

H. NOTHHAAS.
DEVICE FOR TURNING MUSIC SHEETS.

No. 451,976.

Patented May 12, 1891.

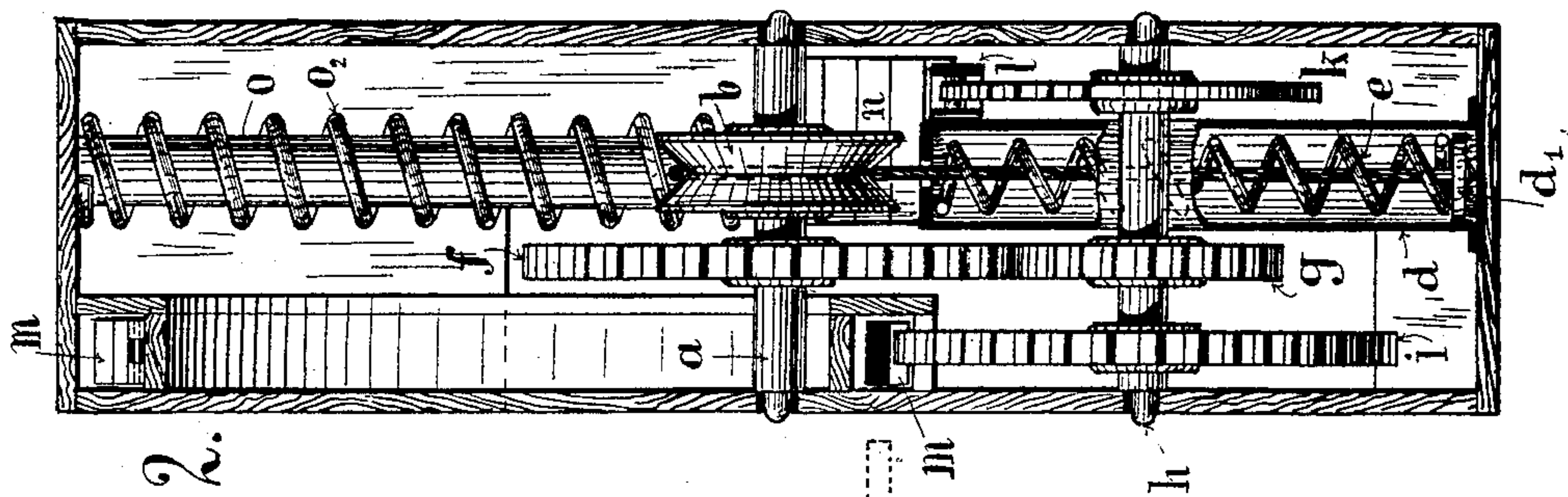


Fig. 2.

