

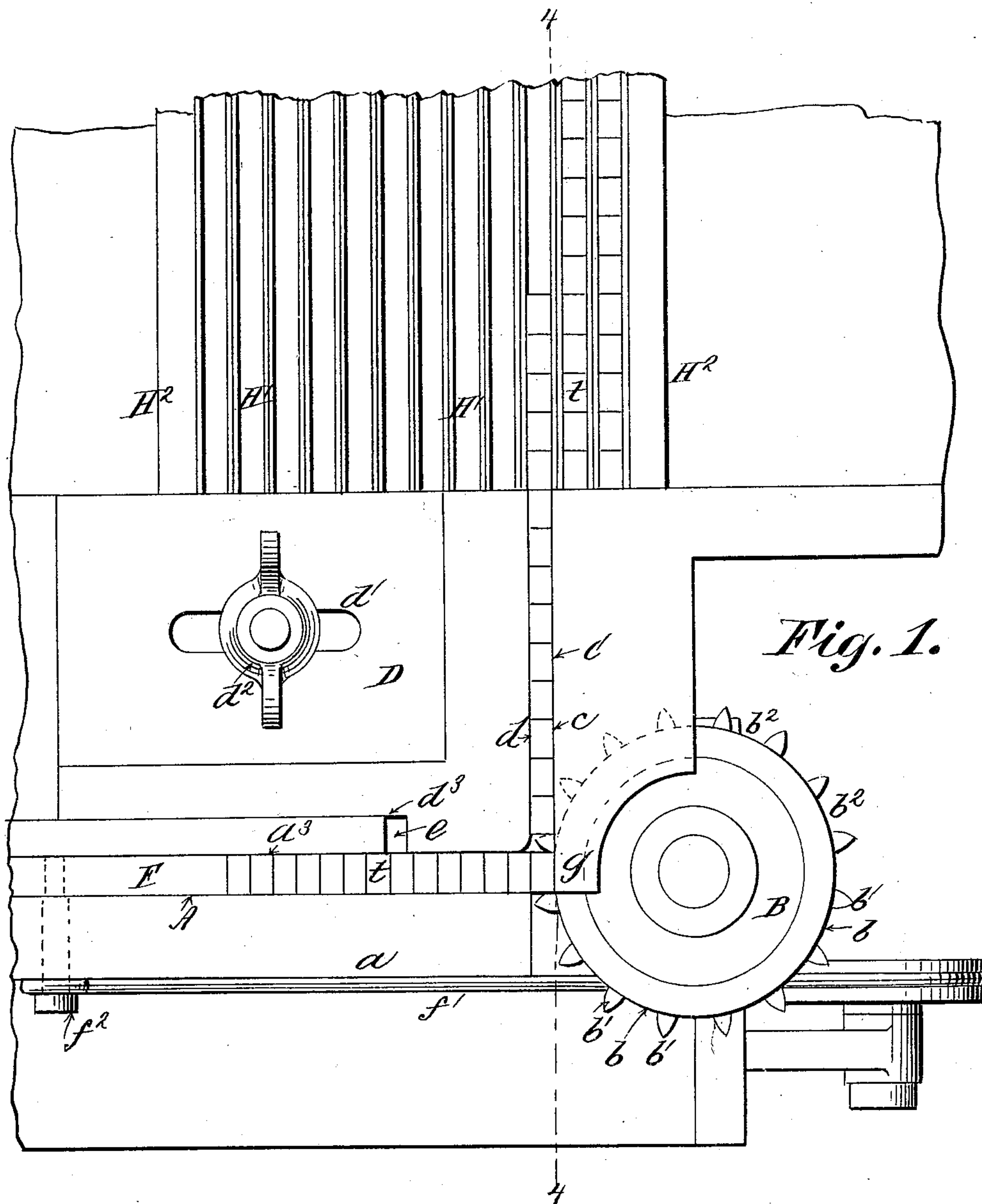
(No Model.)

4 Sheets—Sheet 1.

L. K. JOHNSON & A. A. LOW.
TYPE TRANSFERRING APPARATUS.

No. 562,078.

Patented June 16, 1896.



Witnesses:

Д. В. Чарков.
З. М. Мухоморова

Inventors:

Louis Rossuth Johnson
Abbot Augustus Low
By their Attorney
George William Miatt

(No Model.)

