S. FELDMAN.

APPARATUS FOR TAKING OFF SINGLE SHEETS FROM PILES.

APPLICATION FILED SEPT. 5, 1918.

1,298,485.

Patented Mar. 25, 1919.

2 SHEETS—SHEET 1.

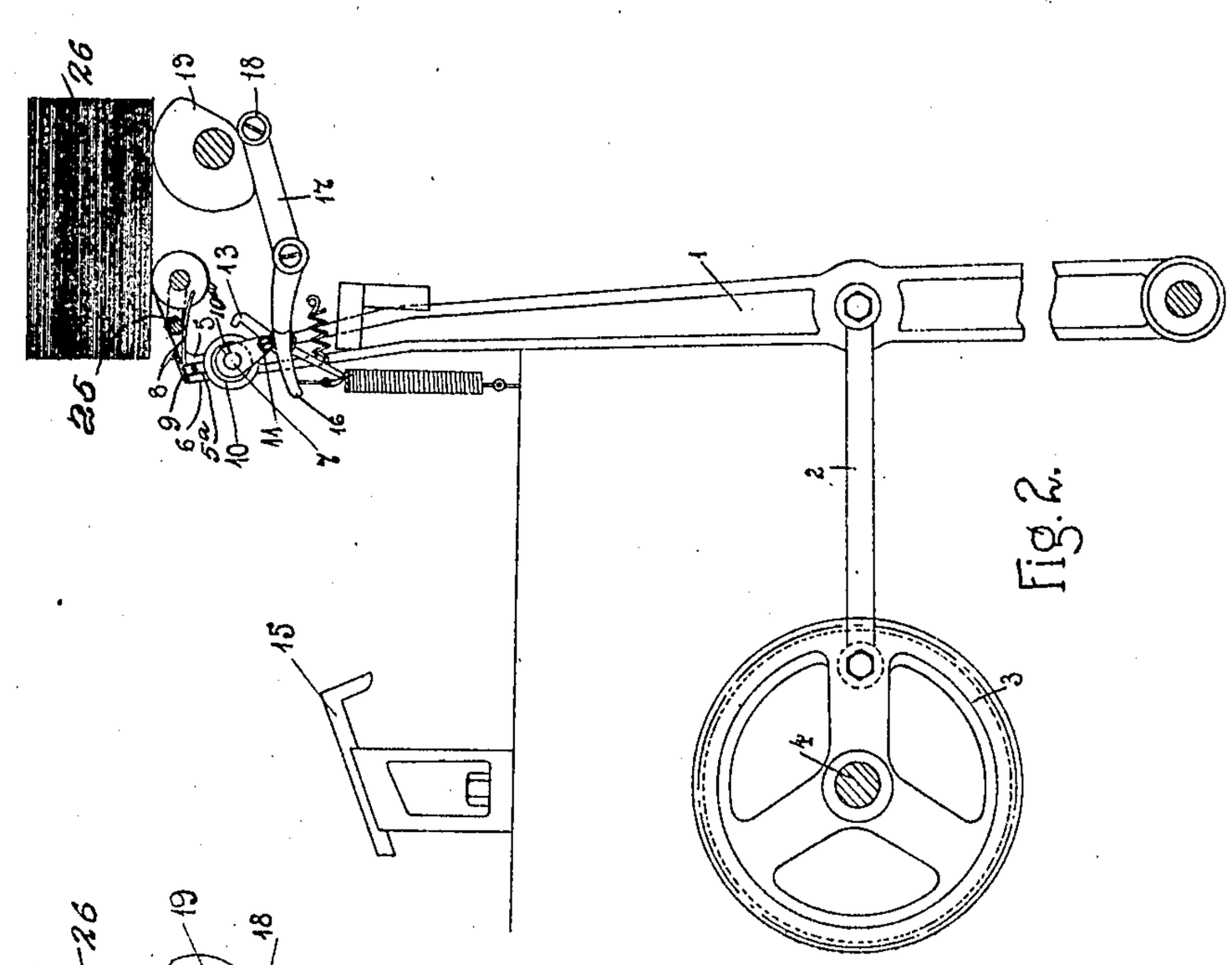


Fig. 2.

