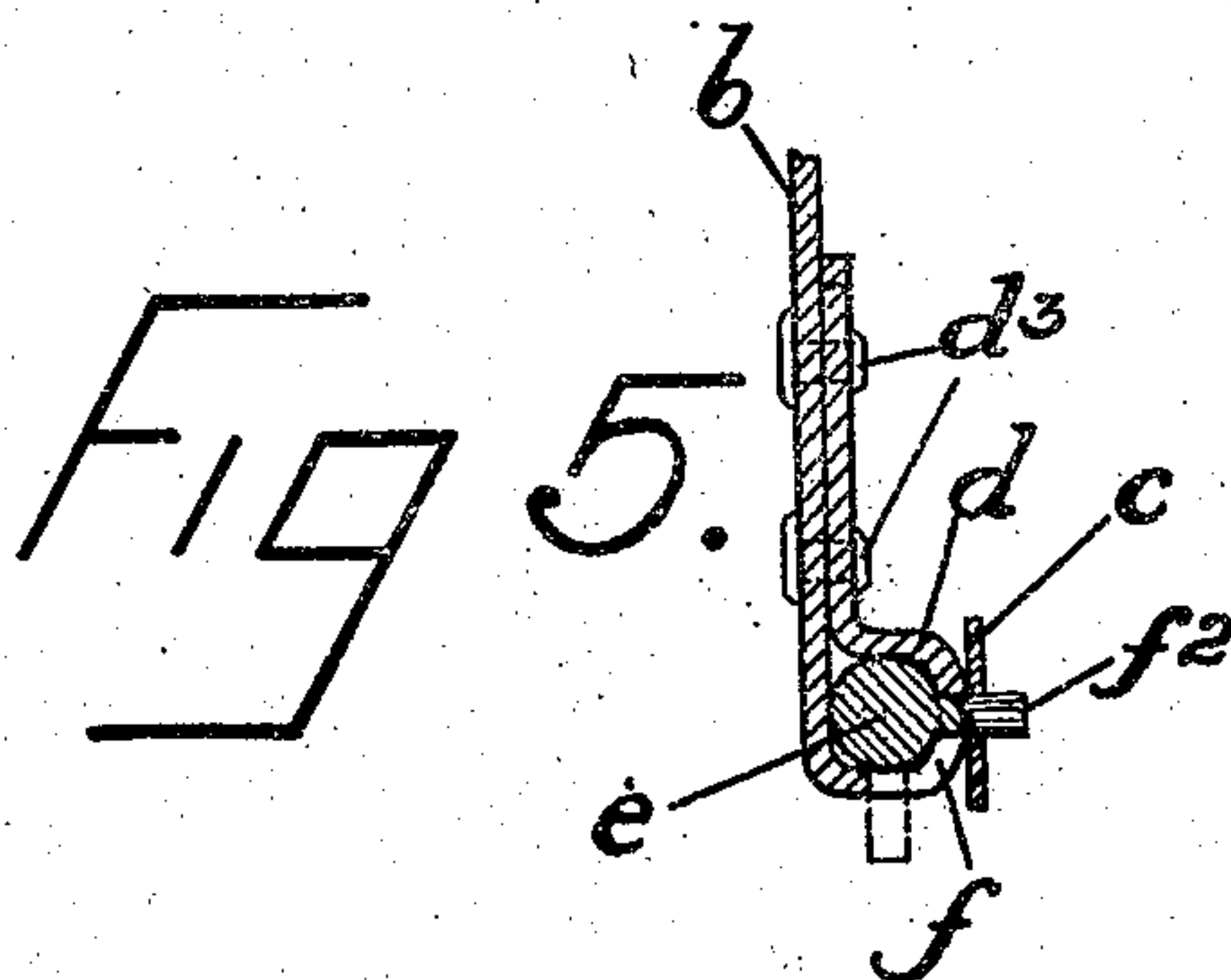