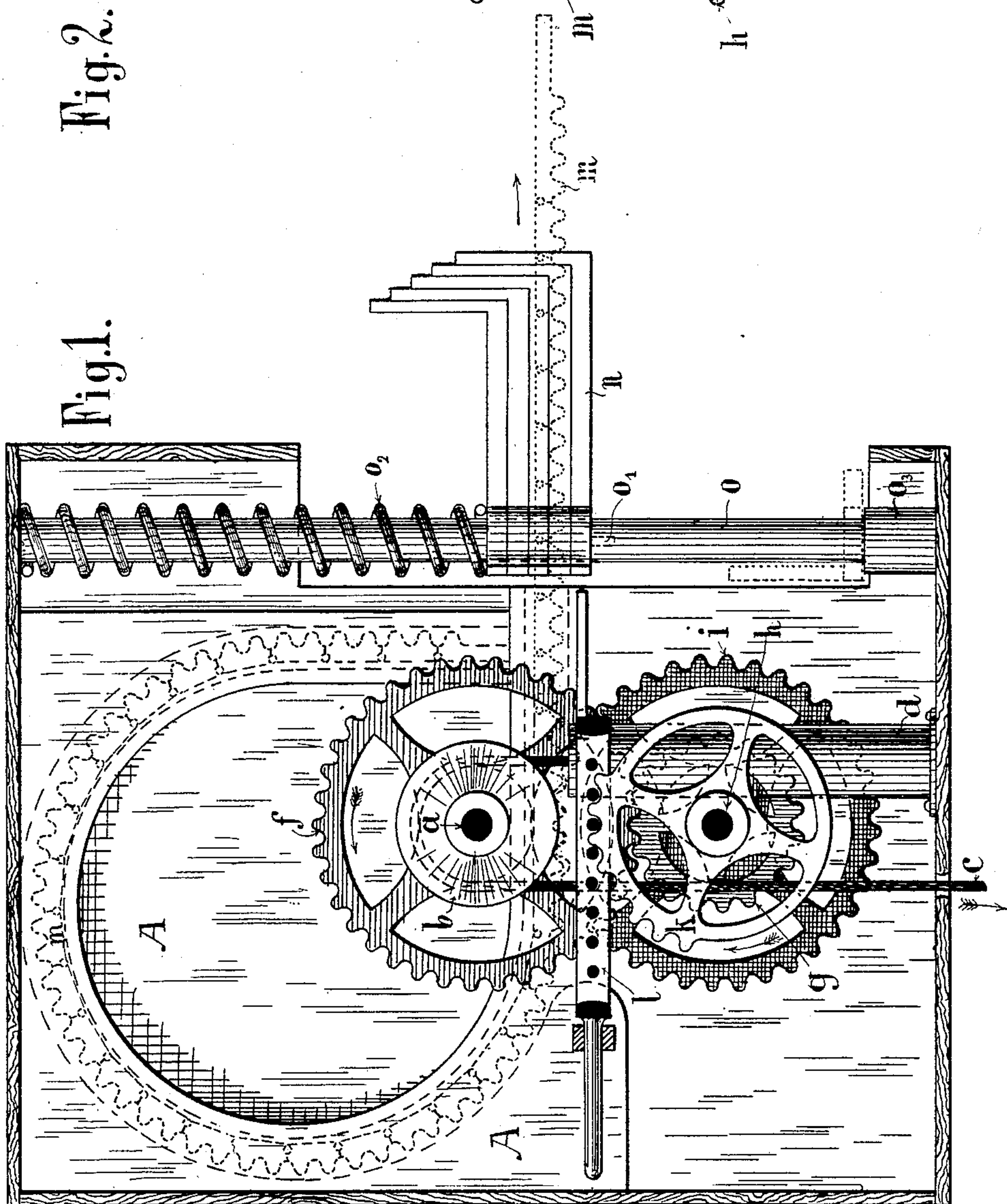


Fig. 1.

Witnesses:
Wilhelm Kord.
Theodor Kordel.

Inventor:
Hugo Nothhaas
per Gerson & Scharf
His Attorneys.

(No Model.)

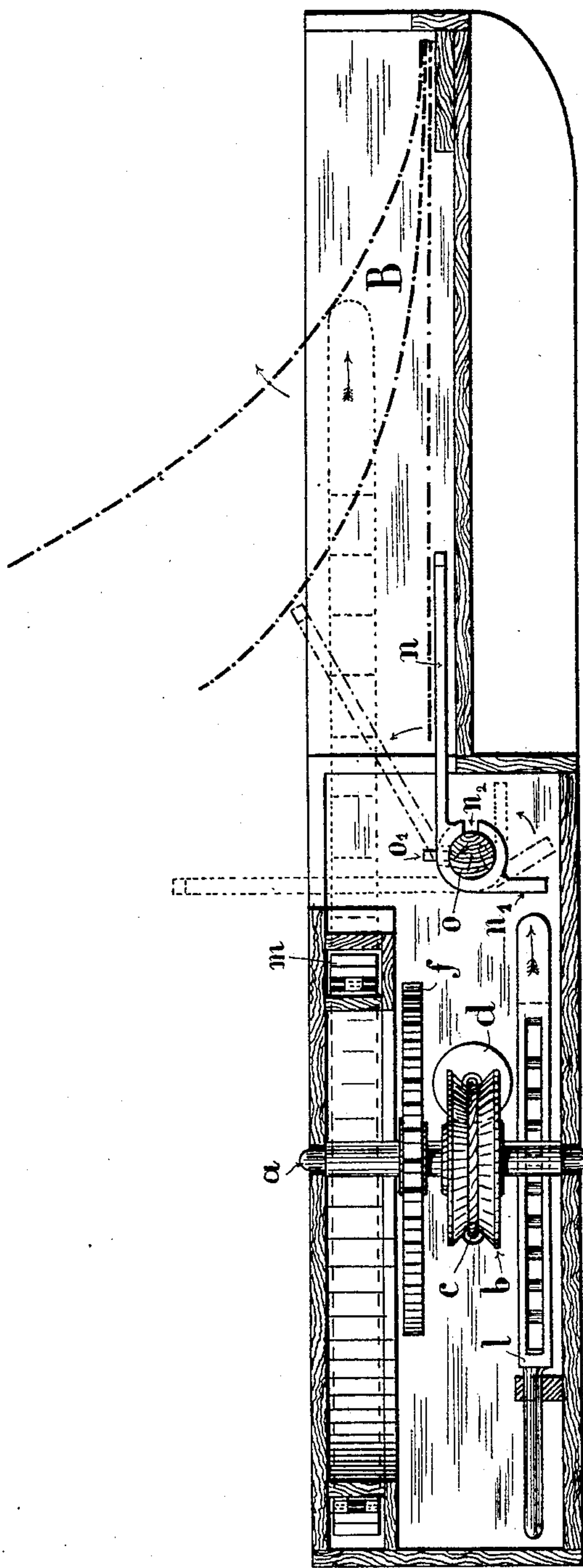
2 Sheets—Sheet 2.