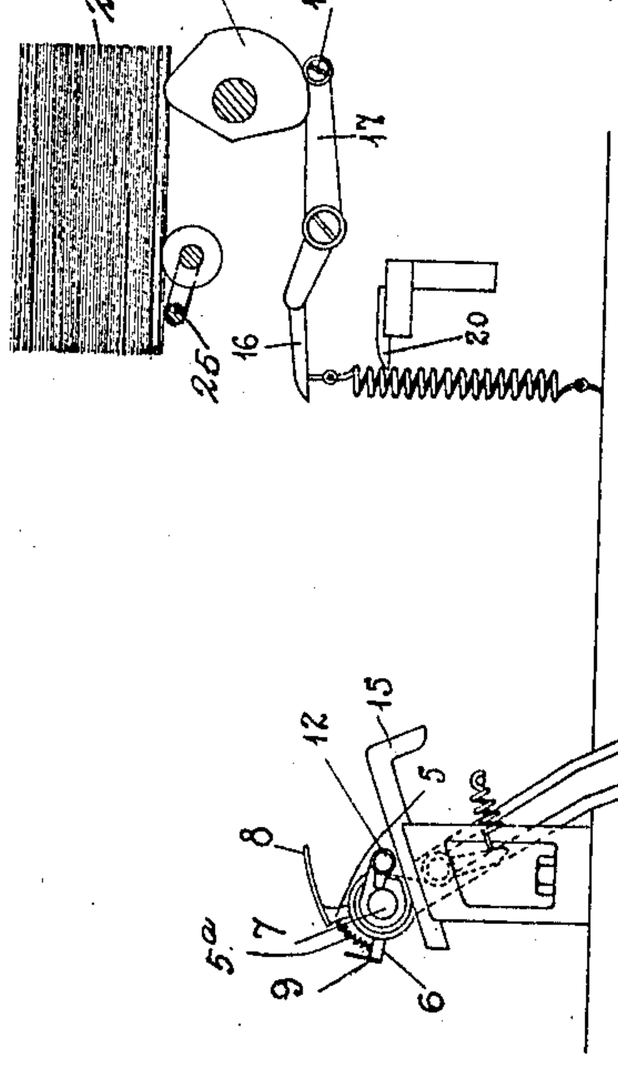
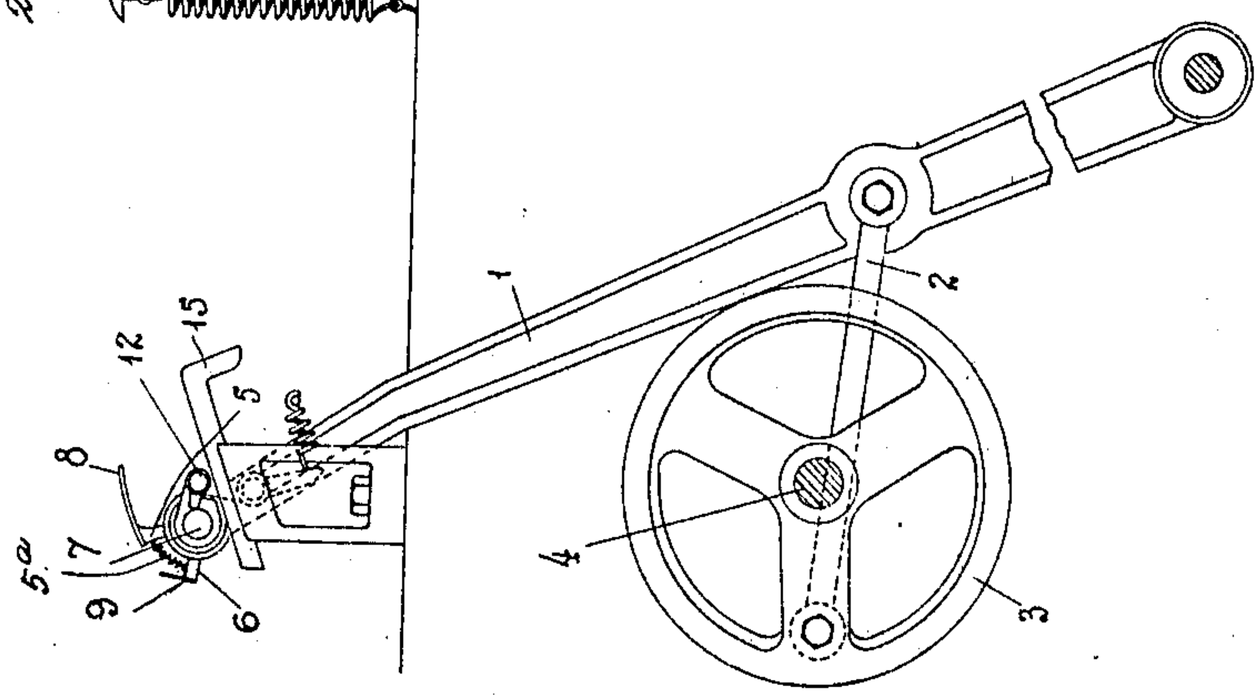


Fig. 1.