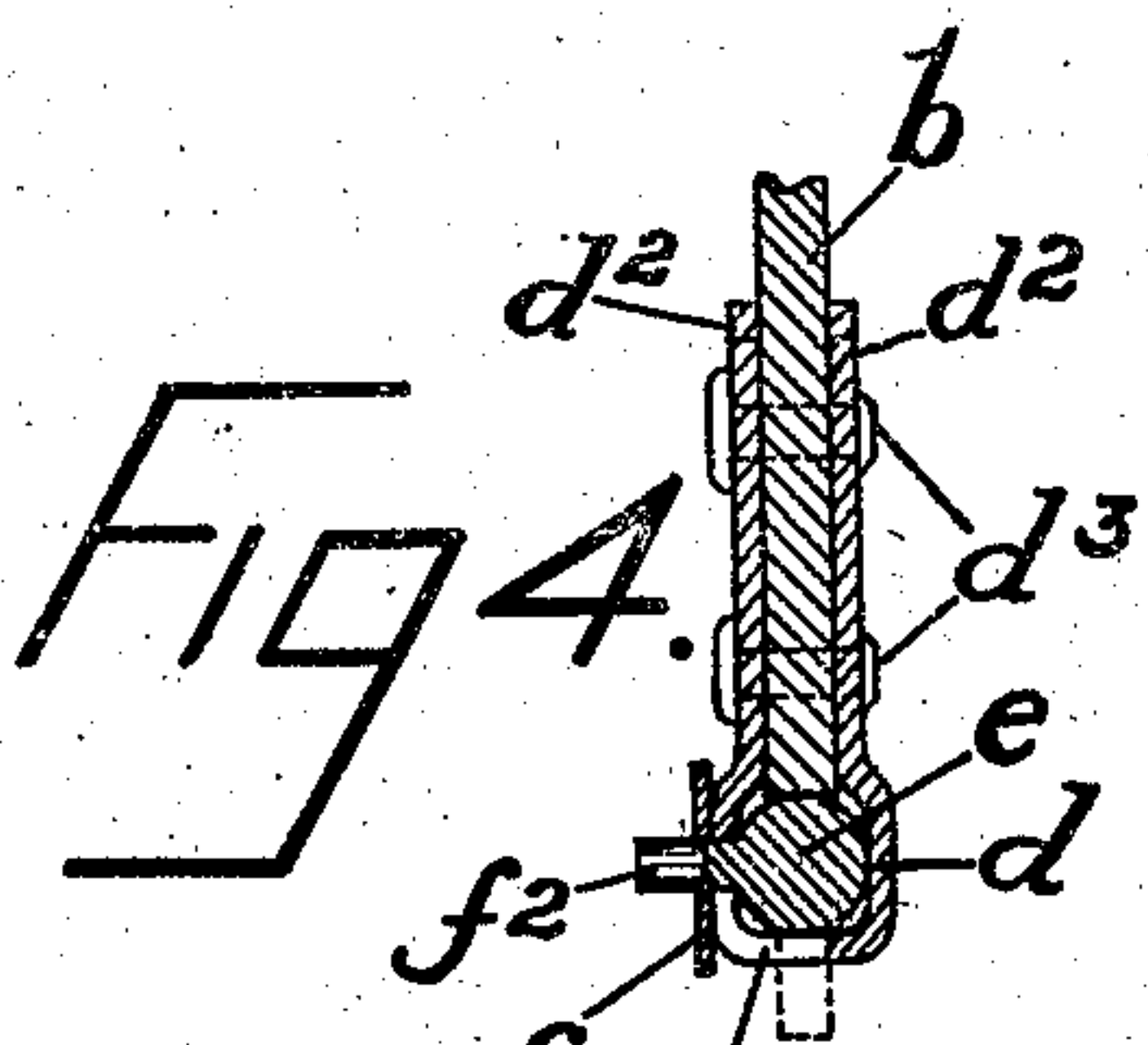
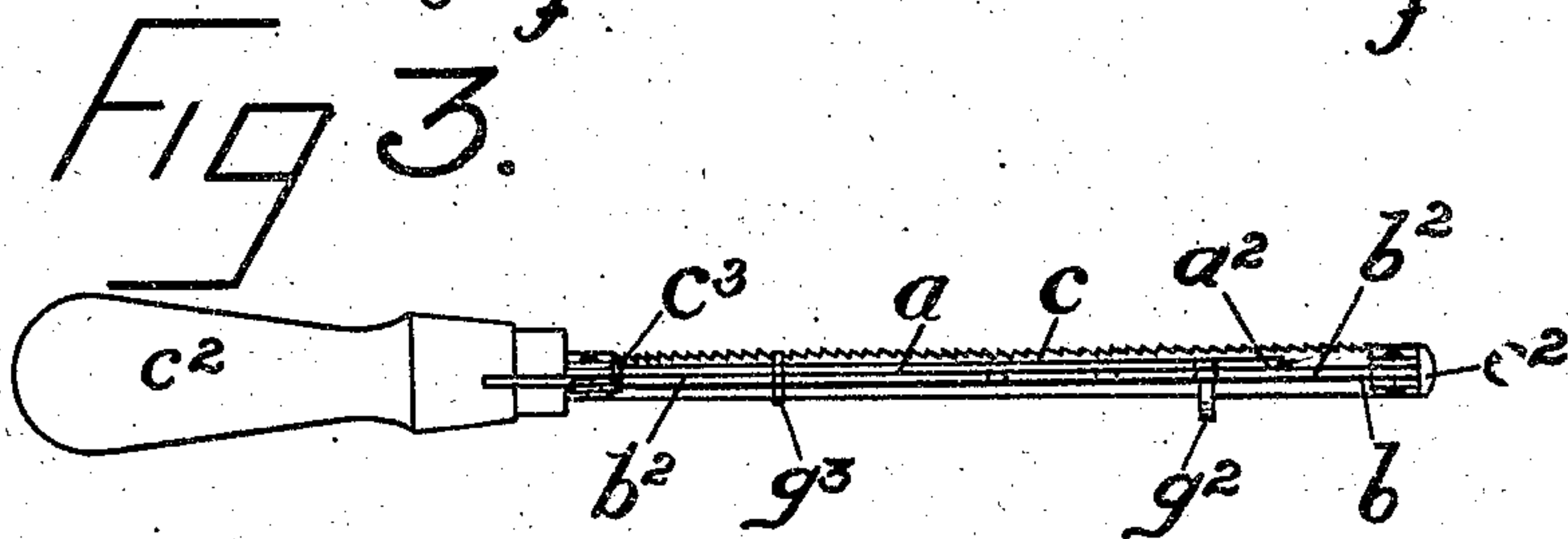
