

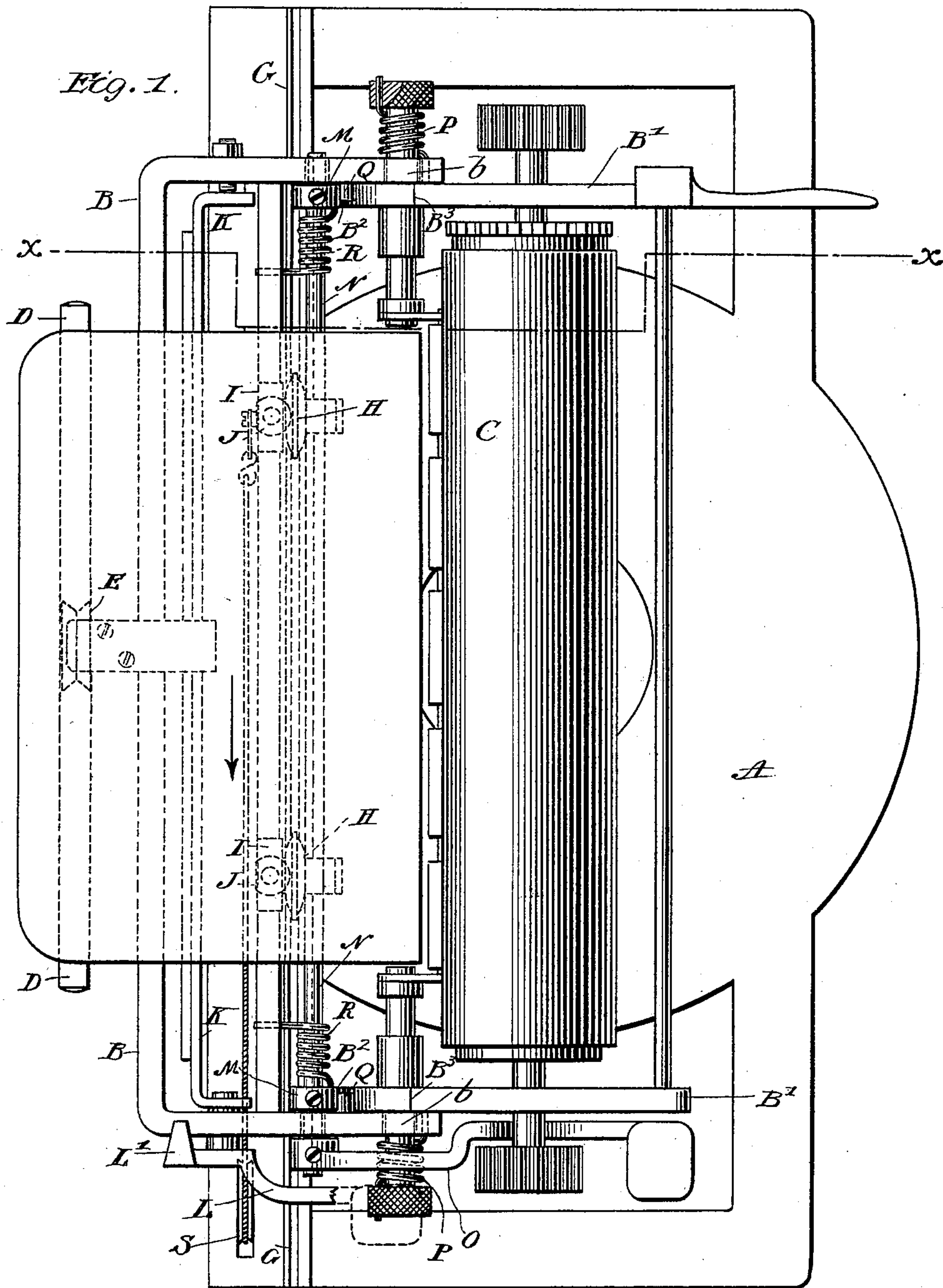
(No Model.)

