

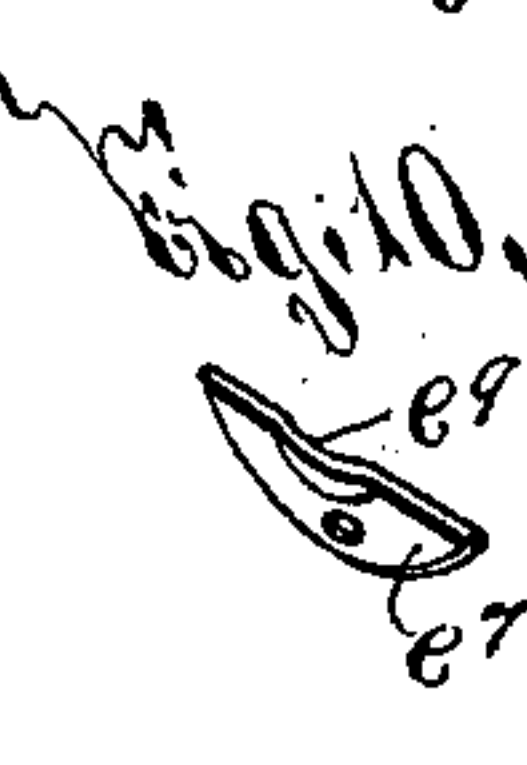
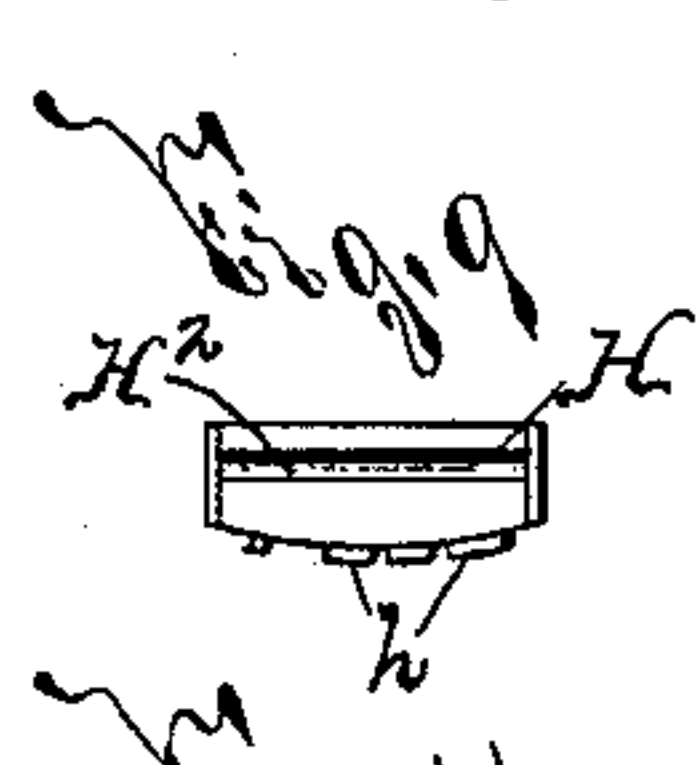
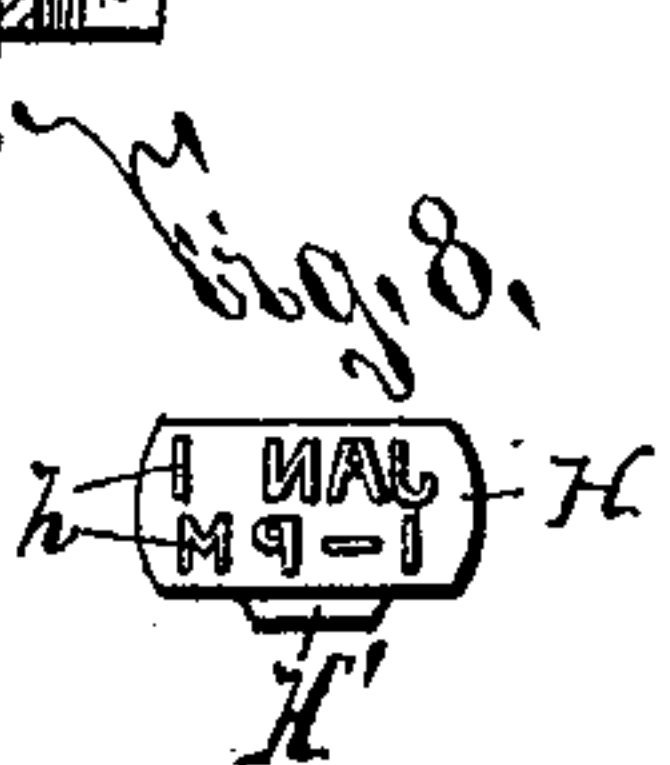
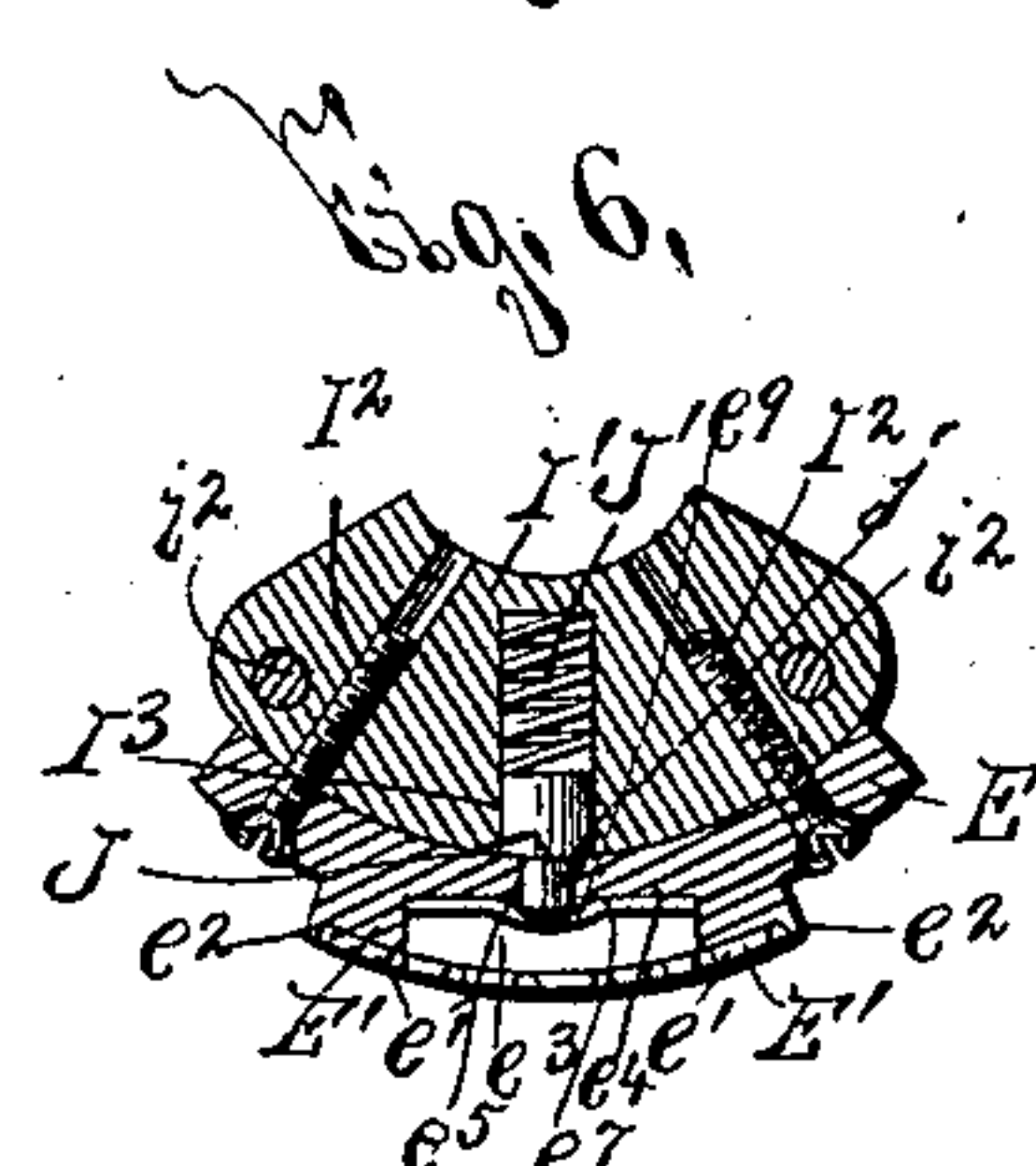
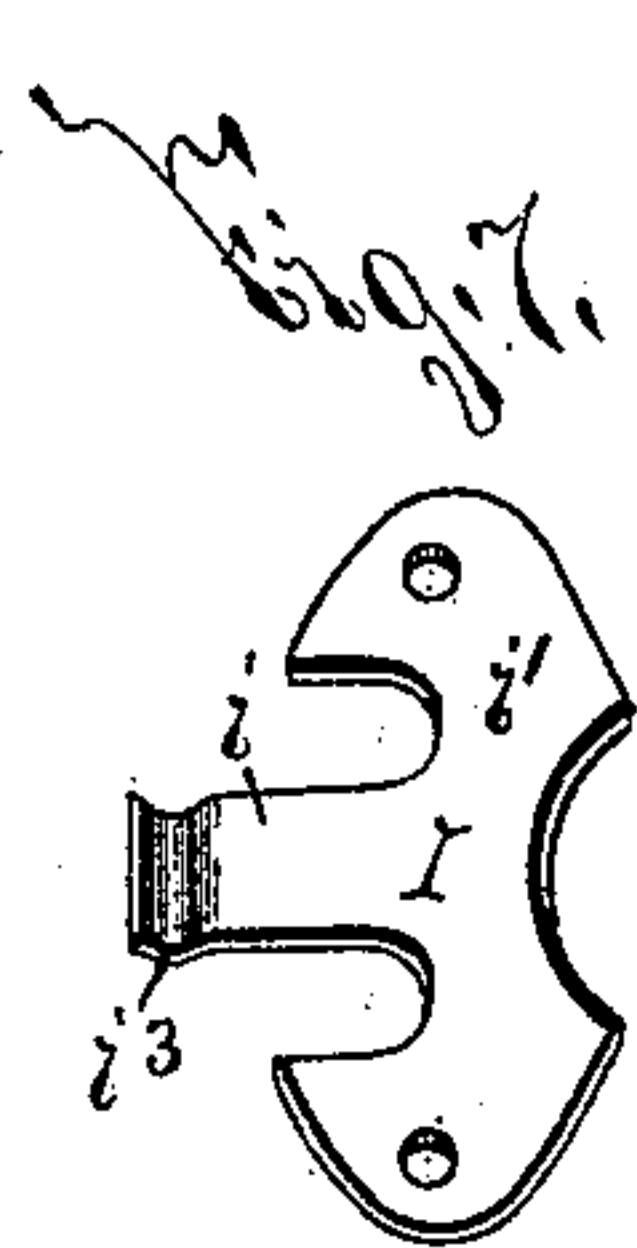
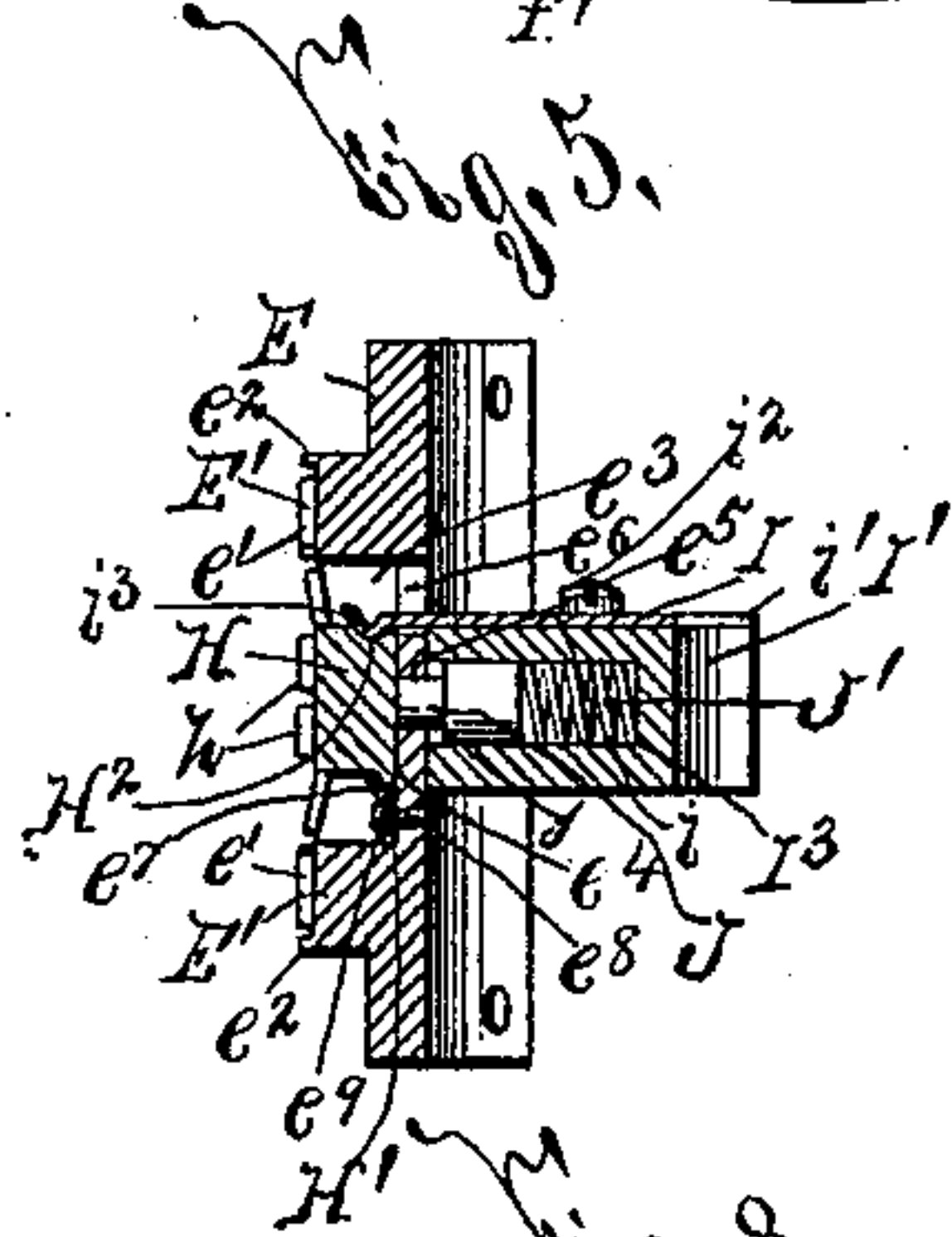
