(No Model.)

J. A. MEHLING.

REGISTER.

No. 568,033. Patented Sept. 22, 1896.

Fig. 1.

Fig. 2.

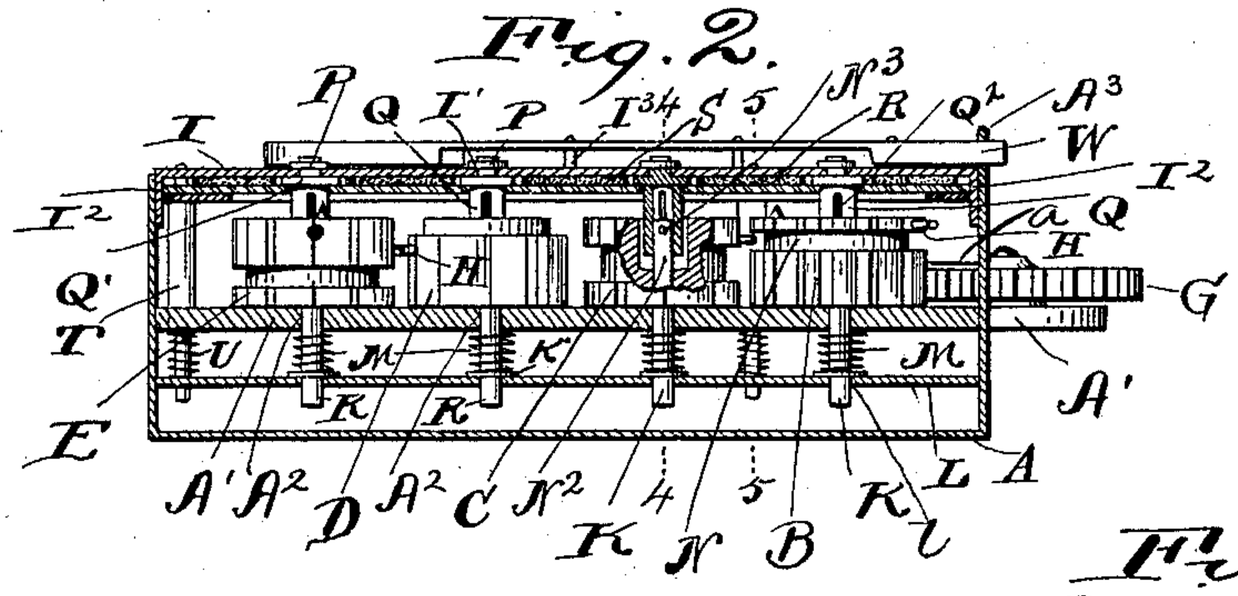


Fig. 3.

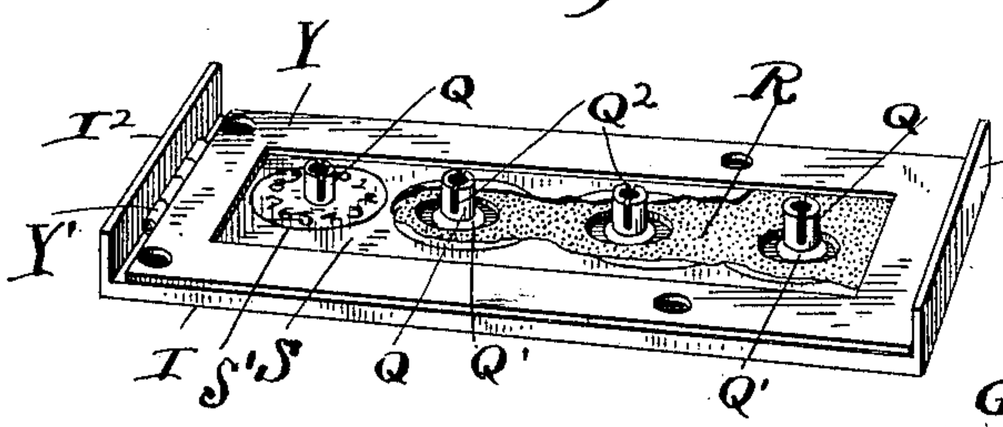


Fig. 4.