4 Sheets—Sheet 2.

L. K. JOHNSON & A. A. LOW.
TYPE TRANSFERRING APPARATUS.

No. 562,078.

Patented June 16, 1896.

Fig. 2.

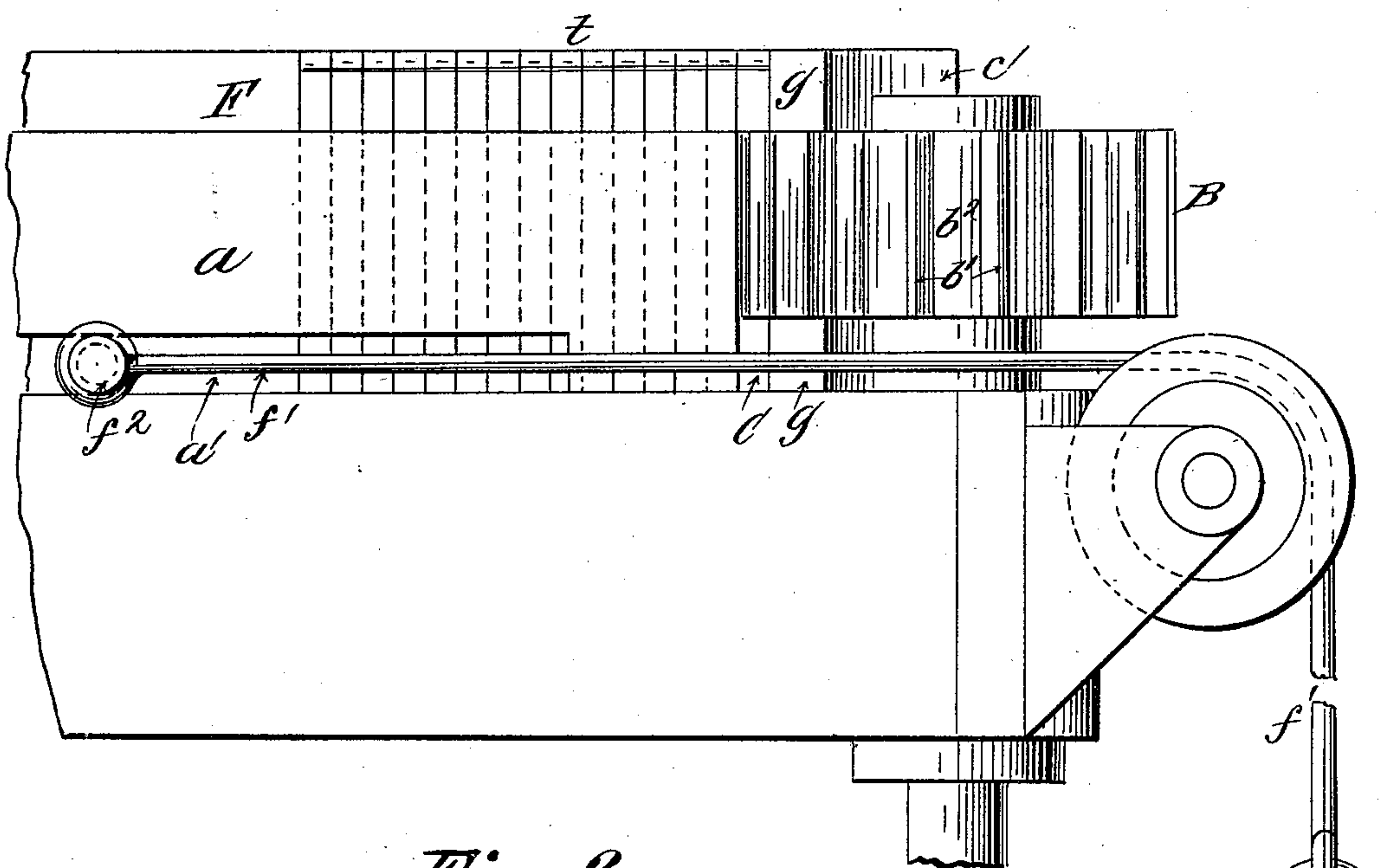
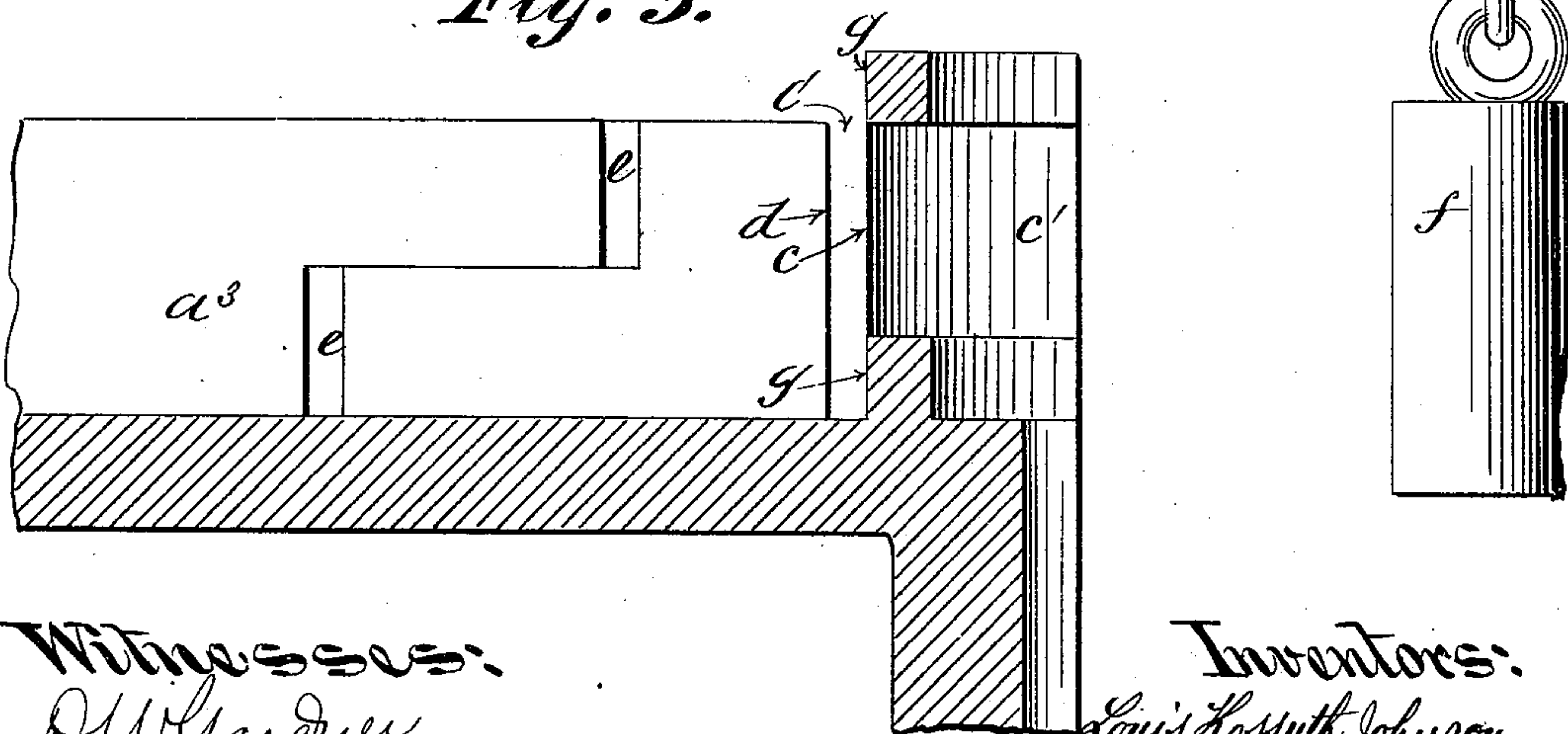