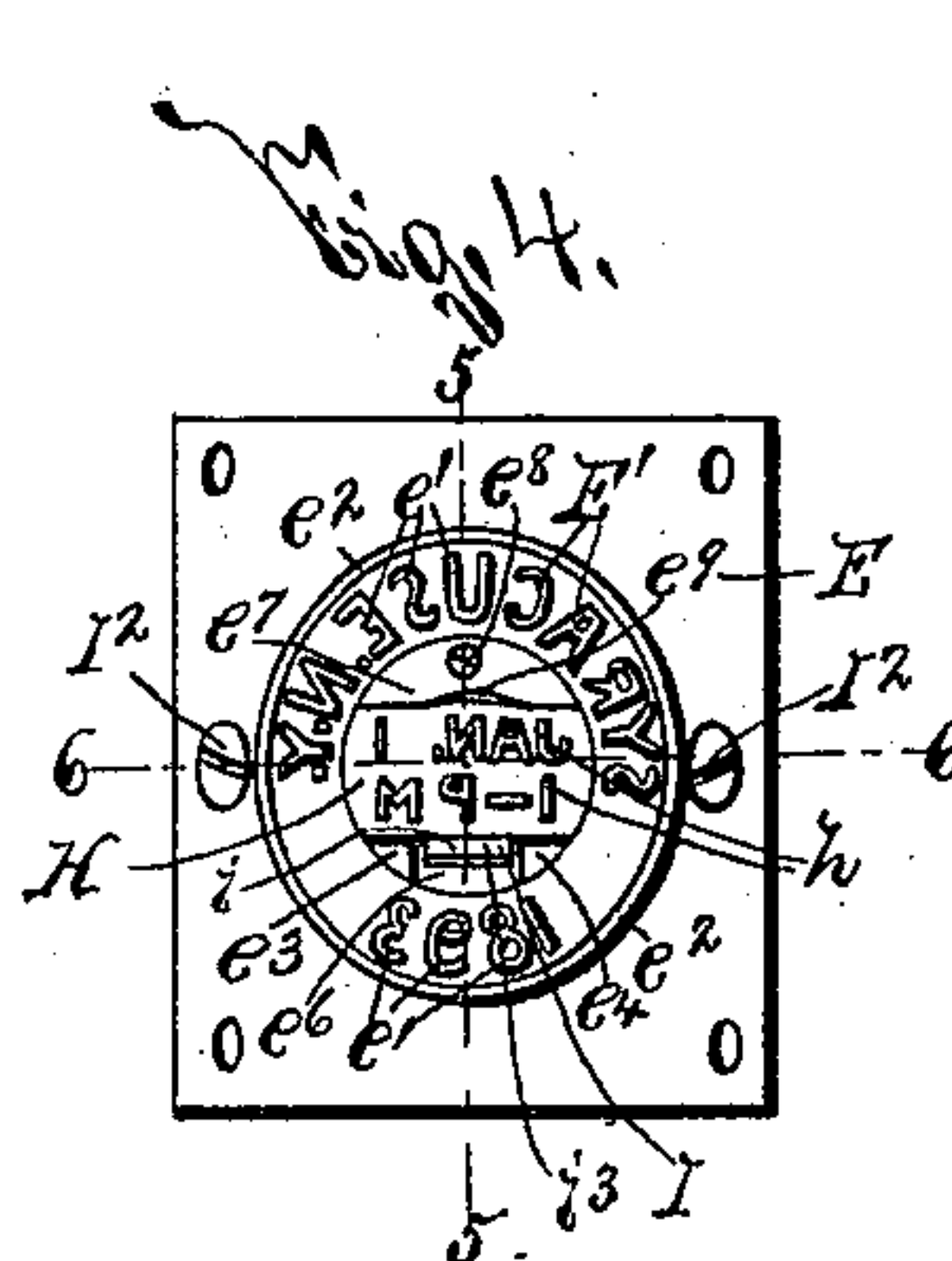
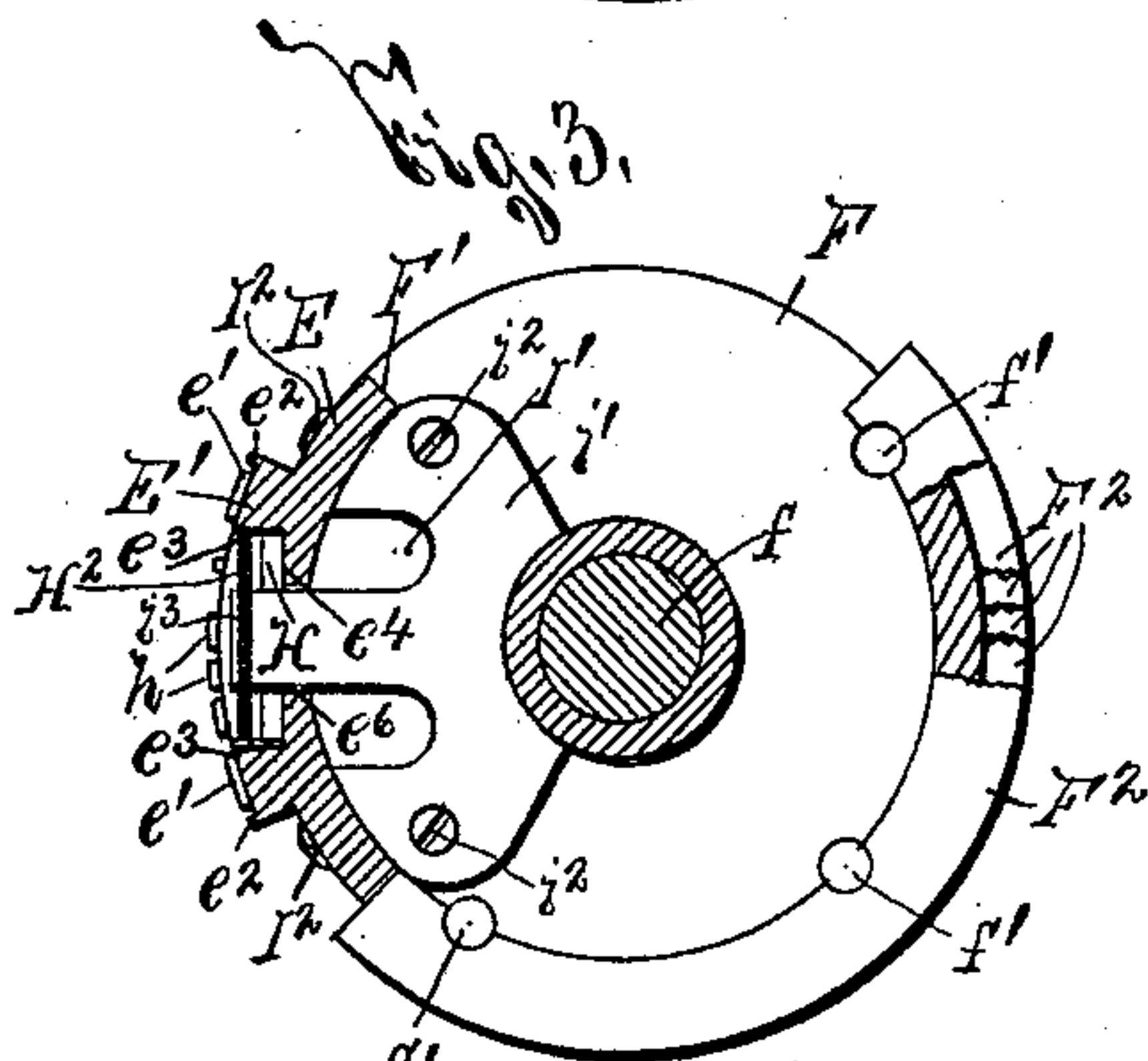
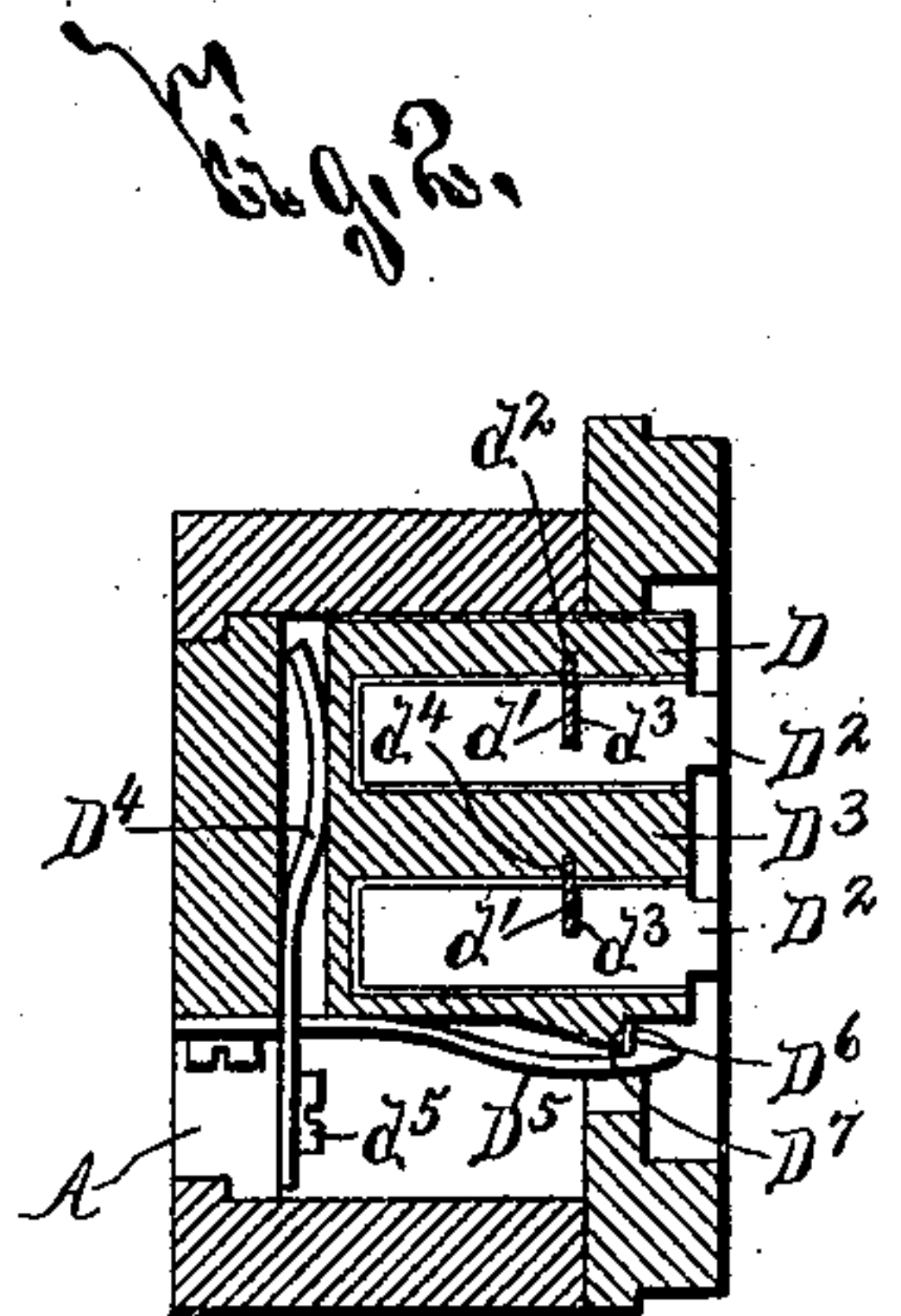
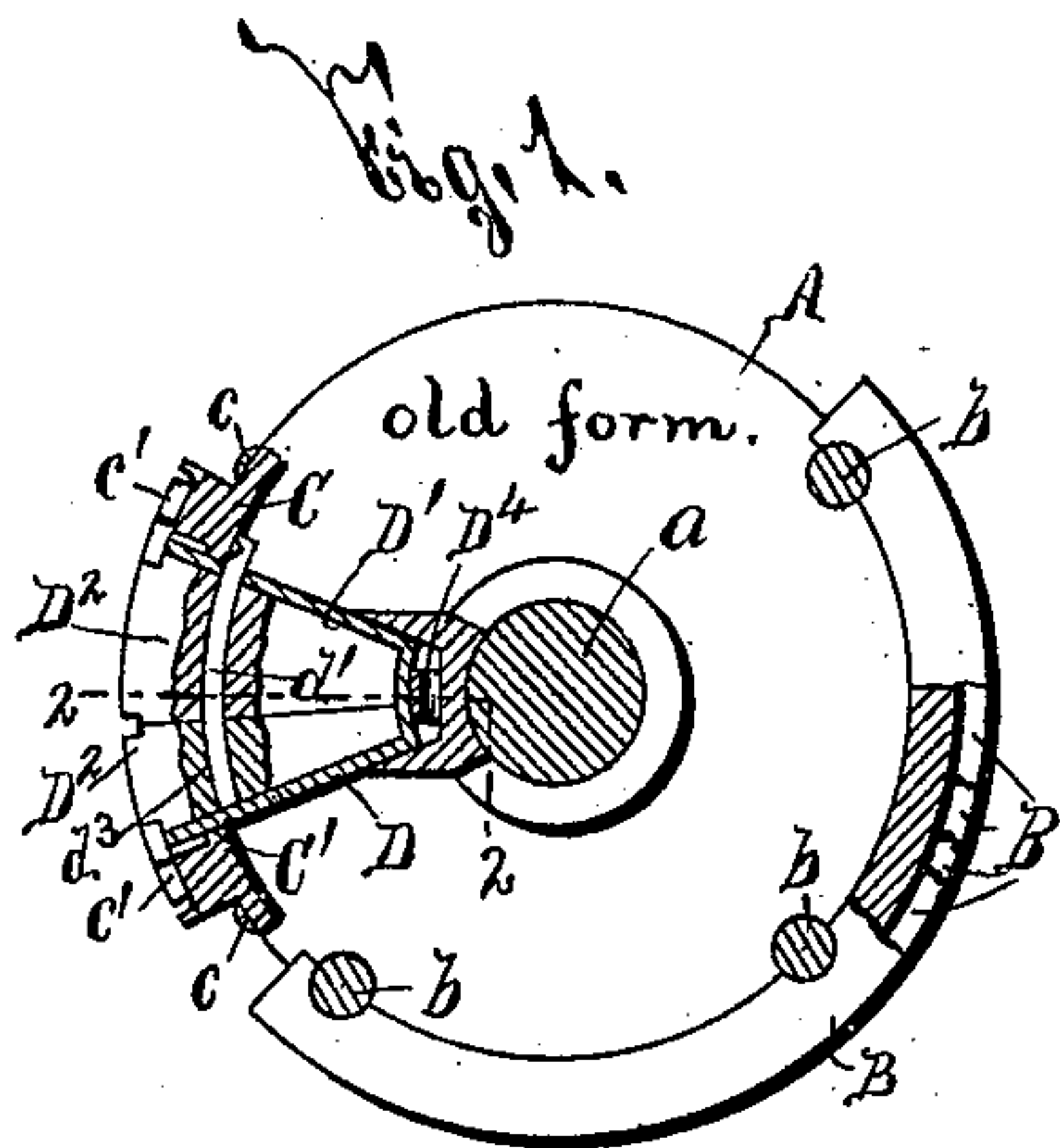
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F. G. JAHN.  
PRINTING DIE.

