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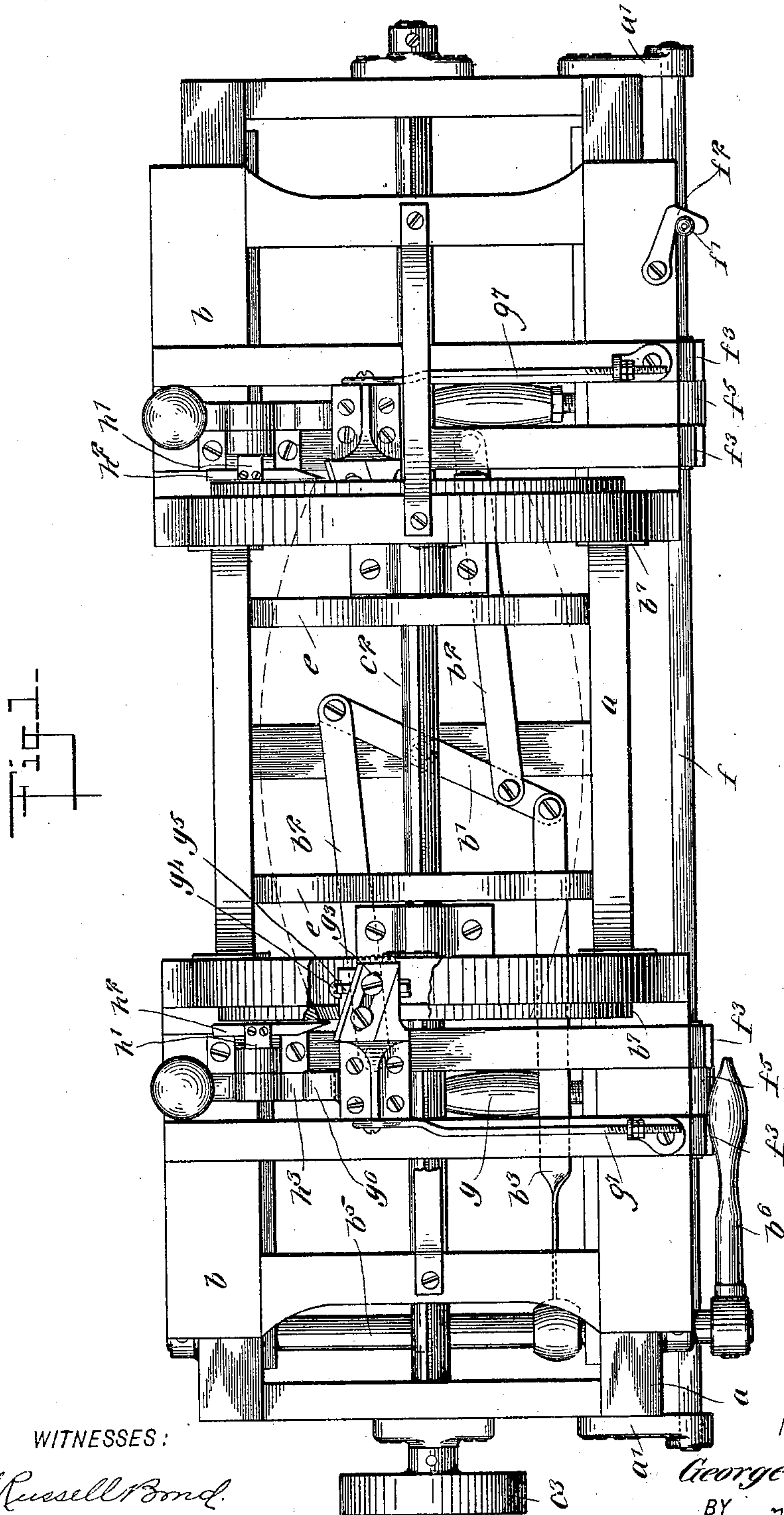
Patented July 8, 1902.

G. M. CARTER.
MACHINE FOR FINISHING BARRELS.

(Application filed Sept. 24, 1901.)

(No Model.)

3 Sheets—Sheet 1.



WITNESSES:

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J. B. Owens.

