(No Model.) 4 Sheets—Sheet 1.

E. NEGRONI.

MUSIC LEAF TURNER.

No. 321,238. Patented June 30, 1885.

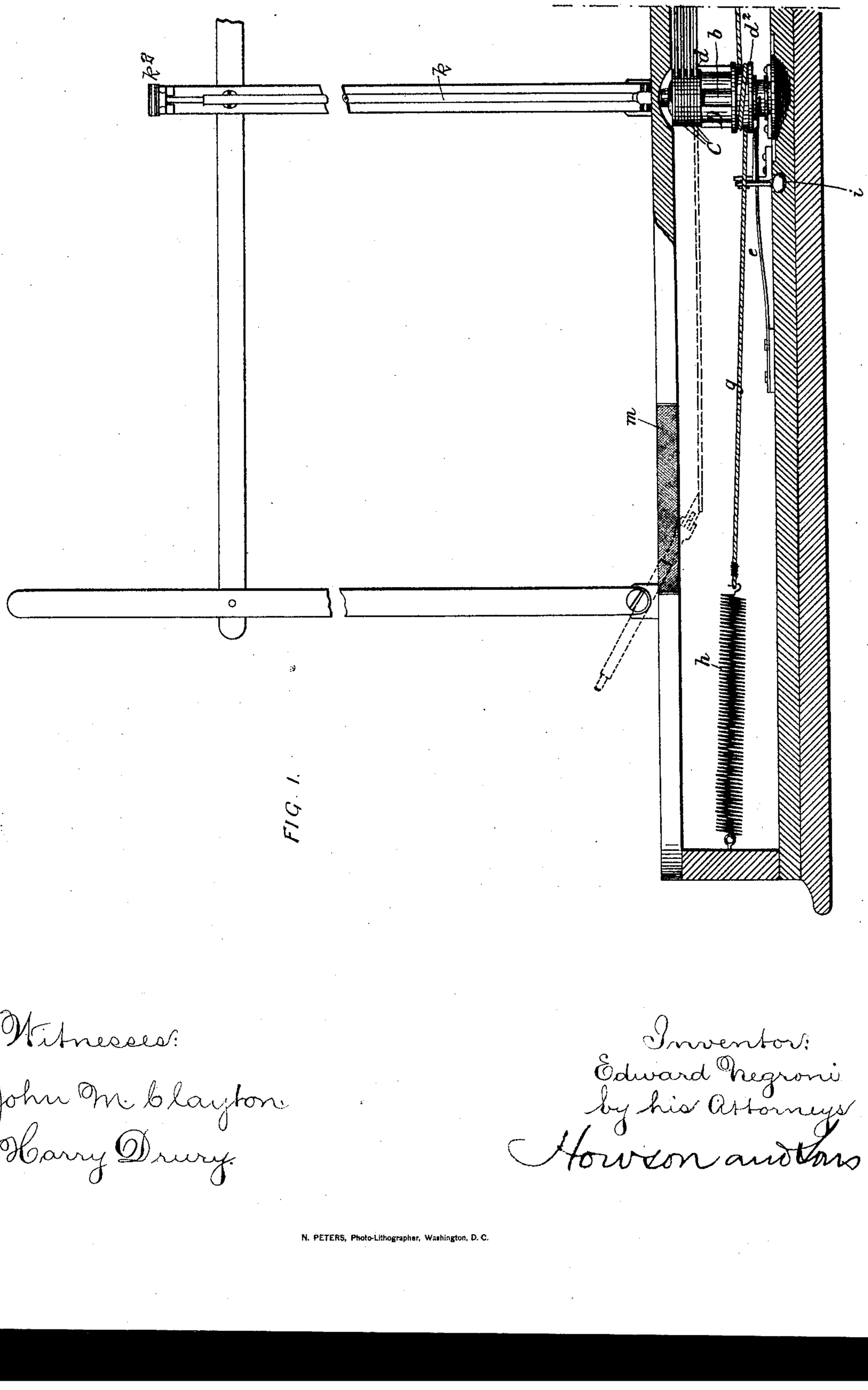

FIG. 1.

Witnesses:
John M. Clayton.
Harry Drury.

Inventor:
Edward Negroni
by his Attorneys
Howson and Howson

(No Model.) 4 Sheets—Sheet 2.