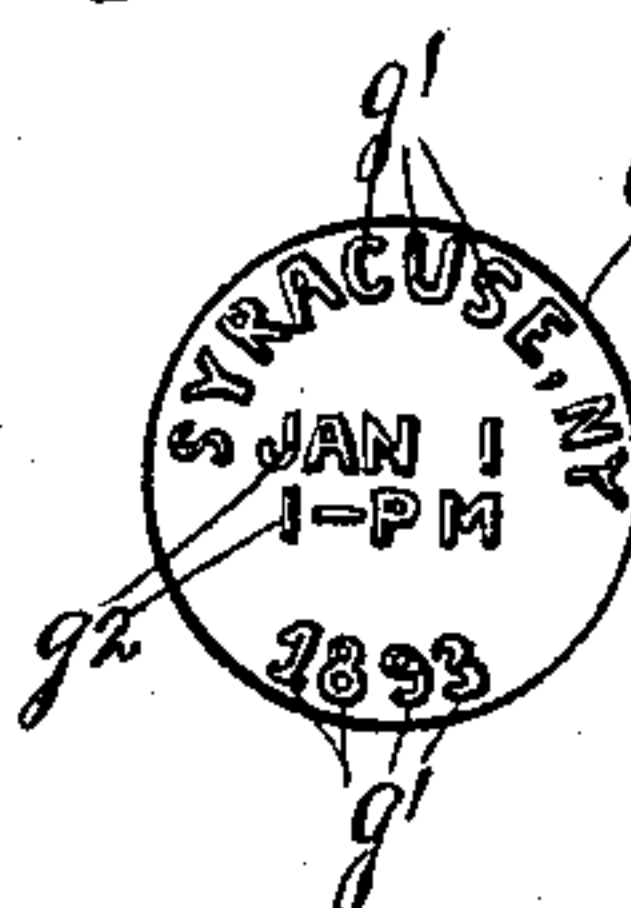
No. 587,261.

