

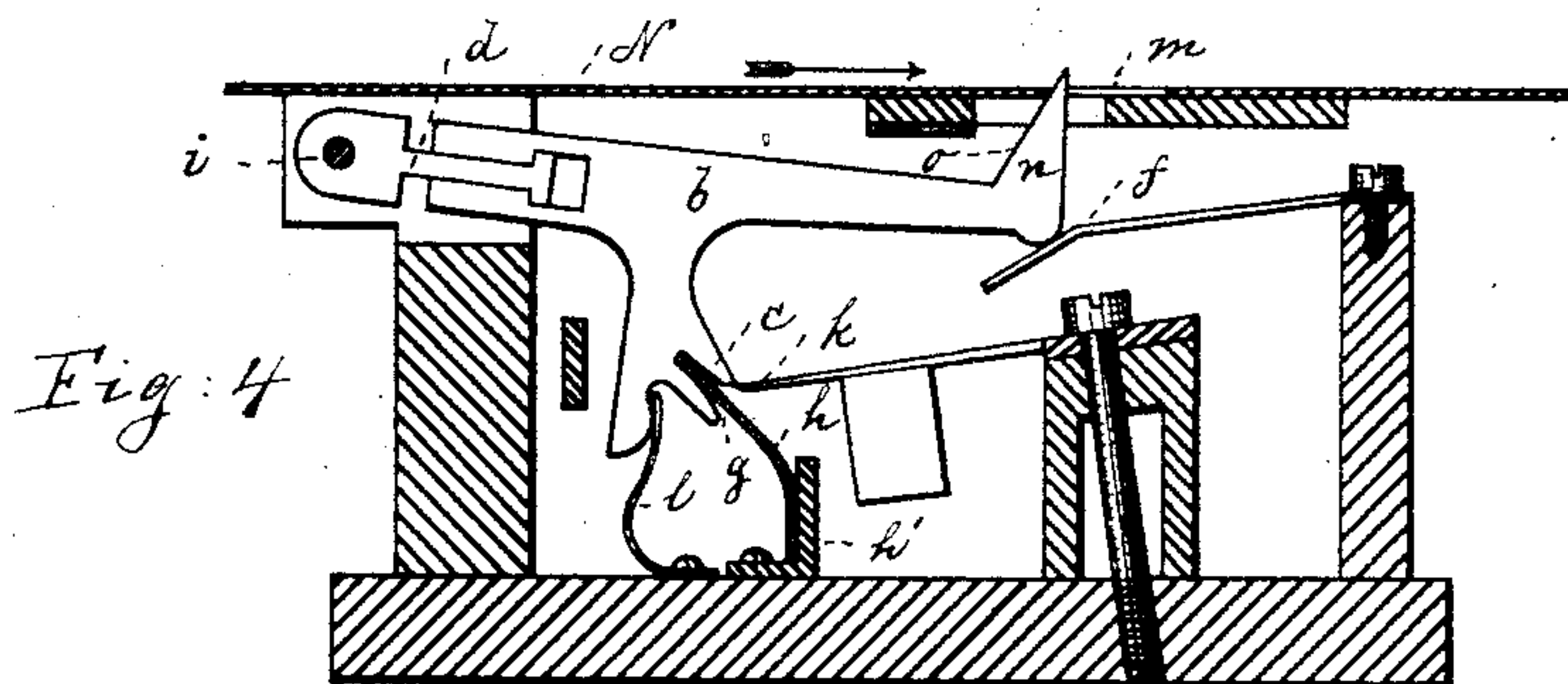
