

(No Model.)

2 Sheets—Sheet 1.

A. E. PYE.
CIGAR BUNDLING MACHINE.

No. 401,514.

Patented Apr. 16, 1889.

Fig. 1.

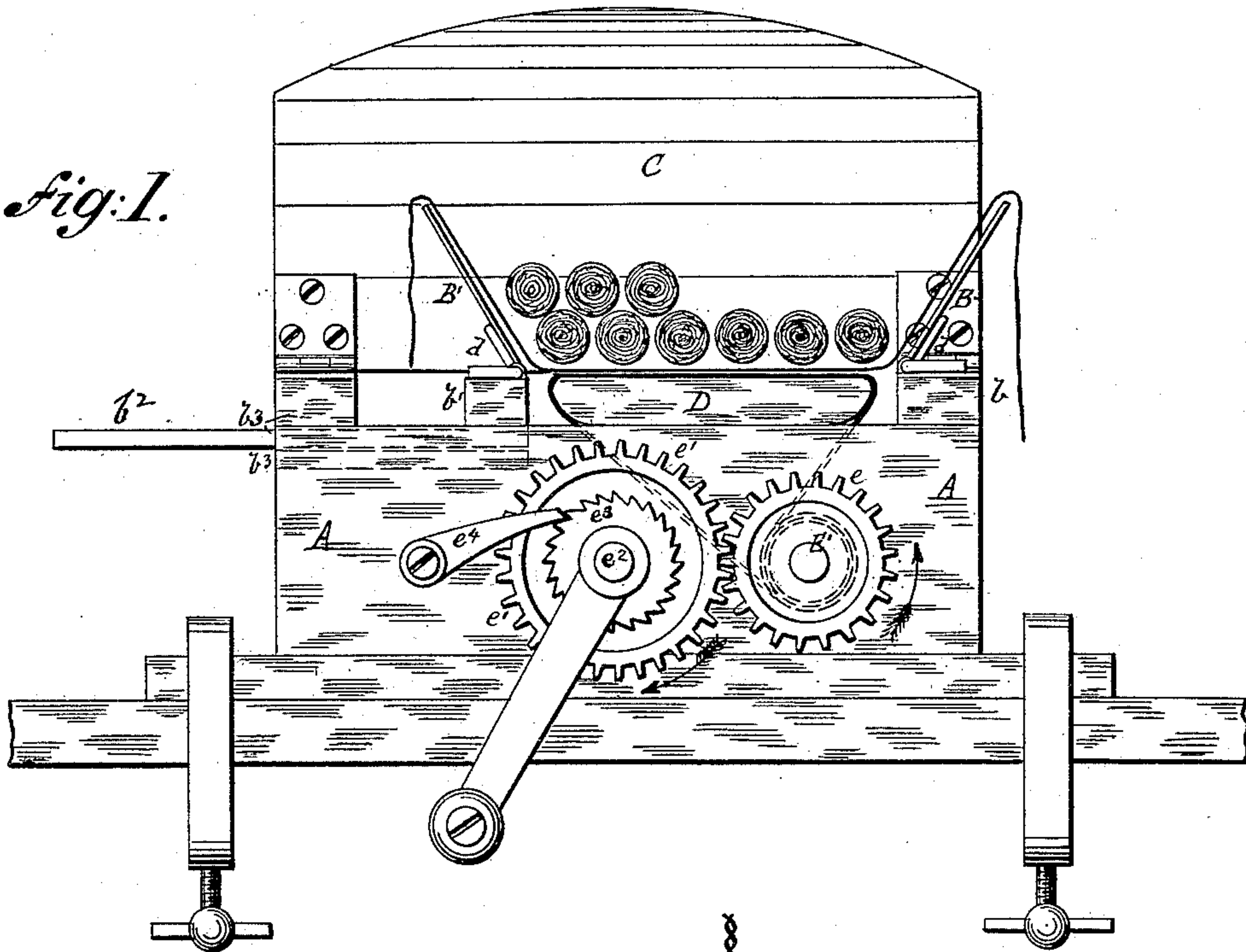
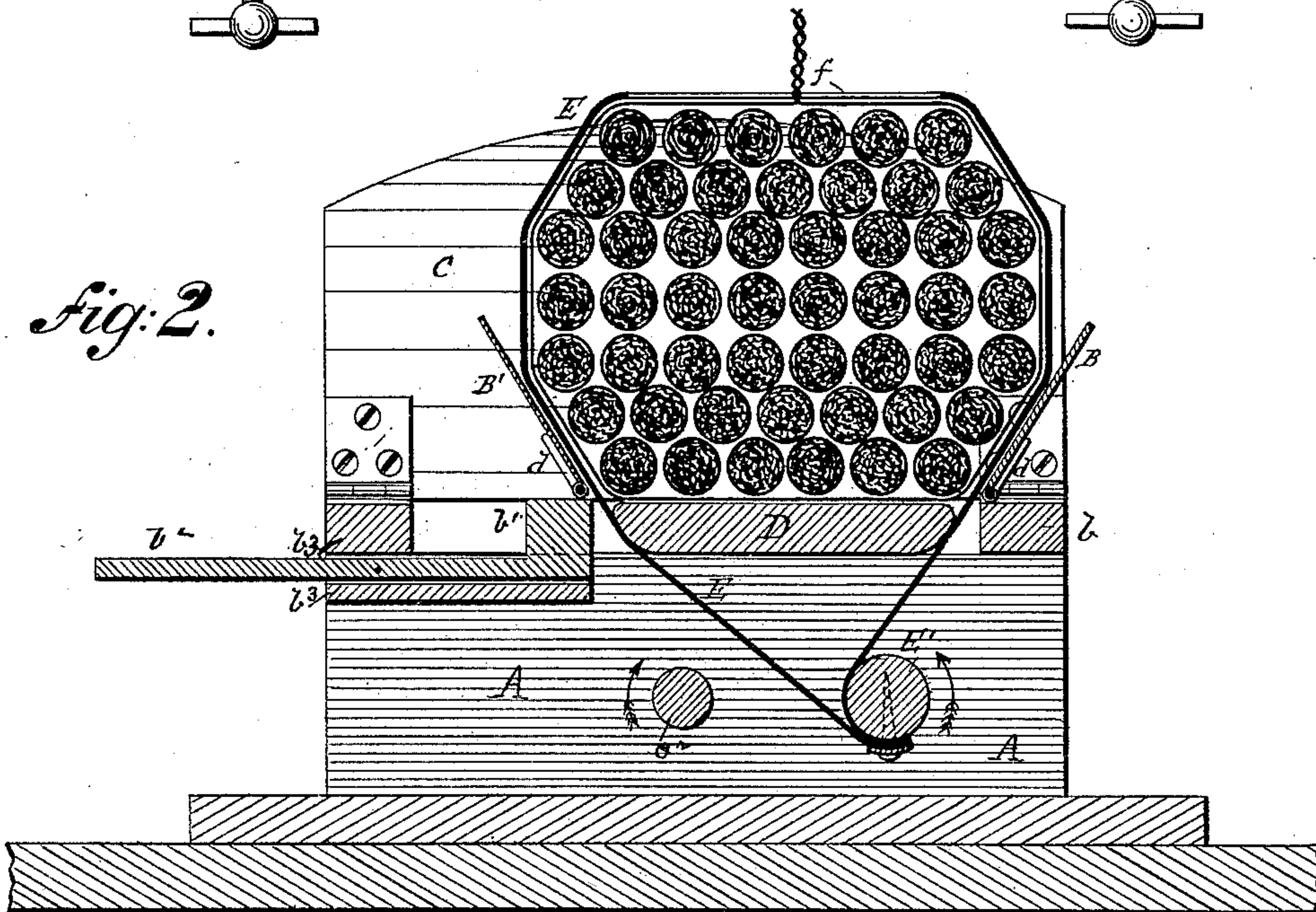


Fig. 2.