Patented July 27, 1897.



**WITNESSES:-**

M. W. Lewis.  
G. Schoeneck,



INVENTOR

Frederick George Jahn

BY

ATTORNEYS.

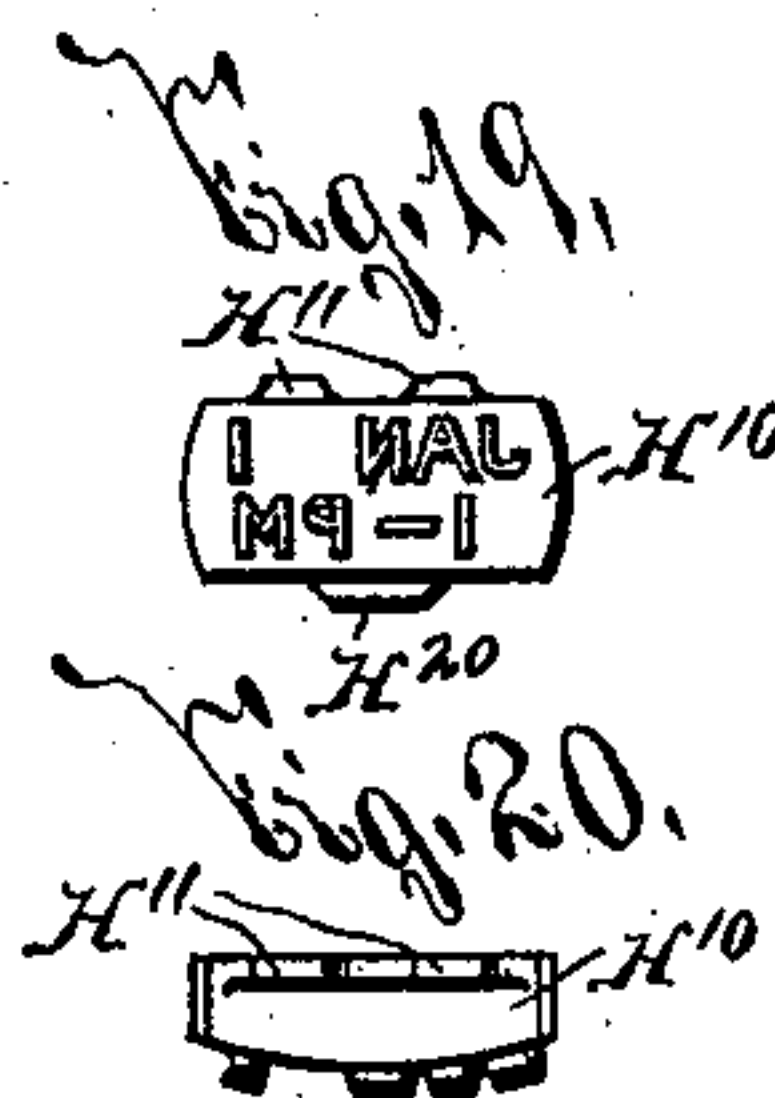
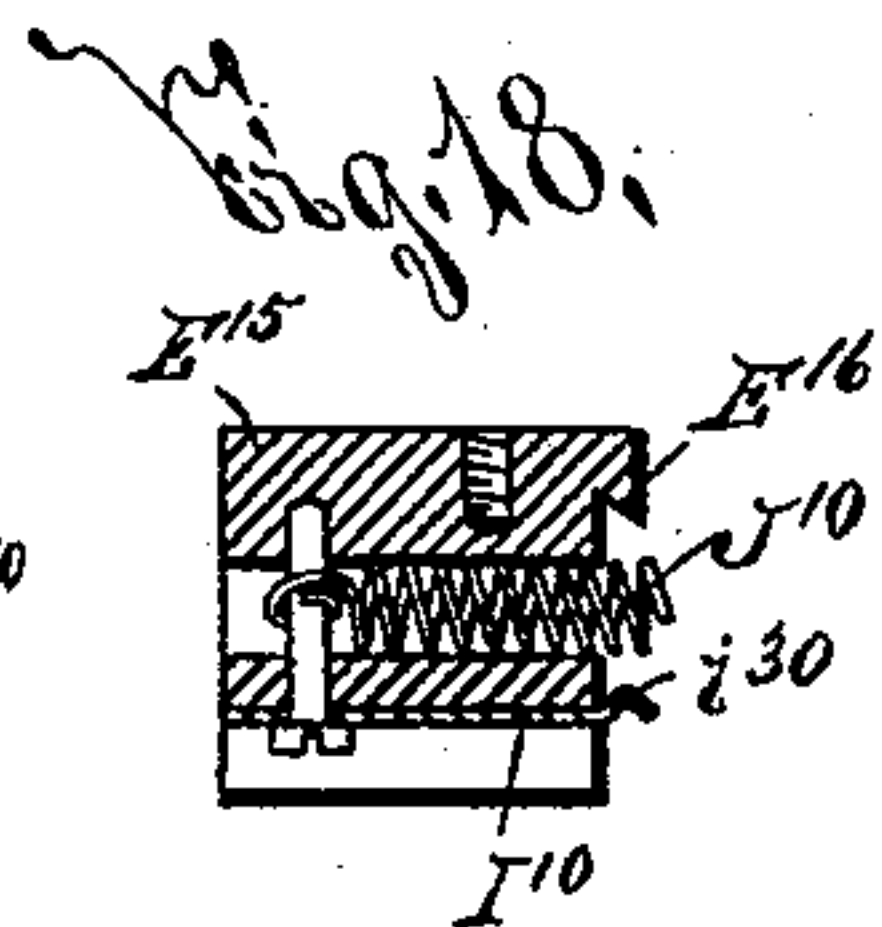
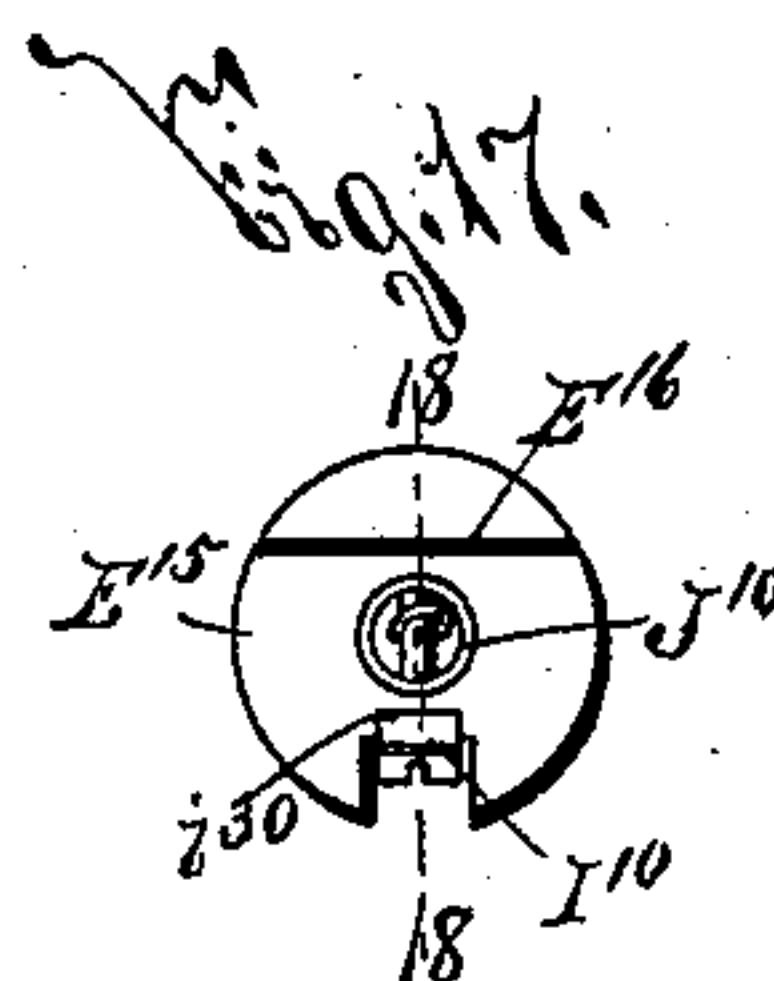
