No. 812,707. PATENTED FEB. 13, 1906.

A. J. WARE & W. ZOLLER.

CHECK PRINTER AND PROTECTOR.

APPLICATION FILED MAR. 7, 1905.

2 SHEETS—SHEET 1.

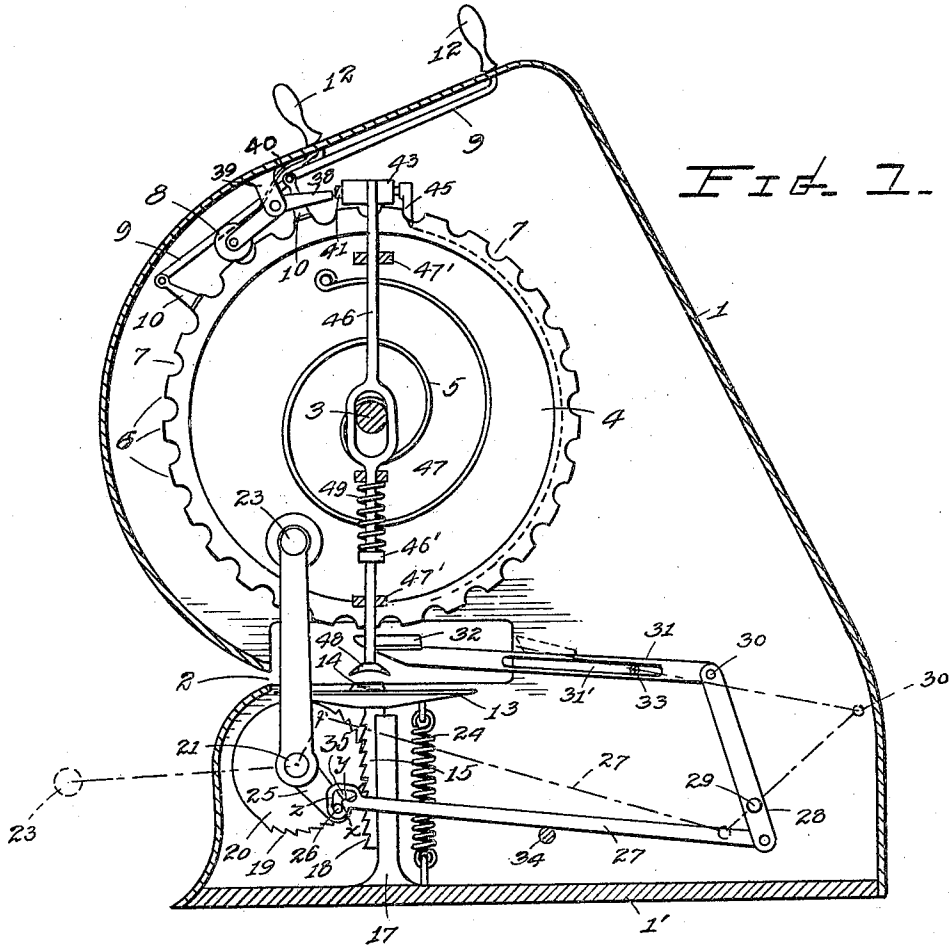

Fig. 1.

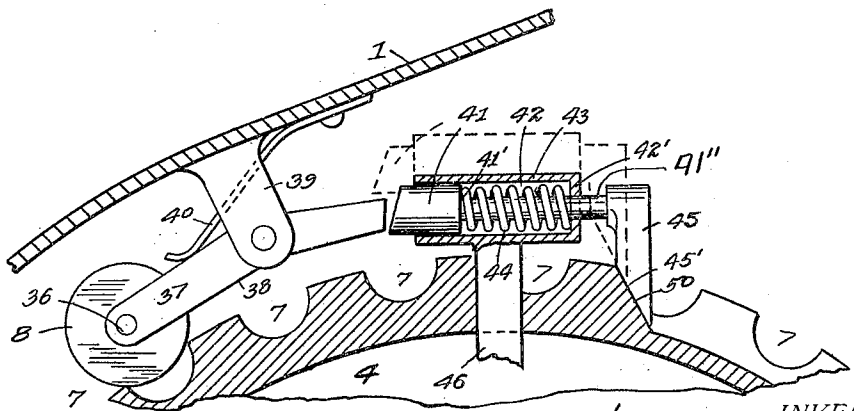

Fig. 3.

WITNESSES:

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2 SHEETS—SHEET 2.