INVENTOR

George M. Carter

BY

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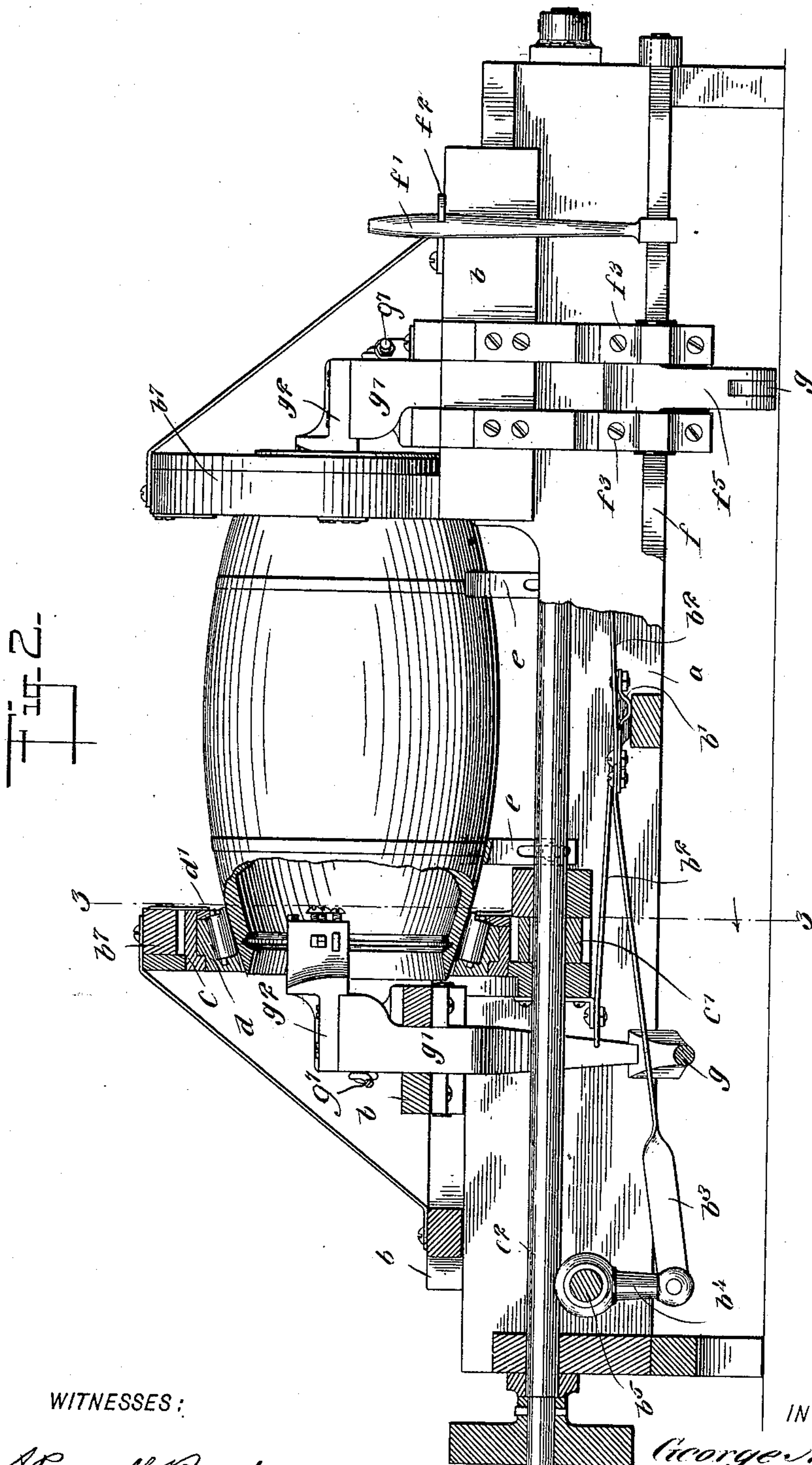