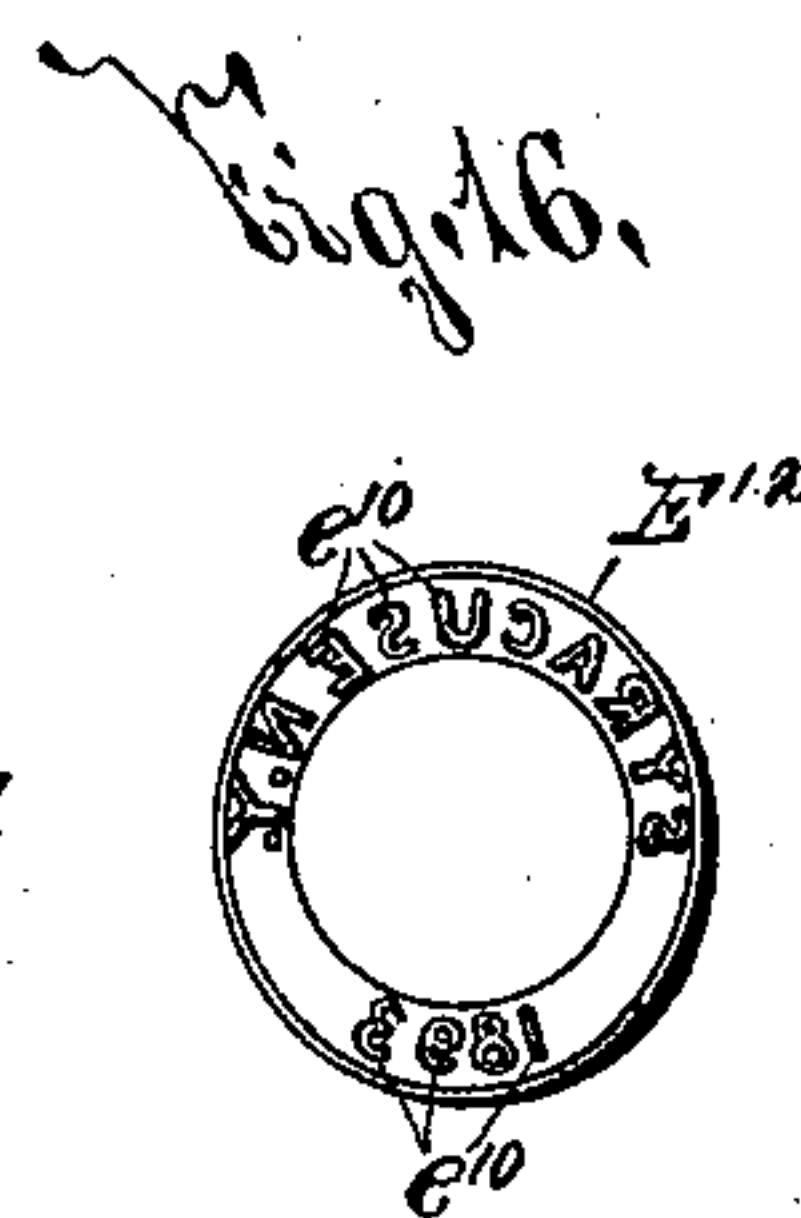
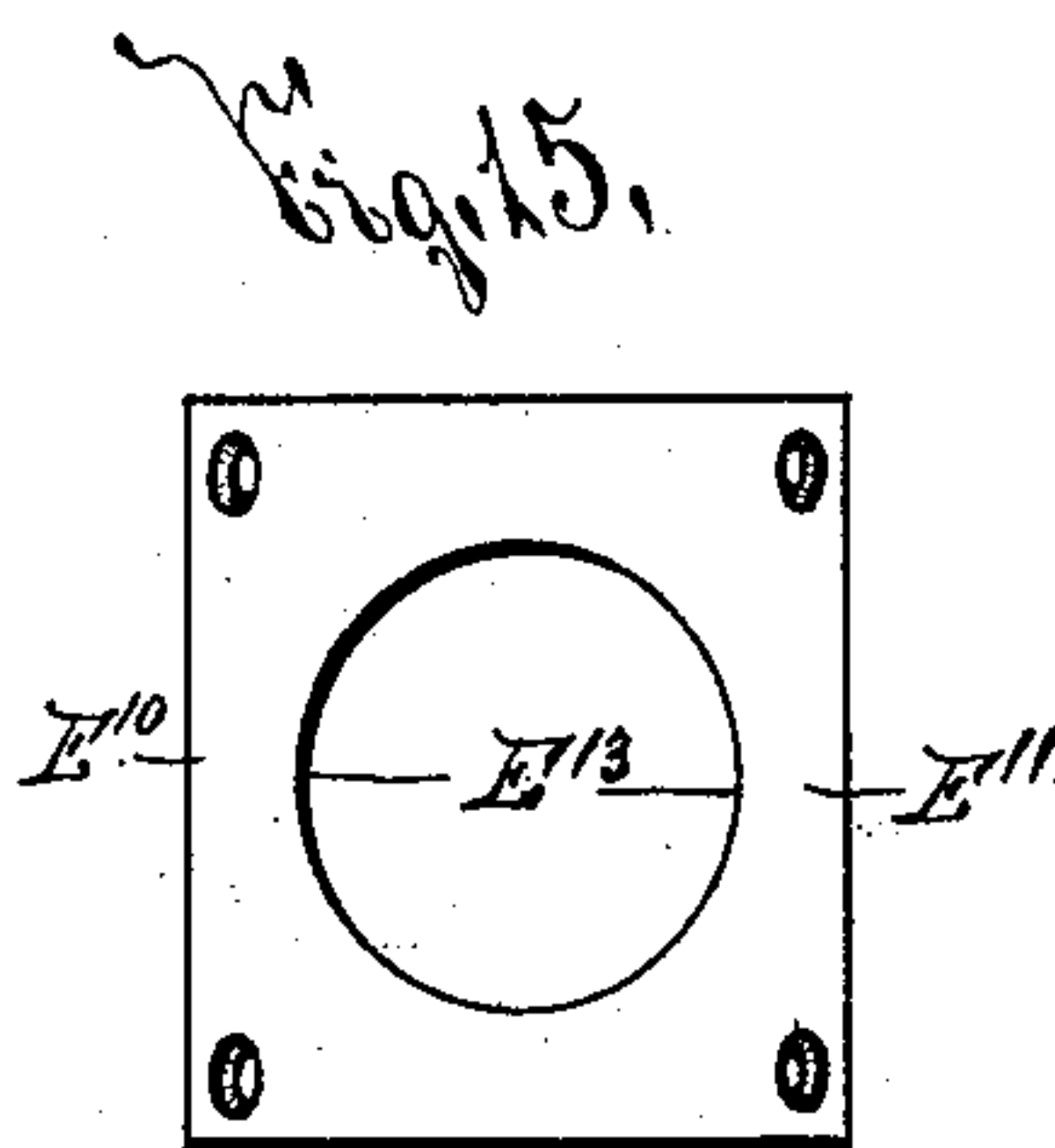
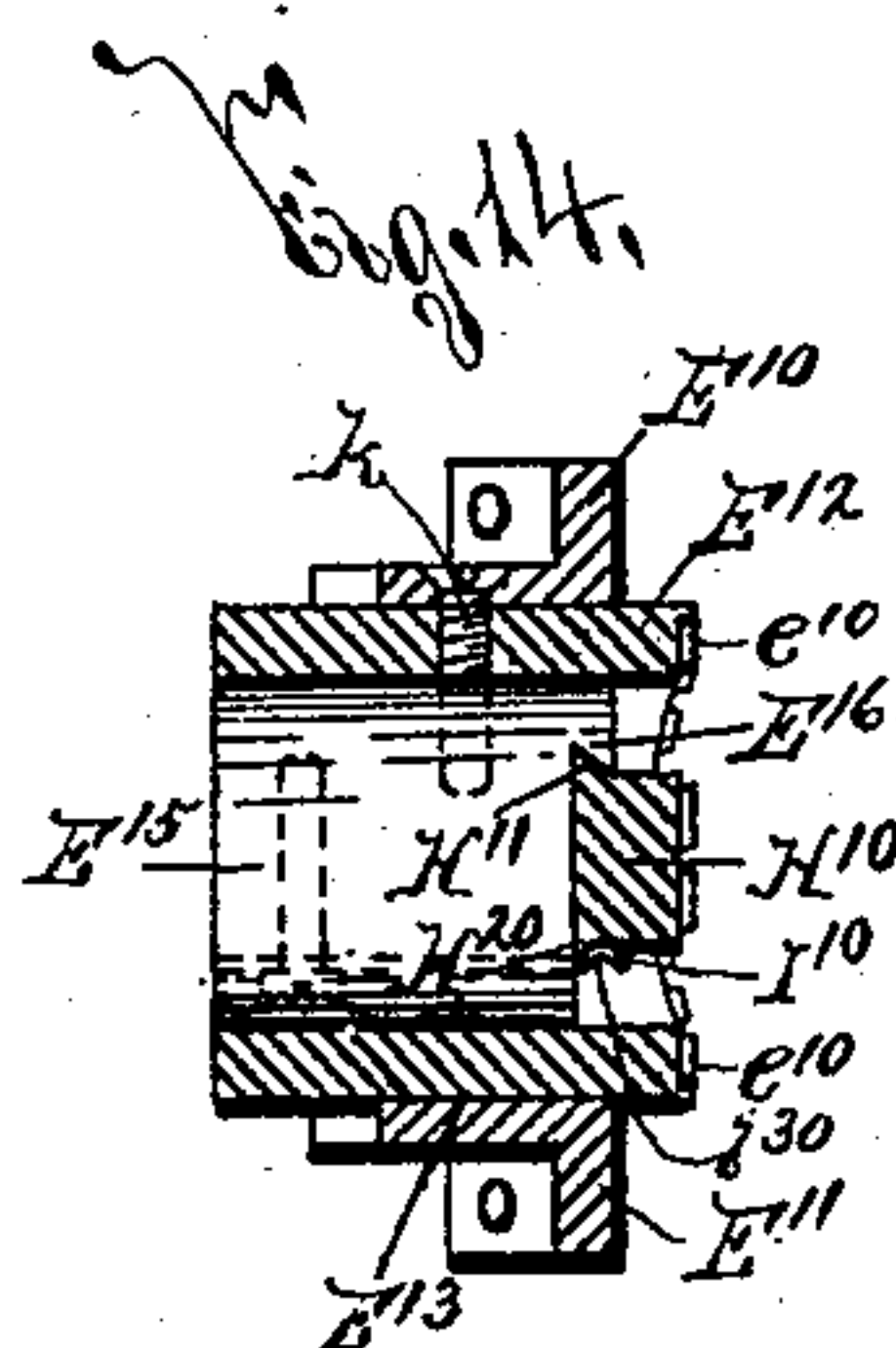
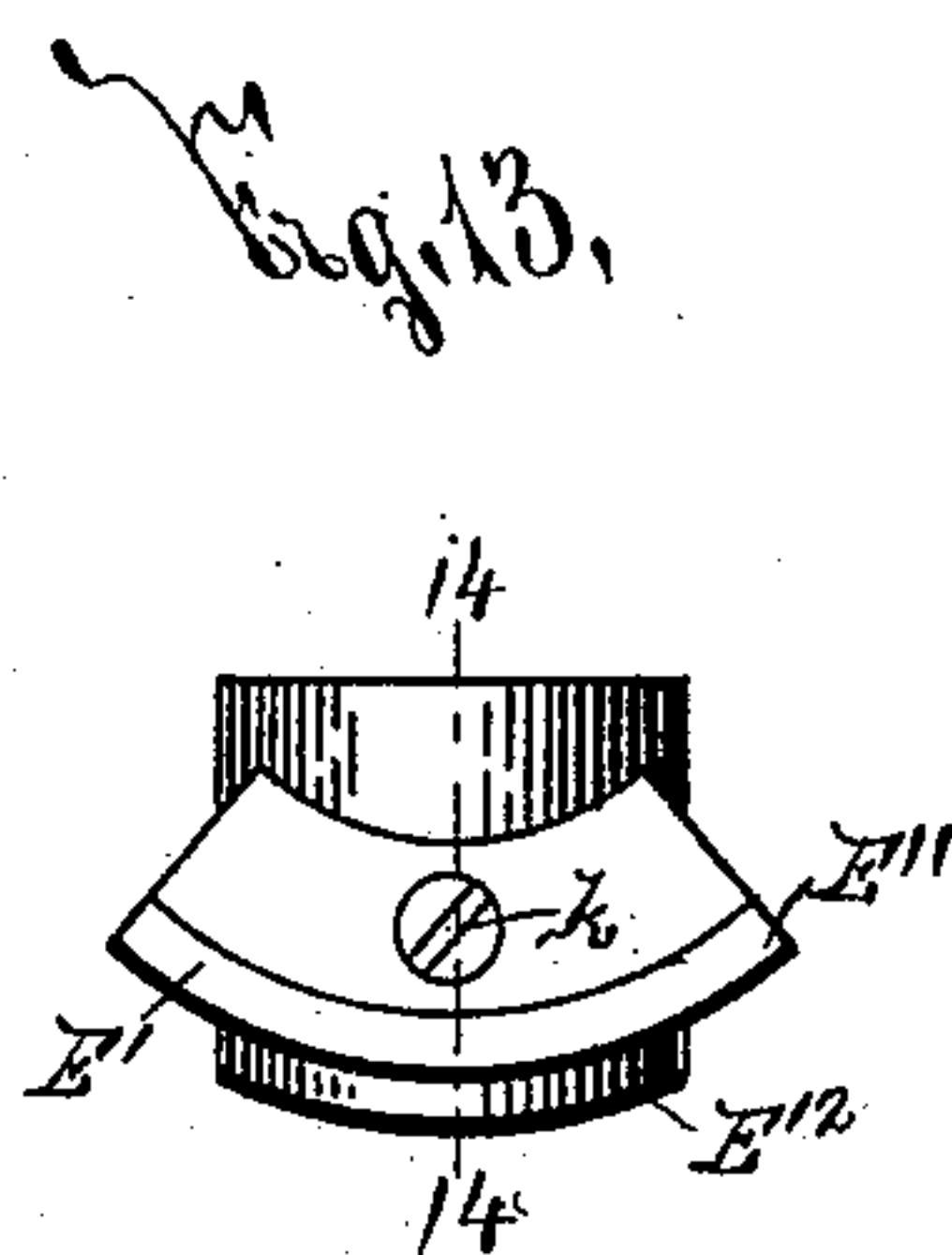
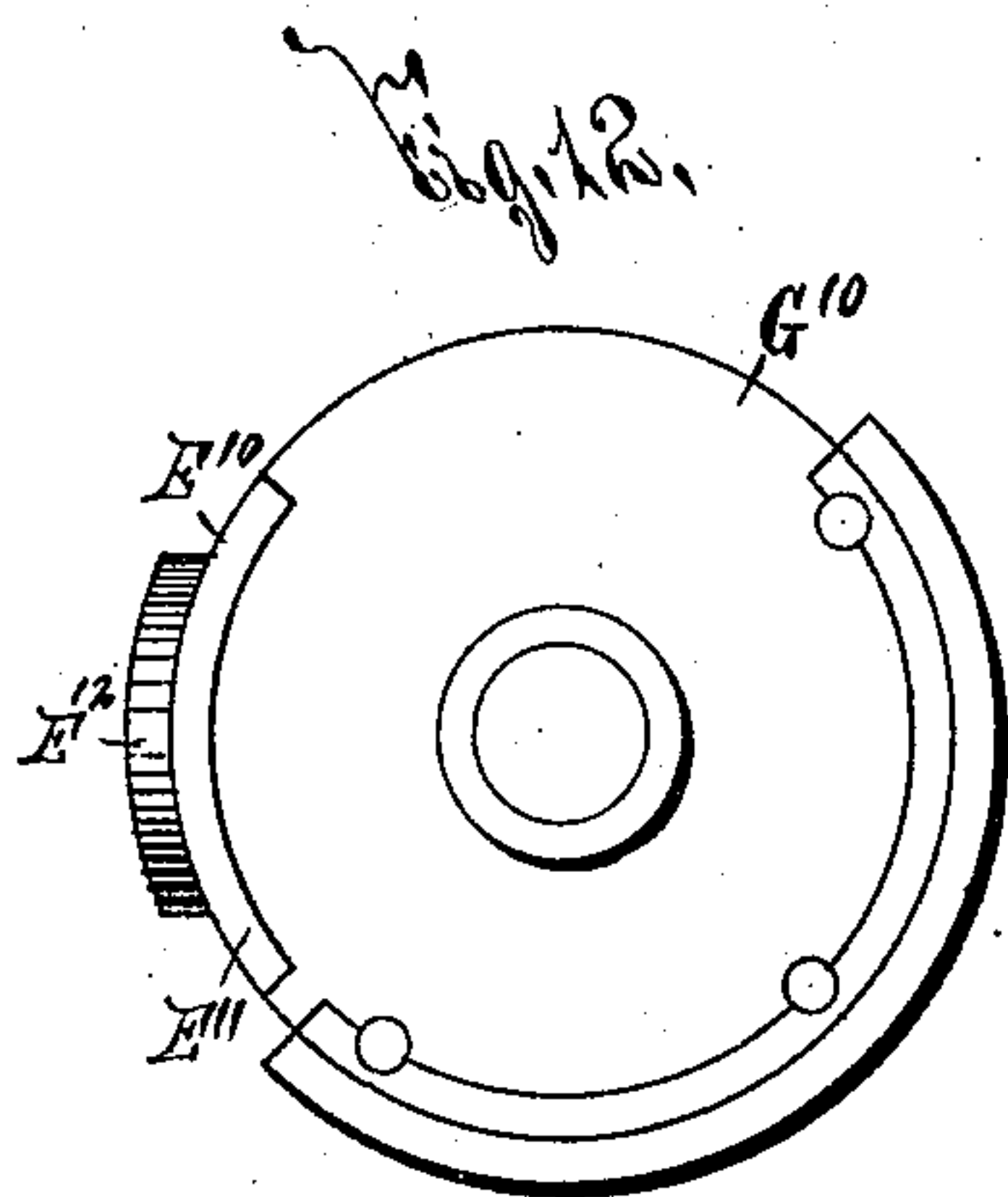
(No Model.)

