

(No Model.)

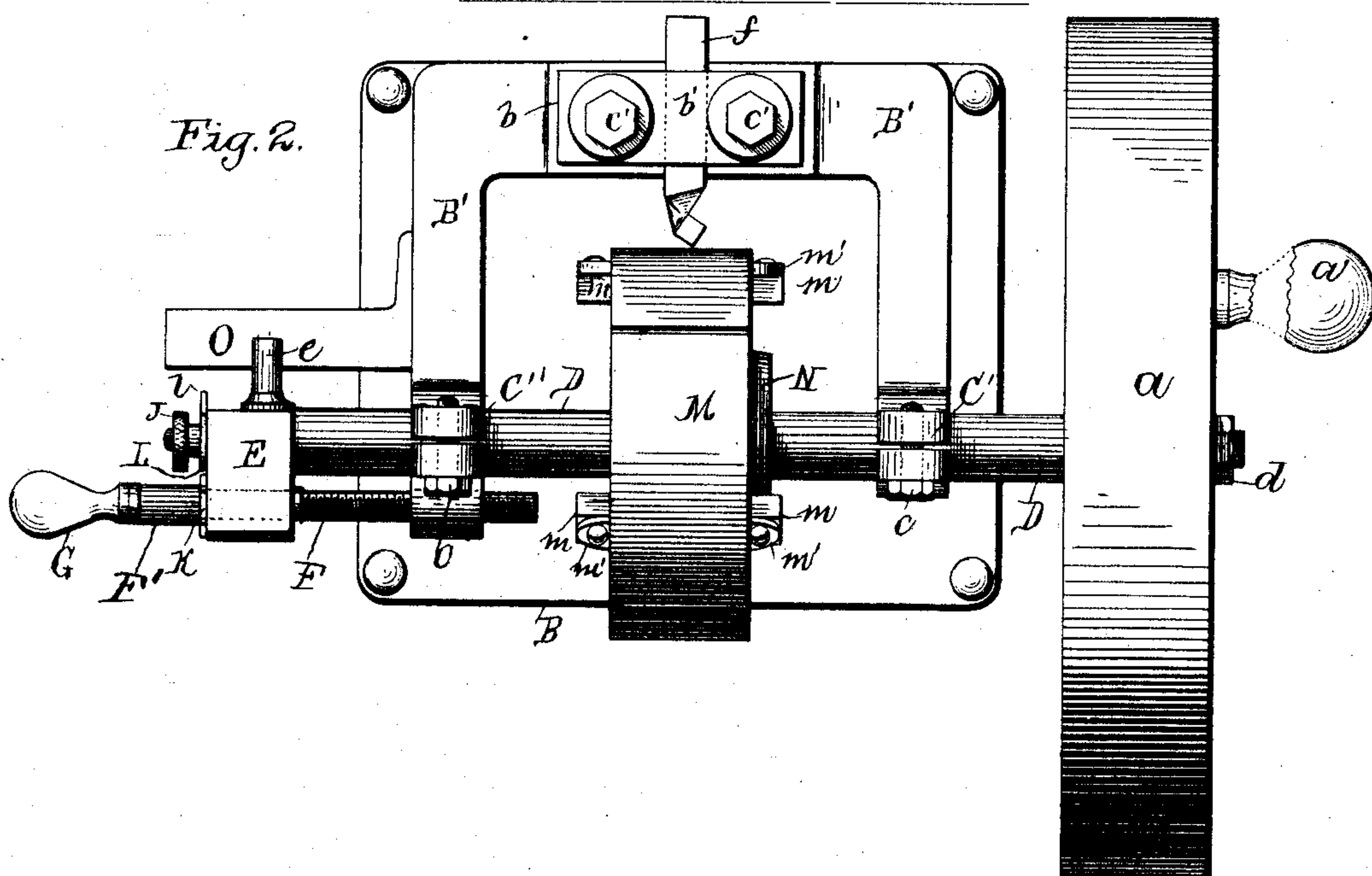