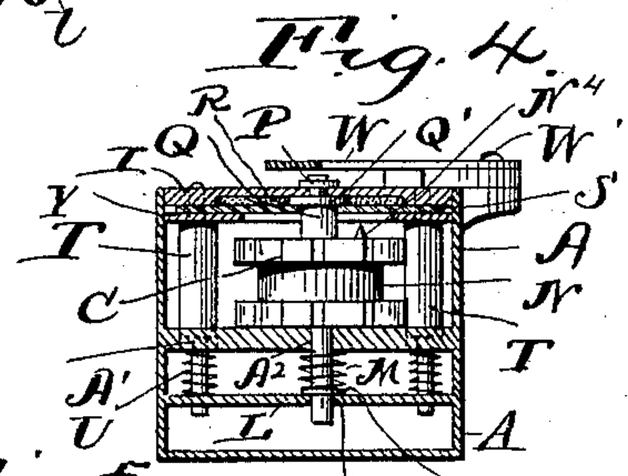


Fig. 5.

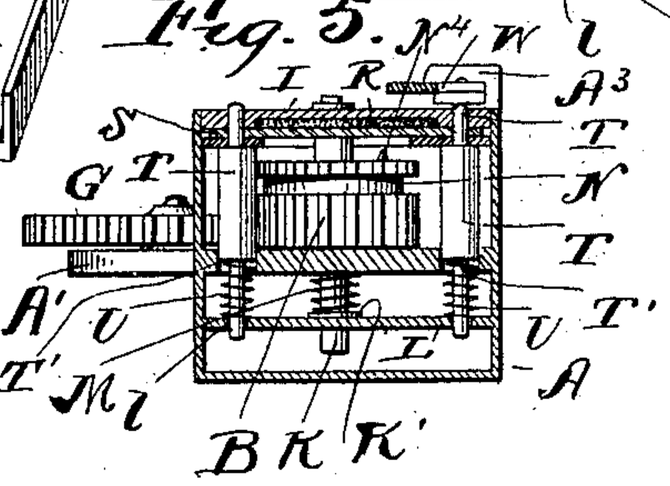
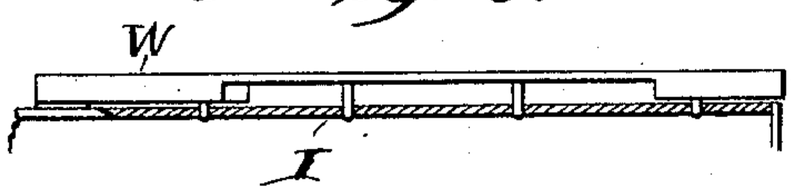


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN A. MEHLING, OF CLEVELAND, OHIO, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE MEHLING MANUFACTURING COMPANY.

REGISTER.

SPECIFICATION forming part of Letters Patent No. 568,033, dated September 22, 1896.

Application filed February 23, 1894. Renewed July 9, 1896. Serial No. 598,592. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. MEHLING, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Registers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in registers which are used in connection with coin-collecting boxes or similar contrivances for the purpose of registering the collections made and of obtaining a record thereof.

The prime or chief object of my improvement is to securely inclose the registering mechanism within a case or box and to so arrange the card or slip upon which the record is to be made that removal of the same cannot take place without causing first an impression thereon of the position of each of the registering-wheels and the total number registered.

With this object in view, and to the end of making the register as simple and durable as possible, my invention consists in certain features of construction and in combinations of parts hereinafter described, and pointed out in the claims.

A preferable construction of register embodying my invention is shown in the accompanying drawings, wherein—

Figure 1 is a top plan of the register, portions being broken away to more clearly show the construction. Fig. 2 is a side elevation, partly broken away and in section. Fig. 3 is a perspective of the record-receiving slip or card holder, showing the under side of the holder, a portion of said slip or card being shown broken away. Figs. 4 and 5 are transverse sections on lines 4 4 and 5 5, respectively, Figs. 1 and 2. Fig. 6 illustrates a modification of the means provided for securing an indication upon the card-holder before the latter can be removed, a more definite description thereof being given hereinafter.