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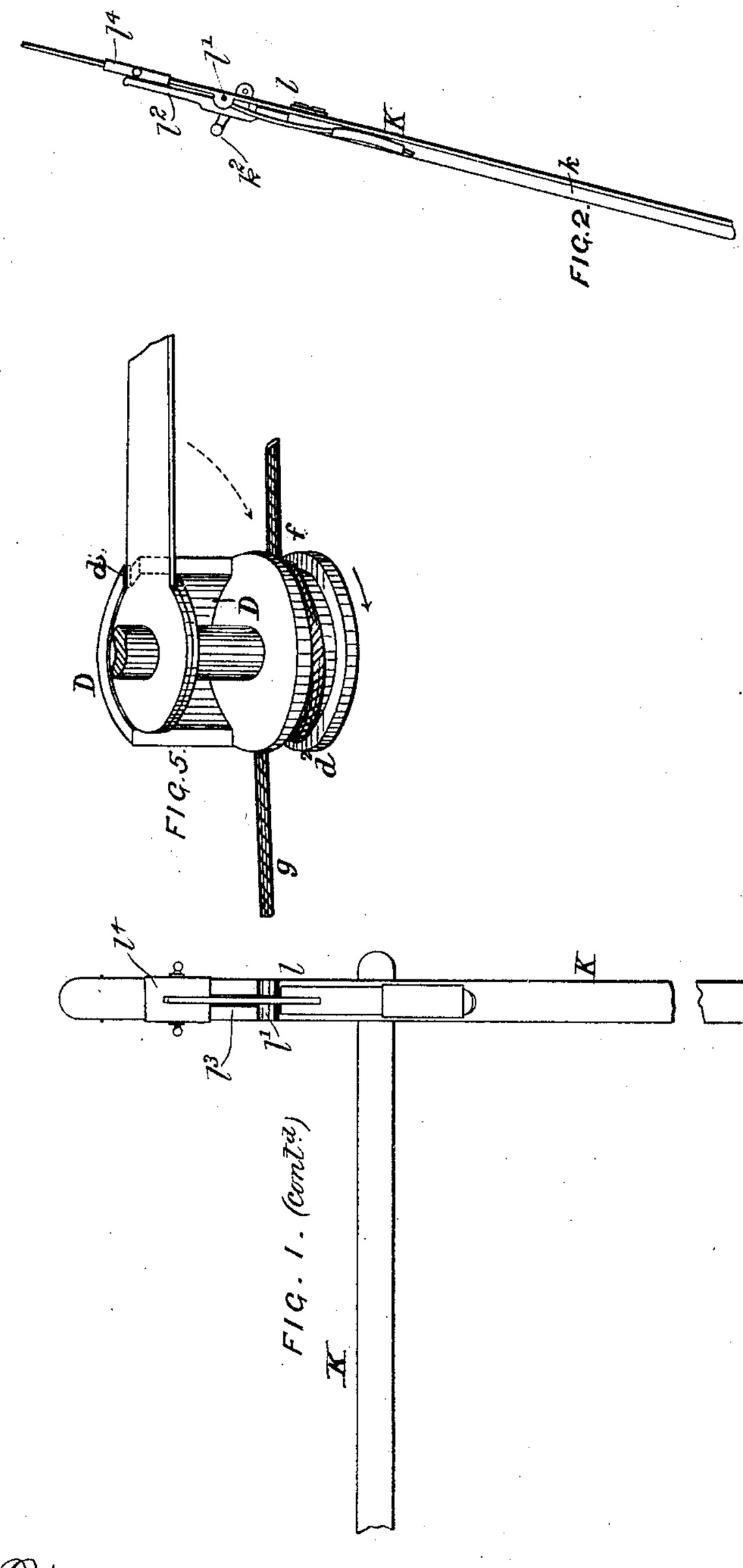

FIG. 2.