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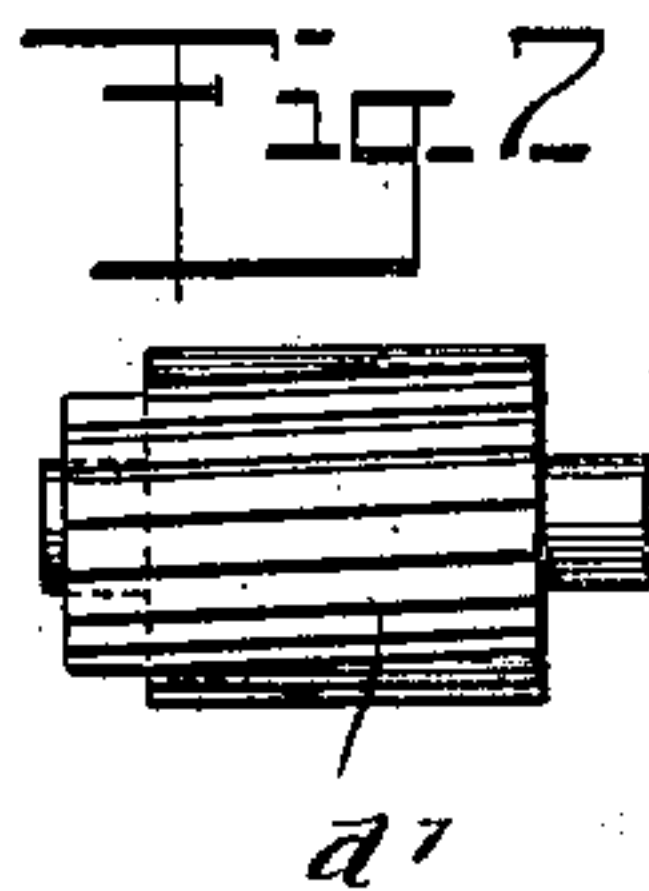