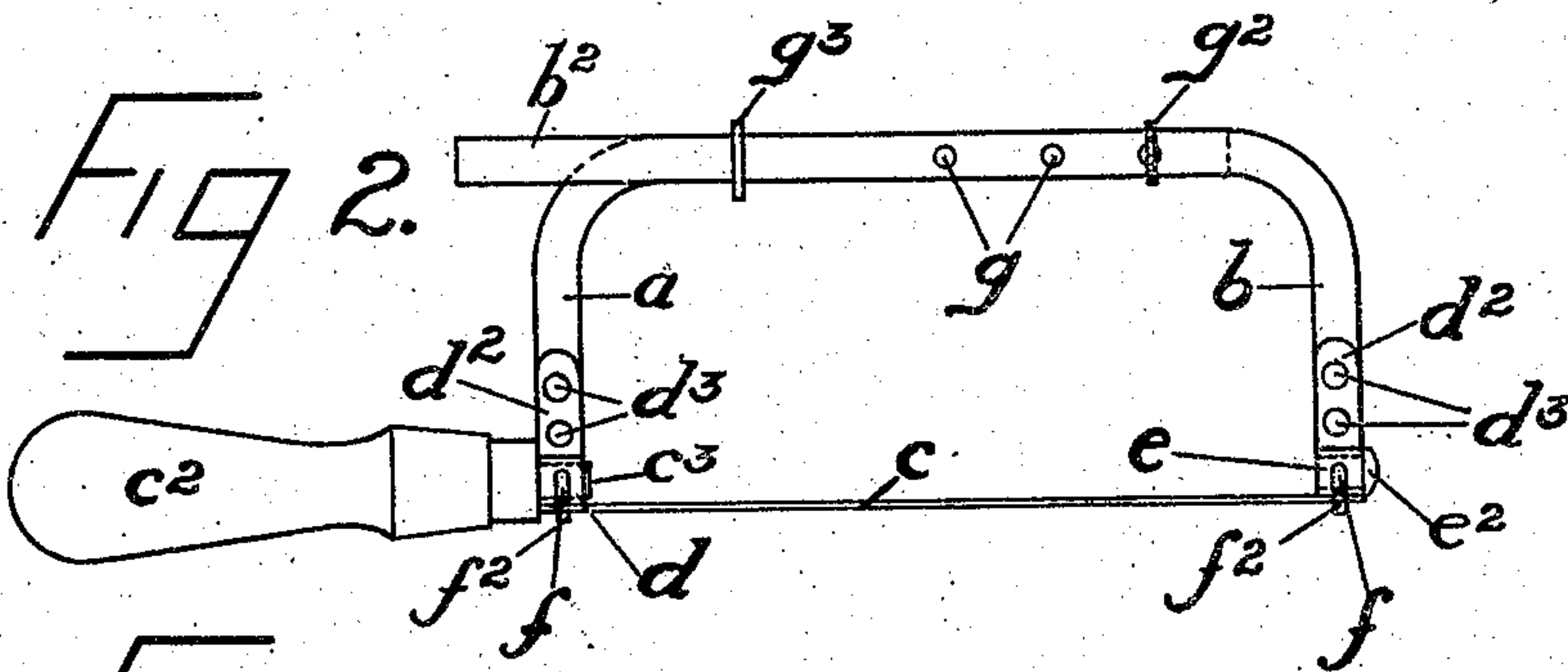
