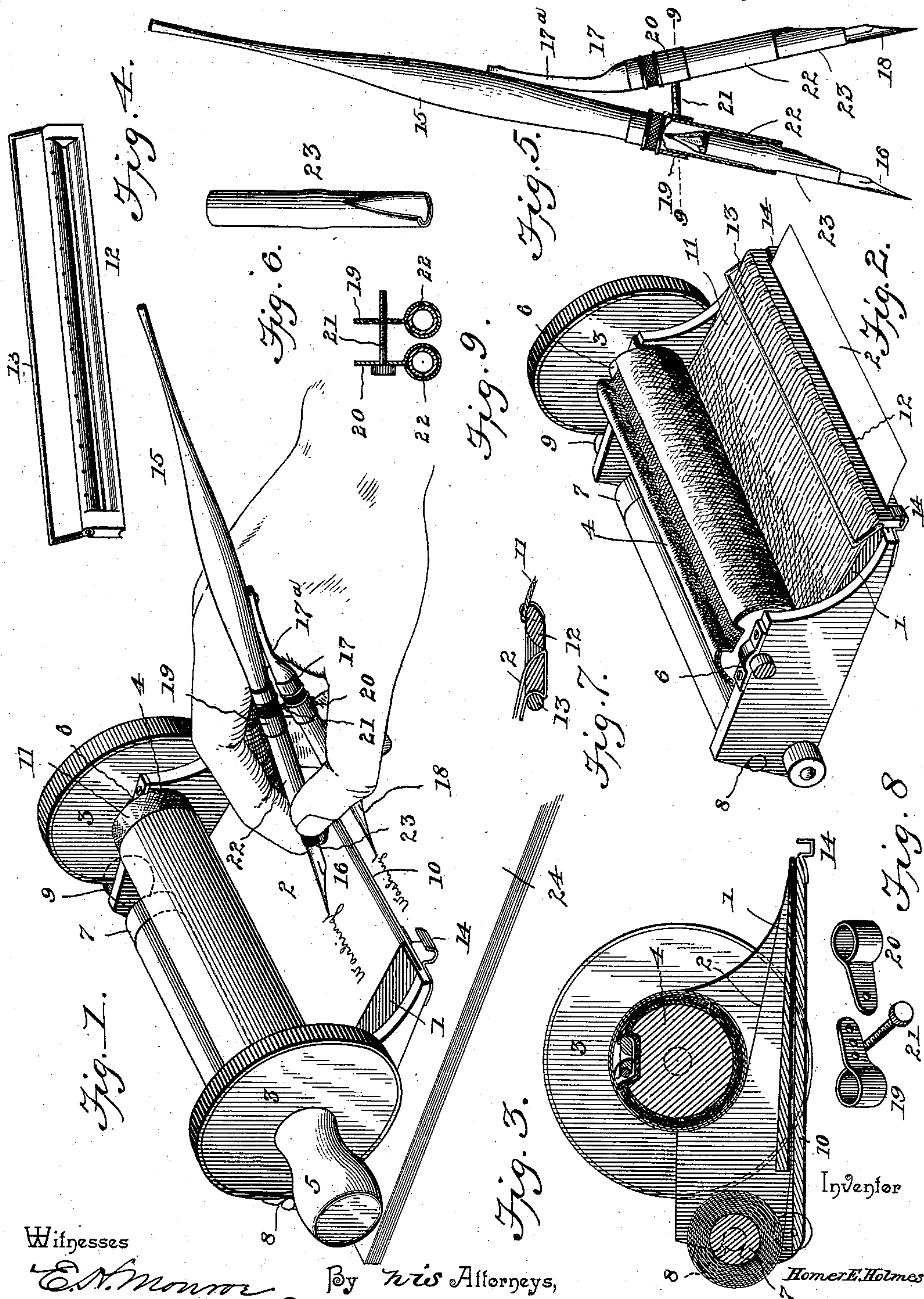


(No Model.)

H. E. HOLMES.  
DUPLEX WRITING APPARATUS.

No. 603,275.

Patented May 3, 1898.



Witnesses

E. N. Munn

*[Signature]*

By his Attorneys,

*Chas. H. Snow & Co.*

Inventor

Homer E. Holmes



# UNITED STATES PATENT OFFICE.

HOMER ELMER HOLMES, OF BURR OAK, KANSAS.