Fig. 3.



Witnesses:
D. W. Gardner.
G. H. Smith.

Inventors:
Louis Kossuth Johnson,
Abbot Augustus Low
By their Attorney
George William Smith

(No Model.)

4 Sheets—Sheet 3.

L. K. JOHNSON & A. A. LOW.
TYPE TRANSFERRING APPARATUS.

No. 562,078.

Patented June 16, 1896.

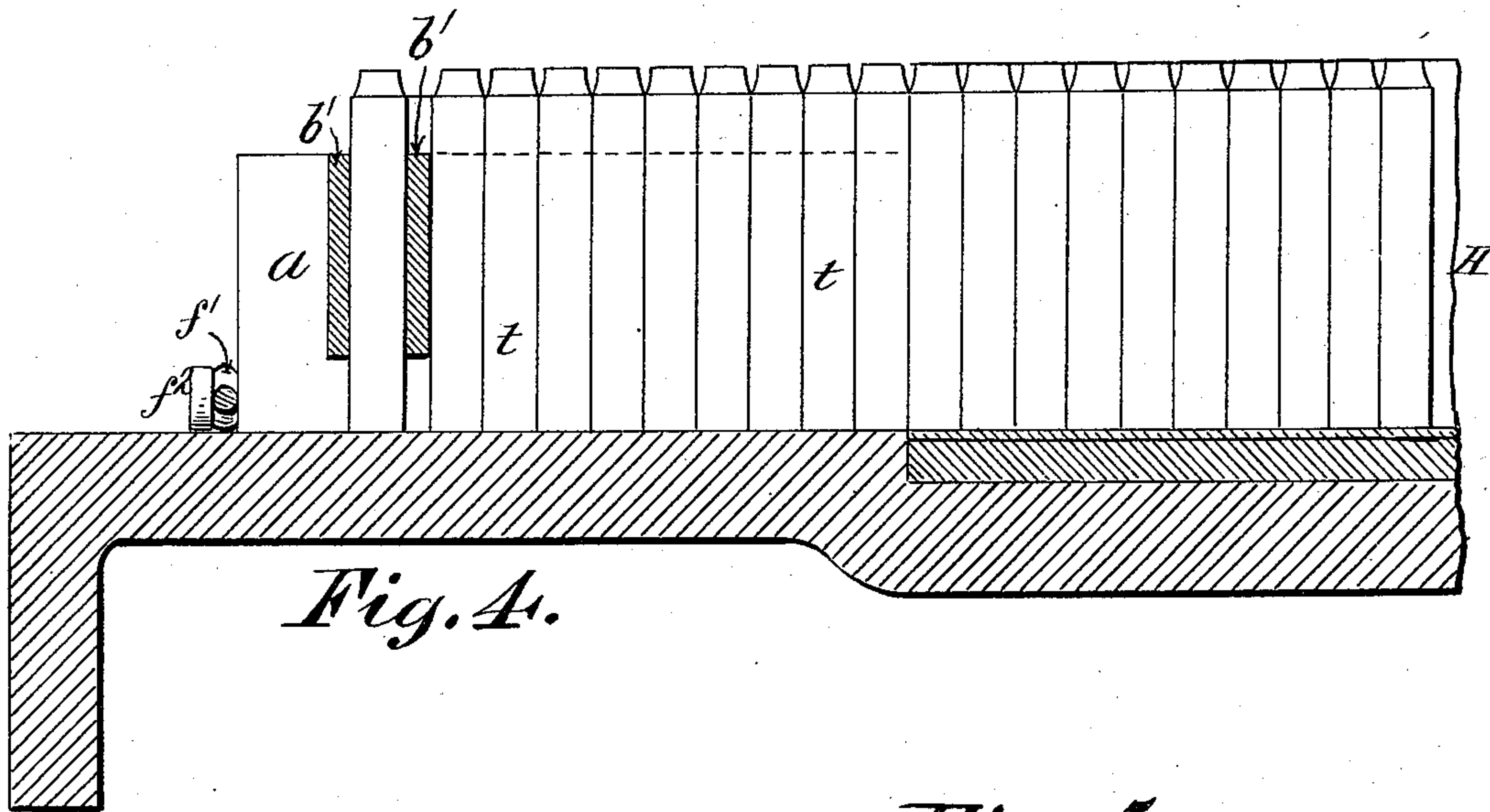
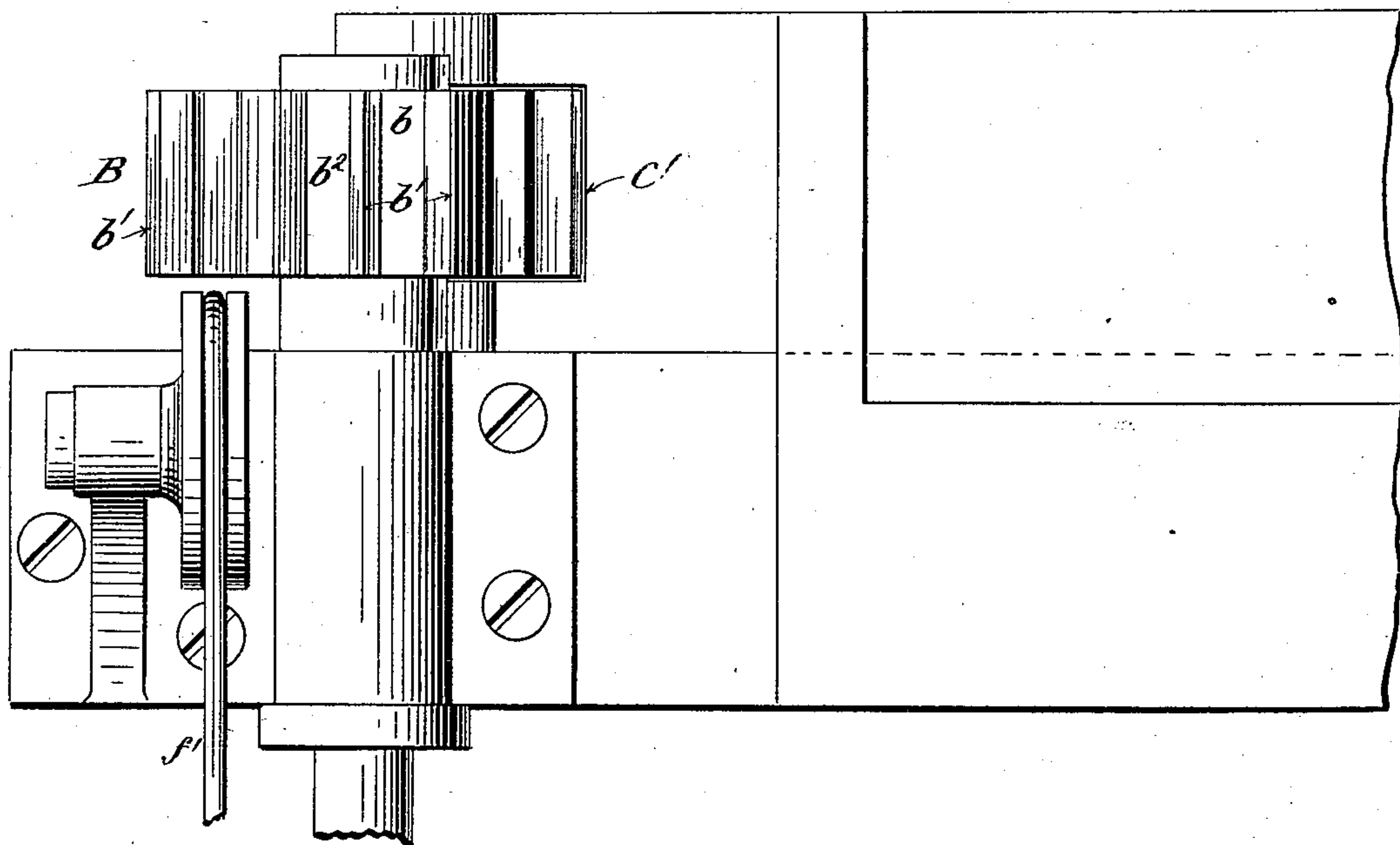


