VICTOR E. MAUGER.

Improvement in Machines for Cutting and Assorting Playing Cards, &c.

No. 121,117. Patented Nov. 21, 1871

Fig: 1.

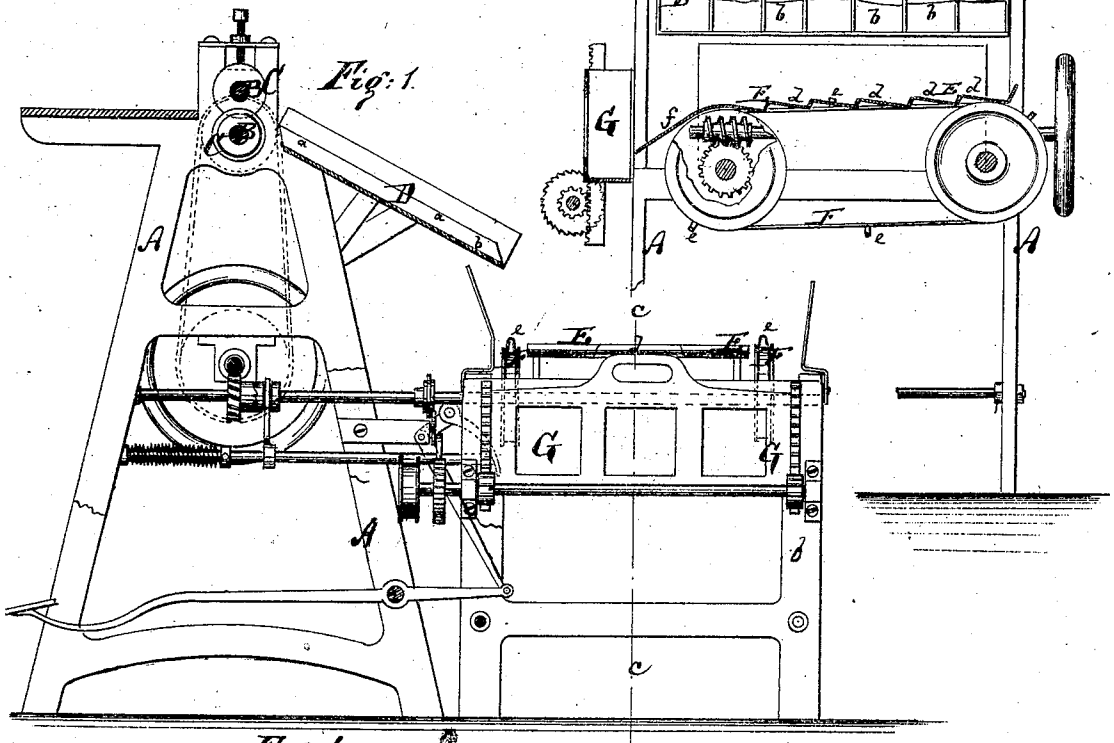


Fig: 2.

Fig: 4.

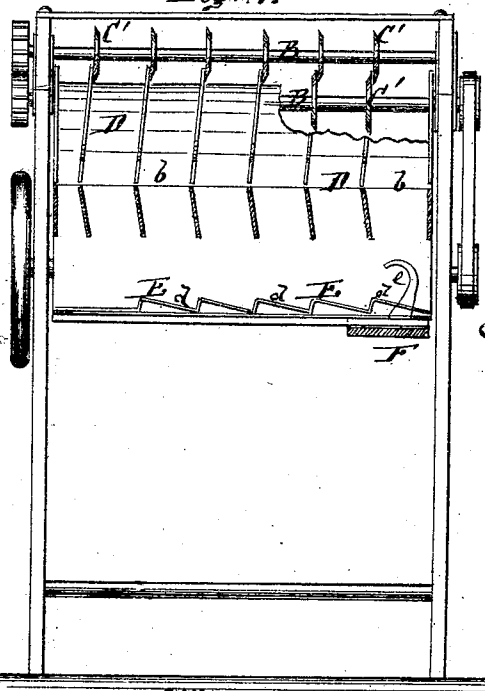
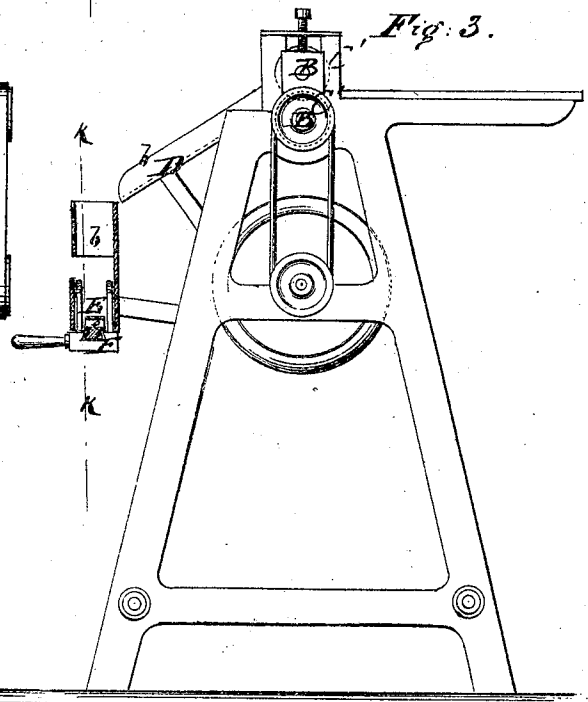


Fig: 3.