2 Sheets—Sheet 1.

J. M. FAIRFIELD.
TYPE WRITING MACHINE.

No. 605,864.

Patented June 21, 1898.



WITNESSES:

Frank S. Ober
J. S. Oswald

INVENTOR:

John M. Fairfield.

BY

R. C. Mitchell
ATTORNEY

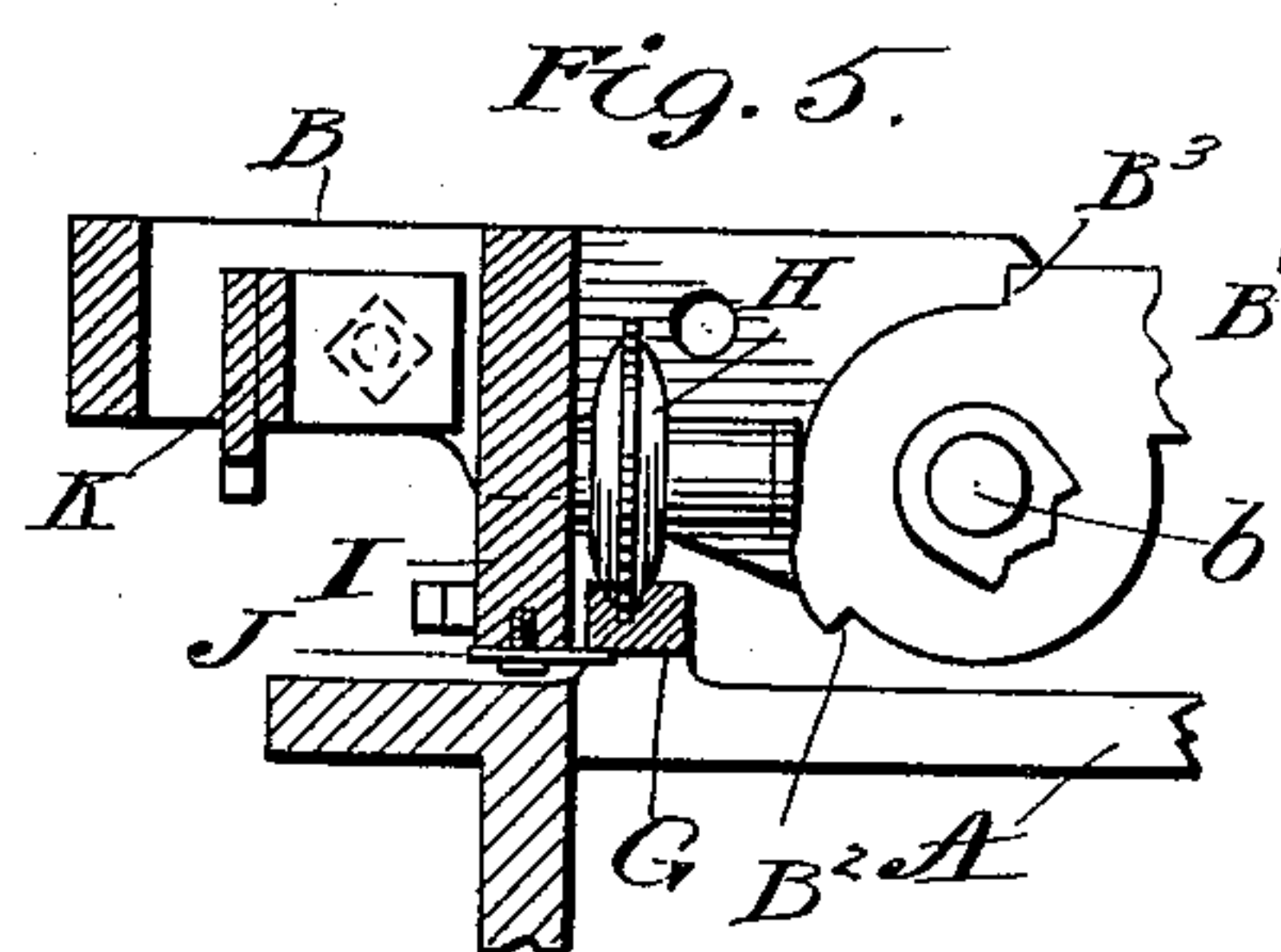
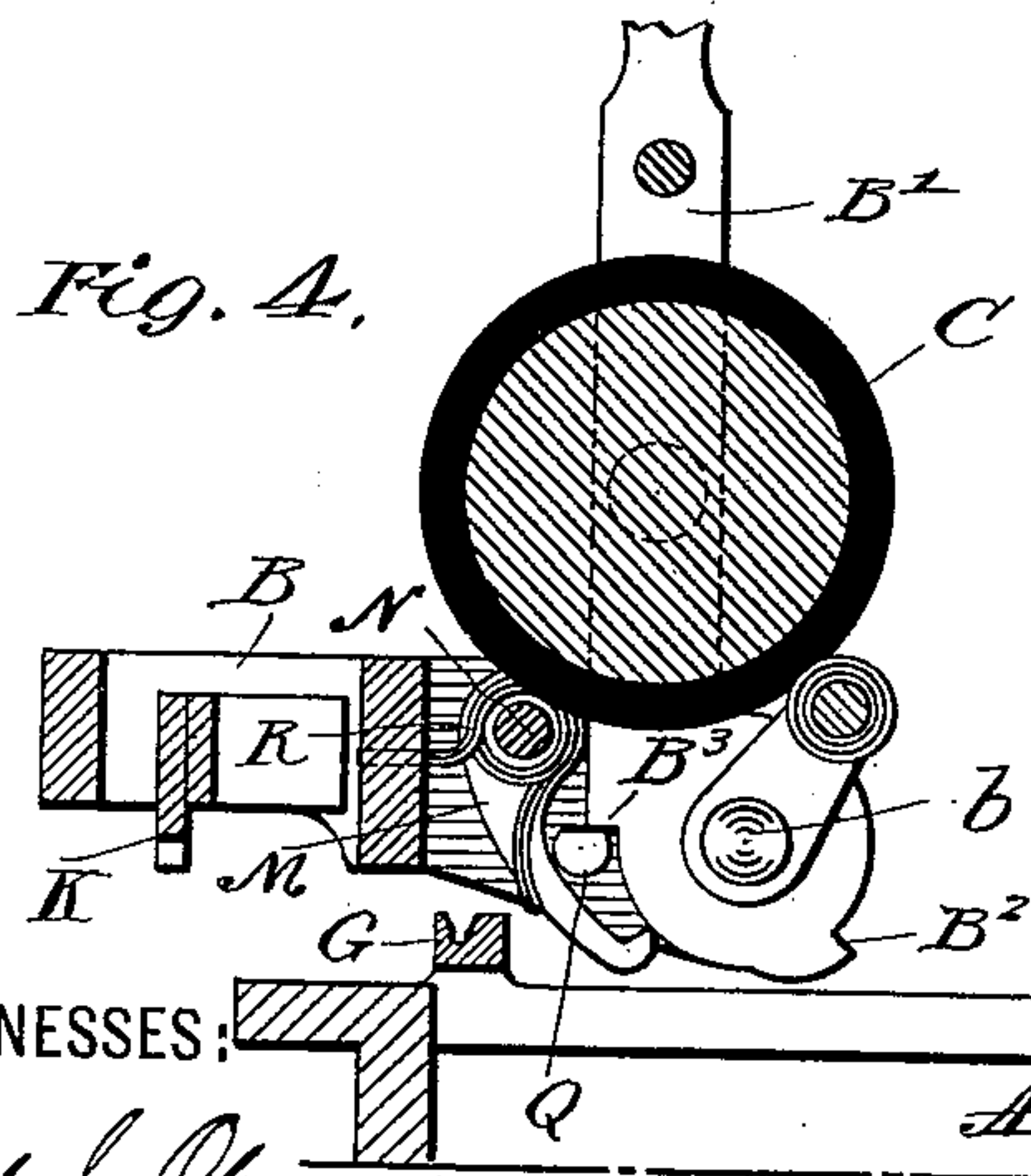
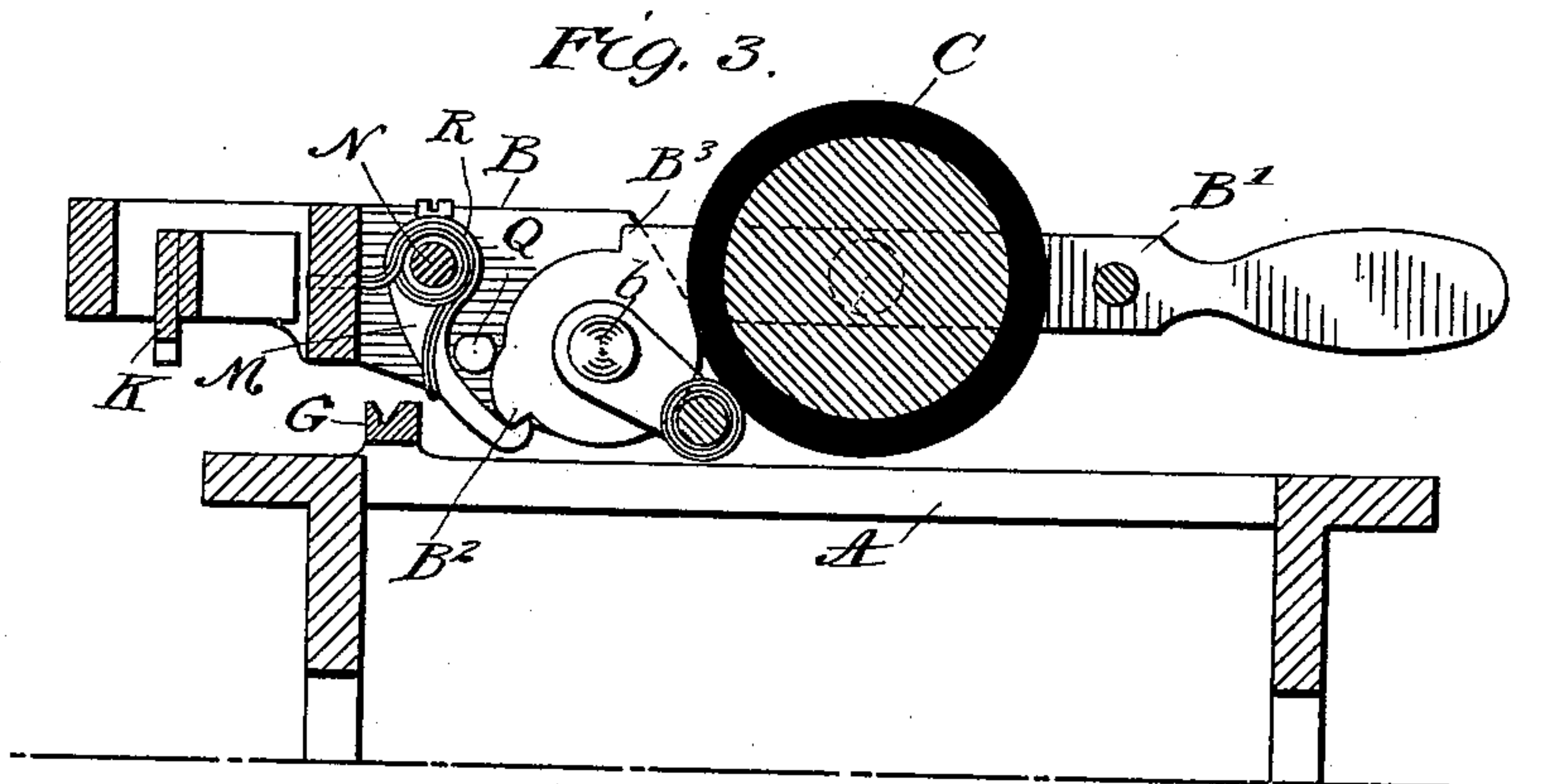
