C. E. CARROLL.

CARD COUNTER.

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1,393,009. Patented Oct. 11, 1921.

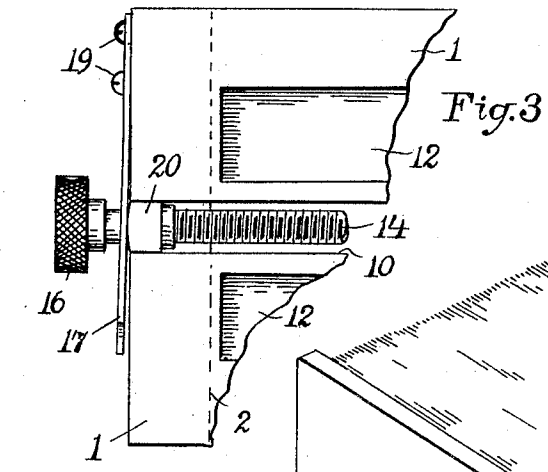


Fig. 3

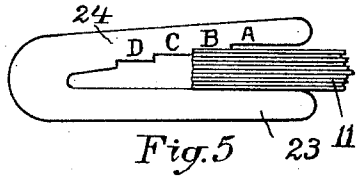


Fig. 5

Fig. 1

Fig. 2

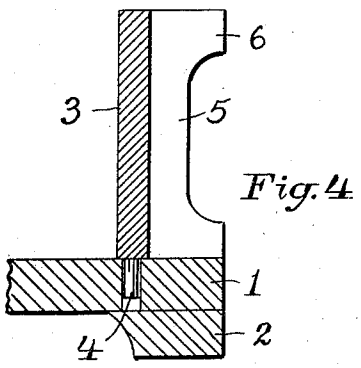


Fig. 4

Inventor,

Charles E. Carroll;

By A. B. Upham,

Attorney.

UNITED STATES PATENT OFFICE.

CHARLES E. CARROLL, OF MALDEN, MASSACHUSETTS.

CARD-COUNTER.

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To all whom it may concern:

Be it known that I, CHARLES E. CARROLL, a citizen of the United States, and a resident of the city of Malden, in the county of Middlesex and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Card-Counters, of which the following is a full, clear, and exact specification.

One of the most expensive and laborious details in connection with social, industrial or religious surveys, or in population censuses, is the tabulation of the facts gathered, whether as results of postal or letter inquiries sent to informants or correspondents, or as results of card schedules filled out by special investigators, canvassers, or enumerators.

The object of this invention is the construction of a device whereby a large quantity, up to several hundreds at the same time, either of sheets of paper, postals or cardboards of practically any standard size, weight or thickness, can be counted in only a few moments, with practically perfect accuracy, especially when a magnifying glass is used in reading the exact location of an indicator.

The so-called "throwing", or easy hand sorting method of variously grouping or classifying the sheets or cards, according to the particular facts to be tabulated, is substituted for the very expensive machine sorting devices sometimes used; and, as each classification is completed, the sheets or cards are placed in the counter comprising my invention, and the total results as indicated on a scale is recorded on tabulation sheets, instead of the slow and laborious method of tallying the individual items of the total result.

In carrying my invention into effect, I prefer to provide a base carrying a plurality of different scales, and means for conveniently comparing a bunch of the cards or sheets with the appropriate scale; the same being employed in connection with a device for determining the thickness of one or a specified number of the cards or sheets on which the particular facts have been gathered, and thereby noting the particular scale with which a bunch of cards or sheets is to be compared.

The apparatus which I have devised for this purpose is preferably constructed to be laid horizontally upon a table or other support, but I also adapt it for being vertically disposed, or nearly so. In each case, the base is provided with a stationary bracket, and a movable bracket slidable toward and from the stationary bracket. I also prefer to have the comparison scales carried by the base with their zero points adjacent the stationary bracket, so that the juncture of the scale selected and the face of the slidable bracket toward the stationary bracket will reveal the number of cards or sheets consolidated between the brackets.

It is, therefore, only the work of a moment to introduce a selected group or bunch of cards or sheets on edge between the brackets, to press the movable bracket snugly against the same, and to take the reading on the scale which designates the number of the cards or sheets resting upon the base; whereas to count the same number would require the expenditure of many minutes of time and much labor.

In the drawings forming part of this specification, Figure 1 is a perspective view of a counter embodying my invention. Fig. 2 is a cross section. Fig. 3 is a plan view of a part of the base of the device. Fig. 4 is a sectional detail view showing a means for removably attaching the stationary bracket to the base. Fig. 5 illustrates one means for calipering a sample number of cards or letter sheets.