2 Sheets—Sheet 2.

F. G. JAHN.  
PRINTING DIE.

No. 587,261.

Patented July 27, 1897.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

FREDERICK GEORGE JAHN, OF BROOKLYN, NEW YORK, ASSIGNOR, BY  
MESNE ASSIGNMENTS, TO DE FOREST SETTLE, RECEIVER OF THE  
INTERNATIONAL POSTAL SUPPLY COMPANY, OF NEW YORK.

## PRINTING-DIE.

SPECIFICATION forming part of Letters Patent No. 587,261, dated July 27, 1897.

Application filed February 13, 1893. Serial No. 462,044. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK GEORGE JAHN, of Brooklyn, in the county of Kings, in the State of New York, have invented new and useful Improvements in Printing-Dies, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to improvements in markers particularly applicable for use with machines for post-marking and stamp-canceling mail-matter, and has for its object the production of a simple and economical device which is practical, efficient, and convenient in use; and to this end it consists, essentially, in a type-carrying section mounted on a suitable support, as a rotary roller, and provided with a projecting type-carrying portion having a series of permanent type arranged on its face and formed integral therewith and having a socket in its central portion, and a type-carrying block removably mounted in said socket and having on its face a series of type formed integral therewith.

The invention furthermore consists in the detail construction and arrangement of the parts of my invention, all as hereinafter more particularly described, and pointed out in the claims.

In describing this invention reference is had to the accompanying drawings, forming a part of this specification, in which like letters indicate corresponding parts in all the views.