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UNITED STATES PATENT OFFICE.

VICTOR E. MAUGER, OF NEW YORK, N. Y.

IMPROVEMENT IN MACHINES FOR CUTTING AND ASSORTING PLAYING-CARDS.

Specification forming part of Letters Patent No. 121,117, dated November 21, 1871.

To all whom it may concern:

Be it known that I, VICTOR E. MAUGER, of the city, county, and State of New York, have invented an Improved Apparatus for Automatically Assorting Playing and other Cards, or pieces cut from sheets; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 represents a vertical longitudinal section of my improved assorting-machine for strips cut from sheets. Fig. 2 is a vertical transverse section of the same taken on the plane of the line *c c*, Fig. 1. Fig. 3 is a vertical longitudinal section of the assorting-machine for cards cut from strips. Fig. 4 is a vertical transverse section of the same taken on the plane of the line *k k*, Fig. 3.

Similar letters of reference indicate corresponding parts.

This invention has for its object to produce simple and effective means for assorting—that is to say, putting upon one another in regular order—the several strips or pieces cut from strips. The invention is to be more particularly applicable in the manufacture of playing-cards, but may also be advantageously used for other matter.

Playing-cards are, by rotary knives, cut from large sheets, each sheet containing about thirty or more cards. Every sheet is first printed, and then, by parallel incisions, cut into strips, each strip being subsequently cut up into as many cards as it contains. When thus cut rapidly the cards of several sheets are apt to become mixed and those of each sheet liable to be indiscriminately arranged, making it difficult and laborious to assort them into "packs;" but by my invention the cards of each sheet are to be regularly arranged and placed one upon another in desired succession, so that the entire labor of subsequent assorting will be dispensed with.

The invention consists chiefly in the use of a graduated plate, upon which the strips cut from sheets or the cards cut from strips are deposited, and in the use thereon of a sliding carriage or belt, which conveys each higher strip or card to the one next below it and places it on top, so that finally all pieces will be one above another in regular succession. The invention also consists in the combination, with said graduated plate, of guide-chutes, which convey the several pieces, respectively, to the several steps of the plate.

In the accompanying drawing I have shown my invention applied to two machines, one for assorting strips cut from sheets, the other for assorting cards cut from strips. It will be seen that the invention is identical in either case, the only practical difference being in the comparative proportions of parts.

In Figs. 1 and 2 is shown a machine for cutting cards into strips and assorting the latter. In this A represents the frame of the machine. B B are the parallel shafts of the rotary cutters C C, by which the sheet is cut into six (more or less) strips of equal width and length. These strips, as they emerge from between the shafts B, are deposited upon an inclined table, D, which, by means of projecting ribs *a a*, is divided into as many guide-chutes *b b* as there are spaces between the pairs of cutters. Each strip is therefore deposited in a separate chute. E is a graduated plate, affixed to the frame A at the foot of the chute-table D. It has as many steps *d d* as there are chutes *b b*, (see Fig. 2,) one step under and in line with each chute. The strips cut from the sheet are by the chutes guided to and finally deposited upon the several steps of the graduated plate E, respectively. An endless apron, F, or a sliding carriage having a projecting finger, *e*, is moved so as to carry said finger along the graduated edge of the plate E or through a slot in said plate with such effect that such finger will first push the strip on the uppermost step of E off and deposit upon the strip on the adjoining step, then take the two strips on the latter and carry them to the step next below, &c., until finally all the strips have been arranged in the desired succession, when they fall from the inclined end of E into a box or receptacle, G. I have in Fig. 1 shown two aprons, F, one on either side of the plate E, so that by their fingers both ends of the strips may be pushed. The box G I prefer to connect with rack and pinion or otherwise, in such manner that it will be gradually fed downward as it becomes filled. The aprons or equivalent slides receive their motion from suitable mechanism. Figs. 3 and 4 show similar cutters C′ C′ on shafts B, a similar or equivalent system of chutes, *b b*, on a table, D, and substantially the same gradu-

ated plate E at the foot of the chute-table D; also a carriage, F, having a finger, *e*. The strips are taken from the box G to the cutters C′, and by them cut into cards, which are in the chute carried upon the graduated plate and deposited on the steps of the same, the sliding finger then causing them to be placed one above the other in proper succession, and finally to be discharged into a suitable receptacle.

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

1. The graduated plate E, applied to a cutting-machine to receive on its several steps the pieces, respectively, that are cut from a sheet or strip, as specified.

2. The sliding finger or fingers *e*, applied to the graduated plate E for conveying the strips, cards, or pieces deposited thereon from the higher to the lower steps, and thereby arranging them in regular succession one above the other, as specified.

3. The sheets *b b*, combined with the graduated plate E for depositing the pieces that issue from the cutting apparatus upon the steps of the said plate E, respectively, substantially as herein shown and described.

4. The vertically-adjustable receptacle G, applied to the lower end of the graduated plate E, substantially as herein shown and described.

The above specification of my invention signed by me this 14th day of August, 1871.

VICTOR E. MAUGER.

Witnesses:

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