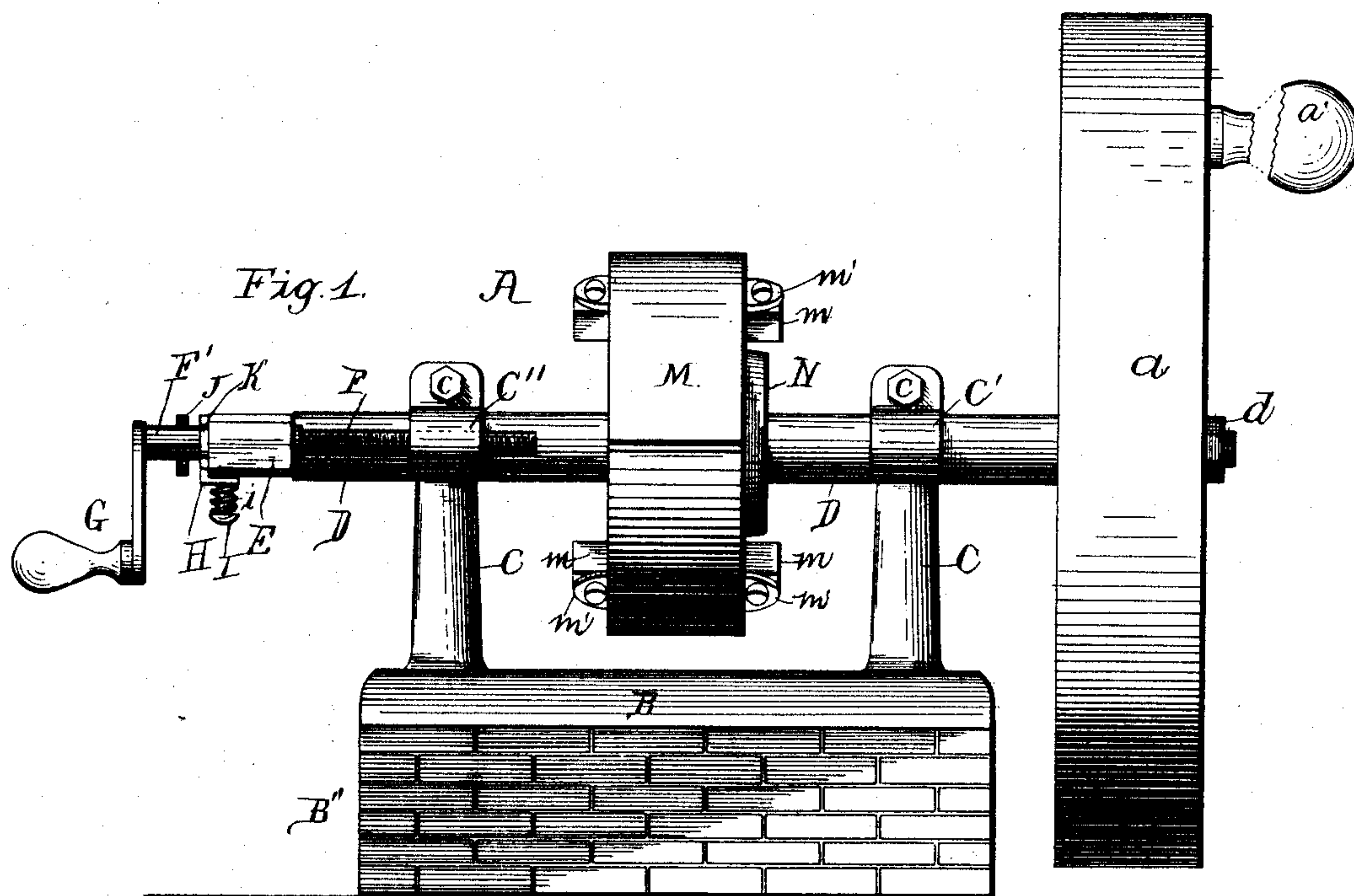
2 Sheets—Sheet 1.