Figure 1 is a top plan view, partly in section, of an ordinary form of marking-roller for post-marking and stamp-canceling machines. Fig. 2 is a sectional view taken on line 2 2, Fig. 1, representing particularly the marker and the removable type-carrying box for the marking-roller shown at Fig. 1. Fig. 3 is an inverted top plan view, partly in section, of my improved marker, shown as operatively secured to a marking-roller suitable for a machine for post-marking and stamp-canceling mail-matter. Fig. 4 is an outer face view of the detached marker, shown at Fig. 3 as operatively mounted upon a supporting-roller. Figs. 5 and 6 are respectively vertical and horizontal sectional views taken on lines

5 5 and 6 6, Fig. 4, the marker being inverted at Fig. 5. Fig. 7 is an isometric perspective of the detached catch for holding the removable type-carrying block in position. Figs. 8 and 9 are, respectively, front or outer face view and top plan or edge view of the detached type-carrying block. Fig. 10 is an isometric perspective of a detached block or plate secured to the type-carrying section of my marker for engaging the type-carrying block. Fig. 11 is a face view of the print or impression produced by a marking-roller provided with my improved marker, as shown at Fig. 3. Fig. 12 is a top plan view, partly in section, of a marking-roller provided with a slightly-different construction of my invention. Fig. 13 is a top plan view of the detached marker shown at Fig. 12. Fig. 14 is a vertical sectional view taken on line 14 14, Fig. 13. Fig. 15 is an outer or front face elevation of the detached base of the type-carrying section of the construction of my improved marker shown at Figs. 12 to 14, inclusive. Fig. 16 is a similar elevation of the type-carrying portion of said section. Fig. 17 is an end view of the support for the type-carrying block. (Best seen at Fig. 14.) Fig. 18 is a longitudinal vertical sectional view taken on line 18 18, Fig. 17; and Figs. 19 and 20 are, respectively, outer face elevation and top or edge view of the type-carrying block shown at Fig. 14.

In order that my present invention may be clearly understood, I have here illustrated, at Figs. 1 and 2, and will now briefly describe, a well-known form of marking-roller for post-marking and stamp-canceling machines.

A represents the body or frame of a rotary marking-roller, which is mounted on a revolvable shaft *a*, journaled in any suitable support. (Not here illustrated.)

B B are a series of bars of narrow cross-section which are arranged one above the other upon a portion of the peripheral face of the frame A and are secured in position by suitable posts *b*.

C is a type-carrying section secured by suitable fastening means *c* to a portion of the frame A in proximity to the bars B B. This type-carrying section is formed with a cen-



tral opening C', extending through its central portion, and is provided on its outer face with a series of type c' for printing an impression representing the name of the city or town in which said marker is used; the State containing the city, and the number of the year when the marker is used.

D is a wedge-shaped box formed with a central cavity D', in which are removably secured a series of changeable type D<sup>2</sup> for printing an impression representing the month, the day of the month, and the hour of the day when the impression is made. Two of the opposite sides of this box D are necessarily radial, as shown at Fig. 1, and consequently two sides of the type D<sup>2</sup> are also radial, and, as best seen at Fig. 2, the box D is formed with a partition D<sup>3</sup>.

The type are arranged in two rows between the partition D<sup>3</sup> and the adjacent walls of the box D and are held in position by keys d' d', one of which is movable in a groove d<sup>2</sup> in the wall of the box D and in grooves d<sup>3</sup> in adjacent faces of the type D<sup>2</sup>. The other key d' is movable in a groove d<sup>4</sup> in one side of the partition D<sup>3</sup> and in grooves d<sup>3</sup> in the adjacent sides of the type D<sup>2</sup>. A spring D<sup>4</sup>, having one end secured to the frame A by a suitable screw d<sup>5</sup>, bears against the inner face of the box D and tends normally to force the same from operative position. A second spring-catch D<sup>5</sup> is formed with a shoulder D<sup>6</sup>, which engages a shoulder D<sup>7</sup> on one of the outer sides of the wall of the box D for holding the box in its normal position against the action of the spring D<sup>4</sup>.

As is evident to one skilled in the art, it is highly essential that the impression printed by the marker of a stamp-canceling and post-marking machine be perfectly legible and clearly defined, as it is frequently called into question and as legibility and clearness are requirements of the Post Office Department. This result can be obtained only with the best conditions and by uniform type having their faces uniformly engraved and disposed when printing in the same plane.

It is also well known to those skilled in the art that it is almost impossible to obtain engraved type which are uniformly engraved and are so relatively arranged as to assume the same plane when printing, especially when said type are separable one from the other. As the type for a marker used with stamp-canceling and post-marking machines are ordinarily, as illustrated at Fig. 1, formed with their type-carrying faces disposed in a curvilinear plane and are supported by a rapidly-revolving frame or die, a clear and well-defined impression can be obtained only when the type are unusually uniform. Moreover, as in the construction of marker shown at Figs. 1 and 2, the type are formed separable and are fitted within a type-containing box and are necessarily provided with two inclined sides. Unusual care and skill must be used in order that the type, even though abso-

lutely uniform, may fit properly within the type-carrying box and against each other, so as to produce a legible and well-defined impression. The difficulty occasioned in obtaining type suitable for practical and effective use on a marker of this character is further increased from the fact that the type-carrying face of the marker is disposed in a curvilinear plane, and therefore the outer face of each type must be cut for the particular place upon the marker which said type is designed to occupy.

It is evident to one skilled in the art that the type for making an impression representing the name of the city, the State containing the city, and the number of the year are not changed until worn out, as it is very seldom that the type will last a whole year, and that should said type last a whole year they are then replaced upon the commencement of a new year. On the contrary, the type for making the impression representing the month, the day of the month, and the hour of the day must be changed, respectively, once a month, every day, and every hour or half-hour. It is also customary to use after the type for making an impression representing the hour type provided with characters for printing "p. m." and "a. m.," and one of these type is necessarily changed twice a day. Consequently, as the type for representing the day, the day of the month, and the hour of the day are changed at unequal intervals they become unequally worn, and while one type may make a clear and well-defined impression the impression made by another type is hardly legible. It requires considerable care, experience, and time to properly change the type of a marker and suitably arrange said type to remain in the required position and print a clear and well-defined impression, and it is usually the case that at the very hour when the type are to be changed the machine is required for use to its full capacity. Markers formed of this construction are extremely expensive and are also very perishable, as the walls of the type-carrying box are necessarily thin and are more or less fragile. A great number of type are lost in cutting, since it is first necessary to bring the same to the required dimensions, and if the engraver carelessly or inadvertently decreases the length of the type by cutting away its end in forming the character thereon the same is rendered entirely worthless.

My present invention has for its object the production of a marker which is more economical, practical, effective, and convenient than the previously-described construction, and I will now proceed to describe the same.

E represents the type-carrying section of my improved marker, which is secured to a suitable support, as the frame or body F of a marking-roller secured upon a revoluble shaft f, journaled in a suitable support. (Not here illustrated.) The frame or body F is



formed with a suitable cut-out  $F'$ , alined with the type-carrying section  $E$ , and is provided upon a portion of its peripheral face with a series of bars  $F^2$  of narrow cross-section, arranged one above the other in proximity to the marking-section  $E$ , for printing the characters or lines  $g$  of the impression  $G$ , produced by the marking-roller for canceling the stamps upon the mail-matter. The bars  $F^2$  are held in position by suitable posts  $f'$ .

The type-carrying section  $E$  extends transversely across the face of the support or roller  $F$ , and its outer face is disposed in a curvilinear plane substantially concentric with the shaft  $f$ , and is provided with a projecting type-carrying portion  $E'$ .

$e'$   $e'$  are a series of type arranged in proximity to the projecting portion  $E'$ , and  $e^2$  is a ring or flange at the edge of said projecting portions  $E'$ . The type  $e'$  and the ring  $e^2$  are preferably formed integral with the type-carrying section  $E$ , which is preferably formed of hardened cast-steel, and said type and ring are produced by engraving the outer face of the projecting portion  $E'$  of said type-carrying section  $E$ . The type  $e'$  are provided with characters suitable for making the characters  $g'$  of the impression  $G$ , Fig. 11, representing the name of the place and the State in which the marker is used and the number of the year during which it is used—as, "Syracuse, N. Y., 1893."

$e^3$  is a socket in the central part of the projecting portion  $E'$  of the type-carrying section  $E$ , and, as best seen at Figs. 3, 5, and 6, this socket is formed with an inner wall  $e^4$ , having a pair of perforations  $e^5$   $e^6$  therethrough, arranged one above the other.

$e^7$  is a block or plate removably secured by suitable fastening means  $e^8$  in the upper end of the socket  $e^3$ , and  $e^9$  is a shoulder provided upon one edge of said block.

Removably secured in the socket  $e^3$  is a type-carrying block  $H$ , having its outer face disposed in a curvilinear plane substantially concentric with the plane of the type-carrying section  $E$  and provided with type  $h$   $h$ , arranged alongside of each other in two rows, one above the other. The block  $H$  is formed of cast type-metal, which it is evident is softer than the material composing the type-carrying section, and the type  $h$   $h$  are formed integral with said block  $H$  when said block is cast. The type  $h$  form the characters  $g^2$  of the impression  $G$ , Fig. 11, for representing the month, the day of the month, and the hour of the day when the marker is used.

The removable type-carrying block  $H$  is formed on one edge with a shoulder  $H'$  for engaging the shoulder  $e^9$  of the block or plate  $e^7$  and is provided on the other edge with the opposite shoulders of a groove  $H^2$ , with which is engaged the spring-arm  $i$  of a catch  $I$ . This catch consists, preferably, of a base  $i'$ , secured by suitable fastening means  $i^2$   $i^2$  to a block  $I'$ , and a spring-arm  $i$ , having its outer end passed through the perforation  $e^6$  in the wall

$e^4$  of the socket  $e^3$  and provided with a shoulder  $i^3$  for engaging the shoulders of the groove  $H^2$ . The block  $I'$  is secured to the inner side of the type-carrying section  $E$  by suitable fastening means  $I^2$   $I^2$ . In placing the type-carrying block  $H$  in position the shoulder  $i^3$  is forced downwardly. The shoulder  $H'$  of the block  $H$  is then engaged with the shoulder  $e^9$  of the block  $e^7$ , and the block  $H$  is then forced inwardly until its inner face rests against the outer face of the wall  $e^4$  of the socket  $e^3$ , whereupon the shoulder  $i^3$  is by the spring-arm  $i$  automatically engaged with the shoulders of the groove  $H^2$  of said block  $H$ .