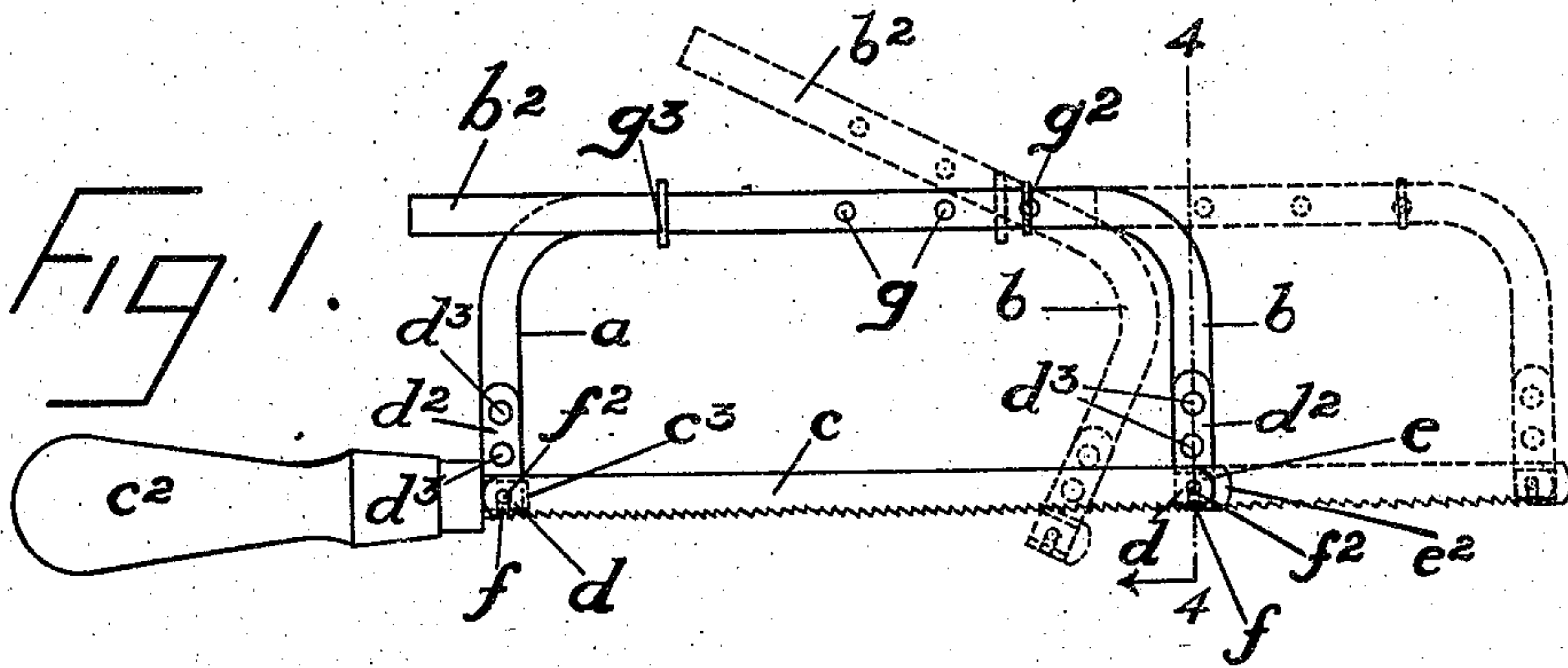