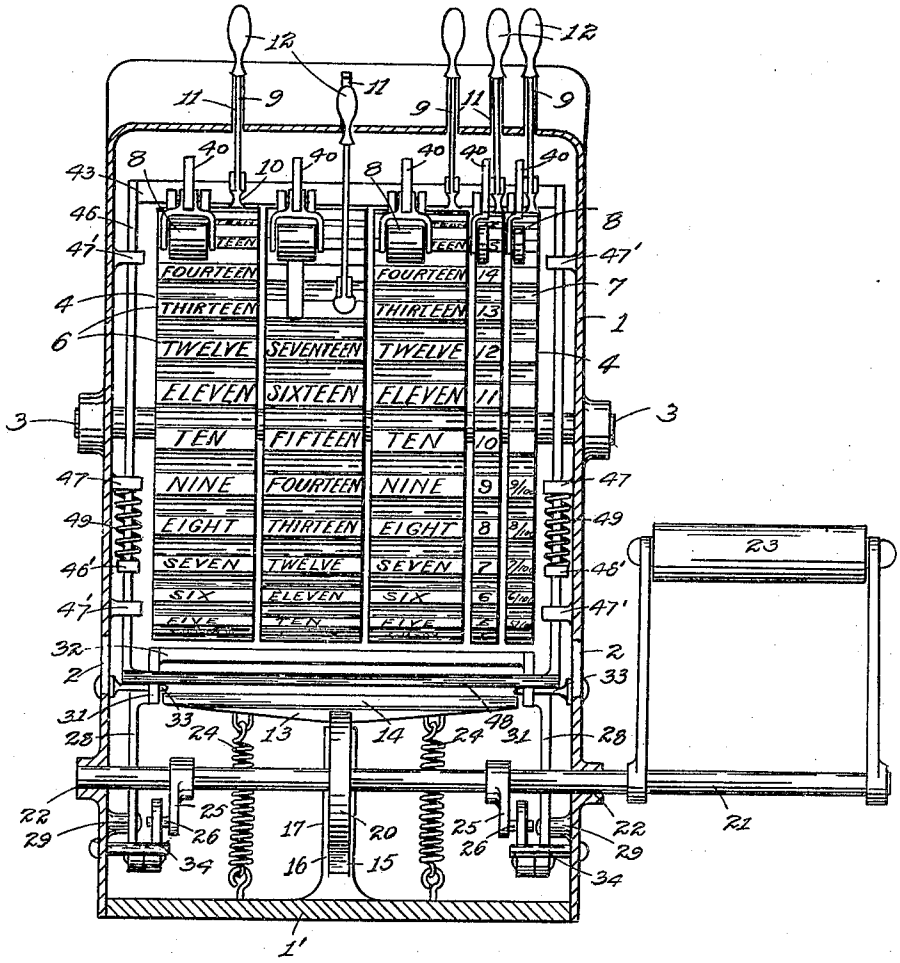

Fig. 2.

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UNITED STATES PATENT OFFICE.

ALFRED J. WARE AND WILLIAM ZOLLER, OF SEATTLE, WASHINGTON.

CHECK PRINTER AND PROTECTOR.

No. 812,707. Specification of Letters Patent. Patented Feb. 13, 1906.

Application filed March 7, 1905. Serial No. 248,879.

To all whom it may concern:

Be it known that we, ALFRED J. WARE and WILLIAM ZOLLER, citizens of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Check Printers and Protectors, of which the following is a specification, reference being had therein to the accompanying drawings.

The object of this invention is to provide means for safeguarding bank-checks or the like by means of an apparatus capable of unmutably printing thereon words, symbols, or other characteristic marks; and it consists in the novel arrangement, combination, and adaptation of mechanical devices, as will be described hereinafter with reference to the accompanying drawings, wherein—

Figure 1 is a longitudinal elevation of an apparatus embodying our invention with the containing-case thereof shown in section. Fig. 2 is a transverse view of the same, and Fig. 3 is an enlarged detail sectional elevation of one of the wheel-locking devices with the direct means for disengaging the same.

The apparatus is inclosed in a case 1 of suitable dimensions and form, having a slot 2 extending entirely across the front and to some distance back into the ends and through which the check or other article to be printed is introduced part way into the case. Extending longitudinally through and secured to the case is a shaft 3, upon which are rotatably mounted wheels 4, but connected thereto by springs, such as 5. Peripherally-disposed types 6 are carried by these wheels and are spaced at such intervals apart as will insure but one word or symbol of each wheel being brought into printing position at the same time and also providing intermediate gullets 7 to receive the brake-wheels 8. The type-wheels are rotated to present the proper characters to the work by means of swinging rods 9, which are pivotally connected to arms 10 of the respective wheels and, protruding through slots 11 in the case, terminate exteriorly thereof in finger-engaging handles 12.