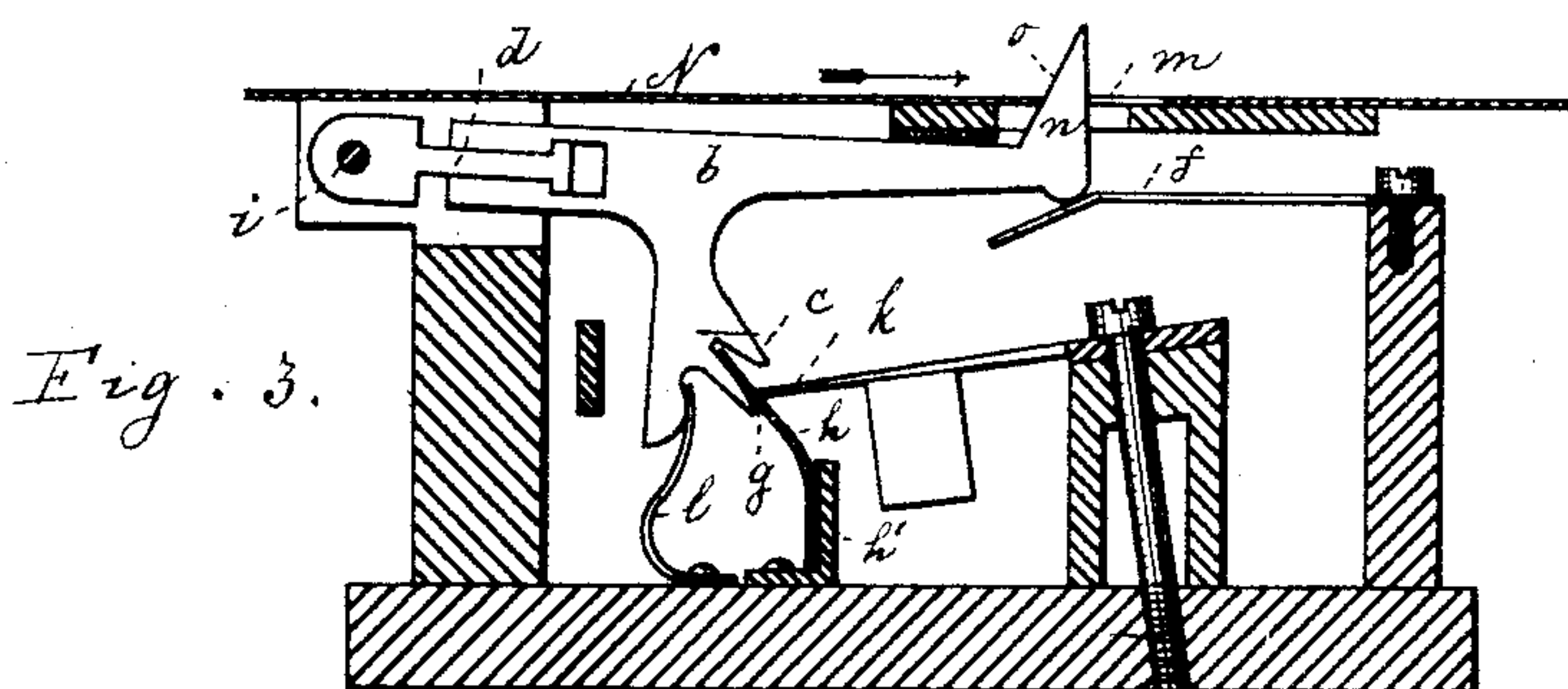
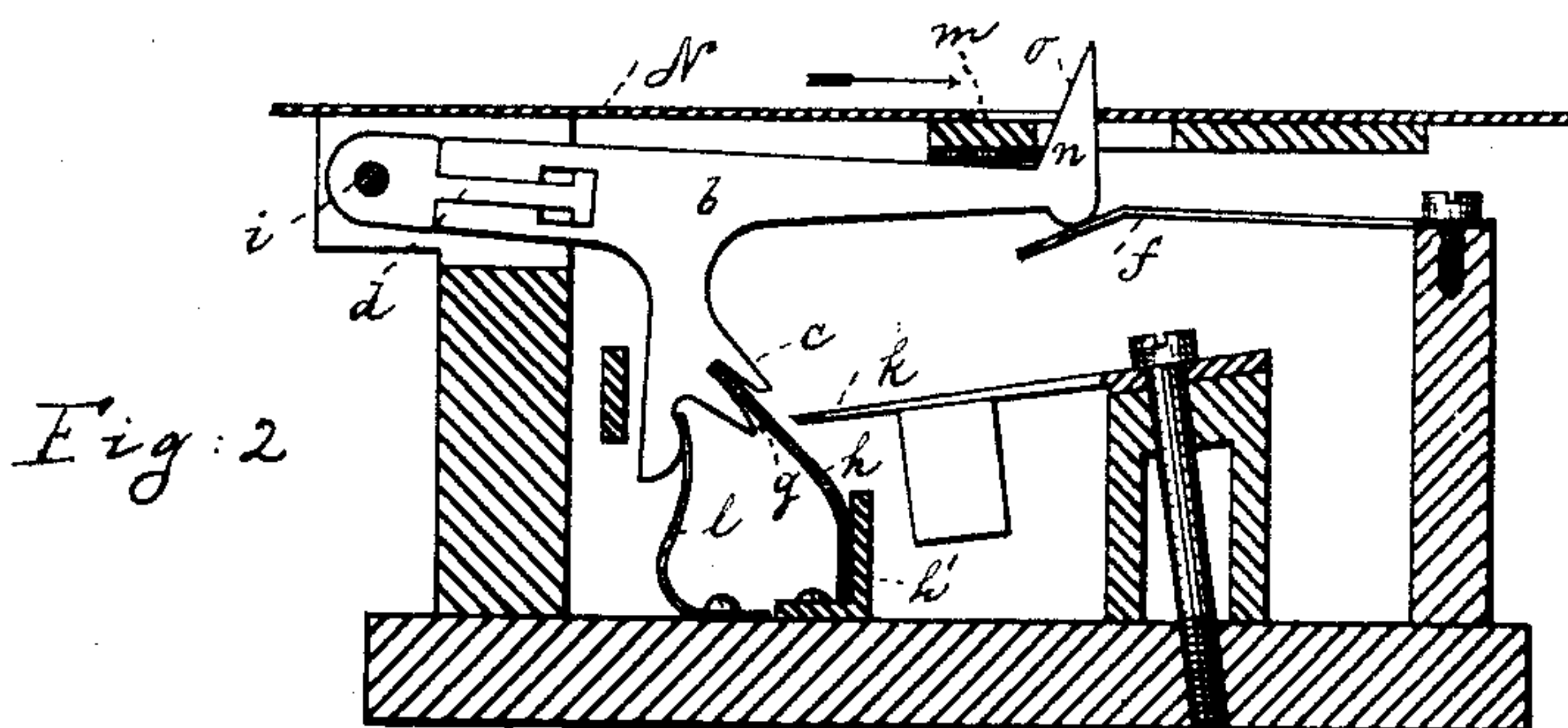