H. G. McLEAN.

MACHINE FOR TURNING DYNAMO COMMUTATORS.

No. 429,946.

Patented June 10, 1890.



Witnesses:

R. A. Balderson
A. A. Higdon

Inventor;
H G McLean,

By his Attorneys,

Higdon & Higdon

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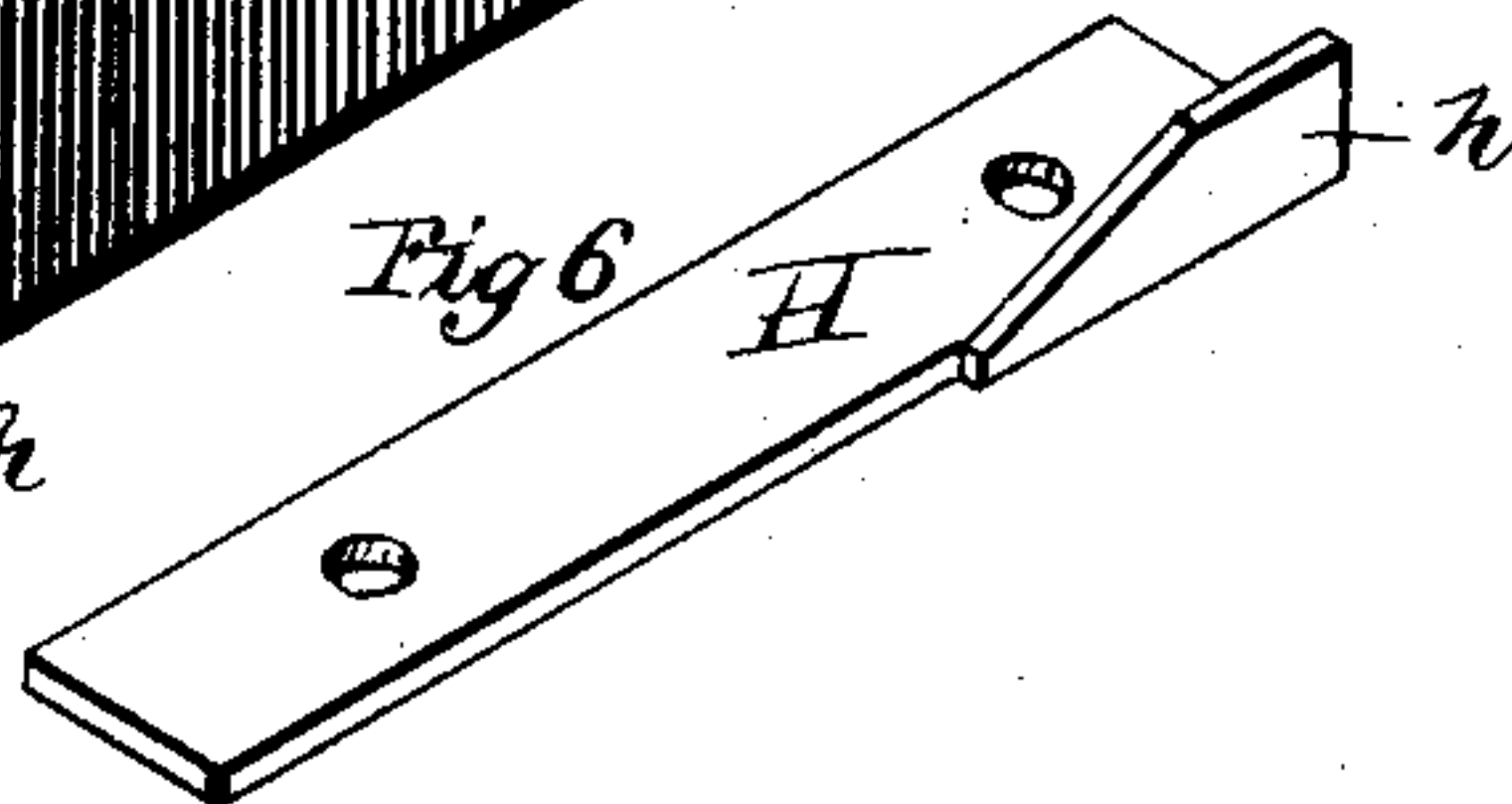
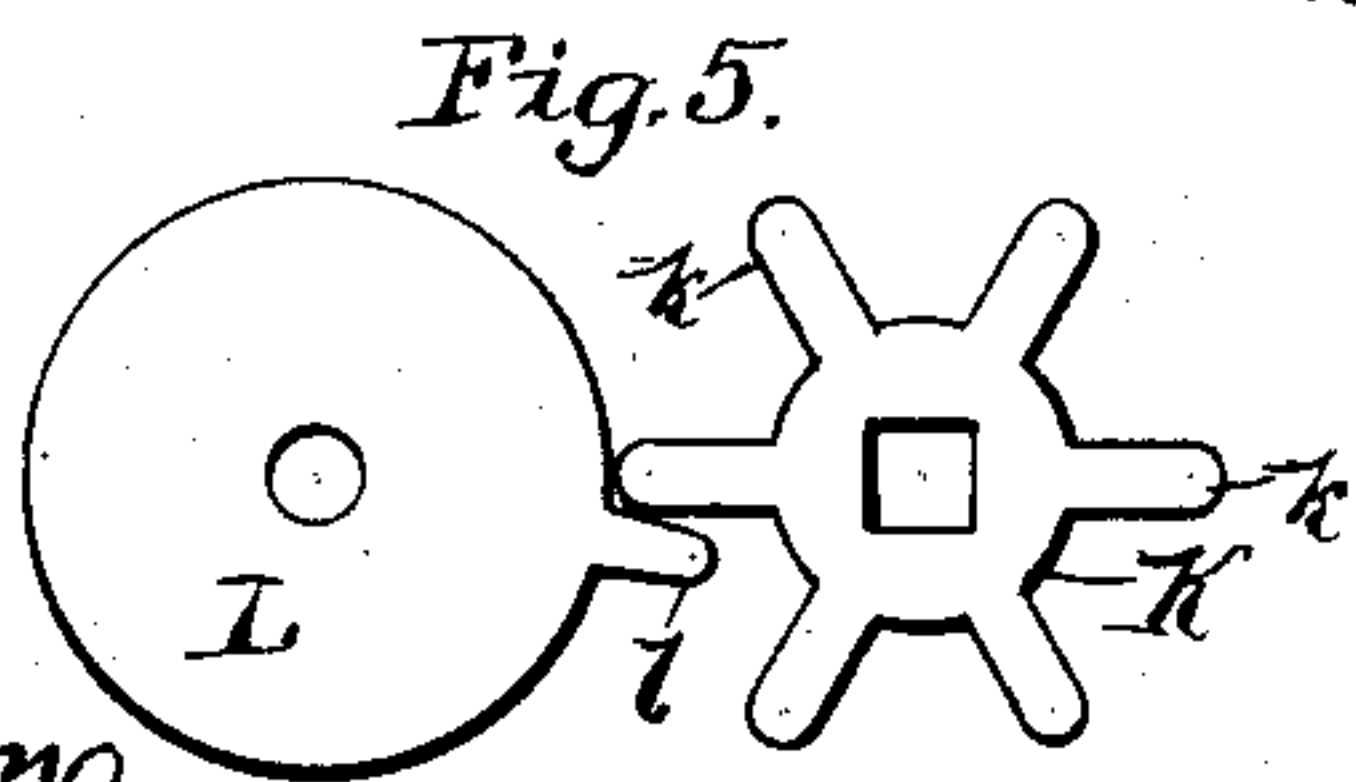
