

G. C. ANDREWS.
 MEANS FOR HOLDING AND ADJUSTING PRINTING PLATES ON A BASE PLATE.
 APPLICATION FILED NOV. 7, 1910.

998,447.

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Fig. 1.

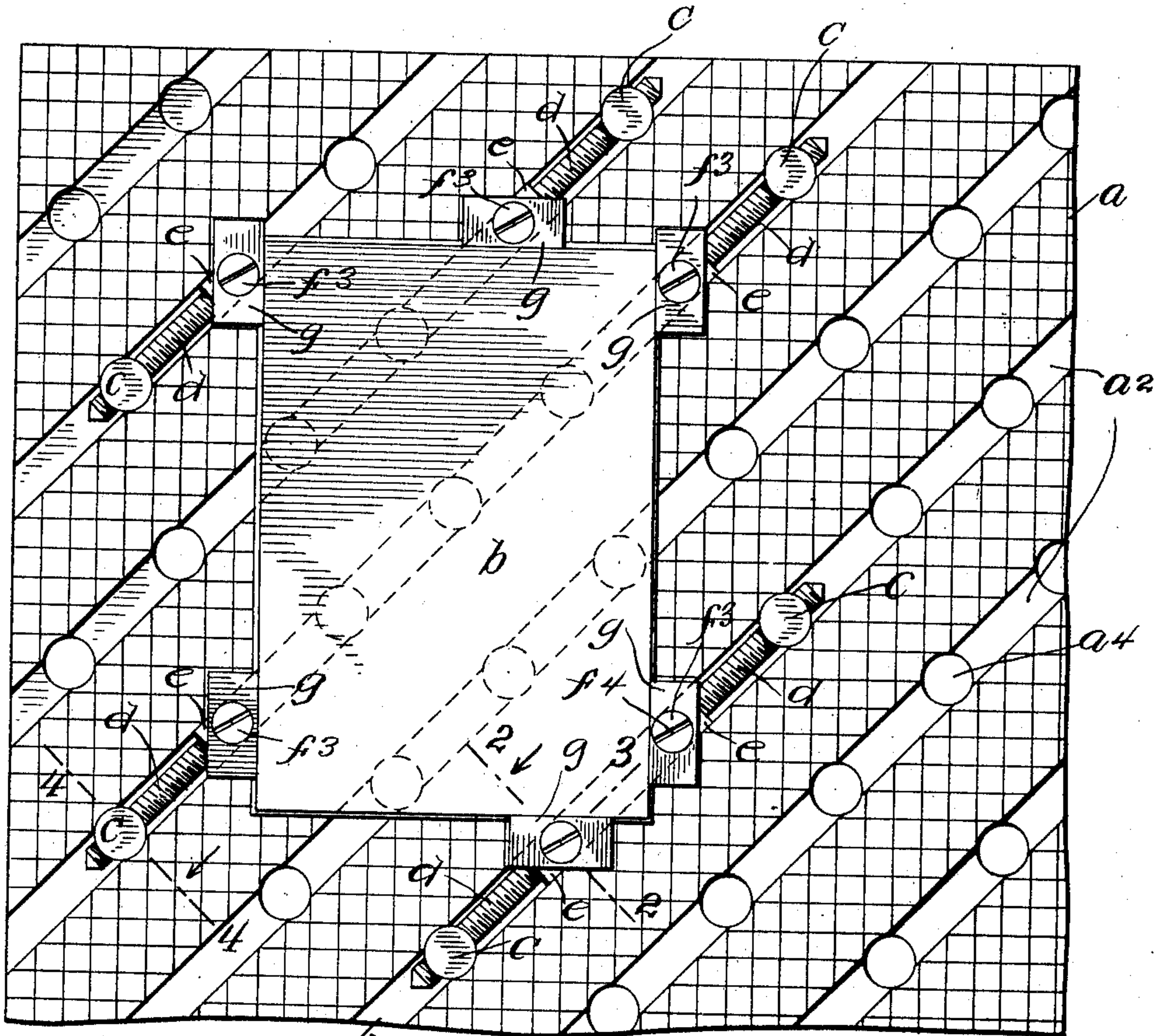


Fig. 2