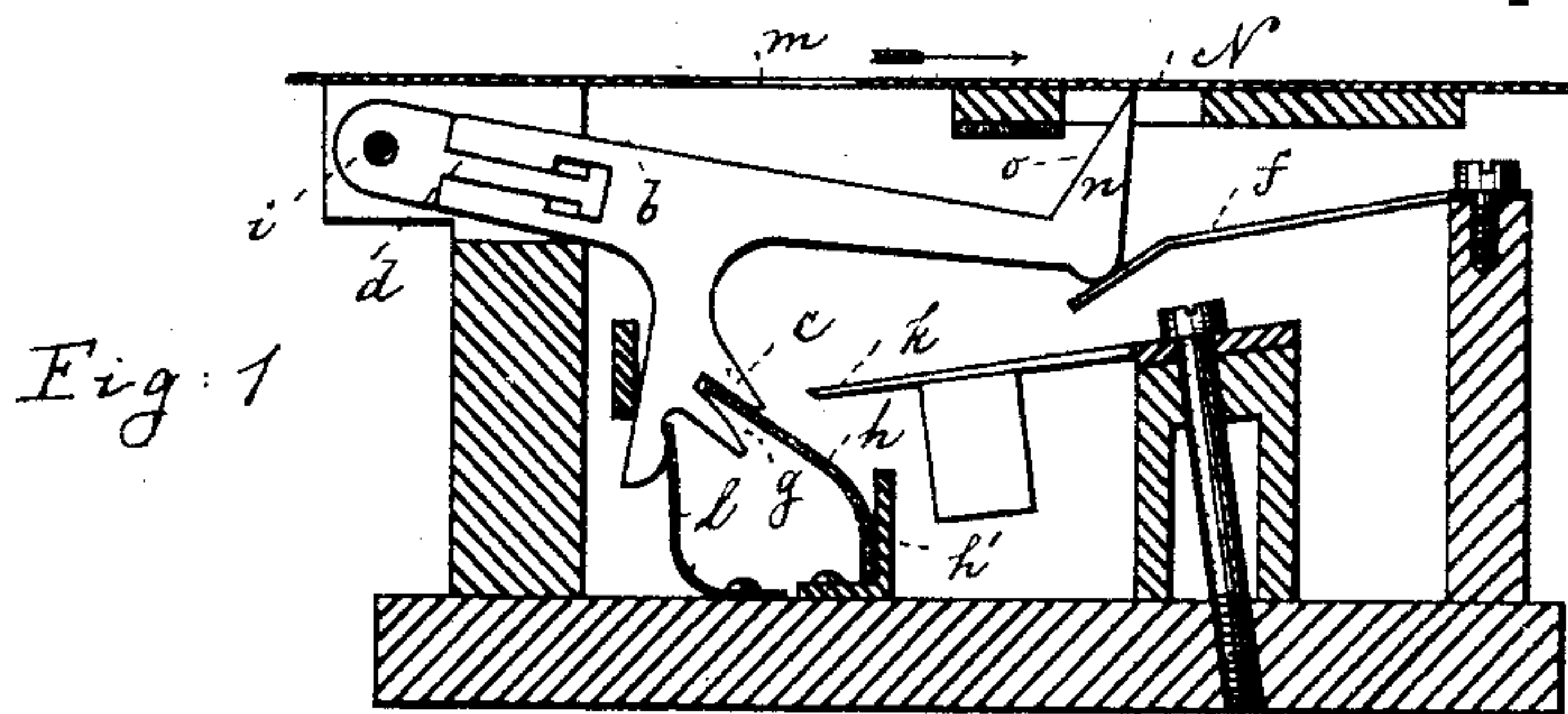
(No Model.)

