No. 789,976. PATENTED MAY 16, 1905.

A. F. JACQUEMIN.

FEEDING DEVICE.

APPLICATION FILED OCT. 18, 1904.

2 SHEETS—SHEET 1.

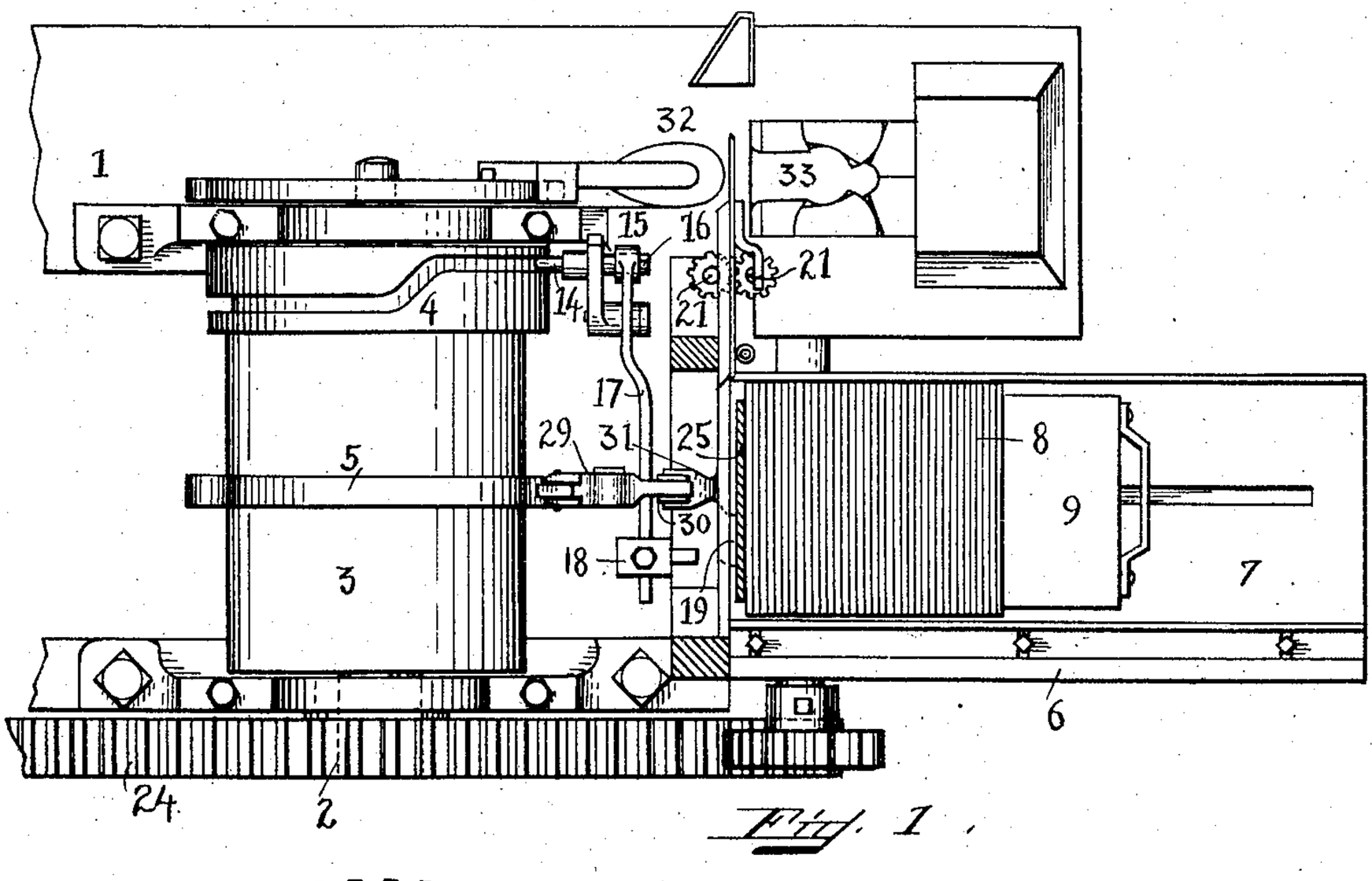

Fig. 1.