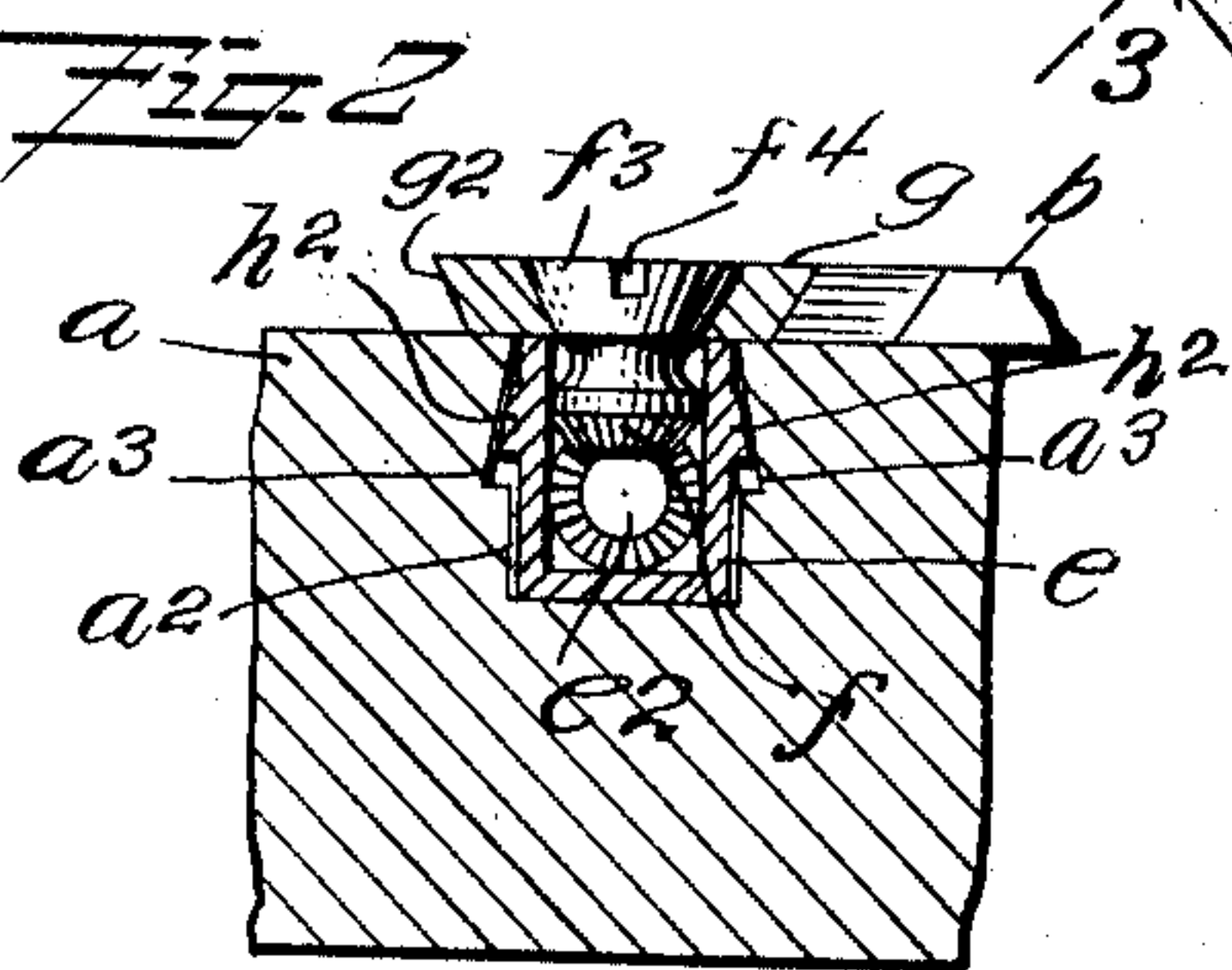


Fig. 3

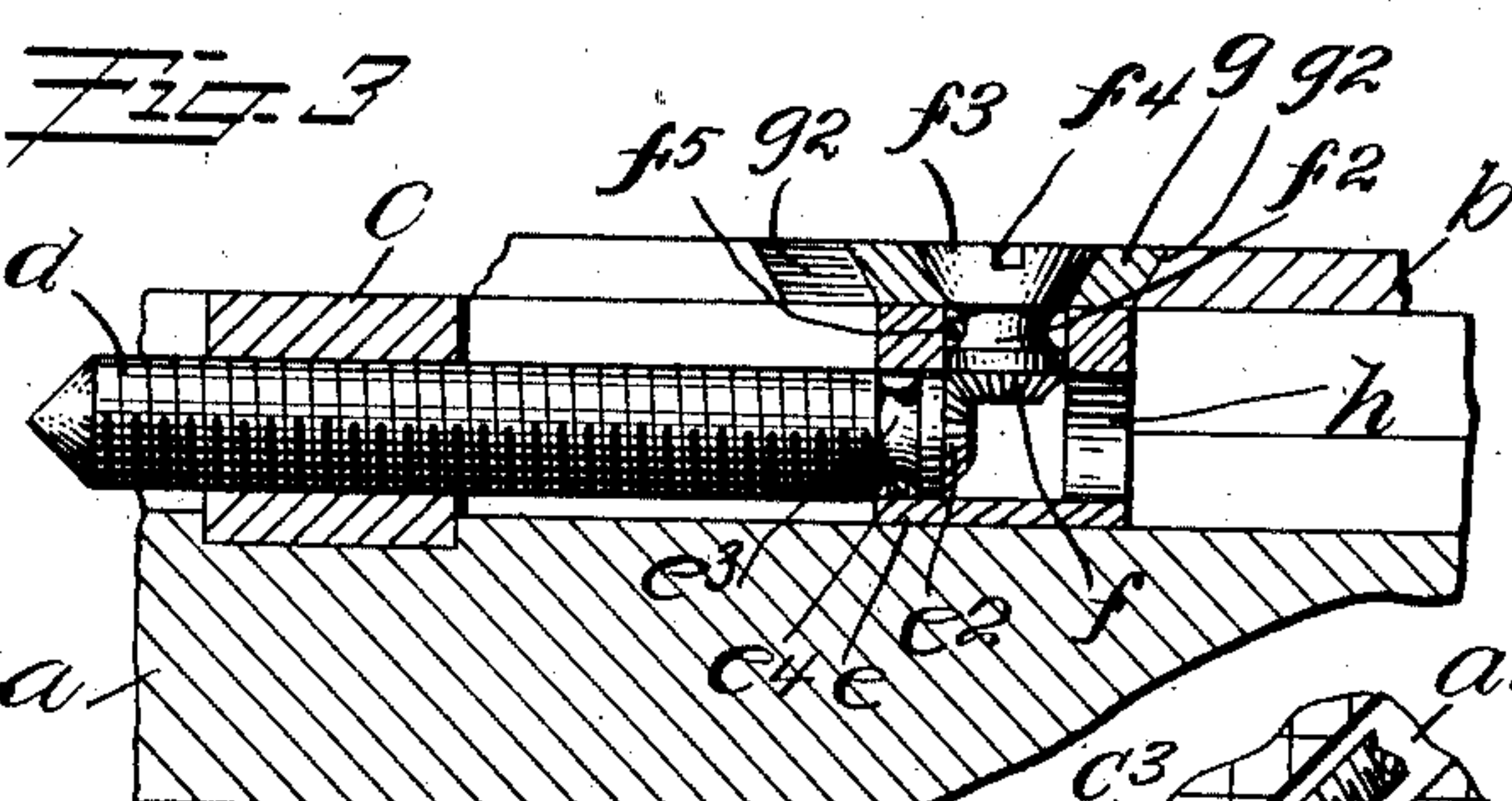


Fig. 4

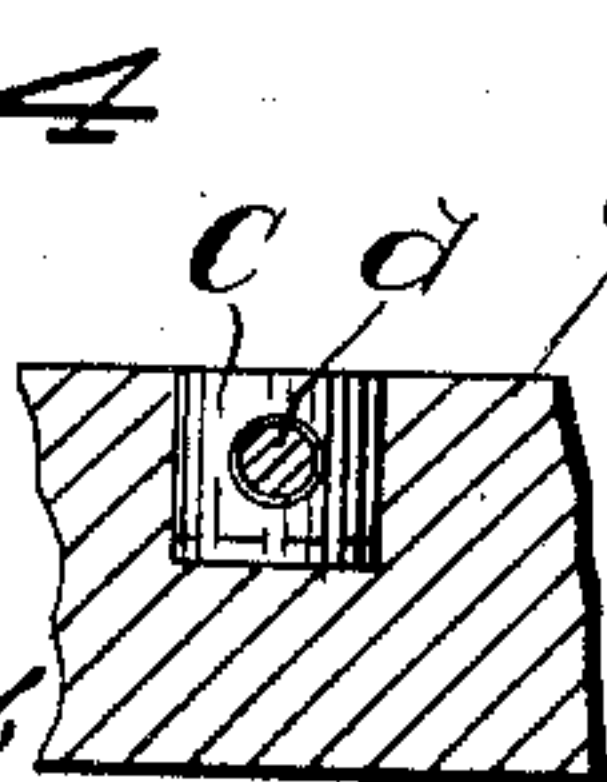