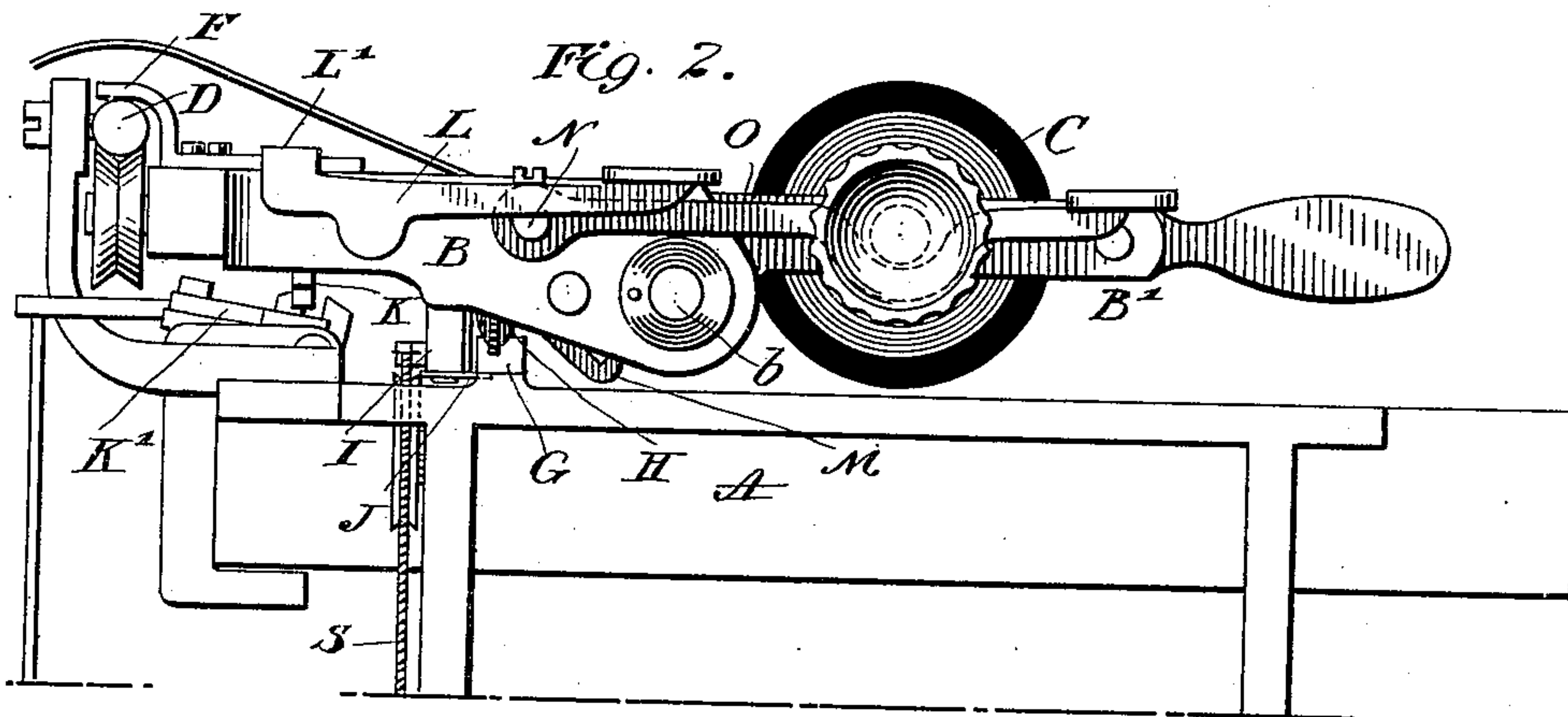
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2 Sheets—Sheet 2.