WITNESSES:
A. Schehl.
Martin Potry.

INVENTOR,
Alonzo E. Pye
BY *Garrett Paegewer*
ATTORNEYS.

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Fig. 3.

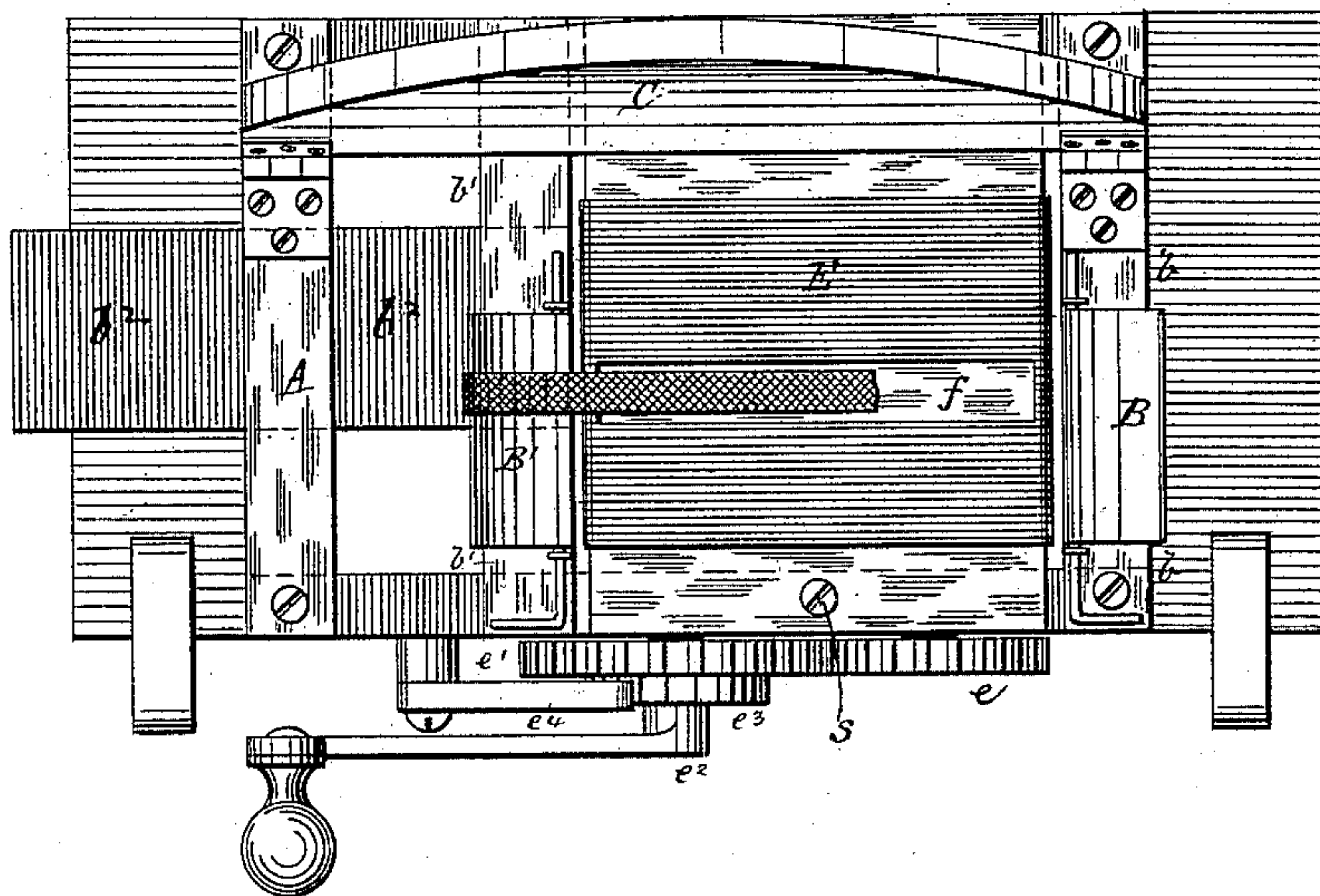
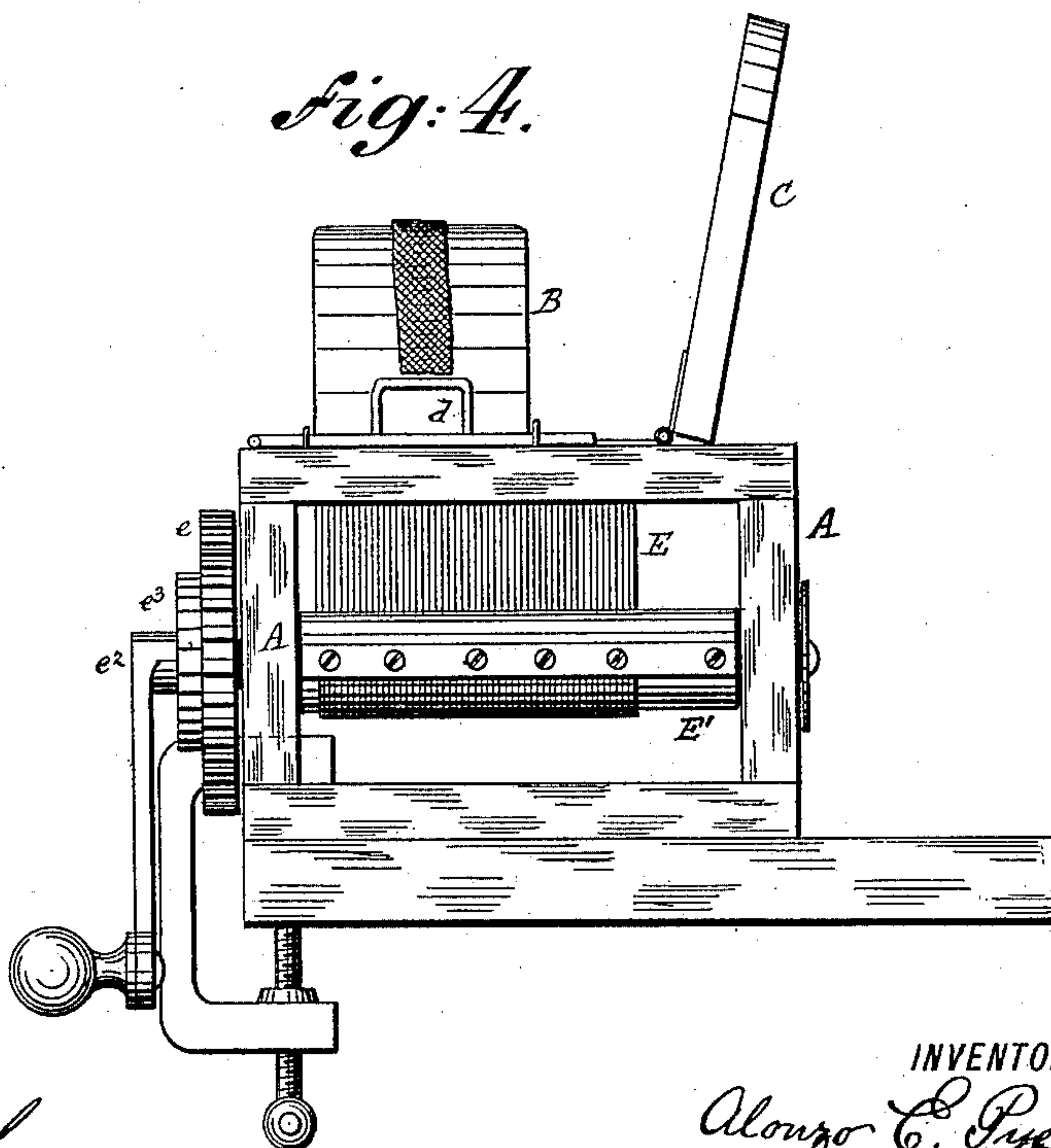


Fig. 4.