Fig. 5.



Witnesses:
D. W. Gardner.
J. H. Thompson.

Inventors:
Louis Kossuth Johnson,
Abbot Augustus Low,
By their Attorney,
George William Smith.

(No Model.)

4 Sheets—Sheet 4.

L. K. JOHNSON & A. A. LOW.
TYPE TRANSFERRING APPARATUS.

No. 562,078.

Patented June 16, 1896.

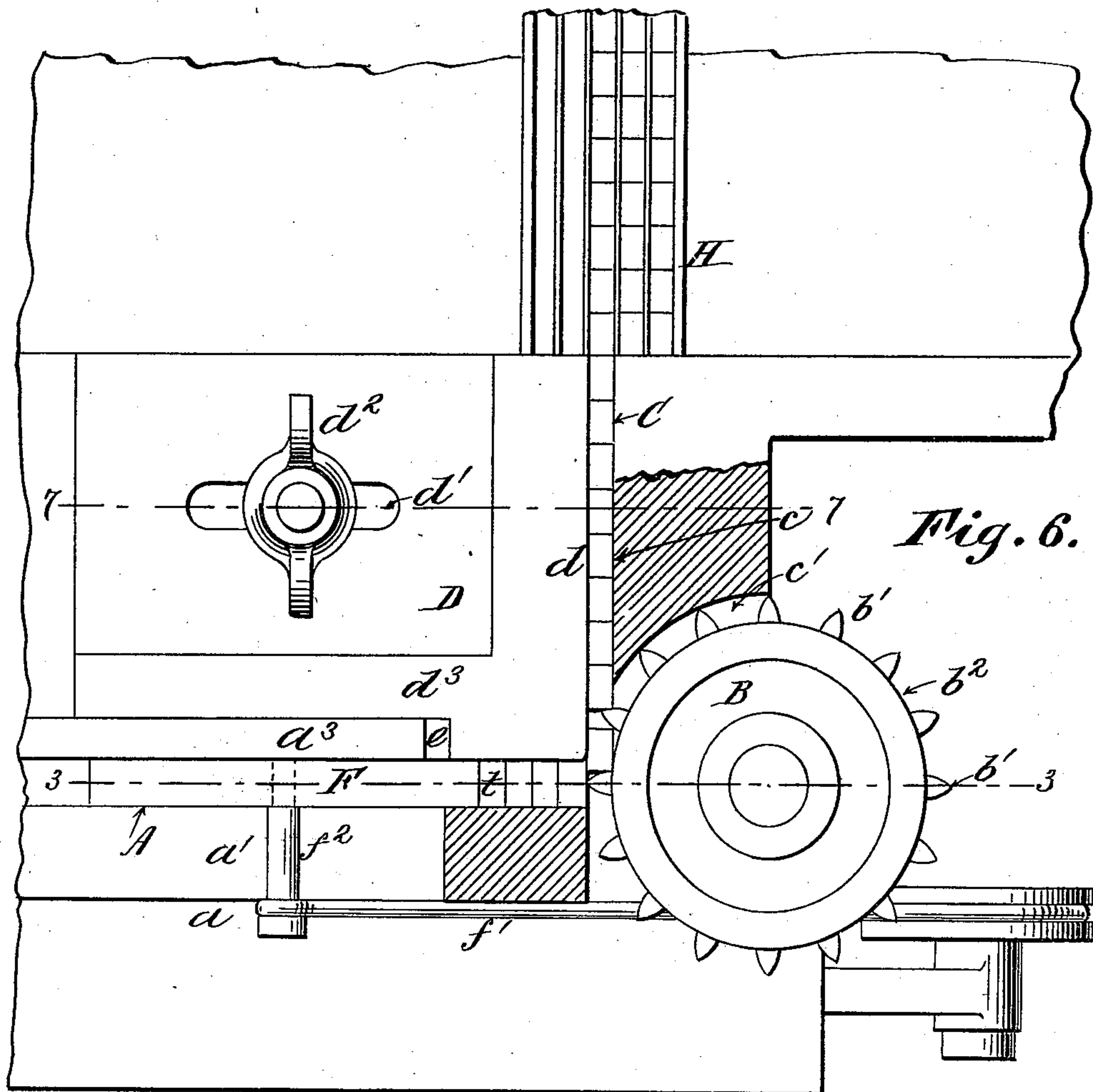
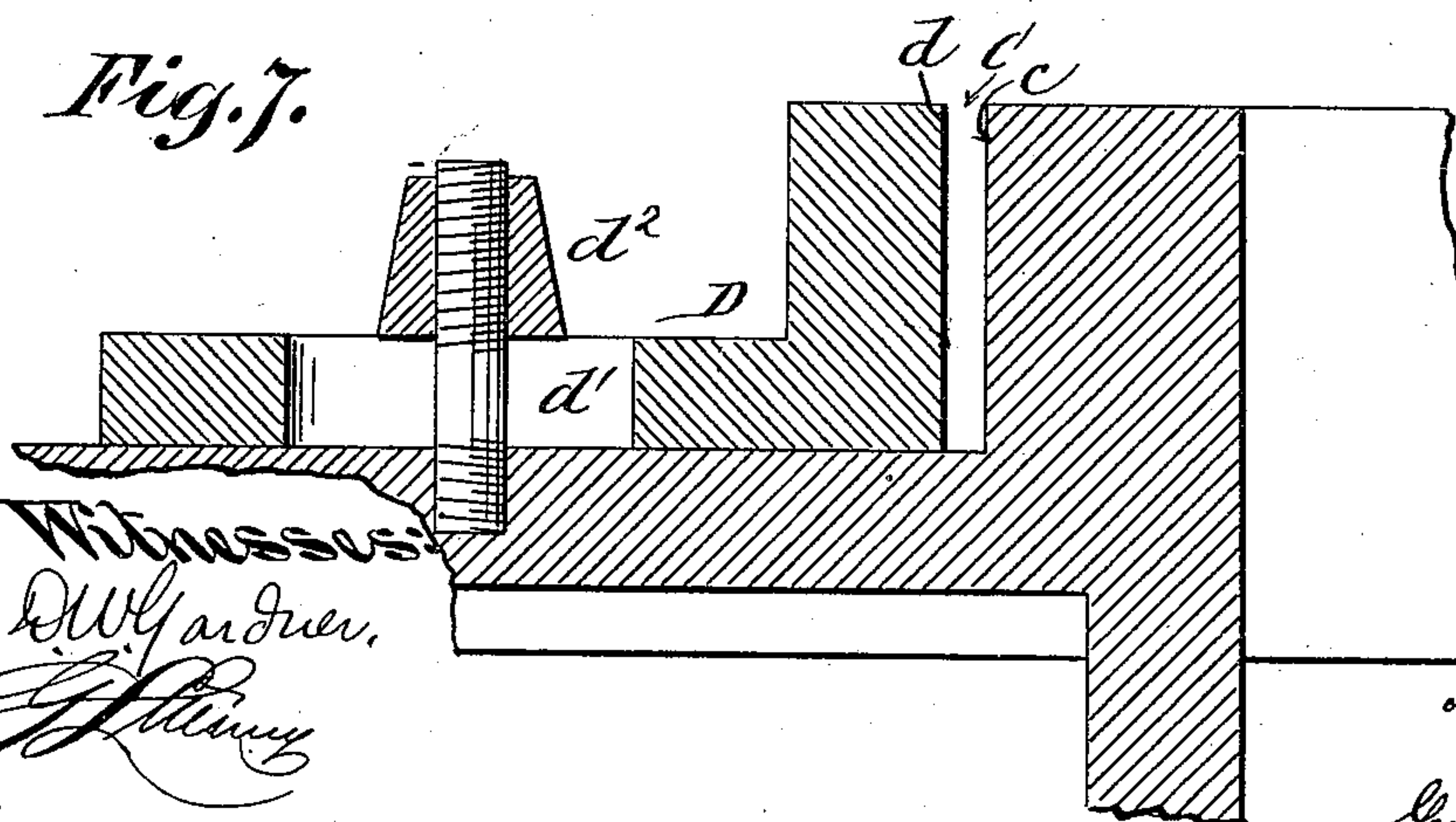


