

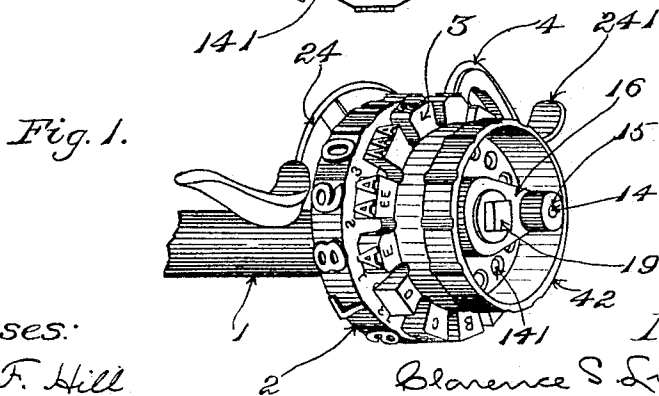
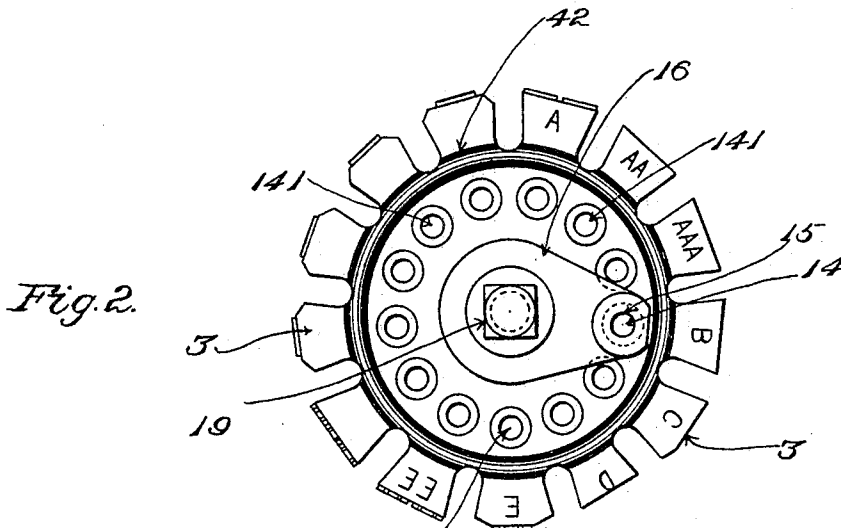
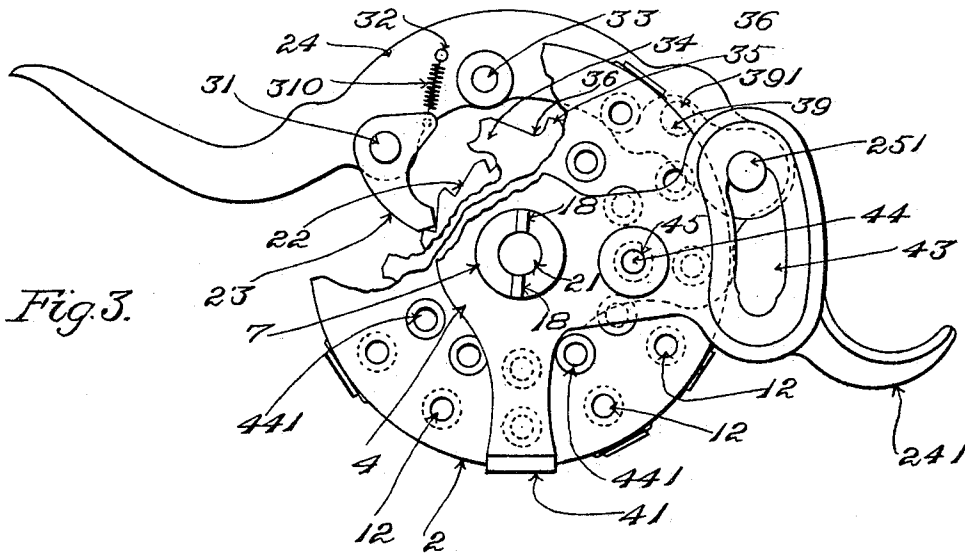
No. 766,635.