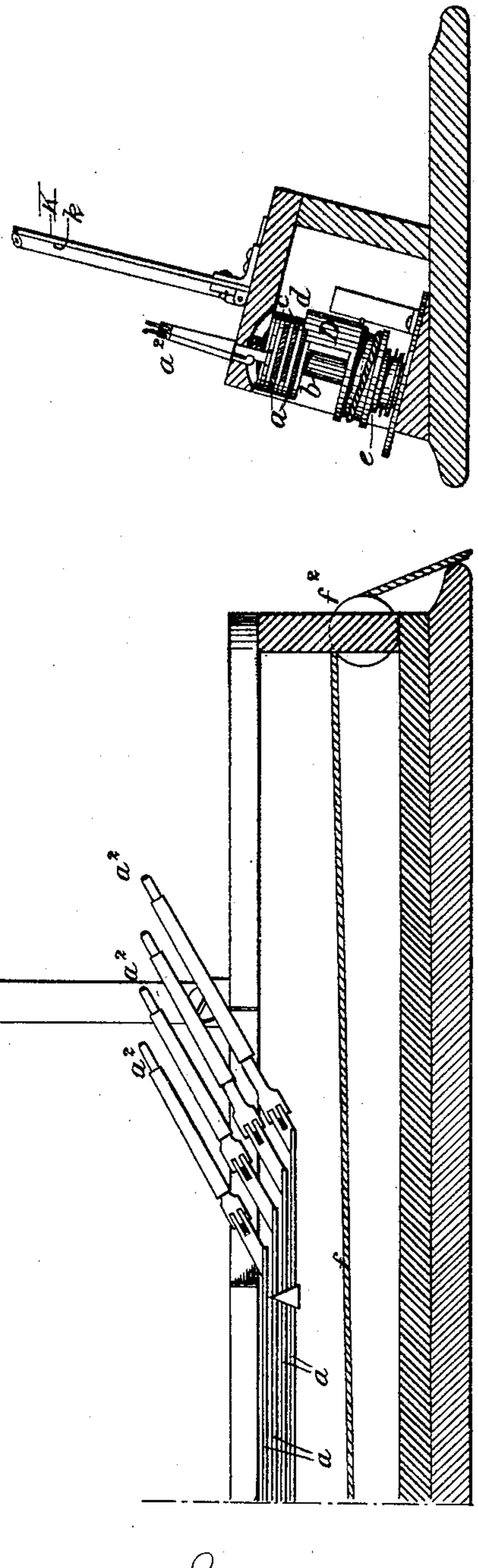

FIG. 5.

FIG. 1. (cont'd)

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(No Model.) 4 Sheets—Sheet 3.

E. NEGRONI.

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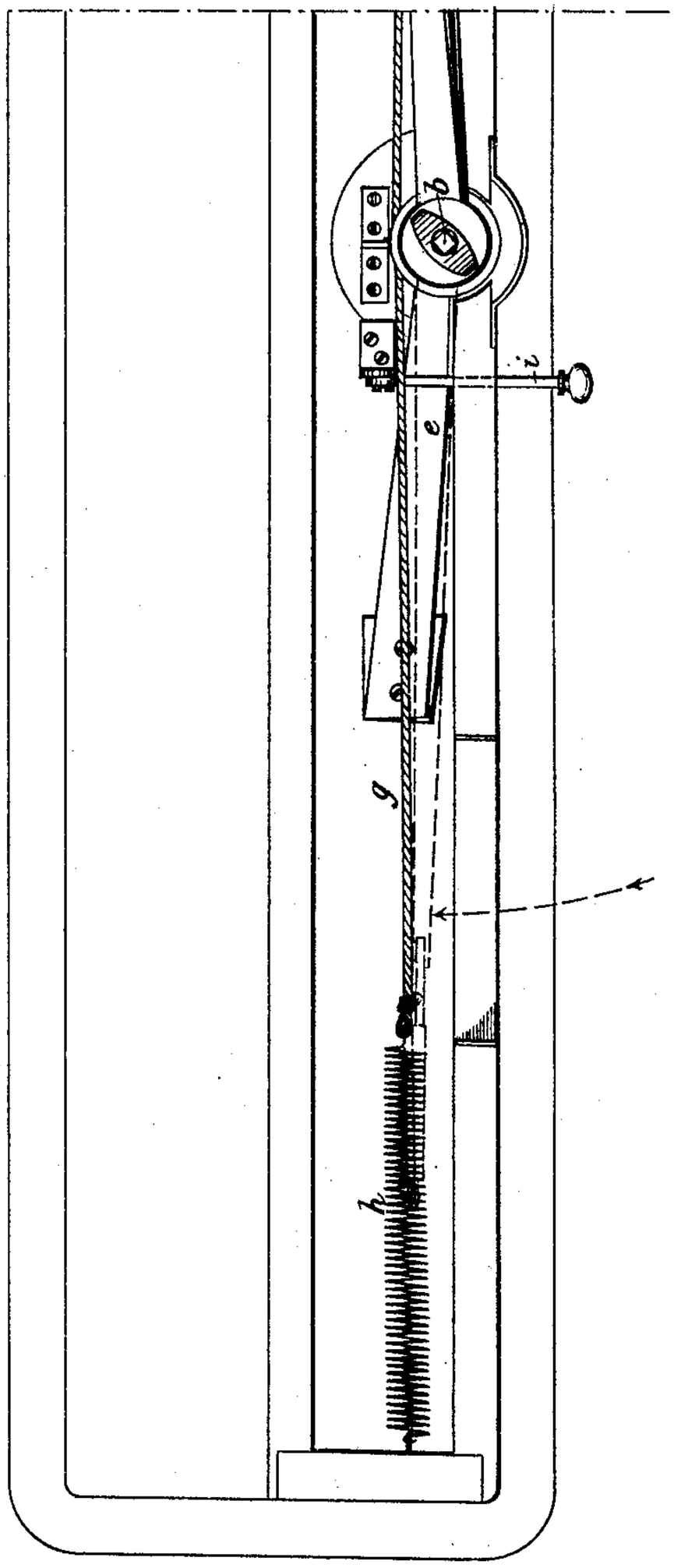
FIG. 3.