Fig. 5

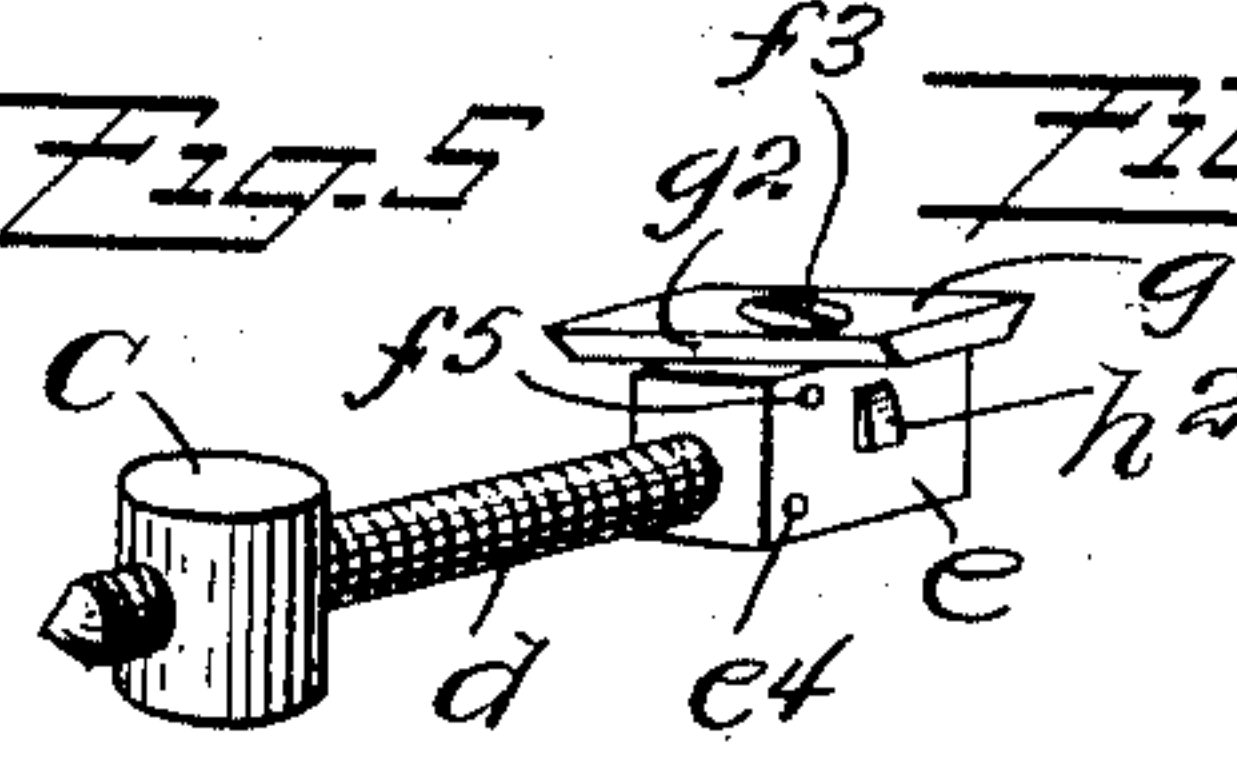
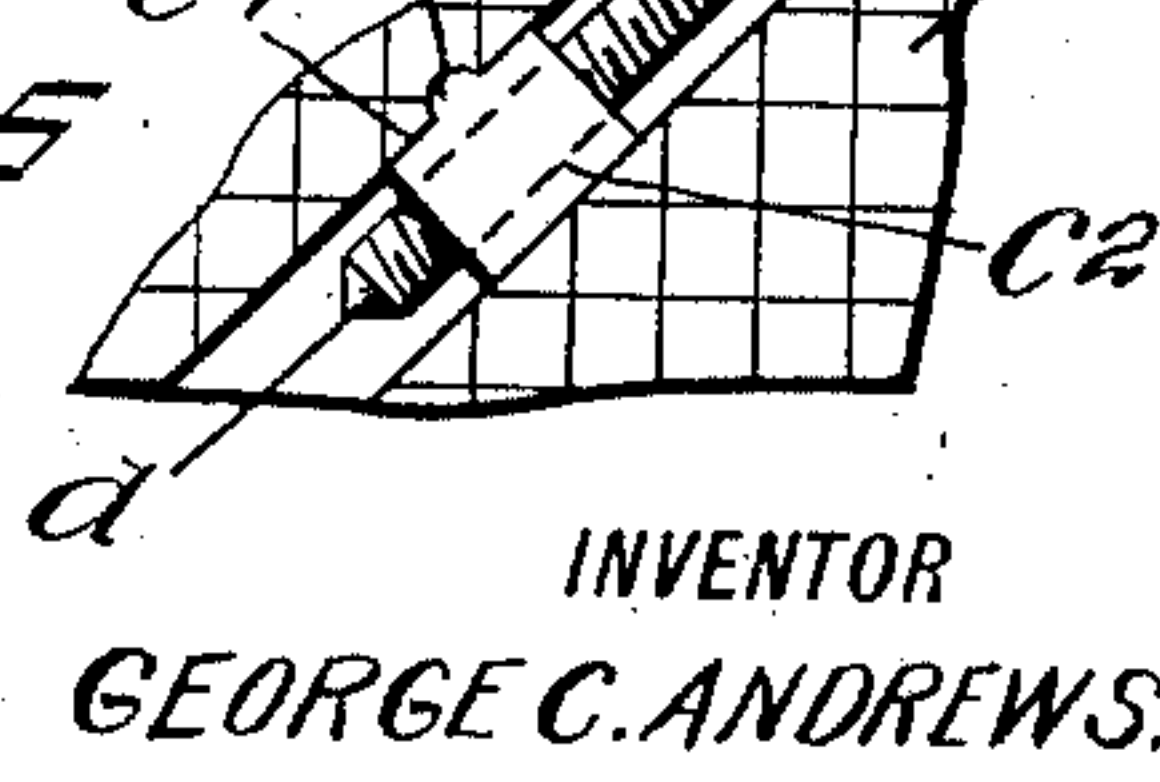


Fig. 6



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MEANS FOR HOLDING AND ADJUSTING PRINTING-PLATES ON A BASE-PLATE.

