(No Model.) 2 Sheets—Sheet 1.

W. E. VINCENT.

MACHINE FOR FORMING CAN BODIES.

No. 306,562 Patented Oct. 14, 1884.

Fig. 1.

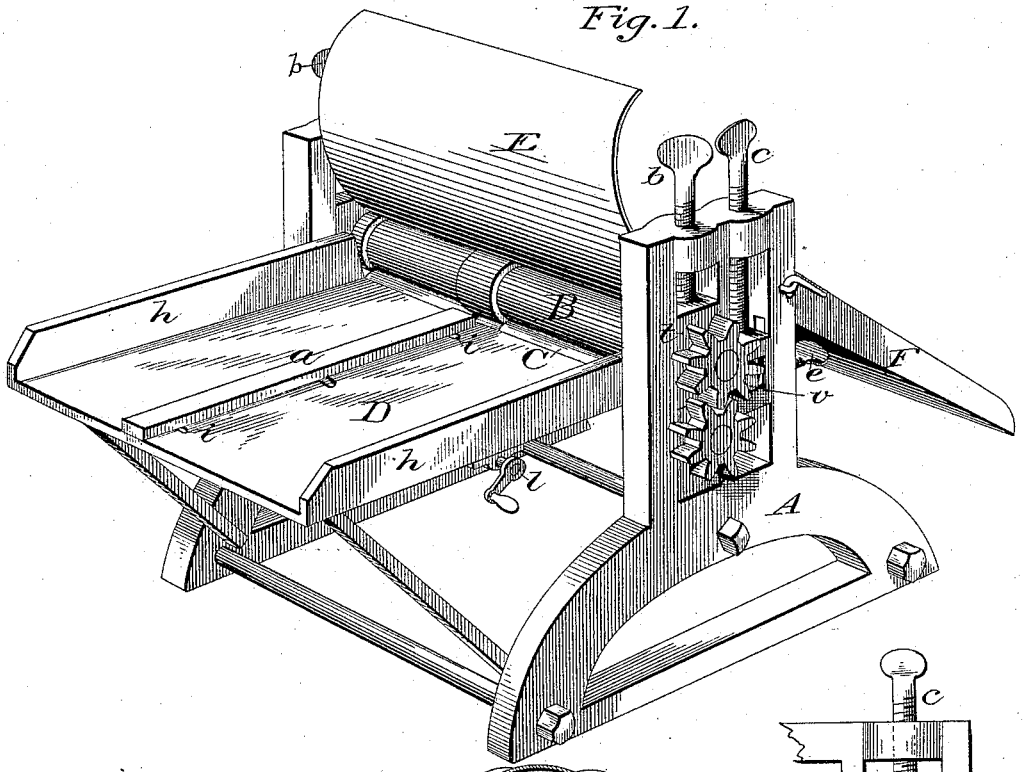


Fig. 2.

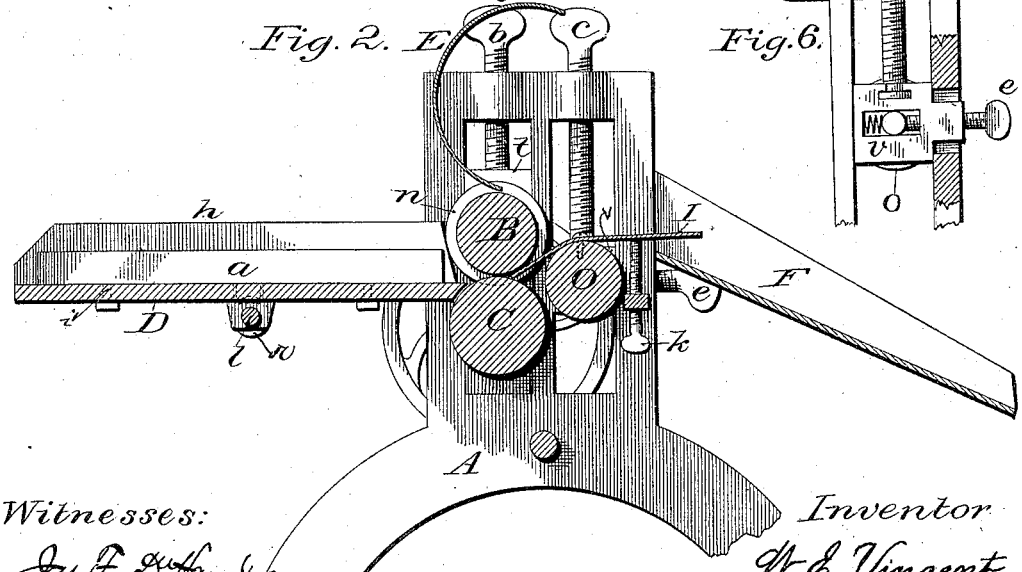
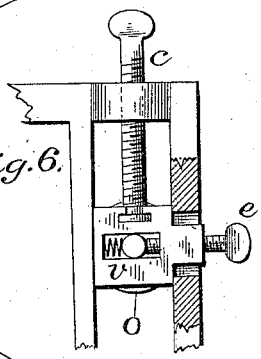


Fig. 6.