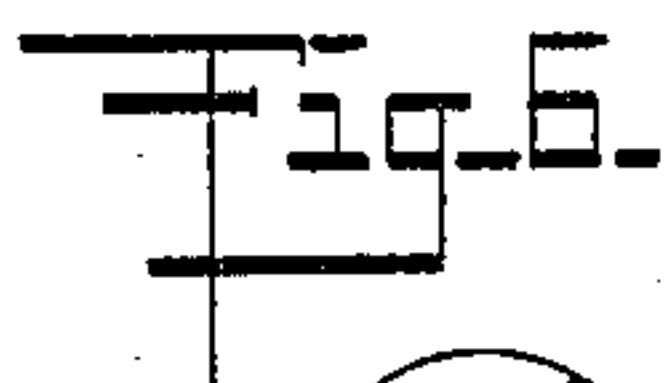
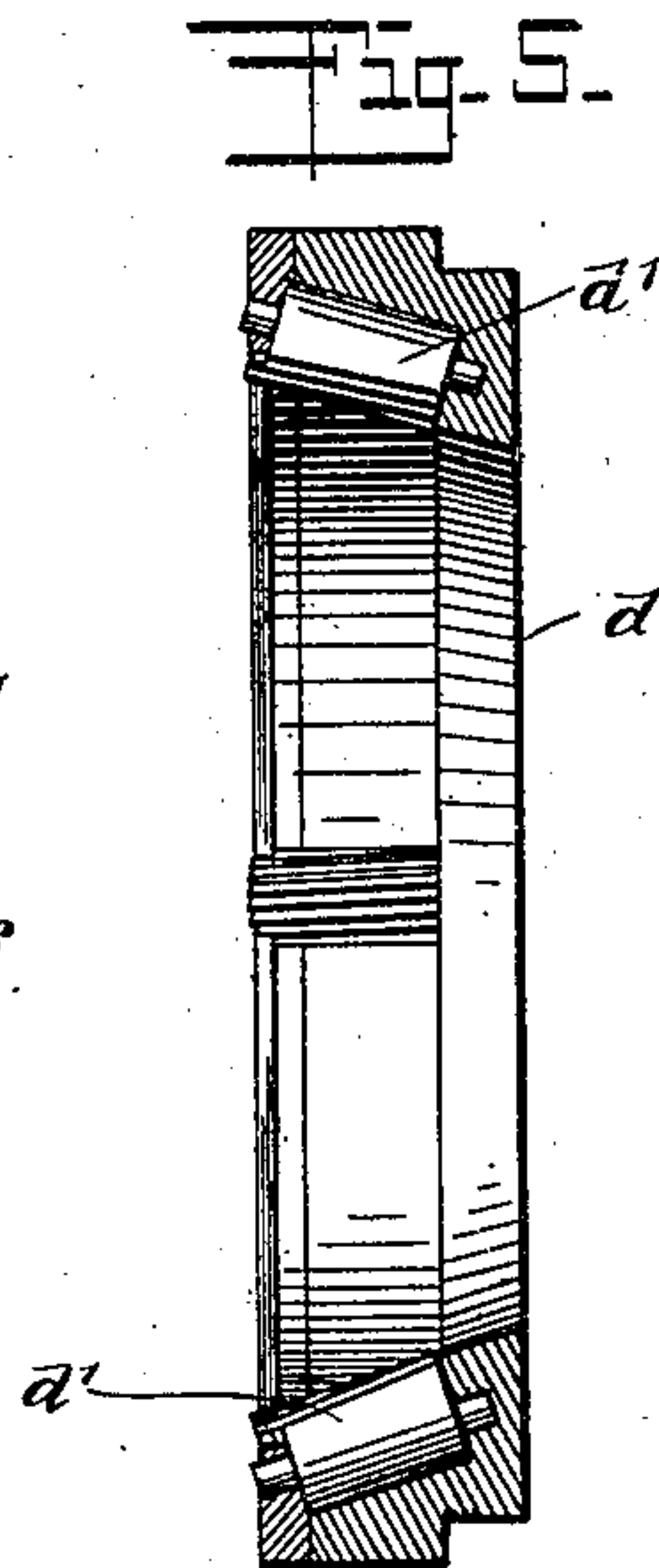
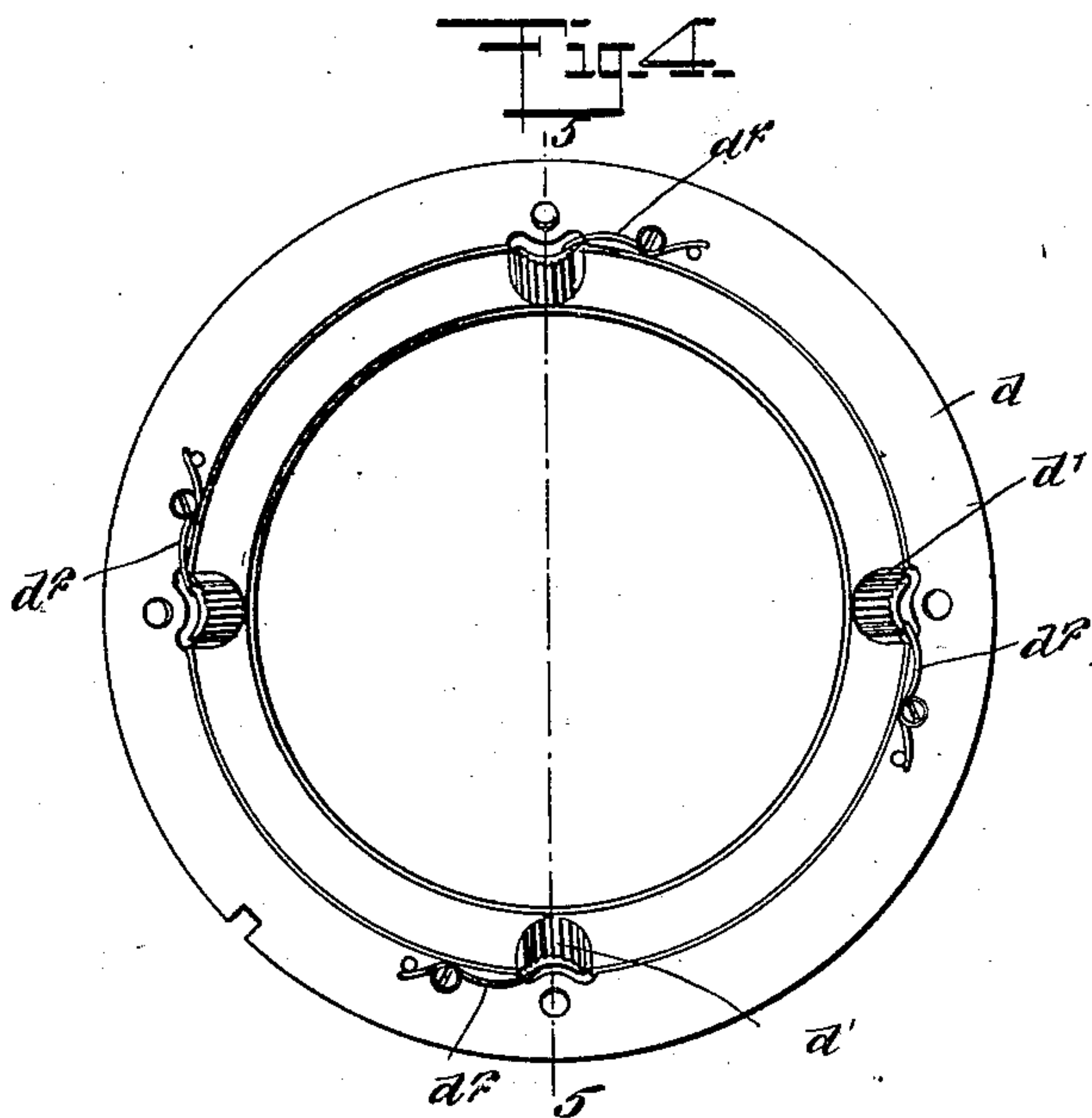