WITNESSES:

A. Schehl.
Martin Petry.

INVENTOR.

Alonzo C. Pye
BY
Goepel & Paegauer
ATTORNEYS.

UNITED STATES PATENT OFFICE.

ALONZO E. PYE, OF KINGSTON, NEW YORK.

CIGAR-BUNDLING MACHINE.

SPECIFICATION forming part of Letters Patent No. 401,514, dated April 16, 1889.

Application filed January 18, 1888. Serial No. 261,116. (No model.)

To all whom it may concern:

Be it known that I, ALONZO E. PYE, of Kingston, in the county of Ulster and State of New York, have invented certain new and useful Improvements in Cigar-Bundling Machines, of which the following is a specification.

This invention relates to an improved cigar-bundling block by which cigars of any size can be quickly and effectively bundled, pressed together, and then tied by a ribbon, so as to save considerable time in bundling, save breakage of the side cigars and ribbon in tightening, and permit the bundling to be performed by unskilled labor.

In the accompanying drawings, Figure 1 represents a front elevation of my improved cigar-bundling block, showing the same in position before the belt is applied for bundling the cigars. Fig. 2 is a vertical longitudinal section showing the belt applied to a bundle of cigars and the latter tied by the ribbon. Fig. 3 is a plan, and Fig. 4 a side elevation, of Fig. 1.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the supporting-frame of my improved cigar-bundling block, which frame is preferably applied to a suitable base-piece and attached by clamps to the packing bench or table, as shown in Fig. 1. To one end of the supporting-frame A is applied a fixed transverse piece, *b*, which supports one horn, B, of the bundling-block, while at the other side of the frame A is arranged a laterally-adjustable transverse piece, *b'*, to which is applied the other horn, B', of the block. The transverse piece *b'* is guided by a rail, *b²*, in guideways *b³* of the supporting-frame A, so that the horn B' can be adjusted nearer to or farther away from the horn B, according to the number and size of the cigars to be bundled.

At the rear part of the frame A is arranged the back C, which is preferably hinged to the frame A, so as to be folded down on the same after use. The horns B B' are preferably made of sheet metal and are hinged, respectively, to the transverse pieces *b* and *b'*, so as to be readily folded down on the frame A below the rear wall, whereby the bundling-

block takes up but a very small space when not in use. When the horns B B' are in raised position, they are supported by fixed inclined stops *d d'*, which are made of wire or other suitable material, and preferably made in one piece with the hinge-pintles of the horns.

Intermediately between the fixed and adjustable transverse pieces *b b'* is arranged an interchangeable filling-piece, D, which is attached by screws *s* at the front and rear part to the supporting-frame A, as indicated in frame 3. Filling-pieces D of different widths may be used alternately in connection with one bundling-block, so as to permit the bundling of different sizes of bundles, said filling-pieces serving to fill up the varying space between the transverse pieces *b b'*, and are rounded off at the sides. A loop-shaped belt, E, of leather or other suitable material, is passed around the filling-piece D, the ends of said belt being attached to a roller, E', supported in bearings at the lower part of the frame A. The roller E' is provided with a gear-wheel, *e*, which meshes with a gear-wheel, *e'*, applied to a crank-shaft, *e²*, the crank of which serves to turn the gear-wheels and wind up the belt E on the roller E'. A ratchet-wheel, *e³*, on the crank-shaft *e²*, and a pawl, *e⁴*, pivoted to the frame A, serve to lock the belt and roller in position. The pawl *e⁴* is released from the ratchet-wheel *e³* whenever it is desired to unwind the belt from the roller. The belt E is provided at its central portion with a longitudinal opening or slot, *f*, through which the ends of the ribbon by which the bundle of cigars is tied are passed when tying the bundle.

