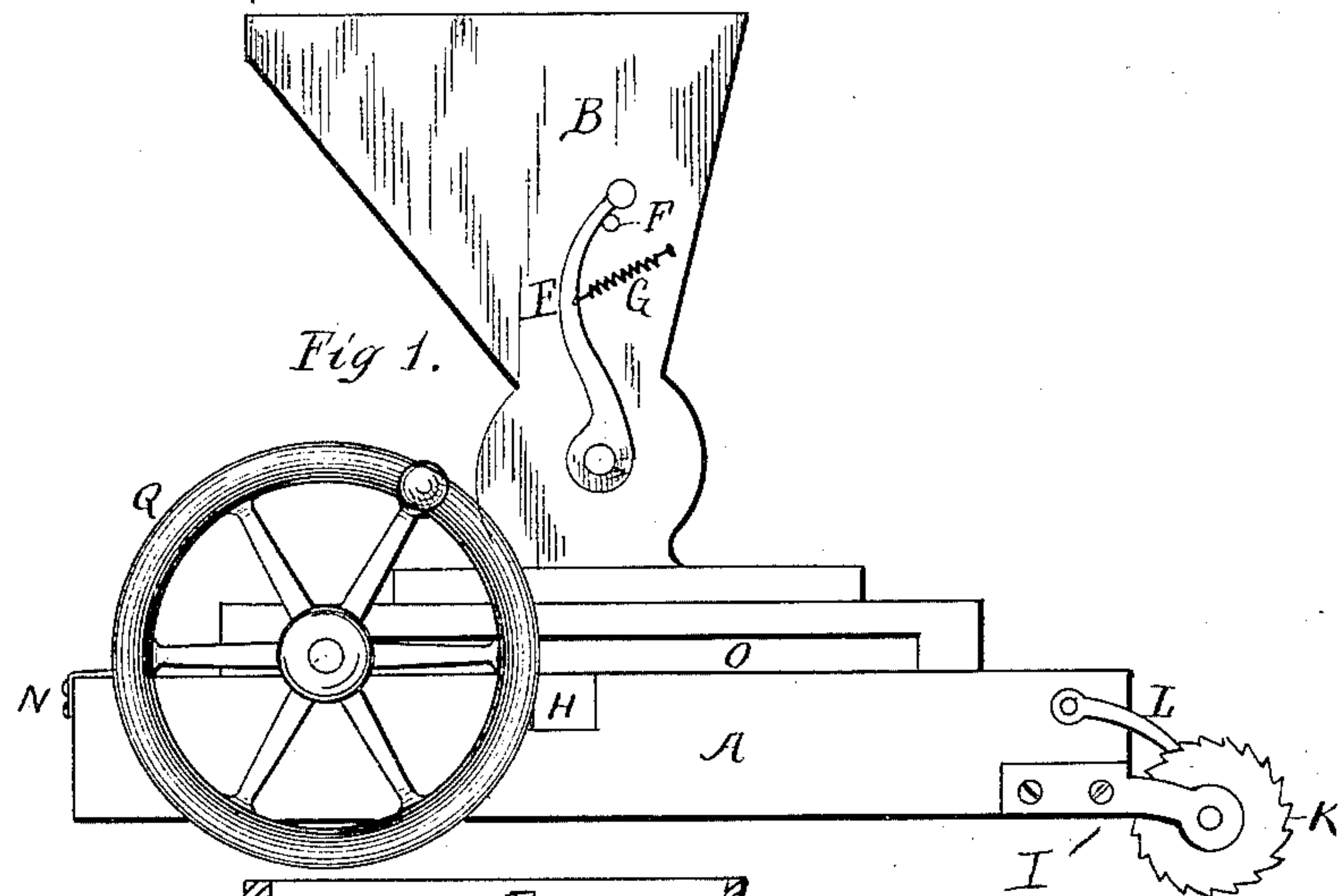
(No Model.)

F. & E. H. THOMPSON.

CIGAR BUNCHING MACHINE.

No. 318,669.

Patented May 26, 1885.



WITNESSES:
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UNITED STATES PATENT OFFICE.

FRANCIS THOMPSON AND EDWARD H. THOMPSON, OF ALLEGHENY, PA.

CIGAR-BUNCHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 318,669, dated May 26, 1935.

Application filed April 16, 1884. (No model.)

To all whom it may concern:

Be it known that we, FRANCIS THOMPSON and EDWARD H. THOMPSON, both of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Cigar-Bunching Machines for the Manufacture of Cigars; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Our invention relates to an improvement in bunching-machines for the manufacture of cigars; and it consists in the combination and arrangement of the several parts hereinafter described.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

In the accompanying drawings, which form part of our specification, Figure 1 is a side elevation of our improvement. Figs. 2 and 3 are vertical longitudinal sections of the same. Fig. 4 is a transverse section of the same at line *y* of Fig. 1. Fig. 5 is a detail view in section of the roller P, the apron, and a bunch of fillings. Fig. 6 is a detail view of the binder.

In the manufacture of cigars, particularly that class called "Tobies" and the common cheap cigars, the "filling" is formed of scraps of tobacco inclosed in a "binder" or binders of leaf-tobacco.