Referring to the drawings, A represents the box or case in which the register-wheels are inclosed. Any number of said wheels may be employed, according to the magnitude of the maximum number that it is desired to have the register capable of registering. The register illustrated in the present case has four of said registering-wheels, (marked B C D E, respectively.) Wheel B is shown as an ordinary spur-gear in mesh with another gear G, that is supported and has motion communicated thereto in any approved manner. Wheels C, D, and E are shown provided with ratchet-teeth and each of the registering-wheels has ten teeth, and one of the teeth of each of said wheels is provided with an outwardly-projecting pin or member H. The registering-wheels extend above the driving-gear, as shown in Fig. 2, and the laterally-projecting pin or member H on wheel B is upon that portion of said wheel that extends above the driving-gear, so that it will not interfere with or obstruct the operation of said wheels. I would here remark that box or case A is slotted, as at *a*, (see Fig. 2,) to accommodate the location and operation of gear G. Wheels B, C, D, and E are designed to register, respectively, units, tens, hundreds, and thousands. The arrangement of parts is such that when the units-wheel B has been turned ten teeth the outwardly-projecting pin or member H thereof shall have actuated the tens-wheel C the distance of one tooth. When the tens-wheel has been turned ten teeth, the outwardly-projecting pin or member H thereof shall have actuated the hundreds-wheel D the distance of one tooth, and when the hundreds-wheel has been turned its full number of teeth (ten teeth) the outwardly-projecting pin or member H of said wheel shall have actuated the thousands-wheel E the distance of one tooth and the outwardly-projecting pin H of the thousands-wheel or last wheel of the register meets a suitably-located fixed lug or stop for arresting the operation of the register when the maximum number that the register is capable of registering has been registered.

The registering-wheels rest upon the partition A′ of box or case A, the depth of which is such that when the registering-wheels are in the position indicated their upper surfaces shall be located a suitable distance below the under side of the lid or cover I of said box or case, and said wheels are so supported that they are capable of being elevated from their

seat within the case or box, each of said wheels at its lower end being provided with an axial arbor K, that extends downwardly through a hole A^2 in the partition A′ of box or case A and through a hole *l* in a bar or plate L, supported a suitable distance below the partition of box or case A, said bar or plate L being supported in any suitable manner. A spring M is mounted upon each of arbors K. Springs M are confined, respectively, between the partition of box or case A and a laterally-projecting flange or member K′ upon the respective arbor above member L and act in the direction to retain the respective registering-wheel in its seated position.

Each of wheels B, C, and D is annularly cut away or recessed, as at N, (see Figs. 4 and 5,) to accommodate the location of the outwardly-projecting pin or member H of the next succeeding wheel.

The lid or cover I of the box, above each registering-wheel, is provided with a dial O and a pointer or index-finger P to indicate upon the dial the number registered by the respective registering-wheel. The pointers or index-fingers P are operatively mounted, respectively, upon a hollow arbor Q, that extends downwardly through a hole I′ in the lid or cover and is operatively connected in any approved manner with the respective registering-wheel.

Arbors Q are rotatably supported by the lid or cover I, the same being held to said cover, respectively, by the respective pointer or index-finger on the outer side of the cover and a shoulder Q′ formed upon the respective arbor at the inner side of the cover. Arbors Q are operatively connected with the respective registering-wheel in such a manner that they are capable of moving endwise without being operatively disconnected from the respective wheel. This is accomplished by providing the registering-wheels with a counterbore N′, and by providing the portion N^2 of the wheels, centrally of said bore, with a laterally-projecting pin or lug N^3, engaging a lateral longitudinal slot Q^2 in the respective hollow arbor Q. This capability of the index-finger bearing arbors to move endwise accommodates the depression of the lid or cover of box or case A, which lid or cover is depressibly supported. Lid or cover I at each end has preferably a depending flange I^2 that nicely fits inside of the respective end of the box or case. The lid or cover upon its under side is preferably lined with a thin layer R of felt or other suitable soft or yielding material, and preferably immediately upon this felt or yielding material a slip or card S of paper or other puncturable material is provided and suitably held in place, said slip of paper or puncturable material being adapted to be pierced upon the depression of its holder, the lid, or cover by points N^4, formed upon the top side of the registering-wheels, each of said wheels being provided with one puncturing-point.