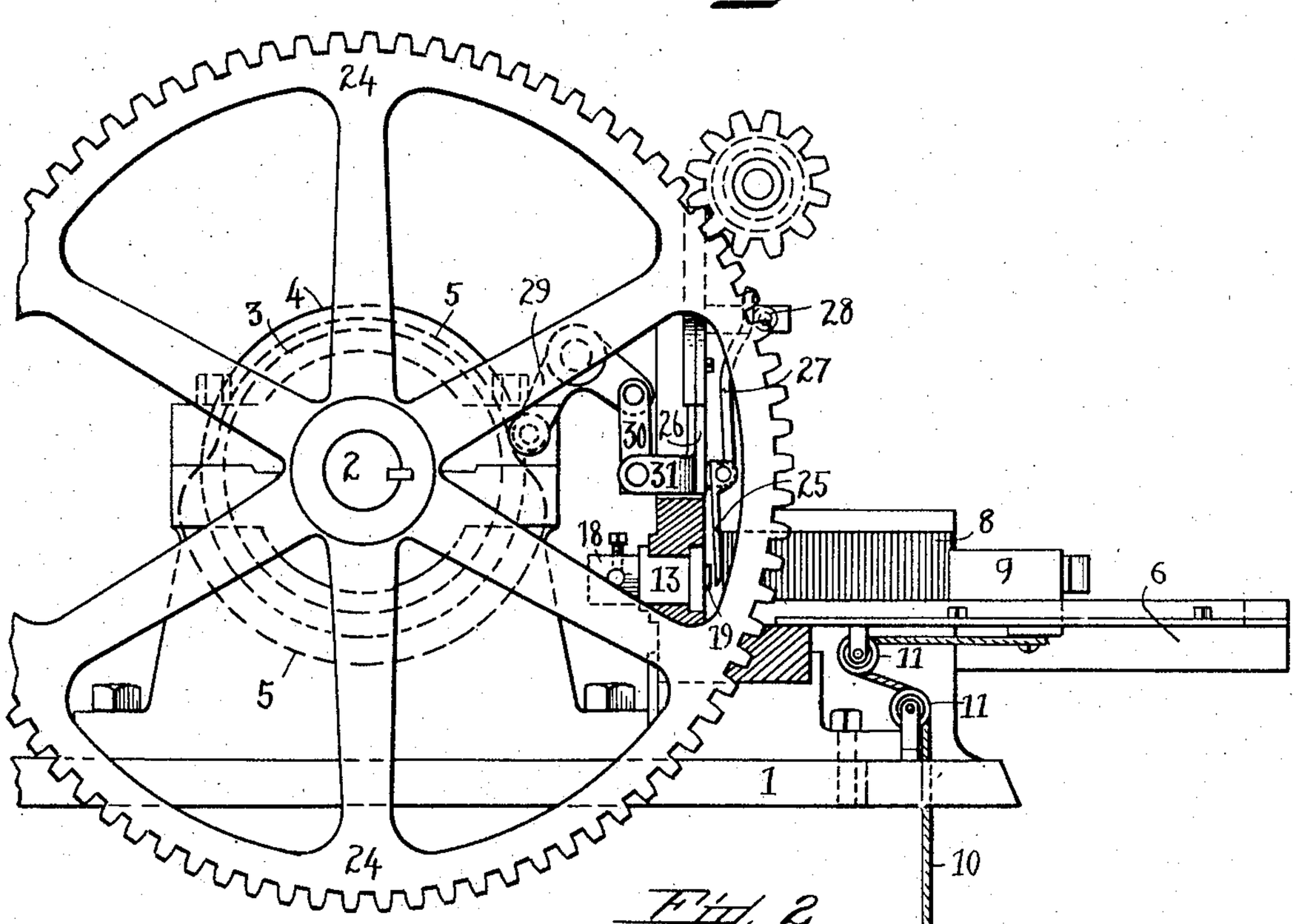

Fig. 2.

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2 SHEETS—SHEET 2.