Positioned beneath the type-wheels is a platform 13, carrying upon its upper surface a platen 14, of some yielding material, such as rubber, and which is provided with a downwardly-extending limb 15, slidable vertically in a slot 16 of a pedestal 17, formed or provided upon the casing-base 1′. The limb 15 is serrated on its front face to furnish teeth 18 for meshing with corresponding teeth 19 of a wheel 20, rigidly mounted upon an actuating-shaft 21, extending through and outside of the casing, and is journaled in bearings 22 in the end walls thereof. The outer end of this shaft is provided with a suitable handle, as 23, whereby a partial rotation may be imparted to the shaft to effect the raising of the said platform against the action of springs 24, connecting the latter with the said base, and likewise for actuating the type-inking mechanism. This mechanism comprises crank-arms 25, keyed or otherwise secured to the last-named shaft and provided with pins 26, which engage, through drag-links 27, with arms of levers 28, fulcrumed at 29 to the case ends, and the other arms of the levers are connected by pins 30 with sliding and tilting arms 31 of the transversely-disposed inking-cushion 32. The arms 31 are each provided with a longitudinal slot, such as 31′, through which protrude supporting-pins 33 from the adjacent ends of the case.

In operating the inking mechanism it is desirable that the cushion should not contact with the type-wheels while the machine is inoperative, or at least until the several such wheels have been rotated into their desired printing positions, and also that the cushion should be withdrawn from beneath the wheels before the printing movement of the platform is accomplished. We attain these ends by the provision of a bracket-support 34 for each of the drag-links and form the aperture 35 therein, by which the said crank-pins are engaged, of an inverted-L shape approximately.

The action of the inking mechanism will be understood from an inspection of Fig. 1, wherein the various parts are shown by full lines in their normal position and indicating, diagrammatically, by broken lines, their relative positions at the moment the article being printed is impressed against the type. More specifically, the crank-pin of each link will at the commencement of its revoluble movement bear against the shoulder x of its aperture, which causes the said levers to press forwardly and downwardly upon the rear ends of the connected arms 31, thereby effecting the impingement of the previously-set type characters by the inking-cushion. A further movement of the handle 23 in the direction of the arrow in this view will cause the crank-pins to slide upwardly in the vertical branches of the apertures and, bearing

against *z*, move the mechanism being considered into the positions indicated by the broken lines. A reverse swinging of the controlling crank-arms, due to action of springs 24, will move the pins thereof into the horizontal branches of the apertures, thus causing no appreciable movement of the inking-cushion until the platform is lowered out of its path of travel. A continued like movement of the crank-pins, however, will press downwardly upon the surfaces *y* until the pins have again entered the vertical branches of the apertures, and thereby move the inking mechanism back to its initial position.

Returning now to the brakes or the devices for locking the type-wheels in set positions, and referring particularly to Figs. 1 and 3, the brake-wheel 8 for each type-wheel is pivotally mounted by a pin 36 to the arm 37 of its lever 38, which is fulcrumed in pendent lugs 39 of the case. These brake-wheels are pressed into engagement with the type-wheels by springs 40 sufficiently powerful to insure their being held down with enough force into the gullets 7 to prevent any accidental displacement of the type, but at the same time with insufficient strength to prevent the wheels being rotatably set by means of the aforementioned handles therefor. The brake-wheels are disengaged from the type-wheels after each printing operation, so as to permit the springs 5 to assert themselves for returning the type-wheels to their initial positions, by the employment of a series of latch-bolts 41, one for each brake, which are positioned in chambers 42 of a transversely-disposed bar 43 and are pressed forwardly by springs 44, placed between the bolt-shoulders 41′ and the rear wall 42′ of said chambers. A stem 41″ of each of the bolts extends rearwardly through the respective chamber-walls and is provided upon its outer end with a rectangularly-arranged arm 45, having at its inner side a sloping face 45′. The bar 43 is provided at its ends with upright members 46, which pass through guide-brackets 47 47′ of the case and are connected at their lower ends by a slotted presser-plate 48. This plate and bar 43, connected therewith, are normally held in their lowermost positions by means of springs 49, interposed between the brackets 47 and collars 46′, formed or provided upon the members 46, and in being thus moved downwardly cause the retraction of the bolts 41 by engaging the sloping faces 41′ thereof with corresponding faces 50, provided in the peripheries of the type-wheels.