PATENTED AUG. 2, 1904.

C. S. LUITWIELER.
UPPER LEATHER PIECE MARKER.
APPLICATION FILED NOV. 28, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:
Oscar F. Hill
Alene Farr

Inventor:
Clarence S. Luitwiler
By Nathan Calder & Randall
Attorneys.

No. 766,635.

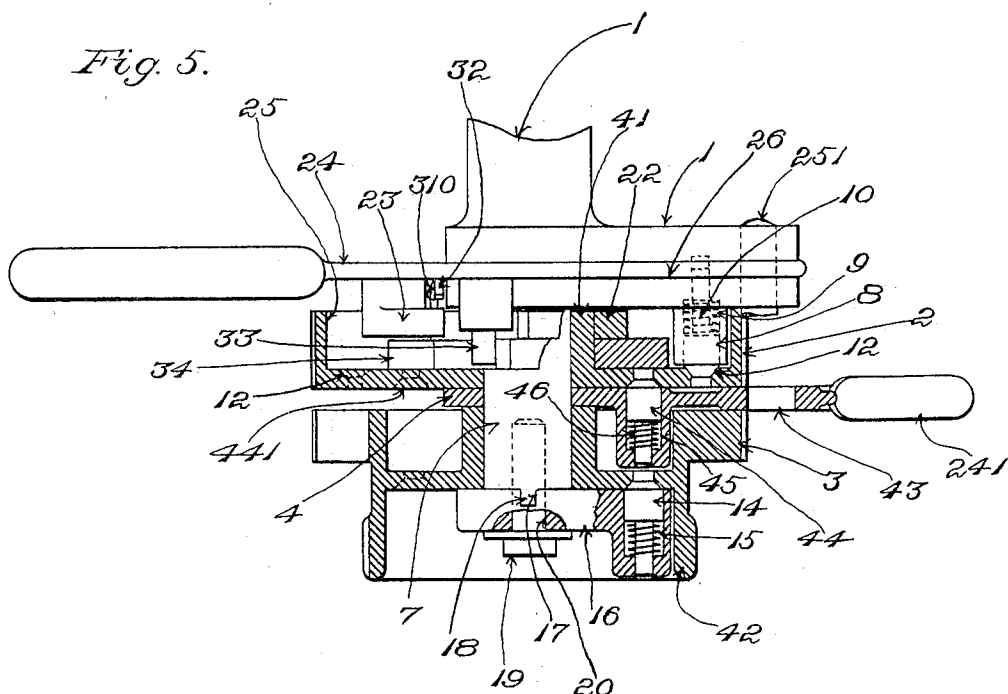
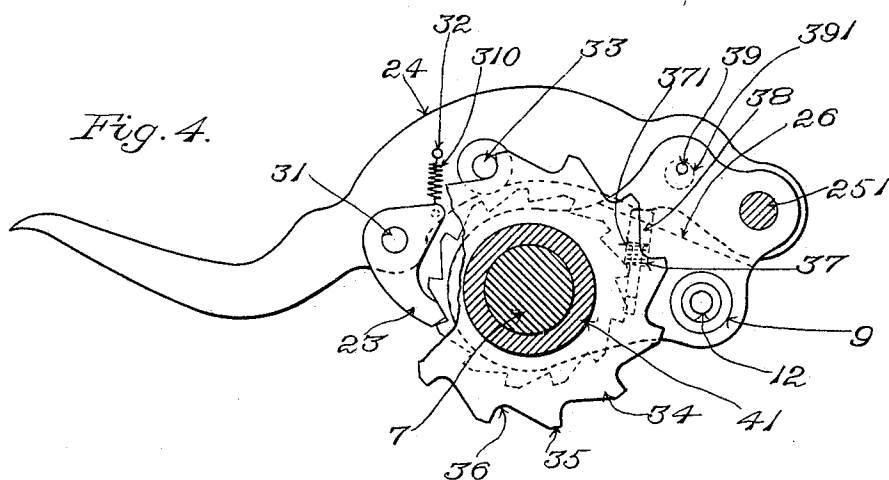
PATENTED AUG. 2, 1904.