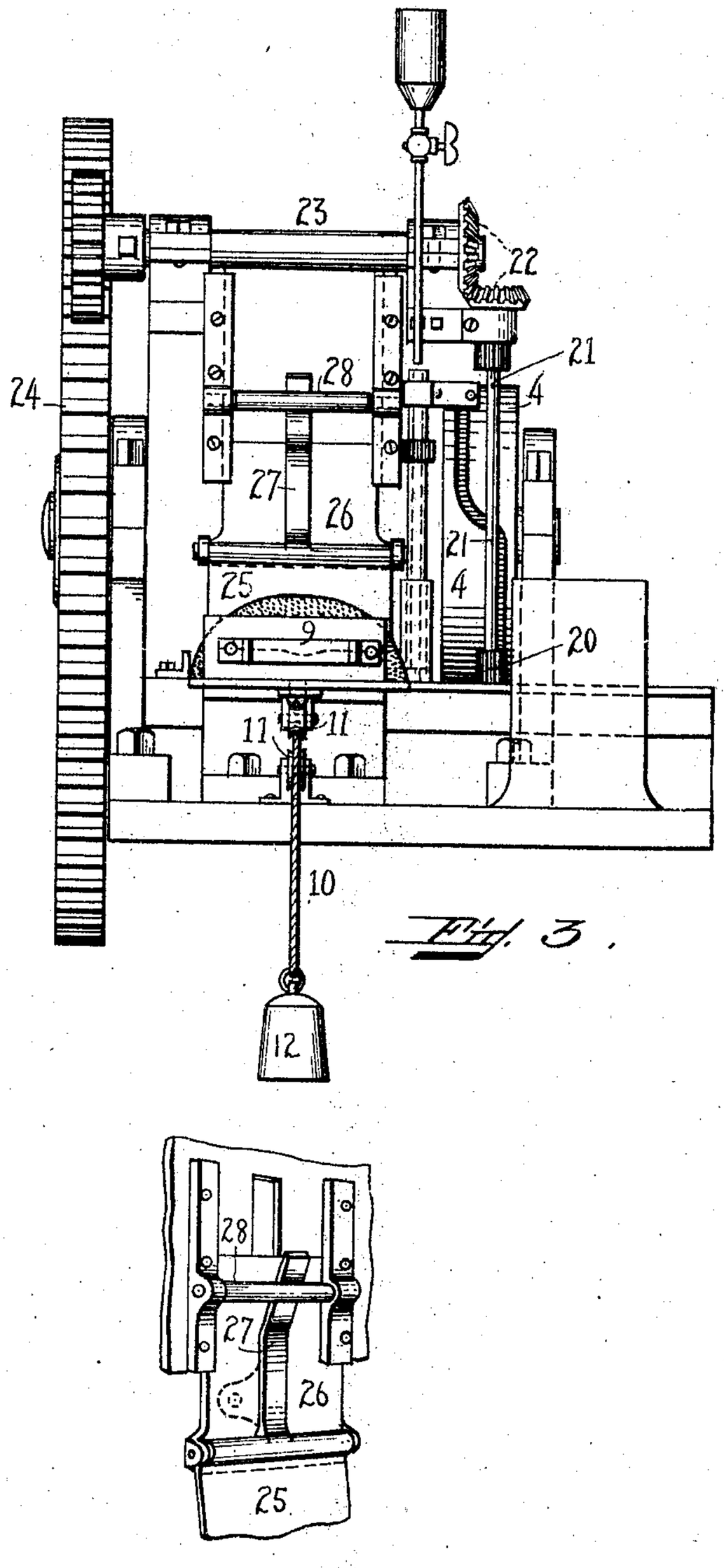

Fig. 3.

Fig. 4.

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UNITED STATES PATENT OFFICE.

AUGUSTE F. JACQUEMIN, OF KENNEBUNK, MAINE, ASSIGNOR TO NATIONAL FIBRE BOARD COMPANY, A CORPORATION OF MAINE.

FEEDING DEVICE.

SPECIFICATION forming part of Letters Patent No. 789,976, dated May 16, 1905.

Application filed October 18, 1904. Serial No. 229,002.

To all whom it may concern:

Be it known that I, AUGUSTE F. JACQUEMIN, of Kennebunk, in the county of York and State of Maine, have invented certain new and useful Improvements in Feeding Devices, of which the following is a specification.

My invention relates to improvements in feeding devices which are adapted to feed flat pieces of thin material one by one to other mechanism for further operation, and its object is to provide means for feeding such pieces of sheet material, called "blanks," from a pack with certainty and despatch; and my invention consists in an improvement upon the device shown in Letters Patent of the United States No. 205,191, granted to Joseph Keiffer June 25, 1878, to which reference is here made.

In the drawings accompanying and forming part of this specification, Figure 1 represents a plan view of a machine embodying my invention as applied to a shoe-counter-molding machine similar in design to that in the patent above referred to. Fig. 2 is a side view of the same, partly in section; Fig. 3, a front view, and Fig. 4 a detail, of the "separator" to be hereinafter described.

Like figures of reference refer to like parts in all the drawings.

In feeding sheets or blanks of thin material, like cardboard, one by one from a pack, as shown in the drawings, there is a practical difficulty in the operation of the machine, as the projection which is intended to catch a single blank and remove it from the pack must not project more than the thickness of one sheet or it will be liable to catch two. Hence if the sheets are stiff and do not lie flat it is liable to miss catching any at all. To obviate this is the object of my invention; and it consists in providing a second slide carrying a separator which is a thin sheet of metal which is caused to move, preferably, at right angles to the feeding-slide and is so adjusted that it enters between the end sheet of the pack and the rest of the pack and having done so thrusts the rest of the pack slightly away from the feeding-slide, so that its projection may catch the blank and feed it out without the possibility of feeding two even if the projection extends more than the thickness of a single blank.