No. 815,597.

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W. E. LAWRENCE.
HACKSAW.

APPLICATION FILED JAN. 10, 1905.



WITNESSES

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HACKSAW.

No. 815,597.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM E. LAWRENCE, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Hacksaws, 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 hacksaws; and the object thereof is to provide improved means for connecting a saw of this class with a frame or holder, whereby the saw may be held in different position or with the plane thereof at different angles to the frame or holder.

The invention is fully disclosed in the following specification, of which the accompanying drawings form 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 side view of a hacksaw provided with a frame or holder similar to that granted to me December 6, 1904, No. 776,602, and showing my improved means for connecting the saw with the frame or holder and showing the parts in different positions in dotted lines; Fig. 2, a view similar to Fig. 1, but showing the saw in a different position; Fig. 3, a back view of the frame or holder with the saw in the position shown in Fig. 2; Fig. 4, a section on the line 4-4 of Fig. 1; and Fig. 5 a view similar to Fig. 1, but showing a modification.

In the drawings forming part of this specification I have shown a hacksaw-frame which is U-shaped in form and composed of two similar side members a and b , each of which is substantially L-shaped in form, said members a and b being provided, respectively, with supplemental members a^2 and b^2 , which are substantially at right angles to the main side members with which the saw c is connected.

Connected with one of the side members a and b , preferably the member a , as shown in the drawings, is a handle c^2 , and the handle c^2 is provided with a journal c^3 . Each of the parts a and b of the frame is provided with a keeper d , composed in the form of construction shown in Figs. 1 to 4, inclusive, of a sheet of metal bent into such shape as to snugly receive the journal c^3 of the handle c^2 , and said keeper is provided with side plates d^2 , between which the parts a and b are secured by bolts, rivets, or screws d^3 .

The journal c^3 of the handle c^2 is inserted through the keeper d , which is connected with the part a of the frame or holder, and the keeper d , which is connected with the part b of the frame or holder, is provided with a rotatable member or plug e , which is similar in form in cross-section to the journal c^3 of the handle c^2 and which is preferably of the same dimension, and as thus constructed it will be seen that both of the keepers d are each provided with a rotatable member, the said rotatable member in one case consisting of a journal formed on the handle c and in the other case by a separate and independent cylindrical-shaped plug, and said cylindrical-shaped plug is provided with a head e^2 .

Each of the keepers d is provided in one side, preferably the front side, and in the bottom thereof with a transversely-arranged slot f , and the journal c^3 of the handle c^2 and the rotatable member or plug e are each provided with a pin, lug, or projection f^2 , and the pins f^2 pass through the slots f and are movable therein.