C. S. LUITWIELER.
UPPER LEATHER PIECE MARKER.

APPLICATION FILED NOV. 28, 1902.

NO MODEL.

2 SHEETS—SHEET 2.



Witnesses:
Oscar F. Hill
Alvin Tarr

Inventor:
Clarence S. Luitwiler
by Nathan Calver & Randall
Attorneys.

UNITED STATES PATENT OFFICE.

CLARENCE S. LUITWIELER, OF BOSTON, MASSACHUSETTS.

UPPER-LEATHER-PIECE MARKER.

SPECIFICATION forming part of Letters Patent No. 766,635, dated August 2, 1904.

Application filed November 28, 1902. Serial No. 133,033. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE S. LUITWIELER, a citizen of the United States, residing at Boston, in the county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Upper-Leather-Piece Markers, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention has relation to printing or marking machines of the class in which the printing-head is furnished with disks or wheels bearing suitable printing characters upon their peripheries and adapted to be set by rotating them about their respective axes to produce the required combination or arrangement of characters to be impressed or imprinted upon the articles needing to be printed or marked.

In the manufacture of boots and shoes it is customary after cutting out the different portions of leather which when subsequently joined together constitute the upper of a shoe—for example, the quarter, vamp, and other pieces—to mark them in suitable manner, so as to identify the size, width, &c., of shoe for which they are intended for convenience in subsequently assembling the component parts of an upper—that is to say, for the purpose of enabling in the stitching-room, for example, pieces all intended for one and the same size of upper to be selected by the operative for the purpose of being united together. Usually in practice heretofore the pieces have been marked by hand with crayons of suitable colors after being cut out. Such marking, however, has the drawback that in consequence of the handling to which the pieces are subjected after being marked the crayon-markings become more or less completely effaced. It often occurs that the marking on some pieces becomes wholly removed, and it then becomes necessary in order to identify the size, &c., to return such pieces to the cutting-out room and have them compared with the patterns which were used in their production and again marked. In cutting out the parts for the uppers of shoes ordinarily the work is done by the “case,” as it is termed, a prescribed number of shoes

of each of a certain range of sizes being provided for. The sizes, respectively, are cut in regular succession, those bearing the lowest number coming first. The widths, however, may come in a varying sequence.

The illustrated embodiment of my invention has been devised more especially for the purpose of enabling the parts for the uppers of shoes to be marked as or immediately after they have been cut and before having been sent forward to the stitching-room. The said embodiment is provided with a size-wheel and means for rotating the same step by step, so as to present the numbers in consecutive order, a width-wheel having in connection therewith means whereby it may be set by hand into any position required by the width of the intended shoe to which the piece in hand pertains, and a half-size marker located conveniently adjacent, preferably between, the two wheels and adapted to be thrown into operative position by hand whenever required.

For convenience of manipulation the half-size marker has in connection therewith a coupling device by means of which it is engaged with the size-wheel, so that after the half-size marker has been placed in operative position, as above referred to, when next a change is made in the position of the size-wheel the half-size marker automatically is thrown into inoperative position out of the way, in readiness, however, to be again set in operative position when next required. It may be stated in this connection that I have set forth above the leading purpose for which my invention has been devised. The principles of the invention are not, however, necessarily restricted to use in the precise connection stated—to wit, the marking of the pieces for the uppers of shoes—for they may be utilized for other purposes as well, and the number of wheels employed in practice, the nature and significance of the characters on such wheels, &c., may vary.

My invention has relation more especially to the printing-head—that is to say, to the printing devices and their carrier.

The precise character and arrangement of the carrier itself and the manner and means of supporting and operating the same form no

portion of the invention. The machine in general in which the invention is utilized and the means and manner of supporting and operating the carrier may be of any approved character.

The accompanying drawings show only the features most immediately involved in the present invention, and only a small portion of a carrier is represented.

10 In the drawings, Figure 1 is isometric of a printing-head having my invention embodied therein. Fig. 2 shows in elevation the wheel at the outer end of the said printing-head and the stop or detent device coacting therewith.