998,447.

Specification of Letters Patent.

Patented July 18, 1911.

Application filed November 7, 1910. Serial No. 590,997.

To all whom it may concern:

Be it known that I, GEORGE C. ANDREWS, a citizen of the United States, and residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Means for Holding and Adjusting Printing-Plates on a Base-Plate, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to devices for securing a printing plate or plates to a base plate and the object thereof is to provide an improved device or devices of this class whereby stereotype, electrotypes and other printing plates may be conveniently secured to a base plate, and by means of which a printing plate or plates of said class may be easily adjusted into any desired position on the base plate, and my invention is more especially designed for use in connection with a base plate provided with a plurality of diagonal grooves or channels in the surface thereof and in which the holding or clamping device or devices are placed in the operation of securing the printing plate or plates to the base plate.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters, in each of the views, and in which;—

Figure 1 is a plan view showing a printing plate connected with a base plate by means of my improved clamp or holding device a number of which are employed; Fig. 2 a partial section on the line 2—2 of Fig. 1; Fig. 3 a partial section on the line 3—3 of Fig. 1; Fig. 4 a partial section on the line 4—4 of Fig. 1; Fig. 5 a perspective view of one of my improved clamping or holding devices detached, and;—Fig. 6 a view similar to Fig. 1 but showing only a small portion of the base plate and a modified form of a part of one of my improved clamping or holding devices.

In the drawing forming part of this specification I have shown at *a* a printer's base

or bed plate of well known form and the surface of which is provided with parallel diagonal and equally spaced grooves *a*², and I have also shown at *b* a rectangular and oblong printing plate which is mounted on said base or bed plate and secured thereto by my improved holding or clamping devices.

The grooves *a*² are provided in their side walls with longitudinally under cut grooves *a*³ which are preferably V-shaped in form as shown in Fig. 2, the outer walls thereof being inclined inwardly and upwardly and formed in the grooves *a*² at equally spaced intervals, and in the construction shown in Figs. 1 to 5 inclusive, are circular recesses *a*⁴, the transverse dimensions of which are greater than the transverse dimensions of said grooves.

In the construction of my improved clamping or holding device or devices I provide a plug or block *c* which is adapted to be inserted into said recesses *a*⁴, and the top of which is flush with the top surface of the plate *a* when said plug or said clamping or holding device is in use. A screw *d* is passed through the plug or block *c*, and one end thereof is rotatable in a box member *e* and is provided with a beveled gear *e*² which is formed on a head having a neck formed by an annular groove *e*³, and a pin *e*⁴ is passed through the box member *e* and through the groove *e*³ as clearly shown in Fig. 3, and this holds said screw in connection with said box member while permitting of its free rotation. The box member *e* is oblong in form and rectangular in cross section and is adapted to exactly fit in one of the grooves *a*² and to slide therein and when said box member is in position its top surface is flush with the top surface of the base or bed plate *a*. The top of the box member *e* is open and mounted therein is a beveled gear *f* which meshes with the beveled gear *e*² and is provided with a neck *f*², and a head *f*³ similar to the head of a screw, said head being provided with a transverse groove *f*⁴ and being also beveled on its under side, and a pin *f*⁵ is passed through the box member *e* and through a groove which forms

the neck f^2 of the gear f , and this screw holds the said gear in the box e while permitting of its free rotation. Mounted on the head f^3 of the gear f is a clamp plate g 5 which is rectangular in form and preferably oblong, and the opposite sides of which are undercut or beveled as shown at g^2 , and the sides or sides and ends of the printing plate b are also beveled to correspond with the 10 bevel of the sides of the clamp plate g . The end of the box or box member e opposite the screw d is also preferably open as shown at h in Fig. 3, and said box or box member is provided on its opposite sides with beveled 15 lugs h^2 which fit in the grooves a^3 in the side walls of the grooves a^2 in the base or bed plate a . With this construction it will be seen that by using a screw-driver or similar tool or instrument in connection with the 20 head f^3 of the gear f , the said gear may be turned in either direction and the operation of this gear will turn the screw d in either direction according to the direction in which the gear f is turned, and this operation of 25 the screw d will move the box member e longitudinally of the groove a^2 in which it is placed and as will be readily understood, and in this way the box member e , a number of which are always employed, as shown in 30 Fig. 1 may be quickly and easily adjusted into any desired position on the base or bed plate a , and the printing plate e may thus be quickly and easily connected with said bed or base plate and adjusted into any de- 35 sired position.