The removable type-carrying block  $H$  is ejected from operative position by an ejecting-piece, which consists of a plunger  $J$ , movable in a guide  $I^3$  in the block  $I'$ , and a spring  $J'$ , mounted in the guide  $I^3$  and bearing against the plunger  $J$ . The outer end of the plunger  $J$  projects through the perforation  $e^5$  in the wall  $e^4$  of the socket  $e^3$  and is provided with a stop-shoulder  $j$ . When desired to remove the type-carrying block  $H$ , the shoulder  $i^3$  of the spring-arm  $i$  of the catch  $I$  is forced downwardly out of engagement with the shoulders of the groove  $H^2$ , whereupon the plunger  $J$  of the ejecting-piece immediately forces said block  $H$  out of the socket  $e^3$  in the type-carrying section  $E$ .

At Figs. 12 to 20, inclusive, I have shown a different construction of my invention, in which the type-carrying section  $E^{10}$  consists of a base  $E^{11}$ , mounted upon a suitable support or roller  $G^{10}$ , and a type-carrying portion  $E^{12}$ , provided on its face with type  $e^{10}$ , similar to the type  $e'$ . This type-carrying portion  $E^{12}$  consists of a hollow cylinder movable through an opening  $E^{13}$  in the base  $E^{11}$ , and it is secured in position by a suitable screw  $k$ , passed through the wall of the base  $E^{11}$  into the type-carrying cylinder  $E^{12}$ . Within the type-carrying cylinder  $E^{12}$  is a cylindrical support  $E^{15}$ , provided with an engaging shoulder  $E^{16}$  for engaging one or more shoulders  $H^{11}$ , formed upon an upper edge of a type-carrying bar  $H^{10}$  of similar construction to the bar  $H$ , previously described. This cylindrical support is secured in operative position by the screw  $k$ , previously mentioned, which passes through the wall of the cylindrical type-carrying section  $E^{10}$  into a socket provided in said cylinder or support  $E^{15}$ . The catch  $I^{10}$  for holding the type-carrying block  $H^{10}$  in its operative position consists of an arm having one end suitably secured to the support  $E^{15}$  and the other formed with a shoulder  $i^{30}$  for engaging a shoulder  $H^{20}$  upon one of the edges of the block  $H^{10}$ . The ejecting-piece for discharging the block  $H$  from its cylindrical support  $E^{15}$  consists of a spiral spring  $J^{10}$ , movable in a socket in the central portion of said support  $E^{15}$  and arranged with one end normally bearing against the inner face of said block  $H^{10}$ .

From the foregoing description of my present invention it will be readily understood that I form the type for printing the impres-



sion representing the city, the State, and the year upon a hardened-steel section by engraving the type in a portion of the outer face of said section, and that I form the type for printing the impression representing the month, the day of the month, and the hour upon the outer face of a block cast or otherwise formed of soft metal and having the type formed integral therewith. After the master-type for producing the type upon this block are once cut the cast block is very inexpensive. All of the type thereon are uniform, and when desired to change one of the type the entire block is thrown aside and may, if desired, be remelted for forming additional blocks.

In practice a number of blocks having type suitable for all of the changes required for a certain limited time, as a month or a year, are formed, and these are then arranged upon a suitable support or ribbon, (not necessary to herein illustrate,) and when desired one of the blocks is easily removed and replaced by another, which is easily selected by the operator. The advantages of this peculiar construction of marker are obvious to one skilled in the art, since all of the movable type are mounted upon a single block, which is easily changed and is economically manufactured. Moreover, all of the removable type which print the most important part of the impression are worn uniformly and are used but a very short time, so that a legible and clear impression is produced at all times. No expensive type-carrying box is required. There is no liability of an engraver spoiling expensive type, nor any liability of one type projecting a greater distance than the other beyond the plane which should be occupied thereby when making an impression. I have discovered upon practical experience, however, that it is not desirable, nor, indeed, practical or possible, to form of cast metal the type *e'* for printing an impression representing the name of the city or town and the State provided with the marker therefor, as, owing to the constantly-varying plane occupied by the similar type for forming different names and owing to the varying number of letters in the names of the various towns and cities, an incalculable number of master-type would be required, the faces of which would be disposed in planes of dissimilar curves representing the curve of the corresponding portion of the outer face of the type-carrying section to be provided with said type were it possible to make and practically arrange, use, and rearrange such a great number of master-type, many of which were provided with similar characters.

It will thus be readily understood that my invention reduces to a minimum the amount of care, time, and skill at present required in attending to the marker of a stamp-canceling machine, greatly reduces the expense incidental to the manufacture and maintenance of said marker in operative condition, adds

greatly to the legibility and clearness of the impression produced by the marker, and is highly efficient, durable, convenient, and practical.

The operation of my invention will be readily perceived from the foregoing description and upon reference to the accompanying drawings, and it will be readily understood that the same is not limited to the exact detail construction and arrangement of its parts.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a marker, the combination of a type-carrying section provided with a series of permanent type on its face and formed with a socket in said face having a shoulder on its wall, a type-carrying block removably mounted in said socket and having one of its sides provided with a shoulder engaged with the former shoulder, and a catch for engaging said block and retaining the same in its operative position, substantially as and for the purpose described.

2. In a marker, the combination of a type-carrying section formed with a socket in its face having an inner wall and a side wall provided with a shoulder, a type-carrying block removably mounted in said socket and having its inner face bearing against said inner wall of the socket and having one of its faces provided with a shoulder for engaging the shoulder on the wall of said socket, and a catch for engaging said block and retaining the same in its operative position, substantially as described.

3. In a marker, the combination of a type-carrying section formed with a socket in its face having an inner wall, a block removably secured in said socket and formed with a side or wall having a shoulder, a type-carrying block removably mounted in said socket with its inner face bearing against said inner wall and having one of its sides provided with a shoulder for engaging the shoulder on said side of the former block, and a catch for engaging the type-carrying block and retaining the same in its operative position, substantially as set forth.

4. In a marker, the combination of a type-carrying section having its face formed with a socket having an inner wall and a side wall provided with a shoulder, a type-carrying block removably mounted in said socket and having its inner face bearing against said inner wall of the socket and its outer face provided with a series of type, a shoulder on the type-carrying block for engaging the shoulder on the wall of said socket, a second shoulder on said block, and a movable catch for engaging the latter shoulder on the type-carrying block, substantially as described.

5. In a marker, the combination of a type-carrying section provided with a series of permanent type on its face and formed with a socket in said face having a shoulder on its



wall, a type-carrying block removably mounted in said socket and having one of its sides provided with a shoulder engaged with the former shoulder, a catch for engaging said block and retaining the same in its operative position, and a movable operating-piece for forcing the type-carrying block from operative position, substantially as specified.

6. In a marker, the combination of a type-carrying section formed with a socket in its face, a block removably secured in said socket, and formed with a side or wall having a shoulder, a type-carrying block removably mounted in said socket and having one of its sides provided with a shoulder for engaging the shoulder on said side of the former block, and a catch for engaging the type-carrying block and retaining the same in its operative position, substantially as set forth.

7. In a marker, the combination of a type-carrying section formed with a socket in its face having a shoulder on one wall, said section being also provided with an opening in its wall communicating with the socket, a type-carrying block removably mounted in the socket and having one side provided with a shoulder for engaging the former shoulder, and a catch having one extremity supported on the opposite face of the type-carrying section and its other extremity passed through said opening and engaged with the type-carrying block for holding the same in its operative position, substantially as and for the purpose described.

8. In a marker, the combination of a type-carrying section formed with a socket in its face having a shoulder on one wall, said section being also provided with an opening in its wall communicating with the socket, a type-carrying block removably mounted in the socket and having one side provided with a shoulder for engaging the former shoulder, a catch having one extremity supported on the opposite face of the type-carrying section and its other extremity passed through said opening and engaged with the type-carrying block for holding the same in its operative position, and a movable operating-piece for forcing the type-carrying block from operative position, substantially as and for the purpose specified.

9. In a marker, the combination of a type-carrying section having one face provided with type and with a socket having an inner wall formed with a perforation therethrough, and a side wall provided with a shoulder, a type-carrying block mounted in said socket and having one of its sides provided with a shoulder for engaging the former shoulder, a catch having one extremity secured to the opposite face of the type-carrying section and its other extremity passed through said perforation and engaged with the type-carrying

block for holding the same in its operative position, substantially as described.

10. In a marker, the combination of a type-carrying section having one face provided with type and with a socket having an inner wall formed with a perforation therethrough and a side wall provided with a shoulder, a type-carrying block mounted in said socket and having one of its sides provided with a shoulder for engaging the former shoulder, a catch having one extremity secured to the opposite face of the type-carrying section and its other extremity passed through said perforation and engaged with the type-carrying block for holding the same in its operative position, and a movable operating-piece for forcing the type-carrying block from operative position, substantially as set forth.

11. In a marker, the combination of a type-carrying section having one face provided with type and with a socket having a shoulder on one wall, a type-carrying block removably mounted in the socket and having one side provided with a shoulder for engaging the former shoulder, a catch consisting of a base secured to the opposite face of the type-carrying section, a spring-arm having one extremity projecting outwardly from said base and secured thereto and its other extremity passed through the type-carrying section and engaged with the type-carrying block, and a movable operating-piece having one end secured to said base and its other end passed through the type-carrying section for engaging said block, substantially as specified.

12. In a marker, the combination of a type-carrying section having one face provided with integral type and with a socket having an inner wall formed with a pair of perforations therethrough, a type-carrying block mounted in the socket and formed with integral type on its outer face, a catch consisting of a base secured to the opposite face of the type-carrying section, a spring-arm having one extremity projecting outwardly from said base and secured thereto and its other extremity passed through one of said perforations and engaged with the type-carrying block, and a movable operating-piece having one end secured to said base and its other end passed through the other perforation of the type-carrying section for engaging said block, substantially as described.

In testimony whereof I have hereunto signed my name, in the presence of two attesting witnesses, at 32 Park Row, in the city and county of New York, in the State of New York, this 4th day of January, 1893.

FREDERICK GEORGE JAHN.

Witnesses:

G. M. KING,  
LOUIS RATZEL.