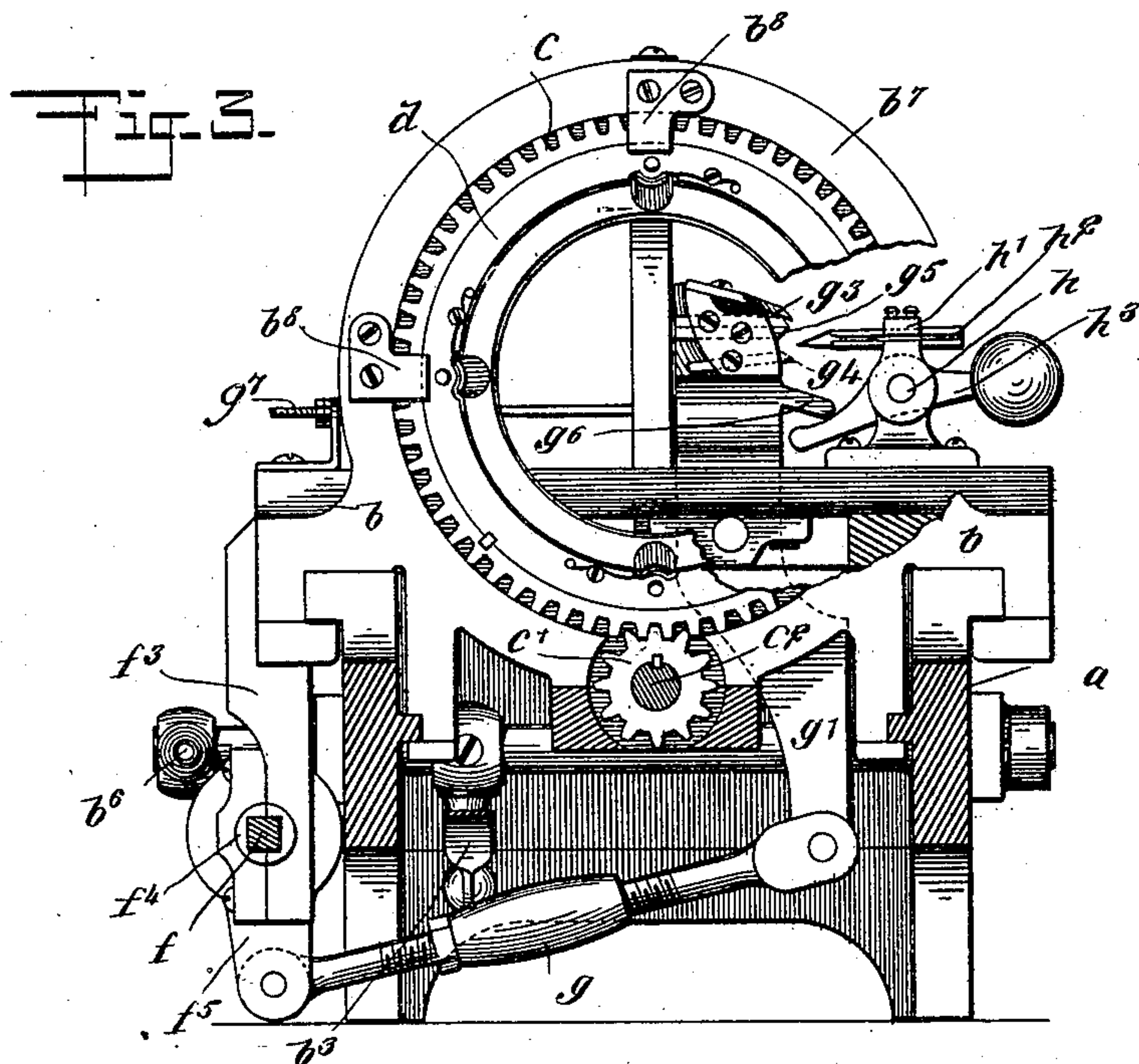
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UNITED STATES PATENT OFFICE.