Witnesses:
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(No Model.)

4 Sheets—Sheet 4.

E. NEGRONI.

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No. 321,238. Patented June 30, 1885.

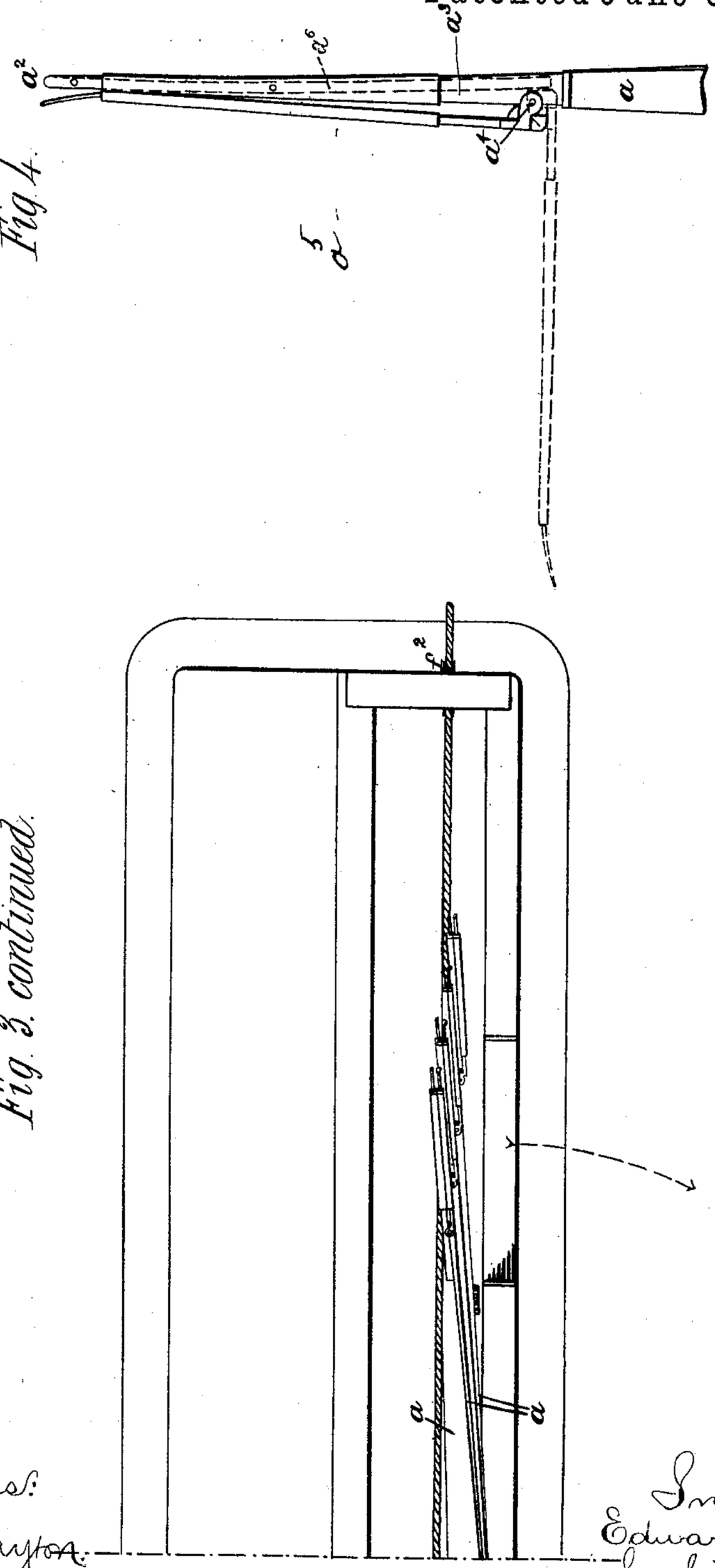

Fig. 4.