The plug or block c shown in Figs. 1 to 5 inclusive is cylindrical in cross section, but in Fig. 6 I have shown a modification consisting of a block c^2 fitted into one of the 40 grooves a^2 and locked in any desired position by means of a lug or projection c^3 on one side of said block which fits in a corresponding recess c^4 in one side wall of the groove a^2 , and it will be understood that 45 when this construction is employed one side wall of the grooves a^2 in the base or bed plate a is provided at regular intervals with the recess or recesses c^3 in order to permit of the adjustment of the blocks c in the 50 grooves a^2 .

In Fig. 1 I have shown but one printing plate b connected with the base or bed plate a , but it will be understood that, in practice, any desired number of said printed plates 55 may be employed, and they may be placed side by side, or end to end, and when so placed the spaces between the same will depend upon the width of the clamp plates g and said clamp plates and all the parts of 60 my improved clamping or holding device consisting of the parts c , d , e , f and g may be made of any desired dimensions.

All the parts of the clamping or holding device except the plate g must fit within the 65 groove or grooves a^2 and the top surfaces of

the parts c and e or c^2 must not extend above the top surfaces of the base or bed plate a . The clamp plates g are loosely mounted on the heads f^3 of the gears f and in securing a 70 printing plate to the base or bed plate a all that is necessary is to place said printing plate approximately in the position desired and then place the clamps or holding devices 75 adjacent to said plate, and the adjustment of the box members e of the clamps or holding devices may be effected quickly and easily by turning the heads f^3 of the gears f and 80 when said parts have been properly adjusted the clamp plates g will bear on the sides of the plate b and will be held stationary and said plate b will be securely locked in position.

My invention is not limited to any particular form of base or bed plate, nor to a base or bed plate provided with diagonal grooves, 85 or to a base plate formed of one piece, and while I have shown and described the part e as a box member adapted to slide in the grooves a^2 my invention is not limited to any particular form or construction of said box 90 member and any block shaped devices of this class capable of being used in the manner shown and described may be employed, and various changes in and modifications of this and other features of construction herein 95 described may be made, within the scope of the appended claims, without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is;— 100

1. In a printing plate holder, the combination with a bed plate provided with a plurality of parallel grooves, of stop devices detachably and adjustably mounted in said 105 grooves, screws passed therethrough, clamp plate holding devices adapted to slide in said grooves and with which said screws are rotatably connected, the end of said screws 110 within said clamp plate holding devices being provided with beveled gears, other beveled gears mounted in said clamp plate holding devices and provided with parts 115 which pass out through the top thereof and are provided with screw heads, and clamp plates rotatably mounted on said heads and in which said heads are countersunk.

2. The combination with a bed plate having equally spaced parallel grooves, of 120 means for clamping a printing plate thereon, consisting of posts detachably and adjustably mounted in said grooves, screws passing through said posts, sliding members mounted in said grooves and with which 125 said screws are rotatably connected, the ends of said screws within said sliding members being provided with beveled gears, other beveled gears mounted in said sliding members and meshing with the beveled gears on 130

said screws and provided with parts which
pass out through the tops of said sliding
members and are provided with screw-
shaped heads, and clamp plates rotatably
5 mounted on said heads and in which said
heads are countersunk.

In testimony that I claim the foregoing as

my invention I have signed my name in
presence of the subscribing witnesses this
5th day of November 1910.

GEORGE C. ANDREWS.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