## DUPLEX-WRITING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 603,275, dated May 3, 1898.

Application filed May 29, 1897. Serial No. 638,771. (No model.)

*To all whom it may concern:*

Be it known that I, HOMER ELMER HOLMES, a citizen of the United States, residing at Burr Oak, in the county of Jewell and State of Kansas, have invented a new and useful Duplex-Writing Apparatus, of which the following is a specification.

My invention relates to a duplex or manifold writer, and has for its object to provide a combination of inscribing and recording mediums, whereby during the operation of writing a letter by means of a pen or pencil point a duplicate may be written upon a record-strip through the medium of an auxiliary pen or pencil point, and whereby telegraph-operators, copyists, and business men when making out messages, bills, and accounts either in books or on letter-sheets or bill-heads are enabled to form a second copy for record.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a device constructed in accordance with my invention, showing the inscribing medium applied in the operative position. Fig. 2 is a similar view to illustrate the means whereby the record-strip is attached to the receiving-roller. Fig. 3 is a central sectional view of the same, taken perpendicular to the axes of the rollers. Fig. 4 is a detail view in perspective of the clamp for engaging the extremity of the record-strip. Fig. 5 is a detail view, partly in section, of the inscribing medium. Fig. 6 is a detail view of one of the holders detached. Fig. 7 is a detail transverse section of the clamp. Fig. 8 is a detail view in perspective of the means for adjusting the members of the inscribing medium. Fig. 9 is a transverse section on the line 9 9, Fig. 5.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

The frame of the recording medium consists, essentially, of a writing-plate 1, adapted to be traversed by a record-strip 2, and having supporting devices, preferably of frictional construction, such as rubber-tired rollers 3.

In order that the adjustment of the writing-plate and of the record-strip may be accomplished simultaneously, the said supporting devices are preferably attached to the spindle of the receiving roller or drum 4, to which one end of said record-strip is attached; also, the spindle of the receiving roller or drum is extended axially to form a handle 5, which may be grasped by the left hand of the operator in order to facilitate the adjustment of the parts. The bearings 6, in which is mounted the spindle of the roller or drum, rise from the side edges of the writing-plate, and also mounted upon the frame in rear of the receiving roller or drum is a supply and filing roller 7, mounted in open-sided bearings 8, whereby it may be removed for replacement. This supply-roller is extended longitudinally to form a knob 9, and after a record-strip has been exhausted or has received the desired amount of record it may be reeled from the receiving roller or drum to the supply or filing roller 7 and then removed from the machine for filing or other purpose, a second supply-roller being substituted therefor.

The record-strip extends from the supply-roller forwardly to the front edge of the writing-plate, and thence around the latter, and traverses the upper surface of the writing-plate in position to receive a record, and in order to protect the portion of the strip which passes under the writing-surface I preferably horizontally slot the writing-plate or apply a subjacent guard-plate 10, which is arranged parallel with the writing-surface and is spaced therefrom a distance only sufficient to receive the record-strip.

Attached to the receiving-roller, as shown in Figs. 2 and 3, by means of a flexible apron or guard 11 is a clamp 12, consisting of a slotted bar, through which is adapted to extend the extremity of the record-strip, a bail 13 being pivotally mounted upon said bar to engage the extremity of the strip and thereby lock it in place. When it is desired to apply a record-strip to the apparatus as above described, the bar of the clamp is seated in a pair of transversely-alined rests or clips 14, arranged at the front edge of the writing-plate, with the slot of said bar in alinement with the slot of the writing-plate, whereby



as the record-strip is inserted from the rear its front edge passes freely through the slot of the bar and may be readily engaged by turning the bail to the position illustrated in Figs. 2 and 3.

The function of the apron or flexible connection 11 is, primarily, to provide for extending the clamp to the front edge of the writing-plate to facilitate the engagement of the extremity of the record-strip therewith, and, secondarily, to enable the writing to be commenced at a point near the extremity of the strip to avoid leaving a blank space between the end of the strip and the point at which the record begins. A third important advantage of this construction resides in the fact that the paper-clamp can be removed a sufficient distance from the receiving roller or drum to facilitate the manipulation of said clamp either in engaging or disengaging the extremity of the record-strip, and this enables me to arrange said roller close to the plane of the writing-plate, whereby the under side thereof is raised above the plane of the plate an insufficient distance to cause inconvenience to the writer in making the record upon the strip.