15 Fig. 3 shows the printing-head in elevation with the wheel and detent device of Fig. 2 removed and certain parts broken away in order to show more clearly parts which would otherwise be hidden. Fig. 4 is a sectional detail showing more particularly the devices for advancing one of the printing-wheels and the detent devices in connection with said wheel.

20 Fig. 5 is a view of the printing-head mainly in horizontal section.

25 Having reference to the drawings, a portion of the arm constituting the carrier for the printing devices is indicated at 1 in Figs. 1 and 5. At 2, Figs. 1, 2, and 5, is the wheel which in the present instance constitutes the size-wheel.

30 At 3, Figs. 1, 3, and 5, is the wheel which in the present instance constitutes the width-wheel, and at 4, Figs. 1, 3, and 5, is the half-size marker. The two wheels and the half-size marker are sleeved upon the stud 7, Figs. 3, 4, and 5, with which the carrier 1 is provided and are capable of turning independently around the said stud in order to enable the required characters on the said wheels to be brought into printing position on the carrier

35 and to enable the half-size marker to be swung into and out of the said position as required in the use of the said machine. In the present arrangement the half-size marker is located between the two wheels. (See Figs. 1 and 5.) The size-wheel 2 is furnished around its periphery with raised characters in the shape of numerals, while the width-wheel 3 is provided around its periphery with radial projections which bear raised characters in the shape of

40 letters. Each of the said wheels is provided also with index characters which when brought to a certain point by the adjustment of the respective wheels indicate the characters which are in printing position. In the present instance the index characters of size-wheel 2 are numerals corresponding with those on the periphery of said wheel and are located upon one side of wheel 2 near its periphery, while those of width-wheel 3 are letters corresponding with the letters at the periphery of said

45 wheel and are located upon the sides of the radial projections bearing the width characters. The half-size marker is provided with a marking-surface 41, Fig. 3, shaped to produce a transverse line intervening between

the size-numeral and the width-letter in the imprint upon the piece which has been marked. Suitable detent devices are provided for the purpose of holding the two wheels from unintended or accidental movement and also for positioning them each time they are adjusted.

70 In the present embodiment of the invention for these purposes there are provided spring-pressed pins or bolts, the heads of which are arranged to enter depressions or holes which are formed in the webs of the two wheels, a circular series of the said depressions or holes being formed in each wheel.

The locking and positioning pin or bolt for the size-wheel is indicated at 8, Figs. 4 and 5. It occupies a socket 9, with which the carrier 1 is provided for its reception and is backed up by a spring 10, Fig. 5, operating with a tendency to project the said pin or bolt and cause its outer end to enter the hole or recess 12 in the web of the size-wheel, which is presented in position adjacent to the said pin or bolt. The pin or bolt 8 has a beveled acting end, facilitating the entrance of the said end into one of the holes or recesses 12, &c., of the size-wheel and also enabling the pin or bolt 8 to be pressed back when sufficient force is applied to the size-wheel tending to rotate the latter. The pin or bolt 14, Figs. 1, 2, and 5, for locking and positioning the width-wheel occupies a socket at 15 in the free extremity of an arm 16, which is fitted to the free end of the stud 7, its beveled extremity entering the holes 141 in the web of the width-wheel as the said holes successively are caused to register with the said pin or bolt by the rotary movement of the width-wheel. The said arm 16 is provided at its inner extremity with a transverse groove 17, Fig. 5, to receive radial projections 18 18, Figs. 3 and 5, on the end of the stud 7. By the engagement of the arm with the said projections 18 18 the arm 16 is locked from change of position, being held from rotating with the width-wheel, and the said arm is secured to the end of the said stud by means of a bolt or screw 19, Figs. 1, 2, and 5, having a flanged head which fits against the outer side of the arm, the stem of the said bolt passing through an eye 20 in the arm and the said stem being screwed into a hole 21, Fig. 3, that is tapped in the outer extremity of the stud.