The horizontal portions a^2 and b^2 of the frame members b are provided at regular intervals with holes g , and said portions are connected by a pivot pin, screw, or similar device g^2 , which is adapted to be passed through any of the holes g in the parts a^2 and b^2 , and mounted on said parts a^2 and b^2 is a slide or movable collar g^3 .

The saw c is provided at its opposite ends with holes h , through which the pins, lugs, or projections f^2 are adapted to be passed, and in connecting the saw with the frame or holder the pivot pin or screw g^2 is preferably placed near to the part b of said frame or holder, and the movable collar or slide g^3 is moved along the parts a^2 and b^2 of said frame or holder until it is adjacent to said pivot pin or screw g^2 , when the part b may be slightly tilted, so that the saw may be connected therewith and with the part a , after which the part b^2 is swung down into the position shown in full lines in Fig. 1, and the collar or slide g^3 is moved in the direction of the handle c^2 into the position also shown in full lines in Fig. 1. This operation, as will be understood, draws the saw taut and securely holds it in the desired position, and when it is desired to detach the saw the above operation is reversed and the part b of the frame is swung into the position shown in dotted lines in Fig. 1; or substantially so. In Fig. 1 of the drawings the saw c is shown in the plane

parallel with the frame or holder and slightly in front of the frame or holder, as will be seen on an examination of Fig. 4; but, if desired, the saw may be swung into the position shown in Figs. 2 and 3, in which the plane of the saw will be at right angles to the plane or holder, and in order to do this the parts *a* and *b* must be adjusted by moving the collar or slide *g*³ in the direction of the part *b* of the frame or holder in turning the handle *c*² and the rotatable member or plug *e*, so that the pins, lugs, or projections *f*² will project downwardly, as shown in dotted lines in Figs. 4 and 5 and in full lines in Fig. 2.

It will be understood that all that is necessary in order to attach the saw is to move the collar or slide *g*² toward the part *b* of the frame or holder, so that said part will turn slightly on the pivot pin or screw *g*², and then place the saw in position on the pins, lugs, or projections *f*², after which the slide or collar *g*³ is moved back to the position shown in full lines in Fig. 2, and the saw *c* may be turned from one position to another in the same manner.

In Fig. 5 I have shown a modification in which the parts *a* and *b* of the frame are bent to form the keeper or keepers *d*, and with this form of construction the saw *c* may be held in front of the frame or holder or at the back thereof, according to the manner or method of bending the parts *a* and *b* to form the keepers *d*.

By means of my improvement it will be seen that the saw may be held in various positions in the frame or holder and may be also easily, quickly, and conveniently connected therewith or detached therefrom, and changes in and modifications of the construction herein described may be made without departing from the spirit of my invention or sacrificing its advantages.

It will also be seen from the foregoing de-

scription that the frame or holder comprises two parts which together form a U-shaped frame or holder the sides of which are separated the length of the saw, or substantially so, and provided with overlapping members which form the cross-head portion of the U-shaped frame, which is parallel with the saw when the latter is in position. It will also be seen that the separate parts of the frame are longitudinally adjustable, as shown in dotted lines in Fig. 1, and in this way saws of different lengths may be employed.

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

1. A saw frame or holder having opposite parallel side members provided at their ends, and at one side thereof with keepers having transverse slots, and rotatable devices mounted in said keepers and provided with pins which pass through said slots and with which a saw is adapted to be connected, the plane of the saw when in position being parallel with that of said side members of the frame, substantially as shown and described.

2. A saw-frame of the class described, said frame being provided with parallel side members, said side members being provided at their ends with keepers having transverse slots, and rotatable devices mounted in said keepers and provided with pins which pass through said slots, the axis of said rotatable devices being at one side of and parallel with the plane of the side members of the frame, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 29th day of December, 1904.

WILLIAM E. LAWRENCE.

Witnesses:

C. J. KLEIN,

C. E. MULREANY.