INVENTOR

S. Feldman

BY L. R. Kerslake

ATTORNEY

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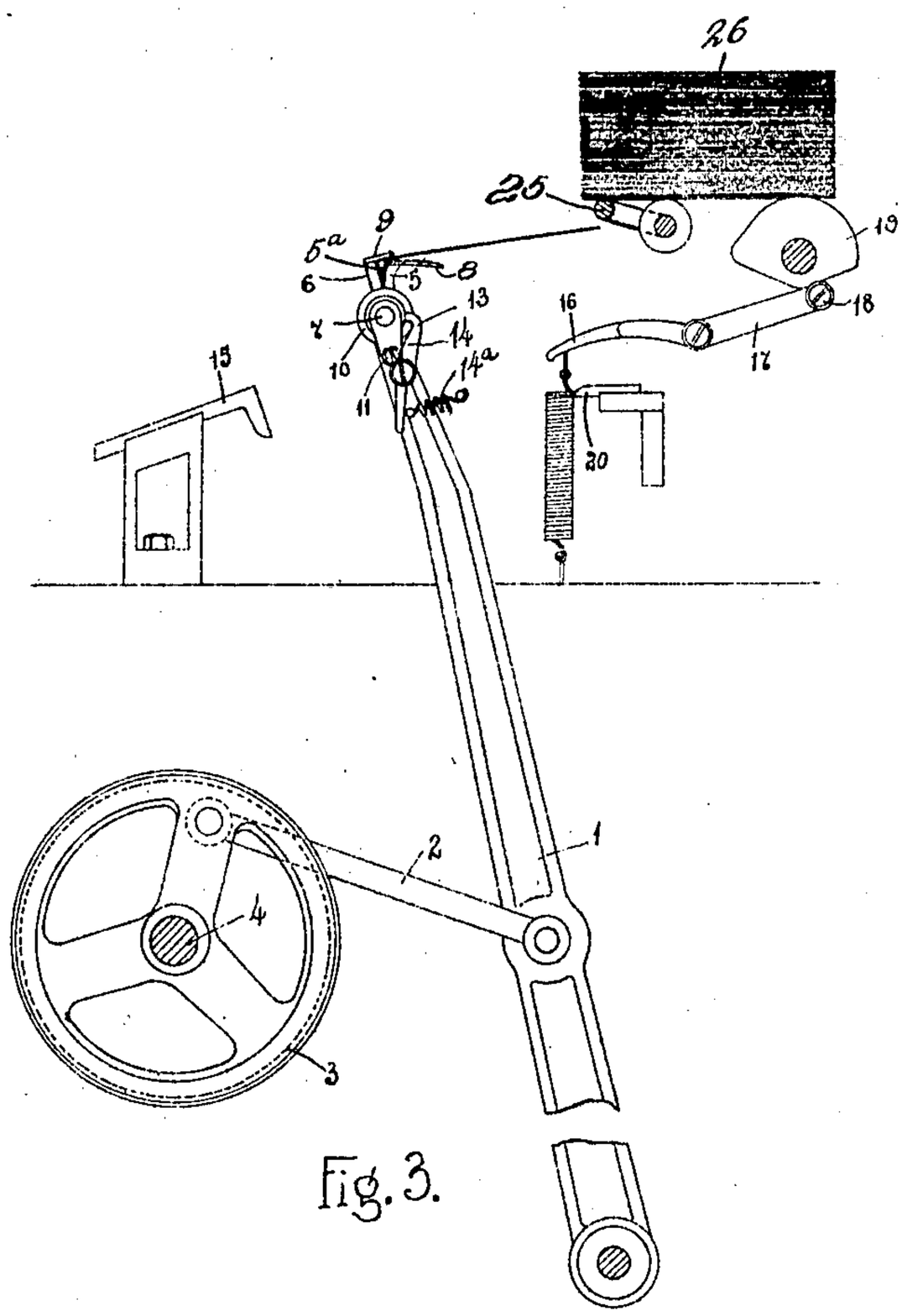

Fig. 3.

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UNITED STATES PATENT OFFICE.

SHIMON FELDMAN, OF PETROGRAD, RUSSIA, ASSIGNOR TO J. M. AIVAZ SOCIETE PAR ACTION POUR CONSTRUCTION DE MACHINES, OF PETROGRAD, RUSSIA.