J. M. FAIRFIELD.
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UNITED STATES PATENT OFFICE.

JOHN M. FAIRFIELD, OF HARTFORD, CONNECTICUT.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 605,864, dated June 21, 1898.

Application filed August 26, 1896. Serial No. 603,949. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. FAIRFIELD, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Type-Writers, of which the following is a full, clear, and exact specification.

My invention relates to an improvement in type-writers; and it consists particularly in the novel mechanical construction and arrangement of the parts of the carriage-frame.

The objects of my invention are to provide in a type-writer a light and durable carriage-frame adapted to positively hold the paper in the proper plane to receive the imprint of the type, said frame being so constructed that by a means conveniently placed within reach of the operator the platen portion may be automatically raised to expose the printing, the entire front of the paper-carrying mechanism being raised, thus expediting the placing of paper, erasures, corrections, &c. Furthermore, the arrangement of the parts is such that the carriage is held firmly down on its ways and the line of friction placed almost directly in the line of draft, thus causing little or no vibration and producing the most desirable results. These together with other features of improvement unite in providing an improved construction which is simple and effective in operation and in which all the parts are readily accessible for readjusting, assembling, or disassembling of the entire organization.

My invention is illustrated by the accompanying drawings, in which—

Figure 1 is a plan view of my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a section upon line *xx*, Fig. 1. Fig. 4 is a section on the same line, the platen portion being raised; and Fig. 5 is a section showing details of construction.

A is a type-writer frame.

B is the rear portion of the carriage-frame, and hinged thereto at *b b* is the forward portion B' of the carriage-frame, which may be said to overhang the printing-center, being there positively held until at the will of the operator it is desired that the platen should be elevated to expose the printing. The extremities of the side arms of the frame B' ad-

jacent to the pivotal support *b b* are by preference rounded and provided with lugs B² and shoulders B³, for the purpose hereinafter described. The rear portion B of the carriage-frame is susceptible only of lateral movement, the line of movement extending parallel with the desired line of movement of the platen C. This is accomplished by means of the following mechanism.

D is a guide-rod carried by the frame A or an extension therefrom.

E is a roll, preferably grooved, carried by the rear portion B of the carriage-frame and bearing, preferably, against the under side of the guide-rod D.

F is a flange carried by the rear portion B of the carriage-frame and extending over the guide-rod D to perform the double function of preventing the accidental disengagement of the roll E from said rod and also preventing the adjacent portion of the carriage-frame B from tilting.

G is a track mounted on the frame A.

H H are rolls revolubly mounted in the rear portion B of the carriage-frame and forward of the roll E. The rolls H H are adapted to move in the track G.

I I are downwardly-projecting shoulders from the frame B, said shoulders carrying an extension J, which projects, preferably, under the track G for the double purpose of preventing the displacement of the rolls H H from said track and preventing the adjacent portion of the carriage-frame B from being elevated.

Inasmuch as the bearing-points of the carriage are on one side only of the printing-center, the parts are by preference so balanced that the overhanging portion of the carriage-frame B' causes the weight of the carriage organization to fall entirely upon the revoluble rolls E H and their respective bearings. By reason of the fact that the bearing-points are so close together it is apparent that the line of friction is almost directly in the line of draft. Any ordinary well-known means may be provided for normally moving the carriage in one direction. S is a cable for accomplishing this end, the normal tendency of said cable being to move in the direction of the arrow indicated in Fig. 1. By attaching this cable to the carriage-frame, as shown, at a

point toward the rear of the type-bar circle and by preference between the bearing-points of said carriage-frame, as shown, any tendency toward a side drag is entirely obviated, the bearing-wheels being permitted to freely move directly in the line of draft without occasioning any side friction. An escapement feed mechanism K' is provided to afford an intermittent movement of the carriage in the direction of the arrow.

K is the rack-bar, supported by the carriage-frame and adapted for engagement with an escapement feed mechanism K'. This rack-bar K is by preference pivotally connected, so that by means of the lever L the former may be lifted out of engagement with said escapement feed mechanism to permit free lateral movement of the carriage.