The lid I being a cover and card-holder combined rests upon the diametrically-enlarged central portion of upright pins or posts T, whose upper reduced ends extend loosely into or through corresponding perforations in said holder. The pins or posts T rest upon coil-springs U, confined upon the pins or posts between the bar or plate L and the shoulder T′, formed at the lower end of the centrally-enlarged portion of the respective pin or post, the lower end of the latter extending easily through a corresponding perforation in said bar or plate.

By the construction just described it will be observed that the holder I is depressibly supported, as already indicated, but the arrangement of parts is such that the puncturing-points N^4 of the register-wheel shall be normally out of contact with the record-receiving slip or card carried by said holder. Holder I is held in its normal position (wherein the record-receiving slip or card is held in position to be punctured) by means of a bar or lever W, that at one end is pivoted or fulcrumed, as at W′, at one side and preferably near one end of box or case A, and at or near its other end is adapted to engage the under side of an overhanging arm or member A^3, rigid with said case or box.

A very important feature of my invention consists in the provision of suitable means whereby the arm or lever W cannot be moved from the position in which it retains the holder I in its normal position without first depressing said holder to such an extent as to cause the puncturing-points N^4 to perform their function. The means referred to may consist of one or more holes or perforations W^2, formed in the arm or lever W and adapted, in the normal or upper position of the holder I, to be engaged by a corresponding number of pins or lugs I^3, formed on the holder, as shown in Figs. 1 and 2, or, if desired, the pins or lugs I^3 may be formed on the arm or lever W, and the engaging holes may be formed in the holder I, as shown in Fig. 6, and the arrangement of parts is such that said arm or lever cannot be actuated to release the holder I without first depressing said holder, and that the holder, in order to permit said actuation of the locking arm or lever, must first be depressed such a distance as to cause the puncturing-points N^4 to perform their function, as already indicated, and while the holder is thus held depressed the engaging pins or lugs and holes in the locking arm or lever and holder are disengaged from each other and accommodate the actuation of said arm or lever to release the holder preparatory to removing the latter when required to introduce a new record-receiving slip or card. I would here remark that the record-receiving slip or card has printed or marked thereon dials S′, as seen in Fig. 6, corresponding with the dials upon lid or cover or holder I, and the arrangement of parts is such that, when properly set, the pointers or index-fingers of the

registering-wheels shall be located directly above the puncturing-points, so that when the slip of paper or card S is punctured, as hereinbefore indicated, it will bear an absolutely correct record of the total number registered. The felt or soft material R interposed between the record-receiving slip or card and the inner side of holder I enables the record-receiving slip or card to be properly pierced by the puncturing-points when the holder is depressed, as hereinbefore described Said strip of felt or soft material is preferably cemented to the inner side of the holder I, and the record-receiving slip or card is held in place at the inner side of said holder against the layer of soft material between it and the holder, preferably by means of a frame Y, that is hinged, as at Y′, at one end of the holder. I would also remark that pawls Z are provided for engaging and preventing the registering-wheels C, D, and E from turning in the reverse direction, and the springs Z′ are provided for retaining said pawls in engagement with the respective wheels, said springs and pawls being suitably supported within the box or case A.

What I claim is—

1. In a register, the combination of the registering-wheels, inclosing case or box, a puncturing-point upon each of said wheels, a record-receiving slip or card holder removably supported adjacent to the puncturing-points and holding a slip or card which adjacent to the registering-wheels bears dials adapted to be pierced or engaged by the puncturing-points, a suitable device or mechanism for locking the aforesaid holder in its normal position and suitable means for retaining the locking device or mechanism in its locking position, the arrangement of parts being such that engagement between the puncturing-points and the record-receiving slip or card must necessarily have been effected before the locking device or mechanism can be actuated to unlock, substantially as set forth.