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Fig. 3.



Witnesses:
Wilhelm Kist.
Theodor Studel.

Inventor:
Hugo Nothhaas.
per Gersons & Co.
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UNITED STATES PATENT OFFICE.

HUGO NOTHHAAS, OF MUNICH, GERMANY.

DEVICE FOR TURNING MUSIC-SHEETS.

SPECIFICATION forming part of Letters Patent No. 451,976, dated May 12, 1891.

Application filed November 18, 1890. Serial No. 371,884. (No model.)

To all whom it may concern:

Be it known that I, HUGO NOTHHAAS, a subject of the Emperor of Germany, residing at Munich, in the Empire of Germany, have invented a new and useful Device for Turning Music-Sheets, of which the following is a specification.

This invention relates to a music-sheet reverser in which, by a suitable number of superposed short levers, which are placed singly each under one sheet of the music-book prior to using the reverser, the music-sheet to be turned is so far lifted by its respective lever as to allow a rack-bar to move below the sheet, and by its forward movement shift on and turn the same over.

In the annexed drawings, Figure 1 is a vertical and longitudinal section, Fig. 2 a vertical cross-section, and Fig. 3 a horizontal and longitudinal section, of the device.

Over a pulley *b*, mounted on the same shaft *a* with a toothed wheel *f*, a cord *c* is guided, which for every turning of a music-sheet is pulled by means of a pedal. (Not shown in the drawings.) The other end of said cord *c* is connected with a plate *d'*, adapted to compress, when the cord *c* is being pulled, a spiral spring *e* inclosed in a box. By the frictional action of the cord *c* the pulley *b* is turned, whereby also the toothed wheel *f* is revolved, which gears into another toothed wheel *g* provided underneath. The shaft *h* of the latter carries, moreover, a partially-toothed wheel *k*, which is geared with a horizontally-guided toothed bar *l* and a large toothed wheel *i*, which gears into the rack-bar *m*. This rack-bar *m* consists of single links hinged at the upper rim, so that it can only be bent upward but not downward beyond its straightened position.

Levers *n* are secured on a common upright shaft *o*, and are subject to the pressure of a spiral spring *o'*, surrounding the upper portion of the latter and pressing the levers *n* against a rib or projection *o'*, provided on said shaft *o*. Each lever *n* has a second shorter arm *n'*, and a recess *n*, corresponding to the rib *o'*, mentioned above.

By pulling the cord *c* through the pedal the partially-toothed wheel *k* causes the rack-bar

l gearing therewith to be displaced and to strike against the shorter arm *n'* of the lever *n*, which is pressed onto the rib or projection *o'* and lies under the sheet to be turned of the music-book B. Thereby the lever *n* is turned about the upright shaft *o* and so far lifts the sheet to be reversed with its longer angular arm as to allow the linked rack-bar *m*, which has been meanwhile sufficiently advanced, to place itself under the sheet. Said lever *n*, as soon as it is so far turned that its recess *n*² coincides with the rib *o'*, is shifted down along the latter by the action of the spiral spring *o'*, surrounding the upright shaft *o*, and descends by its own weight onto a collar *o*³ at the bottom of the shaft *o*. By further pulling of the cord *c* the linked rack-bar *m* is more advanced, thereby completely reversing the music-sheet, while the partially-toothed wheel *k* ceases to gear into its toothed bar *l*.

When the pedal-pressure on the cord *c* is discontinued, all toothed wheels move back by the action of the spiral spring *e*, inclosed in a box *d*. The linked rack-bar *m* is thus shifted back and against suitably-placed curved surfaces A, so that its rear portion is bent into the shape of a loop and lodges itself in a casing. As soon as the partially-toothed wheel *k* again engages with its toothed bar *l* and shifts the same somewhat back the following reversing-lever *n*, lying under the next music-sheet, is pressed by the spiral spring *o'* against the rib and can consequently be struck by the toothed bar *l*, gearing with the partially-toothed wheel *k*, when the cord *c* is again pulled.

What I claim is—

In a device for turning music-sheets, the combination of the levers *n*, placed between the single sheets and turning round a common shaft *o*, with the toothed bar *l*, engaging into the partially-toothed wheel *k* and the flexible rack-bar *m*, the toothed wheels *i f g*, the pulley *b*, the spring *e*, and the cord *c*, connected with plate *d'*, all as described.

HUGO NOTHHAAS.

Witnesses:

EMIL HENZEL,
LERUND FREUND.