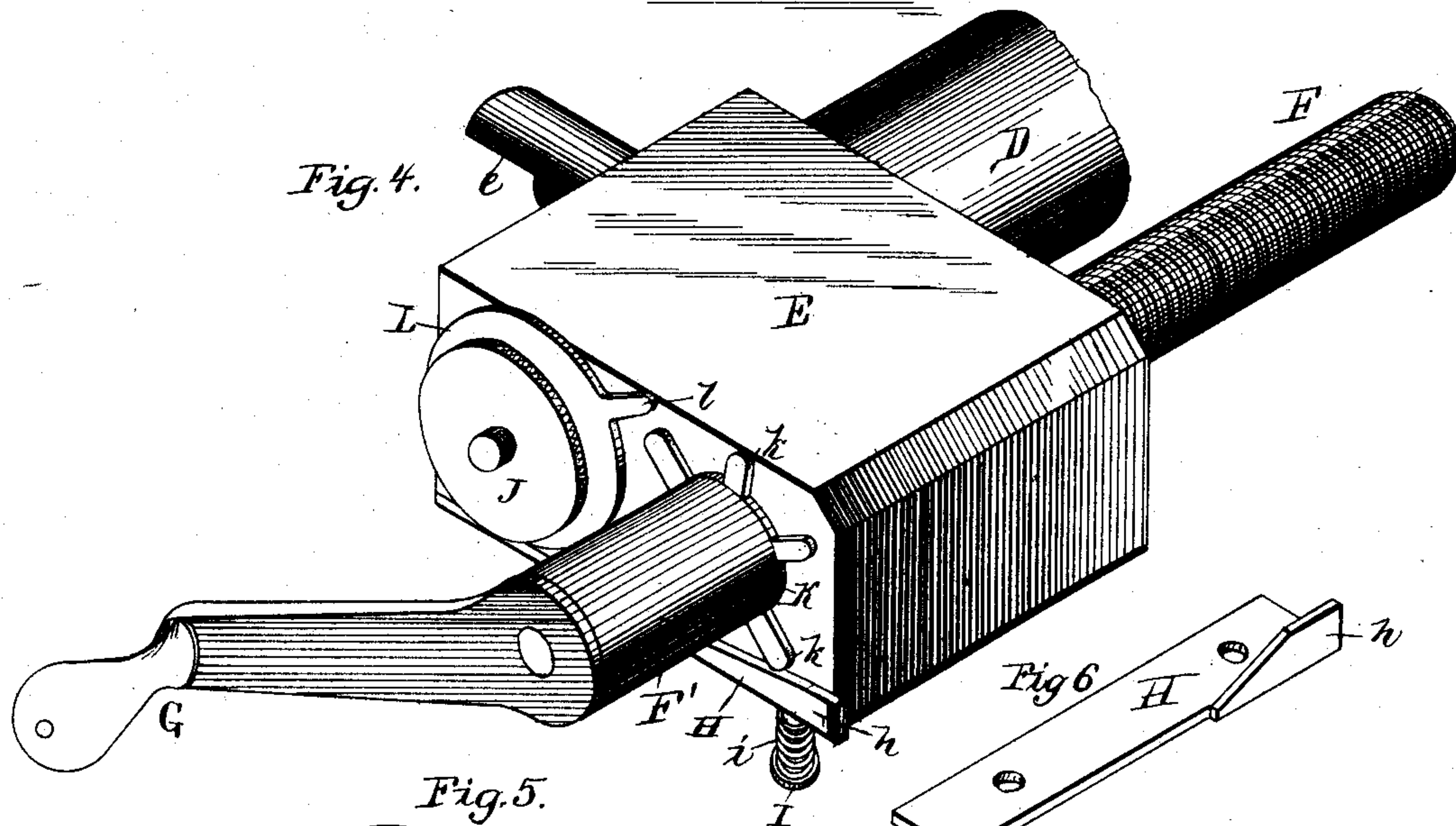
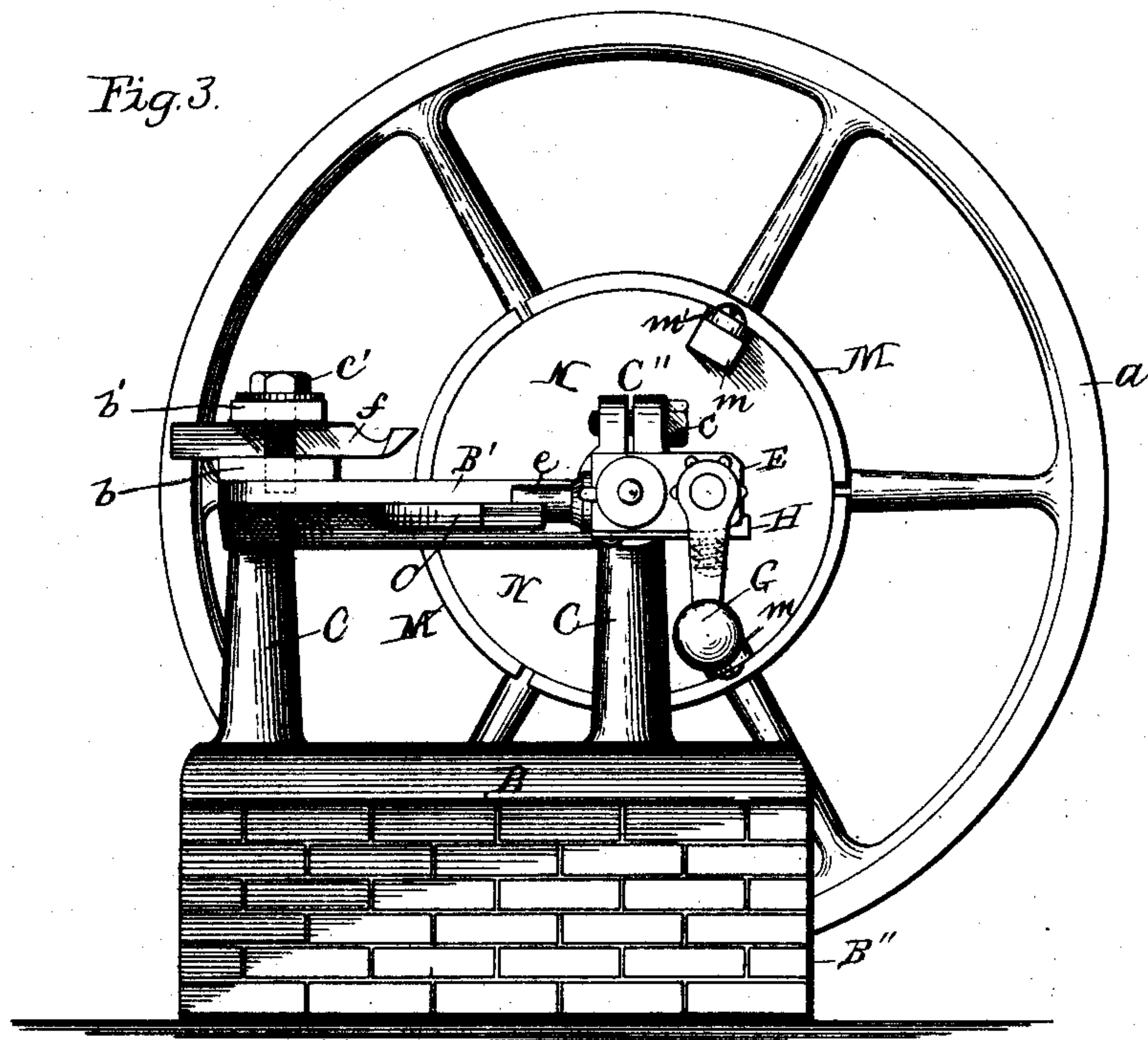
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UNITED STATES PATENT OFFICE.