2. In a register, the combination of the registering-wheels, inclosing case or box, a puncturing-point upon each of the registering-wheels, a record-receiving slip or card holder removably supported adjacent to the puncturing-points and holding a slip or card having a dial marked or printed thereon adjacent to each registering-wheel, the dials on the slip or card being adapted to be pierced or engaged by the puncturing-points, a bar or lever for locking said slip or card holder with the slip or card in position to be punctured or engaged by the puncturing-points and suitable means for holding said arm or lever in its locking position, the arrangement of parts being such that the locking bar or lever cannot be released by the means adapted to hold it in its locking position until an engagement between the puncturing-points and record-receiving slip or card is effected, substantially as set forth.

3. In a register, the combination of the registering-wheels, a puncturing-point upon each of the registering-wheels, a record-receiving slip or card holder depressibly supported adjacent to the puncturing-points and holding a slip or card that has a dial marked or printed thereon adjacent to each registering-wheel, the dials on the slip or card being adapted to be pierced or engaged by the puncturing-points, a bar or lever for locking said slip or card holder in its normal position, an arm or member overhanging and adapted to engage the outer side of said holder in the normal position of the latter, and the holder and aforesaid locking arm or lever being provided the one with one or more lugs or pins and the other with a corresponding number of holes or perforations for receiving said pins or lugs in the normal position of the holder, the arrangement of parts being such that the holder must be depressed in order to disengage said holes and pins or lugs and that, upon such depression of the holder, the aforesaid puncturing-points shall perform their function, substantially as set forth.

4. In a register, the combination of the registering-wheels, a puncturing-point upon each of said wheels, a record-receiving slip or card holder depressibly supported adjacent to the puncturing-points and holding a slip or card which, adjacent to the registering-wheels, bears dials adapted to be pierced or engaged by the puncturing-points, springs acting in the direction to separate said holder from the puncturing-points, suitable device or mechanism for locking the aforesaid holder in its normal position, and suitable means for retaining the locking device or mechanism in its locking position, the arrangement of parts being such that the record-receiving slip or card holder must be depressed to bring the slip or card carried thereby into engagement with the puncturing-points before the aforesaid locking device or mechanism can be actuated to unlock, substantially as set forth.

5. In a register, the combination of the registering-wheels, inclosing case or box, depressible lid or cover for said box or case, a record-receiving slip or card having a dial marked thereon adjacent to each registering-wheel, a puncturing-point upon each registering-wheel for marking upon the adjacent dial the number registered by said wheel, an arm or lever fulcrumed or pivoted at or near one end and adapted to engage the outer side of and lock the lid or cover in its closed position, and the inclosing box or case having an overhanging member the under side whereof is adapted to be engaged by said arm or lever in the locking position of the latter, and the lid or cover and said locking arm or lever being provided the one with one or more lugs or pins and the other with a corresponding number of holes for receiving said pins or lugs in the locking position of the arm or lever, the arrangement of parts being such that the lid or cover must be depressed in order to disengage said holes and pins or lugs and that,

upon such depression of the lid or cover, the aforesaid puncturing-points shall perform their function, substantially as set forth.

6. In a register, the combination of the registering-wheels, inclosing case or box, lid or cover for said box or case, pins or posts supporting said lid or cover, and springs supporting said posts or pins, record-receiving slip or card supported at the inner side of the lid or cover and having a dial printed or marked thereon adjacent to each registering-wheel, a puncturing-point upon each registering-wheel for marking the number registered by said wheel upon the adjacent dial, suitable means for holding the lid or cover in its closed position, and suitable means which necessitate the depression of the lid or cover to bring the record-receiving card or slip carried thereby into contact with the puncturing-points before the lid or cover can be released or removed, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 14th day of February, 1894.

JOHN A. MEHLING.

Witnesses:
C. H. DORER,
WARD HOOVER.