The operation of measuring with the fingers of the cigar-maker the quantity of scrap-tobacco required for a cigar, and giving form thereto on the binder, and inclosing the same in the binder or binders is termed in the nomenclature of the art "bunching." It requires long experience and practice, combined with skill and good judgment, to "bunch" in the making of cigars of uniform size and smooth outline, with the filling of uniform compactness throughout the length of the cigar. If the filling is packed or compressed too much in any part of the cigar, it will impede the draft of the smoke through it, and will burn unevenly, and will constitute what is termed a "hard smoker."

Our improvement in bunching-machines has for its object uniformity and speed in the operation of bunching in the manufacture of ci-

gars, which may be accomplished through the medium of the machine hereinafter described.

Reference being had to the drawings, A represents the frame of the machine; B, the hopper, in which is arranged a roller, C, having a groove, D, longitudinally therein, the length, depth, and width of which correspond to the length and diameter of the cigar desired. The roller C may be provided with a number of grooves of different capacities, and each machine may be provided with a number of rollers of various capacities, which may be inserted into and withdrawn from the hopper at pleasure, so that it may be adapted to bunching for all diameters and lengths of cigars.

On each end of the roller C is arranged an operating-handle, E, which is held against a stop, F, through the medium of a spiral spring, G. By this arrangement of the handle, stop, and spring the groove D will always be brought into position, as shown in Fig. 3, for receiving its charge of filling.

In the frame A is a recess, H, which extends from side to side of the frame, and at the front end of the frame is pivoted in bearings I a cylinder, J, provided with a ratchet-wheel, K, between the teeth of which drops a pawl, L.

On the cylinder J is wound an apron, M, one end of which is secured to the rear end of the frame A at N. This apron may be constructed of gum cloth, thin oil-cloth, muslin, thin soft leather, or other analogous material. The desired tension of the apron is secured through the medium of the said cylinder, ratchet-wheel, and pawl. The frame A is provided with a slot, O, on each side, and the bottom and top walls forming said slots have V-shaped projections which fit into V-shaped recesses in a roller, P, which is arranged under the apron M, as shown in Figs. 2, 3, and 5.

On each end of the roller P is secured a hand-wheel, Q, for operating it. By this is meant that in operation the said roller is carried forward in the slots O of the sides, and when it is brought in contact with the fillings and wrapper, (about as represented in Fig. 2,) which have previously been placed in the groove H of the base, it (the roller) by a slight effort is revolved to be carried over the

fillings to the opposite side of the groove H, thereby causing the apron to tightly envelop the bunched fillings. Then the roller P is slid or carried forward toward the delivery end of the machine or base, which action causes a slipping of the apron around the filling in a direction opposite to that in which the roller is being moved, until, finally, the bunched or rolled fillings are carried to the delivery end of the machine. It will be obvious that this operation of the roller will maintain the apron tightly around the fillings and wrapper until discharged.

The foregoing description and reference had to the accompanying drawings will enable the skilled mechanic to construct our improvement in bunching-machines. We will therefore proceed to describe its operation. It will be observed that the belt or apron M is always kept sufficiently slack to permit enough of it to be depressed into the recess H, so that the roller when operated will act to carry the apron partially around the filling, and thereby maintain the wrapper tightly in place during the passage from the recess to the discharge or delivery end of the base or frame. The filling, which consists of fine scrap-tobacco, is put into the hopper B, as indicated in Fig. 2, and the roller C being in the position shown in Fig. 3 the groove D will be charged with said fillings. The cigar maker or buncher then spreads a binder (which is made and prepared in the usual manner) on the apron M over the recess H, and presses the binder and apron down into said recess by running the fingers over the binder, thereby forming a recess for the reception of the fillings, as shown in Fig. 2. The operator then moves back the handles E of the roller C, which turn it and discharge the contents of the groove D into the depressed binder, as shown in Fig. 2. The cigar maker or buncher then rolls and draws forward the roller P, which will cause a part of the apron to turn up the rear part of the binder over the fillings, folding it completely around them, causing the two edges of the binder to overlap properly, and the bunched fillings to be securely inclosed and properly bound in the binder, and finally discharged upon the incline R of the apron M,

from which the bunched or partly-made cigar is discharged into a suitable receptacle, ready for the molds and other finishing operation common to the making of cigars. The roller P is then returned to about the position shown in Fig. 2 and another binder placed on the apron, which is depressed as before described, and the bunching process is continued at the pleasure of the cigar maker or buncher.

Through the medium of the machine hereinbefore described the process or operation of bunching may be done with great speed and economy of labor, and perfect work may be accomplished with cheap unskilled workers.

By the process or operation of bunching herein described the liability of rending and tearing the binder is avoided, and only a single binder is required to properly inclose the fillings, while the old method usually requires two binders; hence there will be about one-half saved in the use of binders.

The foregoing-described advantages of our improvement, with other advantages which will be apparent to the skilled cigar-maker, will indicate in some degree the value and importance of our invention as an advanced step in the art of cigar-making.

Having thus described our improvement, what we claim is—

In a cigar-bunching machine, the combination, with the base having the transverse recess H, and formed in its sides with slots whose walls are of a V-shaped contour, the roller P, moving in said slots, formed with corresponding V-shaped grooves, the feed-hopper, and the grooved roller C, having an operating-crank connected with a restoring-spring, of the belt M, rigidly secured to one end of the base, passing over the roller P and around a cylinder at the opposite end of the base, said belt designed to be sufficiently slack in operation to be carried around the filler and its wrapper, whereby the latter is maintained tightly in place, substantially as set forth and described.

FRANCIS THOMPSON.

EDWARD H. THOMPSON.

Witnesses:

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C. S. JOHNSTON.