GEORGE MARION CARTER, OF POPLARBLUFF, MISSOURI, ASSIGNOR TO
HIMSELF AND WILLIAM FERGUSON, OF POPLARBLUFF, MISSOURI.

MACHINE FOR FINISHING BARRELS.

SPECIFICATION forming part of Letters Patent No. 703,994, dated July 8, 1902.

Application filed September 24, 1901. Serial No. 76,421. (No model.)

To all whom it may concern:

Be it known that I, GEORGE MARION CARTER, a citizen of the United States, and a resident of Poplarbluff, in the county of Butler and State of Missouri, have invented a new and Improved Machine for Finishing Barrels, of which the following is a full, clear, and exact description.

This invention relates to a machine for chamfering, crozing, and howeling barrels and for trimming the ends of a barrel preparatory to the insertion of the heads.

The invention comprises certain novel features of construction and arrangement of parts, which will be fully brought out hereinafter.

This specification is a specific description of one form of the invention, while the claims are definitions of the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the invention. Fig. 2 is a side elevation with parts broken away. Fig. 3 is a sectional elevation on the line 3 3 of Fig. 2. Fig. 4 is a side elevation of one of the rotating rings which carry the barrel. Fig. 5 is a section on the line 5 5 of Fig. 4, and Figs. 6 and 7 are detail views of the dogs in the barrel-carrying rings.

The machine has a horizontal bed or frame *a*, on which are arranged to slide horizontally toward and from each other two carriages *b*. These carriages are mounted on suitable guides on the frame *a* and are arranged to be adjusted toward and from each other by means of levers *b'*, joined to links *b²*, which are connected, respectively, with the carriages *b*. The lever *b'* has a link *b³* connected therewith, and this link is connected to a crank *b⁴* on a shaft *b⁵*, mounted transversely in the frame *a* and provided with a handle *b⁶* at one end, whereby the shaft *b⁵* may be rocked, thus throwing the lever *b'* and moving the carriages toward or from each other. Each carriage has a circular yoke *b⁷* formed thereon, these yokes lying in vertical planes and carrying gear-rings *c*, which rings are mounted loosely in the yokes and driven by pinions *c'*, splined on a shaft *c²*. This

shaft extends longitudinally of the machine and has a pulley *c³* at one end, by which it may be driven, so as to impart a rotary movement to the gear-rings *c*. Within each gear-ring is keyed a choke-ring *d*. (See Figs. 4 and 5.) These rings *d* being fast to the rings *c* turn therewith, and they carry cam-shaped dogs *d'*, adapted to engage with and hold the barrel in the manner indicated in Fig. 2.

d² indicates springs which engage the dogs *d'*, tending to throw them into active position. The rings *c* and *d* are held in place by means of projecting lips *b⁸* on the yokes *b⁷*.

e indicates two racks, which are mounted on the frame *a* between the carriages *b* and which are designed, primarily, to receive the barrel. As shown in Fig. 2, the barrel is placed on the racks *e*, and then the carriages *b* are moved together, thus engaging the choke-rings firmly with the ends of the barrel. The shaft *c²* is then put in motion, and the pinions *c'* are driven to drive the rings *c* and *d* and impart a rotary movement to the barrel.

f indicates a square or other angular rock-shaft, which is mounted at the side of the frame *a* in suitable bearings *a'*. This shaft is provided with a handle *f'*, which may be locked in vertical position by means of a swinging catch *f²*, this catch being mounted on one of the carriages *b*. Each carriage *b* is provided, as best shown in Figs. 1 and 3, with downwardly-projecting arms *f³*, carrying revoluble sleeves *f⁴*, which fit loosely in the arms and which are arranged to slide on, but to turn with, the shaft *f*. Between each pair of arms *f³* is arranged a crank *f⁵*. This crank is arranged to slide on the shaft *f*, but to turn therewith. Now it will be seen that as the carriages *b* are shifted the cranks *f⁵* move therewith; but notwithstanding the movement of the cranks axially of the shaft *f* the rocking of the shaft will impart a like movement to the cranks. To each crank is connected a link *g*, and these links extend inward toward the center of the machine and are respectively connected with levers *g'*, fulcrumed on the respective carriages *b*. The levers *g'* extend vertically through the carriages *b*, their upper ends being arranged just back of the yokes *b⁷*. The upper end of each lever *g'* carries a cutter-head *g²*, on each of