Fig. 6.

Fig. 7.



Witnesses:
D. W. Gardner,
[Signature]

Inventors:
Louis Rossett Johnson
Abbot Augustus Low,
By their Attorney,
George William Mearns

UNITED STATES PATENT OFFICE.

LOUIS KOSSUTH JOHNSON AND ABBOT AUGUSTUS LOW, OF BROOKLYN,
NEW YORK, ASSIGNORS TO THE ALDEN TYPE MACHINE COMPANY,
OF NEW YORK, N. Y.

TYPE-TRANSFERRING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 562,078, dated June 16, 1896.

Application filed April 29, 1895. Serial No. 547,460. (No model.)

To all whom it may concern:

Be it known that we, LOUIS KOSSUTH JOHNSON and ABBOT AUGUSTUS LOW, citizens of the United States, residing in the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Type-Transferring Apparatus, of which the following is a specification, sufficient to enable others skilled in the art to which the invention appertains to make and use the same.

Types as ordinarily distributed by automatic apparatus are deposited in the type-containing channels upon their "flat" or broad sides. In our methods of assembling and presenting the types in groups upon their edges, as in our several patents heretofore granted to us, it is desirable that the types be arranged within the type-containing channels in the "setter" upon their edges or lesser widths; otherwise they have to be turned one-quarter round by mechanical expedients, the necessity for which it is our object to avoid.

Our invention consists in a type-transferring device embodying the features of construction substantially as hereinafter set forth.

In the accompanying drawings, Figure 1 is a plan of a portion of an apparatus embodying our improvements. Fig. 2 is an elevation of the same. Fig. 3 is a vertical section taken upon line 3 3, Fig. 6, the transfer-wheel, types, follower, &c., being omitted. Fig. 4 is a vertical section upon plane of line 4 4, Fig. 1. Fig. 5 is an elevation taken at right angles to Fig. 2. Fig. 6 is a plan, partially in section, to more clearly show the construction and operation of the parts. Fig. 7 is a vertical section upon plane of line 7 7, Fig. 6.