The means by which the operative is enabled to rotate the size-wheel intermittently to present the size-numerals upon its periphery successively at the printing-point comprises the ratchet-wheel 22, Figs. 3, 4, and 5, fast with the size-wheel, the pawl 23, engaging with the said ratchet-wheel, and the pawl-carrier 24, the said pawl-carrier being in the shape of a lever, which is pivoted to the carrier 1 upon the stud 251, Fig. 3, the pivotal end of the said pawl-carrier fitting and working in a slot at 26, which is formed in the carrier 1 for the purpose of guiding and steady-

ing the pawl-carrier in its movements. The pawl 23 is mounted upon the side of the pawl-carrier on a stud 31, projecting from the pawl-carrier, and its tail has connected therewith one extremity of a tension-spring 310, the other extremity of the said spring being connected with a small stud 32 on the pawl-carrier. By the action of the said spring the working end of the pawl is kept in engagement with the ratchet-wheel. For the purpose of arresting the size-wheel from over-running when operated to shift the same by movement suddenly or forcibly applied to the pawl-carrier the said pawl-carrier is furnished with a locking-pin 33, Figs. 3, 4, and 5, projecting therefrom into position to engage with the locking-wheel 34, made fast to the size-wheel and having teeth or projections 35 with intervening depressions or notches 36, which successively receive the said locking-pin 33. Thus when the pawl-carrier 24 is depressed the engagement of the pawl 23 with the ratchet-wheel 22 shifts the size-wheel one step, and at the completion of the required movement of the size-wheel the said locking-pin 33 enters one of the notches or recesses 36 of the locking-wheel 34 and by its engagement with the succeeding projection or tooth 35 arrests the rotary movement of the size-wheel. When the pawl-carrier is permitted to rise into its normal position under the influence of its elevating-spring 37, Fig. 4, the size-wheel is retained in position by the spring-actuated pin or bolt 8. The elevating-spring 37 for the pawl-carrier is contained in a socket 371, Fig. 4, bored in the carrier 1, the said spring acting against a pin or bolt 38, which contacts by its outer end with the under side of the pawl-carrier adjacent the pivot of the latter. For the purpose of limiting the upward movement of the pawl-carrier a stop-pin 39 is applied to the carrier, the said stop-pin passing through a hole 391 made in the pawl-carrier.

The stop-wheel 34 is larger in diameter than the ratchet-wheel 22, as shown in Figs. 4 and 5, and is located between the said ratchet-wheel and the web of the size-wheel 2, both of said wheels being fast upon the laterally-projecting sleeve or hub 41 of the size-wheel 2 and both of the said wheels being covered by the laterally-projecting flange or rim 25 at the periphery of the size-wheel. The arm 16 and its appurtenances are in similar manner contained within and protected by the outwardly-extending flange 42, forming part of the hub of the width-wheel 3.

For the purpose of limiting the half-size marker in its movements, and thereby determining the positions of the same at the opposite extremes of such movements, the body of the half-size marker is formed with a slot, as 43, Figs. 3 and 5, through which passes the extended body or stem of the pivotal stud 251, on which the pawl-carrier 24 is mounted. Stud 251 is represented as partly broken away

in Fig. 5. The said body of the half-size marker is furnished with a handle 241, Figs. 1, 3, and 5, for convenience in moving the same by hand.

In order to couple or clutch the half-size marker to the size-wheel in such manner as to leave the half-size marker free to be moved by hand independently of the size-wheel—as, for example, when it is desired to throw the half-size marker into working position and yet enable the size-wheel when advanced for the purpose of presenting a different size-numeral at the printing-point to cause the said half-size marker to move in unison with the size-wheel, and thereby restore the half-size marker to its normal or inoperative position—I employ in the present embodiment of the invention the yielding clutch comprising the pin or bolt 44, Figs. 3 and 5, occupying a chamber 45 in the body of the half-size marker and backed up by a spring 46, Fig. 6, which tends to project the head of the said pin or bolt beyond the side of the half-size marker and into one of the holes or recesses 441, Figs. 3 and 5, of the size-wheel. The engagement of the said head of the pin or bolt 44 in one of the said holes or recesses is sufficient to enable the size-wheel when moving to carry the half-size marker backward from its working position, the half-size marker moving in unison with the size-wheel until arrested by contact of the end of its slot 43 with the stud 251, by which time the advance of the size-wheel occasioned by the depression of the pawl-carrier will also have terminated. So long as the half-size marker occupies its retracted position, being held from further movement by the contact of the end of its slot with the said stud 251, the advancing movements which may be communicated to the size-wheel will merely cause the coupling pin or bolt to yield, so as to permit the size-wheel to slip by.