2 Sheets—Sheet 1.

J. L. MÜLLER.
MECHANICAL MUSICAL INSTRUMENT.

No. 459,590.

Patented Sept. 15, 1891.



Witnesses:
W. Wagner
A. Bonghman.

Inventor:
J. L. Müller
by his attorneys
Roeder & Priesen

(No Model.)

2 Sheets—Sheet 2.

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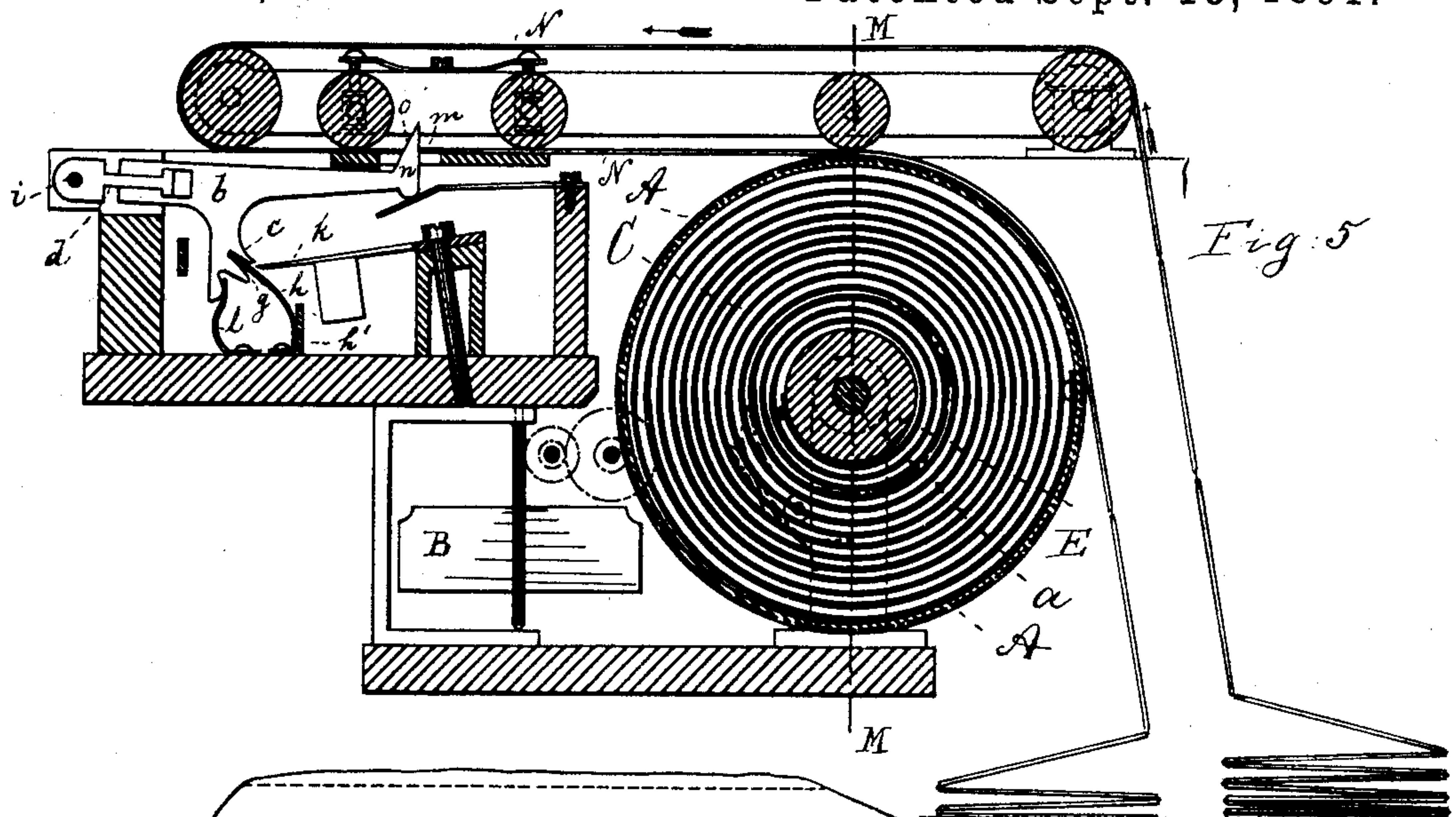