In carrying out our invention the essential features are the channel A, the transfer-wheel B, and the feed-channel C. The types *t* are fed into the primary channel A by any suitable means, resting therein with their flat or broad sides in contact with those next adjoining.

Our apparatus may form a part of a type-distributing machine in which the types are distributed by the aid of nicks, or it may be an independent apparatus into which the dis-

tributed types are transferred by suitable means.

The types *t* are forwarded by means of a follower F, actuated by a weight *f*, through the medium of the cord *f'*, connected with stud *f*², secured to the follower F, or by other automatic means. The side wall *a* of the groove or channel A is slotted longitudinally, as at *a'*, to allow the movement back and forth of the follower F.

The follower F presses the types consecutively against the periphery *b* of the transfer-wheel B and between the transfer-fingers *b'* of said wheel, the peripheral spaces *b*² between the radial fingers *b'* each being equivalent to the width of a broad or flat side of a type. The side walls *c* of the feed-channel C is recessed, as at *c'*, to receive a little over one-fourth of the periphery of the roller B, so as to form upper and lower guiding-surfaces *g* above and below the transfer-wheel and opposite the end of the primary channel A, said guides *g* constituting continuations of the fixed wall and guiding-surface *c'*, of which the right-hand side of the feed-channel is formed. The other side wall, *d*, is adjustable with relation to the wall *c* to adapt the apparatus to a particular thickness of type to be transferred to the type-containing channel H. This adjustment of the side wall *d* may be effected in various ways.

In the drawings the plate D is formed with a slot *d'*, which allows of its being moved longitudinally and clamped in the desired position by a thumb-screw *d*², the side wall *a*³ of the primary channel A and the corresponding wall *d*³ of the slide D being offset and fitting together, substantially as shown in Fig. 3, so as to afford a continuous support for the type, irrespective of the spaces *e*, created to permit of the adjustment of the plate D.

The type-containing channel H, for use in the setter, may consist of a plural type-containing channel such as described in our concurrent application, Serial No. 551,385, filed April 3, 1895, as indicated in Fig. 6, or of ordinary type-containing channels H', presented singly, or in a sliding holder or galley H², as in Fig. 1.

The radial transfer-fingers *b'* are preferably

beveled or curved, substantially as shown in the drawings, to compensate for any slight variation in alinement of the types and to facilitate their centralization; but this is not indispensable, since the automatic follower F will always force the types into the peripheral spaces b^2 .

It is obvious that a right angle between the two channels A and C is the most desirable, although any slight variation therefrom would not materially affect the utility of the invention or apparatus, since the essential feature is the changing of the course transversely of the types as they pass through the apparatus, so that while they rest upon their flat sides against each other in the primary channel A they will pass into and through the feed-channel C, with their narrow edges resting against each other.

By the use of our rotary transfer-wheel the change in the alinement of the types may be effected rapidly and with accuracy, and our invention is the solution of a difficult problem heretofore attended upon our method of presenting the types on their edges in the type-setting case for assemblage and removal in plural number.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination of a type-containing channel of a width equal to the greatest width of the type, an automatic type forwarding and following device in said primary channel, a second type-channel substantially at right angles to the first named and of less width, a

rotating wheel situated at the angle between the two channels and formed with radial fingers which transfer the type from the wider to the narrower channel, and a series of movable channels for receiving the types from the said secondary channel for use in type-setting apparatus, substantially in the manner described.

2. A transferring apparatus formed with a primary channel of a width equal to the greatest width of the type, a secondary channel substantially at right angles to the first and of less width, one side wall of which latter channel is adjustable to regulate the width of said channel, and a rotary transferring device situated at the angle between the two channels for the purpose and substantially in the manner described.

3. A transfer apparatus formed with a primary channel of a width equal to the greatest width of the type, a secondary type-channel of less width than the first, situated substantially at right angles to the latter, a rotary transferring device situated at the angle between the said two channels, and guides above and below said rotary transferring device for the support of the types during transfer, substantially in the manner and for the purpose described.

LOUIS KOSSUTH JOHNSON.
ABBOT AUGUSTUS LOW.

Witnesses:

D. W. GARDNER,
GEORGE WILLIAM MIATT.