The operation of the invention is as follows: The type-wheels being first individually and predeterminately set by moving the handles 12 forwardly until they register with indices marked along the edges of the several slots 11 upon the outer surface of the case, the slots 11 extending on the front of the case from near the slot 2 and on the rear of the case to a point near the bottom thereof, so that an almost complete revolution may be imparted to the type-wheels, the check or other article which is to be printed is then inserted through the slot 2 to rest upon the platen 13 and is raised therewith by swinging the handle 23 forwardly, and as the platform rises the check is brought to bear against the plate 48 and elevate the same. The inking mechanism is meanwhile being operated to ink the type and quickly withdrawn to permit the check being unobstructedly contacted with the type through the aperture of plate 48, causing the inked characters to be embossed against the yielding platen therebeneath. The printing accomplished, the handle 23 is released to allow the various parts being returned to their original positions through the retractile force of the several springs and the type-wheels as soon as they are disengaged from the brake-wheels by reason of the protruding latch-bars being caught during their descent upon the levers thereof until the latch-bars are disconnected through the action of arms 45 thereof being pressed rearwardly by the sloping faces 50.

The type characters are preferably arranged as words for amounts, excepting on the two right-hand wheels, which may be used to designate conventionally by numerals the aliquot parts of a dollar, pounds, marks, francs, or other denominating value, as desired. Included in the type characters may be stars, dashes, or other marks for the purpose of filling in unoccupied spaces or to complete a line.

The invention is inexpensive to construct, simple to operate, and reliable in its action, and perfectly adapted to the purposes for which intended.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In apparatus of the class described, the combination with the containing-case and a plurality of wheels provided with peripherally-disposed type characters, of means to move the wheels into predetermined printing positions, means to automatically lock the wheels in such set positions, devices for supporting the article to be printed, type-inking devices, means to successively actuate said inking devices and impinge the article against the type, and spring-actuated means for automatically releasing the locking devices from the wheels during the downward movement of said supporting devices.

2. In apparatus of the class described, the combination with the containing-case, a plurality of adjustable type-wheels, and bars connected with said wheels and extending exteriorly through the case for individually setting said wheels, of inking devices for the wheels, a vertically-movable platen for holding the article to be marked, means for

successively actuating the inking devices and elevating the platen to impinge articles against the type-wheels, means for locking the type-wheels in set position during the printing operation, and means for automatically releasing the wheels when the printing operation is completed.

3. In apparatus of the class described, the combination with the case, a shaft fixedly connected thereto, a plurality of type-wheels rotatably mounted on said shaft and spring connections between said wheels and shaft acting to rotate the wheels back to their initial positions, of means to adjustably move the wheels into printing positions, means to lock wheels in their adjusted positions, a platen, an inking mechanism and a common means acting to successively actuate the inking mechanism, elevate the platen to bring the article to be printed against the type and to release the locking mechanism of the type-wheels.

4. In apparatus of the class described, the combination with the containing-case the type-wheels, the means for individually setting the wheels against the action of springs, said springs, brake devices for locking the wheels in their adjusted positions, the platen, means to raise the platen against the actions of springs, last-named springs, spring-pressed means for retaining the article to be marked upon the platen, said last-named means carrying devices for disengaging the brake devices from the type-wheels to allow the latter to return to their initial positions.

5. In an apparatus of the class described, in combination, marking mechanism including type-wheels and inking devices for said type-wheels, a movable platen for supporting the article to be marked, spring-pressed devices for holding the article upon the platen, locking devices for the type-wheels, and means for successively operating the inking mechanism, and elevating the platen, and means automatically operating to release the type-wheels when the printing operation is completed, substantially as described.

6. In apparatus of the class described, the combination of the marking mechanism, the platen, the brake devices for locking the wheels of said marking mechanism in their adjusted positions, and means for elevating the platen into marking position and devices coacting with the platen and adapted to disengage said brake devices.

7. In a check-printer, a plurality of type-wheels mounted to be rotated, and means for individually moving said wheels, inking devices for said wheels, a platen on which the article to be printed is supported, means for successively actuating the inking devices and the platen, means for locking said type-wheels in the set position comprising spring-pressed brake-wheels normally held in engagement with the type-wheels, substantially as described.

8. In a check-printer, a plurality of type-wheels mounted to be rotated, and means for individually moving said wheels, inking devices for said wheels, a platen on which the article to be printed is supported, means for successively actuating the inking devices and the platen, means for locking said type-wheels in the set position comprising spring-pressed brake-wheels normally held in engagement with the type-wheels, and means operating automatically with the return movement of the platen to release said brake-wheels, substantially as described.

9. In a check-protector, a plurality of type-wheels, means for individually setting the wheels in marking position, a vertically-movable platen, means for actuating said platen to elevate the article being marked into engagement with the type-wheels, spring-pressed brake-wheels engaging the type-wheels to hold the same in the set position, means operating automatically with the return of the platen to its normal position to release said brake-wheels and means for returning the type-wheels to their normal position when the brake-wheels are released, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

ALFRED J. WARE.
WILLIAM ZOLLER.

Witnesses:
PIERRE BARNES,
F. DUDLEY MOSS.