which are arranged a chamfering-blade g^3 , a howeling-knife g^4 , and a crozing-knife g^5 . By throwing the shaft f from one position to another the levers g' will be rocked, thus moving the knives g^3 , g^4 , and g^5 from active to inactive position.

Mounted on each carriage b is a rock-shaft h . (See Fig. 3.) On this shaft is carried an arm h' , to which is fastened a knife h^2 . These knives serve to engage the ends of the barrels to trim the same. The rock-shaft h carries a weighted arm h^3 , and these arms are adapted, respectively, to be struck by projections g^6 on the levers g' when said levers are thrown into active position. As the levers are thrown down in this position (see Fig. 3) the arms h^3 are tilted, and the knives h^2 are therefore thrown inward into operative position. When the levers g' are thrown back into inactive position, the arms h^3 are released and then return by gravity to their positions of rest. The gears c' move with the carriages b as said carriages are adjusted, it being understood that these gears are splined on the shaft c^2 . The rotation of the gears c' imparts a like movement to the rings c and d , and thus the barrel is turned. This turning of the barrel causes the knives to act and the various cuts are performed. When the barrel has been properly trimmed and finished, the lever b' is thrown to separate the carriages, and the barrel is then disengaged from the choke-rings d and lies at rest upon the rings c , from which it may be removed at will. g^7 indicates a rod attached to each lever g' and having a nut on the end, which bears against a part in the frame to limit the movement of the levers.

Various changes in the form, proportions, and minor details of my invention may be resorted to without departing from the spirit and scope of my invention. Hence I consider myself entitled to all such variations as may lie within the scope of my claims.

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

1. The combination with a frame, of a carriage mounted thereon, a ring arranged to turn in the carriage, the ring receiving the end of a barrel, means for turning the ring, cam-shaped dogs mounted in the ring to engage the barrel and hold it firmly therein, and a tool working with the barrel, for the purpose specified.

2. The combination of a frame, a carriage mounted thereon, a gear-ring arranged to turn in the carriage, a driven gear meshing with the gear-ring to drive it, a choke-ring

fitted in and turning with the gear-ring, cam-shaped dogs mounted in the choke-ring to engage and hold the barrel, and a tool working with the barrel, for the purpose specified.

3. The combination with a frame and means for carrying and turning a barrel, of a lever mounted on the frame, a tool carried by the lever and adapted to work with the barrel, a second tool, and means for mounting said tool to swing into and out of operative position, the lever striking said means when moving the first tool into action, whereby to throw the second tool into action.

4. The combination with a frame and with means for mounting and turning a barrel, of a lever mounted on the frame, a tool carried thereby and adapted to work with the barrel, a rock-shaft, a second tool mounted on the rock-shaft, and an arm on the rock-shaft, the arm being struck by a part of the lever, whereby to throw the second-named tool into operative position.

5. The combination with a frame and means for mounting and carrying a barrel, of a tool, means for mounting said tool to move into and out of operative position, a second tool, and means for mounting the second tool to move into and out of operative position, the mounting means of one tool striking the other to actuate it, whereby the tools are moved simultaneously into operative position.

6. In a machine for finishing barrels, the combination with a frame and the means for mounting and turning a barrel, of a tool, means for carrying the tool to work against the inside of the barrel, a second tool, and means for carrying the second tool to work against the end of the barrel to trim it, said tool-carrying means being juxtaposed to be actuated the one from the other.

7. The combination with a frame and means for mounting and turning a barrel, of a lever mounted on the frame, a cutter-head projecting transversely from the lever, a tool carried by the cutter-head and working on the inside of the barrel, a second tool working on the end of the barrel, and means for carrying the second tool to move into and out of operation, said means for carrying the second tool being struck by a part of the lever to throw both tools into action simultaneously.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE MARION CARTER.

Witnesses:

JOHN A. CUMMINS,

W. A. BLAKE.