Fig. 3. continued.

Witnesses:
John M. Clayton.
Harry Drury

Inventor
Edward Negroni
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UNITED STATES PATENT OFFICE.

EDWARD NEGRONI, OF 32 BRUNSWICK SQUARE, COUNTY OF MIDDLESEX, ENGLAND.

MUSIC-LEAF TURNER.

SPECIFICATION forming part of Letters Patent No. 321,238, dated June 30, 1885.

Application filed October 17, 1884. (No model.) Patented in England June 25, 1884, No. 9,413.

To all whom it may concern:

Be it known that I, EDWARD NEGRONI, professor of music, a subject of the King of Italy, and residing at 32 Brunswick Square, in the county of Middlesex, England, have invented certain Improvements in Apparatus for Turning Over Leaves of Music or Books, (for which I have applied for a patent in Great Britain, No. 9,413, dated June 25, 1884,) of which the following is a specification.

My invention has for its object to provide a simple and effective apparatus by which leaves of music or leaves of books can be turned over without necessitating the use of the hands for the purpose.

An apparatus constructed according to my invention consists of a number of levers set upon an axis, so that they can have a motion of partial rotation imparted to them one after the other. Each of the said levers carries a clip or device for engaging a sheet of music, the said levers being of different lengths, so that the said clips or devices will lie in the same or about the same plane, the said levers being situated one under the other, and kept at a certain distance apart by washers or the like mounted upon the axis. Beneath the series of levers and capable of sliding longitudinally, and also of having a motion of about a semi-rotation upon the said axis, is a piece carrying a catch or tooth, which engages behind the lever which is lowermost, the said catch or tooth being caused by a spring or the like to always take up this position when released. The leaves to be turned are put in due order between or engaged with the clips or devices at the ends of the levers, the leaf to be first turned being engaged with the clip or device of the lowermost lever, the next leaf being engaged with the clip or device of the lever next above it, and so on with as many levers as may be used. The catch or tooth lying, as aforesaid, at the back of the lowermost lever, on a partial rotation being given to the piece carrying the said catch or tooth by a cord or other suitable means, it carries over the said lever, and so turns the first leaf of the music or book. The said piece, carrying the catch or tooth, then automatically returns to its normal position and engages behind the next lever, which is now lowermost, and this is similarly operated when the next leaf is to be turned, and so on until a number of leaves corresponding to the number of clips and levers provided have been turned, when the piece carrying the catch or tooth is lowered, and the said levers can then be turned back to their original position for reuse.

In order that my said invention may be fully understood, I shall now proceed more particularly to describe the same, and for that purpose shall refer to the several figures of the annexed drawings, the same letters of reference indicating corresponding parts in all the figures.

Figure 1 is an elevation with the case in section. Fig. 2 is a transverse section, and Fig. 3 is a plan, with the cover of the case removed, of an apparatus constructed according to my invention, and Figs. 4 and 5 are details drawn to a larger scale.

A number of levers, *a*, are set upon the axis *b*, so that they can be turned one after the other from the position shown in Fig. 1 in full lines to that shown in respect to one of them in dotted lines. Each lever *a* carries a clip, a^2, between each of which one of the leaves of the music or the like to be turned is placed, the leaf to be first turned being held by the clip of the longest lever, the next leaf by the next shorter lever, and so on, the last leaf to be turned being held by the shortest of the levers. I prefer to set the clips at an angle, as shown in Fig. 1, so as not to obstruct the music or printing or the like upon the leaves.

Fig. 4 shows a construction of clip that may be used; but I do not limit myself to any particular construction of the said clip. As shown in the drawings, it consists of a back piece, a^3, or projection from the lever, to which is centered, at a^4, a piece, a^5, against the lower flattened part of which bears a knife-spring, a^6, which retains the piece a^5 in its closed position, but allows it to be turned down, as shown in dotted lines, for placing the leaf between the parts a^3 and a^5. The bearing parts are preferably covered with india-rubber or leather, or the like, to give a proper grip upon the leaf. The levers *a* are kept at a sufficient distance apart to give them a clearance by