Referring to the drawings, upon a suitable frame 1 is mounted a shaft 2, carrying between its bearings a drum 3, on which is a cam-wheel 4 and an irregular cam projection 5. This shaft may be driven by a pinion meshing with the large gear 24. A bracket 6 extends from the main frame, carrying a table 7, on which is placed the pack of blanks 8 to be operated upon. These blanks are pressed forward by a sliding follower 9, which is actuated by a rope 10, passing over pulleys 11 11 and sustaining a weight 12. (See Fig. 2.) A sliding block 13, Fig. 2, is adapted to slide horizontally in ways provided for it with an intermittent motion, being driven from the cam 4, in the groove of which runs a pin 14, attached to a rocker-arm 15. On the opposite side of said arm is a pin 16, which operates the connection-rod 17, which at its other end is attached to a block 18, which is carried by a pin attached to the sliding block 13. Thus it will be seen that by the revolution of the shaft and cam-wheel 4 an intermittent and reciprocating motion is imparted to the slide 13. Upon this slide is a projection 19 of about the thickness of one of the blanks to be fed, and as the pack of blanks is pressed against the slide 13 the projection 19 catches the one to which it is adjacent and carries it along until it is seized by the corrugating-rolls 20, which are fastened to upright shafts 21 and geared together, being driven by bevel-gears 22, one of which is on a shaft 23, which is driven from the large gear 24. The blank when caught between the corrugating-wheels is carried away from the pack and delivered to the molds 21 22 or to be operated upon by any other desired mechanism. This arrangement is substantially the same as set forth in the patent above referred to.

In Figs. 3 and 4 will be seen the separator 25, hinged to and carried by a vertically-sliding plate 26, which is movable in ways on

the frame of the machine. As this separator is carried downward a rigid curved tongue 27, which is attached to it, passes under a roller 28, and being curved outward near its upper end it throws the separator out to an angle with the line of the slide, so that when this is arranged to enter the pack and separate one of the blanks from the rest as its motion downward is continued it forces the balance of the pack slightly away from the one thus separated. This separator is operated from the cam 5, which moves one end of the rocker-arm 29, whose other end is connected by a link 30 to projecting ears 31 on the slide 26.

The operation of the machine is as follows: The pack of blanks 8 is pressed forward by the follower 9, moved by the weight 12. As the shaft 2 revolves the cam 5 operates the slide 26, carrying the separator 25, which descends and is so adjusted as to separate the blank lying against the slide 13 from the rest of the pack. As it continues to descend the curved tongue 27 forces the pack slightly away from the blank lying against the slide 13, which latter immediately moves, and the projection 19 pushes the blank away from the pack to the corrugating-wheels, which carry it beyond themselves for such operation as may be desired. The abutment 13 may be a narrow slide carrying the projection 19 between solid abutments; but I prefer the movable abutment, as the separator holds back the pack while the abutment is in motion.

I claim—

1. In a machine of the character described, the combination of a movable abutment with a projection thereon and adapted to remove the adjacent blank from a pack pressed against it, with means for automatically pressing a pack of blanks against it, and a separator with means for operating the same so as to detach the blank lying against the said abutment from the pack and allow it to be removed by the sliding projection substantially as shown and described.

2. In a machine of the character described, the combination of a table for holding a pack of blanks, a follower adapted to press such blanks along such table, an abutment to receive the pressure of said blanks, a sliding projection arranged to move along said abutment and to remove a single blank from the pack and a separator with means for operating the same and arranged to enter the pack between the blank lying against the abutment and the remainder of the pack and to thrust the balance of the pack slightly from the abutment, substantially as and for the purpose set forth.

3. In a machine of the character described, the combination of a table adapted to receive a pack of blanks, an abutment against which said blanks may be automatically pressed, a sliding projection adapted to remove the single blank lying against the abutment, and a pair of feed-rollers adapted to remove the blank when entered between them, arranged and to operate substantially as described.

4. In a machine of the character described, the combination of means for holding a pack of blanks in position, an abutment parallel with said blanks, means for pressing said pack toward and against the said abutment, a separator with means for operating the same, arranged to enter the pack between the blank lying against the abutment and the remainder of the pack and means for removing the blank so separated from its position between the abutment and the separator, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

AUGUSTE F. JACQUEMIN.

Witnesses:
F. C. SIMONDS,
ELLIOT ROGERS.