The loop-shaped belt forms the essential feature of my improved bundling-block, as thereby the entire bundle of cigars can be tightly pressed together before tying and held in position for the ribbon, so as to permit the bundling and tying of the bundle without specially-skilled hands.

My improved cigar-bundling block is used as follows: The adjustable horn is set into the position required for the size of the cigars to be bundled. The corresponding filling-piece is screwed to the supporting-frame, and the belt passed around the same and wound

up on the roller, so that the belt is stretched tightly over the filling-piece D, as shown in Fig. 1. The ribbon is now placed in position over the horns and filling-piece, and the required number of cigars arranged in position on the filling-piece, between the horns and back, as shown in Fig. 1. When the required number of cigars are arranged between the horns, the ribbon is temporarily applied to the bundle by twisting the ends together. The bundle is then removed from the bundling-block, which is permitted by the belt being unwound from its roller and by releasing the pawl from its ratchet-wheel on the crank-shaft until the bight formed between the belt and filling-piece is large enough to conveniently receive the temporarily-tied bundle. The twisted ends of the ribbon are placed in position, so as to project through the slot of the belt, as shown in Fig. 2. The pawl is then reapplied to the ratchet-wheel, and the crank turned, so that the belt is partly wound upon its roller, which produces the shortening of the loop of the belt and the application of considerable pressure to the bundle, whereby the size of the same is considerably reduced. The ends of the ribbon are then permanently tied, and the bundle removed from the bundling-block and transferred to the cigar-box. After use the hinged horns and back are folded down on the supporting-frame, the clamps are loosened, and the entire block stored away until required again for use.

By the use of the belt and bundling-block a uniform pressure is exerted on all sides of the bundle at the same time, so as to impart uniformity to the shape of the bundles and save a large percentage of the breakage which is ordinarily incurred by unskilled labor in tightening the ribbon.

The bundling-block is specially adapted to flat fancy bundles and bundles containing one hundred cigars, in which a strong pressure is required, which often breaks the ribbon when bundled in the old way.

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

1. The combination, with a supporting-frame, having a back and horns, of a filling-piece between said horns, a loop-shaped belt extending around the filling-piece and provided with a longitudinal opening or slot, a roller to which the ends of the belt are attached, and means for winding the belt on the roller, substantially as set forth.

2. The combination, with a supporting-frame, having a back, a fixed horn, an adjustable horn, and an interchangeable filling-piece between said horns, of a loop-shaped belt passing around the filling-piece, a roller to which the ends of the belt are attached, and mechanism for winding the belt on said roller, substantially as set forth.

3. The combination of a supporting-frame, having a back hinged to said frame, horns also hinged to the frame, stops for retaining the horns in raised position, a filling-piece between the horns, said filling-piece having rounded-off ends, a loop-shaped belt provided with a longitudinal opening or slot, a winding-roller to which the ends of the belt are attached, and mechanism for winding the belt on said roller, substantially as set forth.

4. The combination of a supporting-frame, a hinged back, a hinged horn applied to a fixed piece of the frame, a second horn hinged to a laterally-adjustable piece of said frame, and an interchangeable filling-piece between said horns, substantially as set forth.

5. In a cigar-bundling block, the combination, with a filling-piece, of a loop-shaped belt having a longitudinal opening or slot, said belt passing around the filling-piece, a roller to which the ends of the belt are attached, and means for winding the belt around said roller, so as to compress the bundle of cigars placed in said belt preparatory to tying the same, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

ALONZO E. PYE.

Witnesses:

FRED. L. HASWELL,
FRED. J. MUELLER.