The base of the device consists preferably of two strips of wood 1 spaced from each other and attached to and supported by cross pieces 2 at their ends. From one end of the base 1 rises the stationary bracket 3 preferably made removable by means of short dowels 4 as illustrated in Fig. 4. Braces 5 aid in holding this bracket upright, these braces being preferably formed with feet 6 for enabling the device to be stood vertically thereon.

The movable bracket 7 is not attached to the base, but is designed to be slidable thereon, the slidable control being a brace 9 which fits loosely in the slot 10 formed by the spacing of the two parts of the base.

The quantity of cards 11 or other sheets to be counted being placed against the bracket 3 upon the base 1, the movable bracket 7 is slid into firm contact therewith, as illustrated in Fig. 1. Inset within a suitable recess 12 in the upper surface of each

member of the base is a removable scale 13 bearing upon its face the scale markings appropriate to one thickness of card or paper. These markings differ in the two scales, and upon the under face of each scale is still another set of scale markings, thus providing for four different thicknesses of card and paper, for I have found that there are practically only eight different thicknesses to be allowed for, and one-half of them are merely doubles of the other half. Hence the two scales 13 are ample for all practical purposes.

For the better manipulation of the movable bracket 7 I locate a screw rod 14 within the slot 10 engaging a groove 15 in the under edge of the brace 9, this groove being threaded to fit the screw rod whereby the rotation of the latter propels the bracket along the base. This rod-engaging element 15 is formed as a groove in order to permit the bracket 7 to be removed from the base and returned thereto close to the bunch of cards or papers, the screw rod being rotated by an actuating head 16 sufficiently to properly consolidate the cards.

In order that the consolidating action of the screw rod 14 may be uniform I attach a leaf spring 17 to the end of the base at 19, and have the bearing 20 of the screw rod rest against it in a manner to press the free end of the spring away from the base when the proper degree of consolidation has been reached, as indicated in Fig. 3. The bearing block 20 is, of course, loose in the slot 10 to permit its free re-action against the spring 17 through which the screw rod freely passes.

After a bunch of cards has thus been consolidated, they may be removed and the scale-reading noted at the inner surface of the bracket 7, but I prefer to enable the readings to be read before the cards are removed. To this end, a hole 21 is made through the bracket 7 cutting through to the latter's bottom edge, as indicated in Figs. 1 and 2. By making this hole tapering, an indicator point 22 is formed by means of which the correct marking is more readily seen.

For determining which scale to employ for a certain quantity of cards or letter sheets, some well known form of micrometer caliper may be used, or, instead, a simple type of alligator caliper can be used, such as is shown in Fig. 5. By introducing a small bunch of ten cards between the jaws 23, 24 and noting in which notch of the jaw 24 they most perfectly fit, the letter over the notch, as B, designates the scale to be used.

What I claim is:

1. A counting device for cards and the like comprising a horizontally extended base, a stationary bracket rising from near one end of said base, a bracket slidably carried by said base, means for moving the slidable bracket toward the stationary bracket, and a scale supported by the base to lie beneath the cards to be stood upon the base, the zero point of said scale being flush with the surface of the stationary bracket next to the cards, whereby the outermost card adjacent the movable bracket will by its position on said scale designate the number of the cards between.

2. A counter device comprising a base, a stationary bracket thereon, a slidable bracket thereon, a screw rod for moving the slidable bracket, the latter being adapted to be lifted out of engagement with said screw rod, and a scale having markings and numerals thereon disposed for indicating the total number of cards and the like consolidated between said brackets.

3. A counter device comprising a base having a longitudinally disposed slot therein, a stationary bracket, a slidable bracket, a screw rod located in said slot and adapted to propel the slidable bracket, a slidable bearing for said screw rod, and a leaf spring attached at one end to the base and pressing said bearing toward said brackets, whereby the degree of pressure applied by said screw rod to a quantity of sheets placed on edge between said brackets is indicated by the deflection of said leaf spring.

4. A counter device comprising a base having a shallow recess therein, a scale having a plurality of markings thereon fitted to be removably located in said recesses, a stationary bracket, and a slidable bracket movable toward the stationary bracket to designate in connection with one of said scale markings the number of sheets consolidated between the said brackets.

5. A counter device comprising a base having a scale in its surface, a stationary bracket, and a slidable bracket movable toward the stationary bracket, the slidable bracket having a hole in its lower edge to permit reading the scale at the inner surface of the bracket.

In testimony that I claim the foregoing invention, I have hereunto set my hand this 12th day of June, 1920.

CHARLES E. CARROLL.