Witnesses:
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(No Model.) 2 Sheets—Sheet 2.

W. E. VINCENT.

MACHINE FOR FORMING CAN BODIES.

No. 306,562. Patented Oct. 14, 1884.

Fig. 3.

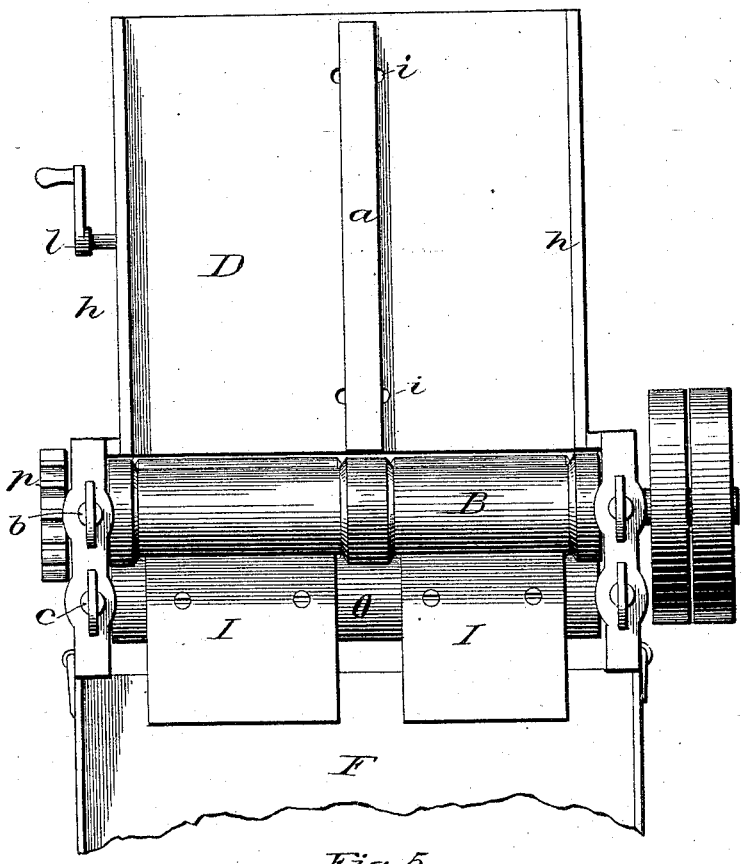


Fig. 5.

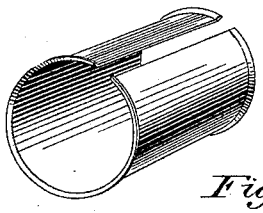
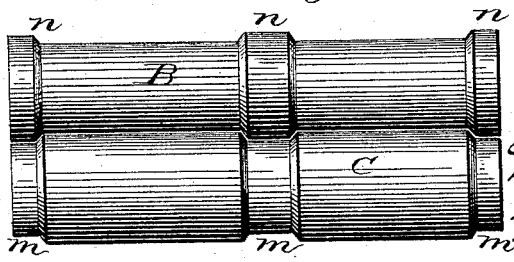


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM E. VINCENT, OF PORT DEPOSIT, MARYLAND, ASSIGNOR TO REYNOLDS BROTHERS, OF SAME PLACE.

MACHINE FOR FORMING CAN-BODIES.

SPECIFICATION forming part of Letters Patent No. 306,562, dated October 14, 1884.

Application filed May 2, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. VINCENT, of Port Deposit, in the county of Cecil and State of Maryland, have invented certain new and useful Improvements in Machines for Forming Can-Bodies, of which the following is a specification.

This invention relates to machines for forming the bodies of tin cans; and it consists in the combination of a series of devices, as hereinafter more fully set forth.

Figure 1 is a perspective view of the machine. Fig. 2 is a longitudinal vertical section; Fig. 3, a top plan view. Fig. 4 is a front elevation of the rolls shown detached, and Fig. 5 is a perspective view of the blank for a can-body after being operated upon by the machine, and Fig. 6 is a view showing certain details of construction.