APPARATUS FOR TAKING OFF SINGLE SHEETS FROM PILES.

1,298,485. Specification of Letters Patent. Patented Mar. 25, 1919.

Application filed September 5, 1918. Serial No. 252,810.

To all whom it may concern:

Be it known that I, SHIMON FELDMAN, a citizen of Russia, and residing at Petrograd, Russia, have invented certain new and useful Improvements in Apparatus for Taking Off Single Sheets from Piles, of which the following is a specification.

This invention relates to pincers for taking off single sheets from a pile, especially adaptable to machines for automatically preparing cigarette boxes from blanks assembled into piles.

The accompanying drawings show by way of example one method of carrying out the invention, in which:—

Figure 1 shows the pincers in their original position:

Fig. 2 shows the position when the pincers grip a sheet separated from the pile, and

Fig. 3 shows the pincers in the intermediate position at the return stroke.

The separating of the sheets is effected by means of suction device 25 from below the pile of sheets 26.

The apparatus consists of a main pivoted lever 1 connected by means of a link 2 with a wheel 3, mounted on a shaft 4 which is continuously rotated so that at each turn of the shaft 4 the pincers complete a reciprocal stroke. The pincers consist of two fingers 5 and 6, mounted on a common pin 7 on the end of the lever 1 and normally held in closed position by a spring 5^a. The finger 5 is provided with an elongated arm 8, while the finger 6 is provided with a short arm 9 bent as a segment. The finger 5 maintains its relative position on the lever 1, while the finger 6 can be thrown back. To this end it is provided with a disk 10 having an arm 11, on the end of which a roller 12 (Fig. 2) is mounted. The disk 10 has a notch 10^a, shown in Fig. 2, in which a nose 13 of a spring actuated pawl 14 enters for holding the fingers in open position. The said pawl is mounted on the lever 1 and the spring for actuating the pawl 14 is designated 14^a.

When the lever 1 moves toward the left, the roller 12 will engage an inclined surface 15 and this will cause the arm 11, disk 10 and finger 6 to turn until the nose 13 of the pawl 14 drops into the notch in the disk 10. The finger 6 will thus be locked in open position until the lever 1 is moved its maximum distance toward the right.

When the lever 1 moves with opened pincers to the right the roller 12 approaches the forked crank 16 of a crank lever 16—17, which at this moment is turned aside by the cam 19, acting upon the roller 18 mounted upon the end of the lever 16—17, so that the end 16 takes its highest position. The sheet sucked enters with its edge into space between arms 8 and 9. Just after the roller 12 engages the crank 16 the lower end of pawl 14 bears against the stop 20 rigidly affixed under the lever 16, and the nose 13 is forced out of the notch of the disk 10. By the further rotation of the cam disk 19 the roller 18 rolling on its surface permits the moving of the forked lever 16 down under influence of a spring 30. This permits the finger 6 to approach the finger 5, and clamp the end of the sheet between arms 8 and 9 and as the nose 13 of the pawl 14, is out of the corresponding notch of the disk 10, the fingers of the pincers will close under the action of the spring 5^a. By the back motion of the lever 1 the pincers carry the gripped sheet (Fig. 3) until the lever returns to the position as shown in Fig. 1, where the roller 12 rolling on the surface 15 causes the pincers to be opened. Thereby the sheet is gripped by other members and the lever 1 begins its cycle again.

Having now described my invention, what I claim as new and desire to secure by Letters Patent is:—

The combination with a pile of sheets and an inclined surface, of an oscillating lever, the end of which moves between the pile of sheets and the inclined surface, a fixed finger carried by the lever, a movable finger pivotally mounted on the lever and coöperating with the fixed finger for grasping a sheet between them, a disk movable with the movable finger and provided with a peripheral notch, an arm movable with the movable finger and having an operating roller coöperating with said inclined surface for opening the movable finger, a spring pressed pawl carried by the lever and having a nose coöperating with said notch for holding the movable finger in open position during the period when the

lever is moving from the inclined surface to the pile of sheets, means for moving one of the end sheets of the pile to permit the fingers to grasp the same, means for holding the fingers in closed position during the movement of the lever from the pile of sheets to the inclined surface, a stop adapted to engage the pawl when the lever moves toward the pile of sheets for withdrawing the nose from the notch, and means located adjacent the pile of sheets for temporarily holding the movable finger open when the nose is withdrawn from the notch.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SHIMON FELDMAN.

Witnesses:
ZOROS MOFSIK,
MOSES LUNARENDO.