In connection with this record device, which is adapted to be rolled over the surface of the desk or table or over a book which is receiving an inscription, I employ an inscribing medium of special construction in that it is provided with a plurality of inscribing-points. In the construction illustrated this inscribing medium consists of a main stem or holder 15, adapted to carry an inscribing-point 16, and an auxiliary holder 17, adapted to carry an auxiliary point 18 and having a spring-shank 17<sup>a</sup> pivotally mounted upon the main holder for lateral swinging movement and being connected therewith by adjusting devices, such as perforated arms 19 and 20 and a set-screw 21, adapted to be engaged with the aligned perforations of said arms to secure the auxiliary and main holders at the desired angular adjustment. Each holder terminates in a barrel 22, which is designed for the reception of a reversible point-carrier 23, said point-carrier being constructed to hold a pen-point at one end and a pencil-point at the other and being reversible to expose either of said points, as may be desired.

In operation each of the inscribing-points is adapted to traverse a different recording-surface. For instance, the inscribing-point of the main holder is adapted to traverse the record-strip on the writing-plate of the recording medium, while the inscribing-point of the auxiliary holder traverses a recording-surface, such as a sheet of paper, a page of an account or record book, or the equivalent thereof. As a line is completed the supporting-rollers of the recording medium are turned to advance the writing-plate a distance equal to the interval between the proposed lines of writing on the stationary record-surface, which has been illustrated in the drawings at

24 and which may consist, as above indicated, of a sheet of note-paper, a book, or the equivalent thereof, and at the same time the record-strip is advanced in an opposite direction upon the writing-plate to bring an un-inscribed portion of the surface under the inscribing-point of the main holder.

The spring-shank of the auxiliary holder yieldingly holds the inscribing-point of the latter at an interval from that of the main holder, and the adjustment of the inscribing-points toward and from each other to the desired interval to suit the convenience of the operator may be secured by manipulating the set-screw which extends loosely through the opening in the arm of the main holder and is threaded into one of the perforations in the arm of the auxiliary holder. Obviously the set-screw should be tightened to reduce the interval between the inscribing-points and loosened to increase the interval, the resilience of the shank of the auxiliary holder serving to maintain the latter in a fixed position with relation to the main holder at the limit allowed by the set-screw.

The pivotal mounting of the auxiliary holder upon the main holder provides for lateral adjustment or swinging movement of the former, and the auxiliary holder is secured at the desired lateral adjustment by means of the set-screw 21, engaging different threaded openings in the arm of the main holder, said arm being provided with the desired number of openings, as shown in Fig. 8, to accomplish the described object.

It is obvious that the record-strip, which is carried by the recording medium, may constitute the main copy when a continuous article is to be written, a record being formed upon stationary recording-surfaces located in the position of that shown at 24; but the arrangement of parts hereinbefore described is preferable under ordinary circumstances and is that which I have found to be particularly convenient in making out bills, telegraph-messages, orders, and the like.

A further advantage of the above-described construction resides in the fact that copies of manuscript can be made by causing one of the inscribing-points to follow the copy while the other makes the record.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

1. A duplex-writing apparatus having a writing-plate provided at its front edge with a transverse guide, revoluble supports mounted upon the plate to traverse a stationary record-surface and support said plate in a position approximately parallel with, and with its front edge contiguous to the plane of, said surface, supply and receiving rollers mounted above and carried by the writing-plate, and



one of them being operatively connected with said rolling supports for actuation thereby, and a record-strip terminally connected respectively to said supply and receiving rollers, traversing the upper and lower surfaces of the writing-plate, and extending around said transverse guide at the front edge thereof, substantially as specified.

2. A duplex-writing apparatus having a writing-plate, supporting-rollers mounted upon the writing-plate to traverse a record-surface, receiving and supply rollers mounted upon the writing-plate to carry a record-strip, the receiving-roller being carried by the common spindle of the supporting-rollers and adapted to receive rotary motion therefrom, and a handle projecting axially from one of the supporting-rollers to provide for manually turning the same to advance the writing-plate and reel the record-strip, in combination with an inscribing medium having a plurality of inscribing-points to respectively traverse the record-strip and the record-surface, substantially as specified.