HORACE G. McLEAN, OF McPHERSON, KANSAS, ASSIGNOR OF ONE-THIRD TO
EDWARD C. HEGGELUND.

MACHINE FOR TURNING DYNAMO-COMMUTATORS.

SPECIFICATION forming part of Letters Patent No. 429,946, dated June 10, 1890.

Application filed January 18, 1890. Serial No. 337,330. (No model.)

To all whom it may concern:

Be it known that I, HORACE G. McLEAN, of McPherson, McPherson county, Kansas, have invented certain new and useful Improve-
5 ments in Machines for Turning Dynamo-Commutators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

10 My invention relates to improvements in a machine for turning dynamo-commutators; and it consists in the novel construction and arrangement hereinafter fully set forth and described.

15 In the drawings which illustrate my invention, Figure 1 is a front elevation of a device embodying my improvements. Fig. 2 is a top plan view of the same. Fig. 3 is a side elevation. Fig. 4 is a detail perspective of
20 the feeding device. Fig. 5 is a detail view showing the position that the disk L occupies in connection with the operating-disk K, and Fig. 6 is a detail in perspective of the detent-lever H.

25 Referring to the drawings by letter, A represents my invention.

B is a metallic base resting on a suitable foundation B'. It may, however, rest on a table, bench, or other suitable platform.

30 C are columns cast together with base B, which form bearings for the upper platform B' and main shaft D, said shaft D having bearings in the columns C, as illustrated by C' and C''. Said bearings C' and C'' have
35 the upper surface slotted, as illustrated in Figs. 2 and 3. These slots are for the purpose of keeping the bearings tight by means of tangent-screw c.