means of the washers *c*, mounted upon the axis *b*. Beneath the levers *a*, and mounted upon the axis *b*, so as to be capable of a motion of partial rotation thereon, and also of a longitudinal motion thereon, is a piece, D, (shown more clearly in Fig. 5,) having upon its upper part a catch or tooth, *d*, which engages the lowermost of the levers *a*, a spring, *e*, keeping the said piece D in its raised position, so that its said tooth *d* engages with whichever of the levers may be the lowermost of those not turned over. The said piece D has a pulley, d^2, formed upon it or attached to it, one end of a cord, *f*, or its equivalent, being fixed to the said pulley, the said cord being led over a pulley or guide, or pulleys or guides, as at f^2, to a pedal or other instrument, by which a free pull can be exerted upon it to turn the said piece D in the direction for turning over the leaves. A cord, *g*, or its equivalent, is also attached by one end by the said pulley d^2, the other end of the said cord *g* being attached to a spring, *h*, so that when the said piece D is released from the pull upon the cord *f* the said spring *h* and cord *g* return it to its normal position. *i* is a lever by which the spring *e* can be lowered, and with it the piece D to allow of the levers *a* being turned back, when required, to their original position. The apparatus is preferably inclosed in a casing, as shown, and attached to this casing is the support K, having a bar, *k*, behind which the music or the like is passed, and by which it is held firmly at the part constituting the center upon which the leaves are to be turned. The said bar *k* may be hinged at the lower part, and secured at the upper part by a catch-piece, k^2, of any suitable construction. The side of the support K, from which the leaves are turned, has a clip-piece, *l*, for holding firmly the cover or next sheet to that to be last turned. This clip may be of any suitable construction. As shown in the drawings, it consists of a lever, entered at *l'*, and having a tail-piece, l^2, which, when the catch is raised, passes through a slot, l^3, in the support. A piece, l^4, can be slid down behind this tail-piece l^2 when the clip is closed, so as to hold the sheet or cover very firmly. I do not, however, limit myself to any particular construction of the means by which the music or book is secured to the support.

When the apparatus is to be used, the music or the like is secured to the support K, and the last page or cover is held by the clip *l*, or its equivalent. The last leaf to be turned is secured between the clip a^2 of the shortest and uppermost lever, *a*, the next leaf by clip a^2 of the next lower lever, *a*, and so on, the first leaf to be turned being secured between the clip a^2 of the longest and lowermost lever, *a*. The tooth *d* of the piece D lies behind the lowermost lever, as shown in Fig. 2, and on exerting a pull upon the cord *f* the said piece D has a motion of partial rotation upon the axis *b*, given to it in the direction of the arrows in Fig. 5, and the lowermost lever, *a*, is thereby turned through about a half rotation upon the axis *b*, so that it takes up the position shown in dotted lines in Fig. 1, taking the leaf over with it. A piece of india-rubber or soft material is preferably provided at *m* to prevent noise. When the pull on the cord *f* is released, the spring *h* pulls upon the cord *g* and causes the piece D to be turned back to its original position, and as it is pressed upward by the spring *e* its tooth *d* (when the said piece D has reached the limit of its back stroke) engages behind the next lever *a* to turn over that lever when another pull is exerted upon the cord *f*, and so on with all the leaves to be turned. After all the leaves have been turned, the piece D is lowered by depressing the lever *i*, and the levers *a* can then be turned back to their original position for reuse.

Although I have shown four levers, *a*, it will be evident that any required or suitable number can be similarly arranged for keyed musical instruments.

It will be evident that my invention may be readily applied to pianos or other like musical instruments, to music-stands, invalids' book-rests, and the like.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is—

1. In an apparatus for turning over leaves of music or books, the combination of a series of pivoted levers and a pivot-pin, with the turning-piece D, free to move longitudinally as well as to rotate on said pin, and having a catch to engage with the lowermost lever and a spring to move said piece longitudinally on the pin into engagement with the successive levers, substantially as described.

2. The combination of a pivot-pin and a series of pivoted levers to turn the leaves of music, with a turning-piece, D, free to move longitudinally on the pivot, as well as to rotate thereon, and having a catch, *d*, a spring to return it to its normal position, and a spring to move it longitudinally on the pivot into engagement with the successive levers, substantially as described.

3. The combination of a series of pivoted levers to turn the sheets of music, and a pivot-pin, with a piece, D, free to move longitudinally and rotate on the pin, and having a catch to engage with the successive levers, and having also a pulley portion and a cord to operate it, substantially as set forth.

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

EDWARD NEGRONI.

Witnesses:
CHAS. MILLS,
CHAS. JAS. JONES,
Both of 47 *Lincoln's Inn Fields, London.*