What I claim is—

1. In combination, the marking-wheel provided with a series of characters arranged in succession, the marking device adjoining the said wheel occupying normally an inoperative or idle position in which it does not participate in rotary movement of the said wheel, and means to return the said marking device from the working position thereof to the said idle position when a shift of the marking-wheel occurs to bring a fresh character of the said wheel into working position.

2. In combination, the marking-wheel, devices to advance the said wheel step by step, the swinging marking device occupying normally an inoperative or idle position in which it does not participate in rotary movement of the said wheel, and means to move the marking device from the working position thereof to its idle position when an advance of the marking-wheel takes place.

3. In combination, the marking-wheel, means to advance the said wheel step by step,

the marking device adjoining the said wheel, mounted to swing from its idle position to its working position and vice versa, and provided with means for moving the same independently from the said idle position to the said working position, and means to return the marking device from the working position to the idle position thereof in unison with the movement of the marking-wheel when an advance of the latter takes place.

4. In combination, the marking-wheel, the ratchet-wheel connected therewith, a pawl and pawl-carrier to operate the said ratchet-wheel and marking-wheel step by step, a marking device adjoining the said wheel, occupying normally an idle position, and movable independently from the said idle position to the working position thereof, and means to restore the marking device from the working position thereof to its idle position simultaneously with the advance of the marking-wheel.

5. In combination, a marking-wheel provided with a series of characters arranged in succession, means to advance the said wheel step by step, a marking device adjoining the said wheel, occupying normally an idle position, and movable independently from the said idle position to the working position thereof, and means to restore the marking device from the working position thereof to its idle position when an advance of the marking-wheel is caused to take place.

6. In combination, a marking-wheel provided with a series of characters arranged in succession, means to advance the said wheel step by step, a marking device adjoining the said wheel, occupying normally an idle position, and movable independently from the said idle position to the working position thereof, and a clutch device whereby the marking device is operated from the marking-wheel when an advance of the latter is caused to take place and thereby is restored to the said idle position.

7. In combination, a marking-wheel provided with a series of characters arranged in succession, means to advance the said wheel step by step, a second marking-wheel also provided with a series of characters and adapted to be shifted to bring said characters into op-

eration as required, a marking device between the said wheels occupying normally an idle position, and movable independently from the said idle position to the working position thereof, and means to restore the marking device from the working position thereof to its idle position when an advance of the marking-wheel first mentioned is caused to take place.

8. In combination, a marking-wheel provided with a series of characters arranged in succession, pawl-and-ratchet devices to advance the said wheel step by step, means to prevent overrunning of the said wheel, a second marking-wheel also provided with a series of characters and adapted to be shifted to bring said characters into operation as required, a marking device between the said wheels occupying normally an idle position and movable from the said idle position to the working position thereof, and means to return the said marking device from the said working position to the said idle position when a shift of the marking-wheel first mentioned is caused to occur to place a fresh character of the said wheel in working position.

9. In a marking-machine, in combination, the wheel 2 having a series of marking characters, a dog or pawl to actuate said wheel step by step, a stop or detent to arrest the wheel at the end of each advance of the same, an operating device common to the said dog or pawl and stop or detent, a wheel 3 provided with a series of marking characters and adapted to be shifted to present the said characters as required at the marking-point, a supplemental marking device, movable from its marking position into a retracted position, and vice versa, and means whereby when the first-mentioned wheel is advanced by its actuating devices movement is transmitted from the same to said marking devices to retract the latter from the marking position thereof, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CLARENCE S. LUITWIELER.

Witnesses:

CHAS. F. RANDALL,

WILLIAM A. COPELAND.