M M are hooks fixedly mounted upon a shaft N, to which shaft is also secured the lever O. The hooks M M are (see Fig. 3) adapted for engagement with the lugs B². (See Fig. 3.) By depressing the lever O the shaft N is rotated slightly and the hooks M M are disengaged from the lugs B², permitting the forward portion B' of the carriage to be automatically elevated under the influence of the springs P, which normally tend to swing the said overhanging portion B' of the carriage-frame into the upright position, (see Fig. 4,) in which position further movement in the same direction is checked by means of stops Q Q, against which the shoulders B³ impinge, thus opening up and affording access to the entire front of the paper-carrying mechanism. The shaft N, carrying the hooks M, is by preference spring-actuated, so as to normally press said hooks against the rounded extremities of the overhanging portion of the carriage-frame B'. These springs are designated by the letters R R.

Obviously any suitable means may be provided for the adjustment of the springs P R.

L' is an overhanging shoulder carried by a forward extension of the lever L and adapted to check the downward movement of the rack-bar K. Any suitable springs may be provided to normally cause the rack-bar to descend into the normal position, although it is obvious the same end may be accomplished by gravity. Any well-known means may be provided to cause the rotation of the platen C.

In operation the paper is placed in contact with the platen C in the usual manner and moved into the printing plane by revolving said platen. As soon as it is desired to inspect the writing the lever O is depressed, thereby retracting the hooks and permitting the overhanging hinged portion B' of the frame to be automatically raised under the normal influence of the springs P P.

It is obvious that notches cut in the rounded extremities of the frame B' would be a mechanical equivalent of the lug projection B².

It is apparent that in carrying out my invention it may be desirable to make some changes in the particular construction shown

and described, and I would therefore have it understood that I do not limit myself to a specific form of construction, but hold myself at liberty to make such alterations and changes as are fairly within the spirit and scope of my invention.

Having thus described my invention, what I claim is—

1. In a type-writing machine a laterally-movable carriage having a plurality of bearings on one side of the printing-center, a platen-frame hinged thereto forward of said bearings, said platen being located above the type, said platen-frame overhanging said printing-center, means for normally moving the carriage in one direction, said means being located between said bearings, and means for normally swinging the platen-frame into an upright position, and a locking means for detachably holding said platen-frame in the printing position.

2. In a type-writing machine a carriage-frame susceptible only of lateral movement, a platen-frame overhanging the printing-center, said platen being above the type, a plurality of bearings for said carriage, the bearing portion of said carriage being located on one side of the printing-center, the overhanging platen-frame being hinged to the forward portion of the carriage, and to one side of the bearings, means for normally swinging the platen-frame into an upright position, and a hook detachably engaging the rear or bearing portion of the platen-frame for holding the platen down rigidly in position over the printing-center.

3. In a type-writing machine a carriage-frame susceptible of lateral movement only, a plurality of bearing-points for said carriage, said bearing-points being located on one side of the printing-center, means for laterally moving the carriage in one direction, said means being located in line with the movement of said carriage and between its bearing-supports, a platen-frame in the same plane with and hinged to said carriage-frame, springs for normally causing the overhanging portion to assume an upright position, and hooks engaging with the bearing portion of said platen-frame for locking it in the printing position, substantially as described.

4. In a type-writing machine, a carriage-frame, a bearing-rail underneath the forward edge of said carriage, an overhead bearing-rail to the rear thereof, a platen-carrying frame hinged to the forward portion of said carriage adjacent to said forward bearing-rail, the weight of said platen and frame being sufficient to hold said carriage against said bearing-rail, in combination with a spring for normally swinging the platen-frame into an upright position, and a lock for positively holding said platen in the printing plane.

5. In a type-writing machine, a carriage, an underneath bearing-rail therefor toward its forward edge, an overhead bearing-rail therefor toward its rear edge, a counterweight

for said carriage to hold the same against its bearings when in operative position, said counterweight comprising a platen-carrying frame hinged at the forward edge of said carriage adjacent said underneath bearing-rail, in combination with a means for normally causing said platen-carrying frame to swing into an upright position to expose the print-

ing, and means for detachably holding said platen-carrying frame in a proper printing plane, substantially as described.

JOHN M. FAIRFIELD.

Witnesses:

EDMUND J. FAIRFIELD,
HENRY D. CLERECONS.