3. A duplex-writing apparatus having a writing-plate provided at its front end with a transverse guide, transversely opposite main supporting-rollers mounted upon the record-plate in rear of said transverse guide and adapted to traverse a record-surface, rear auxiliary rollers mounted upon the plate to traverse the record-surface in rear of the main supporting-roller, supply and receiving rollers mounted upon the writing-plate in rear of its transverse guide, the receiving-roller being carried by the spindle of said main supporting-rollers, and a record-strip terminally attached respectively to the supply and receiving rollers and extending around said guide, substantially as specified.

4. A duplex-writing apparatus having a writing-plate adapted to be advanced over a record-surface, a receiving-roller mounted upon the writing-plate for carrying a record-strip, a paper-clamp for engaging one extremity of the record-strip, and a flexible connection between the paper-clamp and the receiving-roller, substantially as specified.

5. A duplex-writing apparatus having a writing-plate adapted to be advanced over a record-surface and having a guide-slot parallel with its writing-surface, a receiving roller or drum mounted transversely above the plane of the writing-plate, a clamp comprising a bar having a slot for alinement with the slot of the writing-plate and a bail for engaging the inserted extremity of a record-strip, and a flexible connection between said bar and the receiving-roller, substantially as specified.

6. A duplex-writing apparatus having a writing-plate provided with a slot parallel with its writing-surface, alined supporting-clips contiguous to the front edge of the writing-plate, a receiving-roller mounted transversely above the writing-plate, and a clamp flexibly connected with the receiving-roller

for engaging the extremity of a record-strip, said clamp having a slotted bar adapted to be seated in said supporting-clips with its slot in registration with that of the writing-plate, and means for engaging the extremity of the strip inserted through the slot in the bar, substantially as specified.

7. In a duplex-writing apparatus, the combination with a writing-plate adapted to carry a record-strip and traverse a record-surface, of an inscribing medium having main and auxiliary inscribing-point holders, the auxiliary holder being mounted for lateral adjustment, and for adjustment toward and from the main holder, and means for securing the auxiliary holder in the desired position with relation to the main holder, substantially as specified.

8. In a duplex-writing apparatus, the combination with a writing-plate adapted to carry a record-strip and traverse a record-surface, of an inscribing medium having main and auxiliary inscribing-point holders, the auxiliary holder being mounted for lateral adjustment, and for adjustment toward and from the main holder, and common means for securing the auxiliary holder at the desired adjustment against movement in either direction, substantially as specified.

9. In a duplex-writing apparatus, the combination with a writing-plate adapted to carry a record-strip and traverse a record-surface, of main and auxiliary inscribing-point holders, the auxiliary holder being pivotally mounted upon the main holder for lateral adjustment with relation thereto, and being flexibly connected with said main holder for swinging movement in a plane perpendicular to said lateral movement, whereby the interval between the extremities of the holders may be varied, and means for securing the auxiliary holder at the desired adjustment, substantially as specified.

10. In a duplex-writing apparatus, the combination with a writing-plate adapted to carry a record-strip and traverse a record-surface, of main and auxiliary inscribing-point holders, the auxiliary holder having a spring-shank pivotally mounted upon the main holder to allow lateral adjustment of the free end of the auxiliary holder, and adjustment of said free end toward and from the corresponding end of the main holder, and means for securing the auxiliary holder at the desired adjustment with relation to the main holder, substantially as specified.

11. In a duplex-writing apparatus, the combination with a writing-plate adapted to carry a record-strip and traverse a record-surface, of main and auxiliary inscribing-point holders, the auxiliary holder being mounted upon the main holder for lateral and forward and rearward adjustment, a lateral ear on one of the holders provided with a plurality of threaded sockets, and an adjusting-screw swiveled upon the other holder and engaged with one of the sockets in said ear of the first-



named holder, whereby the auxiliary holder may be secured at the desired adjustment in either of its planes of movement, substantially as specified.

- 5 12. In a duplex-writing apparatus, the combination with a writing-plate adapted to carry a record-strip and traverse a record-surface, of main and auxiliary inscribing-point holders each having a barrel, the auxiliary holder  
10 being mounted upon the main holder for lateral swinging movement and forward and rearward swinging movement, means connecting the holders for securing the auxil-

iary holder in the desired position in both of its planes of movement, and flat inscribing- 15 points having carriers revolubly fitted in said barrels for adjustment to vary the relative positions of said inscribing-points, substantially as specified.

In testimony that I claim the foregoing as 20 my own I have hereto affixed my signature in the presence of two witnesses.

HOMER ELMER HOLMES.

Witnesses:

L. B. ROYER,

O. M. JUDY.