The object of this invention is to produce a machine by which flat sheets of tin can be given the proper curvature and have the two ends beveled or flared all at a single operation and with rapidity and uniformity. To accomplish these results I first provide two rolls constructed as shown in Fig. 5—that is to say, one of the rolls B is provided with annular projections *n*, the inner edges of which are beveled, as shown, and placed at a distance from each other equal to the length that the body of the can is to be. The other roll, C, is provided with a corresponding set of recesses, *m*, so that the two rolls will fit close together, as represented. The rolls here shown are provided with two spaces of different lengths, so that sheets of different widths may be operated upon, and thus make can bodies or blanks of two different heights or lengths on the same machine. It is, however, obvious the rolls may be provided with more such spaces, and thus adapt the machine to making still other sizes, if desired. These rolls thus formed are mounted in a suitable frame, A, each roll being provided with gear-wheels at one end, and the upper roll, B, being mounted in vertically-adjustable boxes *t*, which are acted upon by screws *b*, as shown in Figs. 1 and 2, so that the two rolls can be adjusted in reference to each other as may be required. In rear of these rolls is secured a transverse bar, O, which may be round, as shown, or of any desired form, and which is mounted in vertically-adjustable boxes *v* at each end, and which can be raised or lowered by means of screws *c*, as shown in Figs. 1 and 2. This bar O also is capable of being adjusted to or from the rolls B C by means of screws *e*. (Shown in Figs. 1, 2, and 6.) Upon this bar O is secured a plate, I, opposite each space, through which the sheet is to be passed, as shown in Figs. 2 and 3, the front edge of these plates I being beveled, so as to fit close against the rear upper side of the lower roll, C, as shown in Fig. 2, their function being to act as guides to the sheet of tin as it passes through between the rolls and turn it upward. Each of these plates I has a set-screw, *k*, arranged to bear against its rear under side, as shown in Fig. 2, so that it may be adjusted at different inclinations and keep its front edge close against the roll C, and thus insure the sheet passing above the same. Above the rolls is secured a curved guard or plate, E, as shown in Figs. 1 and 2, the lower edge of which is parallel with and close to the upper roll, as shown, the object of which is to prevent the curved blank from passing on around the roll. The blank, as it comes up on the rear side of the roll B, strikes against this guard-plate E, and, as it passes entirely from between the rolls, is thus thrown out and falls upon the inclined chute F, secured to the frame in rear of the rolls, as shown in Figs. 1, 2, and 3, down which they roll into any suitable receptacle.

In order to guide the sheets properly between the rolls, a feed or guide board, D, preferably of metal, is secured to the frame directly in front of the rolls, as shown in Figs. 1, 2, and 3. It is provided with vertical sides *h*, the inner faces of which are placed even with the outer edge of the bevels on the rolls, so as to guide the sheet accurately on their outer edges, and an adjustable bar, *a*, is placed at or near the center, and is arranged to be moved laterally sufficiently to bring its outer edges on a line with the edge of the bevels on the central portion of the rolls, this bar *a* having lugs on its under side, which project through slots *i* in the plate D, to hold it in line and admit of such lateral adjustment. A

traversing or adjusting screw, *l*, is mounted in suitable bearings underneath the bed D, and works in a lug, *r*, which also projects from or is attached to the under side of the guide-bar *a* through a slot in the bed, the screw *l* being provided with a crank or hand wheel for operating it, and thus adjusting the guide or bar *a*. It is, however, obvious that instead of this the bar may have slots formed transversely in it, through which bolts may project from the bed and be provided with thumb-nuts above; or the guide-bar *a* may be made of such a width as not to require any adjustment.

If the machine is to be run by power, as is proposed, one of the rolls will be provided with a pulley, as shown in Fig. 3, or with a fast and loose pulley, as may be preferred; but if to be operated by hand it will be provided with a crank instead.

To use the machine it is only necessary to first adjust the guide-bar to the one or the other side, according as it is desired to make the longer or shorter blanks or can-bodies, and then shove the sheets previously cut to the proper size forward between the guides *a* and *h* until the front end of the sheet enters between the rolls, when it is immediately drawn through and comes out on the opposite side suitably curved and with its ends flared, as shown in Fig. 5, the capacity of the machine being very great, as may readily be understood. By adjusting the plates I, so as to give them more or less inclination, the blank may be curved more or less, as desired.

I am aware that rolls have before been made with beveled flanges and recesses, and also that adjustable guides have been used in connection with plain rolls and a shield for throwing out the bent sheet after it has passed between the rolls, and therefore I do not claim any of these features, separately considered; but,

Having thus described my invention, what I claim is—

1. The combination of the adjustable rolls B C, provided with beveled flanges and recesses, with the stationary feed-bed D, provided with the adjustable guide *a*, and the adjustable guide-plate I, all constructed and arranged to operate substantially as and for the purpose set forth.

2. In combination with the rolls B C, provided with beveled flanges and recesses, the adjustable guide-plate I, and curved guard-plate E, all arranged to operate substantially as shown and described.

WILLIAM E. VINCENT.

Witnesses:

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