E is a metallic casting in which operates
40 the end of shaft D. Said shaft D passing entirely through casting or cross-head E, is provided with a disk L, which is secured and held in position by a suitable thumb-nut J, said wheel L being provided with a finger l,
45 which operates against the arms k of the wheel K, thus causing it to turn a short distance with each revolution of the fly-wheel a, feeding the dynamo-segments M to the cutting tool or knife f.

50 F is the feed-screw end of the shaft F',

which is secured in said casting E, and operates in the bearings C'', as illustrated in Figs. 1 and 2, on the shaft F', on which is secured a suitable crank and handle G, for the purpose of returning shaft D to its original position after having taken a cut, which may
55 be done by revolving shaft D until the feed-operating disks L and K are out of gear.

H is a detent-lever with a flanged projection h, which operates against the arms k. 60 This flange is designed to press against two of the arms k, thus forming a bearing sufficient to hold handle G in position until the finger l makes its revolution and turns said wheel K. Spring i allows said detent-lever
65 H to spring outward, allowing wheel K to operate.

M are the segmental dynamo-commutators, which are secured on the jig N by suitable lugs m', which coincide with lugs m, which
70 form a part of jig N.

O is a guide, which forms a part of the upper platform B' and serves to guide the casting E when moving in either direction by having the traveling guide e to operate
75 thereon.

a is a fly-wheel, heretofore referred to, secured on shaft B by suitable nut d. This wheel may be operated by a belt or by a suitable handle a'. 80

b is a bridge, which forms a part of the platform B', on which rests the cutting-tool f.

b' is a yoke provided with suitable perforations through which bolts c' pass, said bolts c' being threaded into the platform B' for
85 holding said bed in position.

e is a suitable guide or lug secured on casting E, as illustrated in Figs. 2 and 4. This has a bearing on the guide O and serves to keep the casting E in position in its operation back and forth. 90

All dynamo-commutators are subject to wear when in use, and the friction of the brushes on them causes them to wear off in such a manner as to leave the surface uneven, when they become unfit for use. My device is for the purpose of cutting away all defects in said commutators, and it is accomplished by securing the segmental commutator on the jig N in the manner illustrated in 100

the accompanying drawings. Then by each revolution of the shaft D the disk L, operating against the disk K, causes the feed-screw F to gradually feed the commutator to the cutting-tool *f*, thus cutting away all imperfections on said segmental commutators and leaving the surface even and in proper order to be replaced on the dynamo. It may be found necessary to pass the commutator across the cutting-tool several times before an even surface is attained; but the operation is the same each time, the feeding process being made automatic by disk L operating against the arms *k* of the wheel K.

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

1. In a machine for turning dynamo-commutators, the main shaft D, the cross-head E, 20 secured to one end of the main shaft and provided with the lug *e*, the guide O, on which the lug *e* slides, the disk L on one end of the shaft D, having a finger, the shaft F', having a screw-threaded end F working in a screw-hole in the bearing C'', the fingered disk K 25 on shaft F', and the crank G, all operating substantially as described.

2. In a machine for turning dynamo-com-

mutators, the main shaft D, mounted on columns C C, means for turning the shaft, the 30 jig N, on which the commutator-sections are fastened, the cross-head E on one end of the main shaft, having the lug *e*, the guide O, on which the lug slides, the disk L on one end of the main shaft, having a finger *l*, the shaft 35 F', turning in the cross-head E and having a screw-threaded end F', said end working in a screw-hole in the bearing C'', the fingered disk K on shaft F', and the crank G, all operating substantially as described. 40

3. The casting or cross-head E, having an opening, a shaft F', working in said opening and provided with a screw end which works in a screw-hole in the bearing C'', a fingered disk K, the detent-lever H, secured to the 45 casting E and bearing against the fingers of the disk K, and a spring bearing on the under side of said detent-lever, keeping it in engagement with the fingers *k* of the disk K, substantially as described. 50

In testimony whereof I affix my signature in presence of two witnesses.

HORACE G. MCLEAN.

Witnesses:

A. A. HIGDON,

R. A. BALDERSON.