Fig. 5

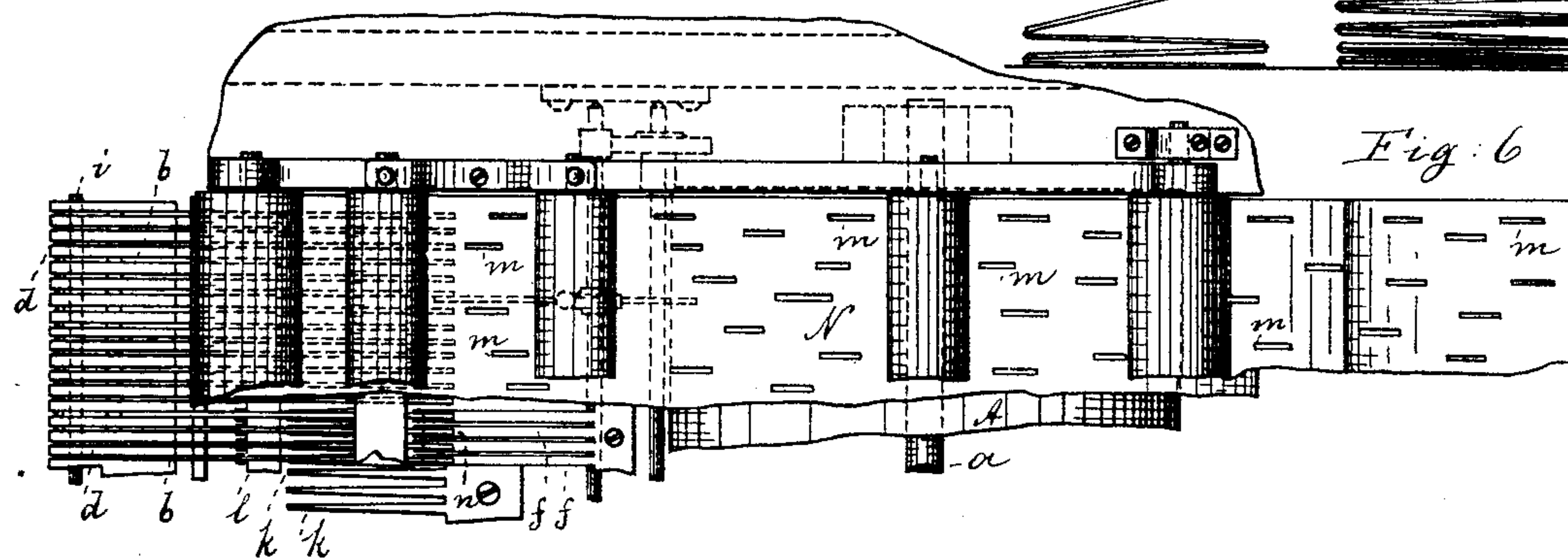


Fig. 6

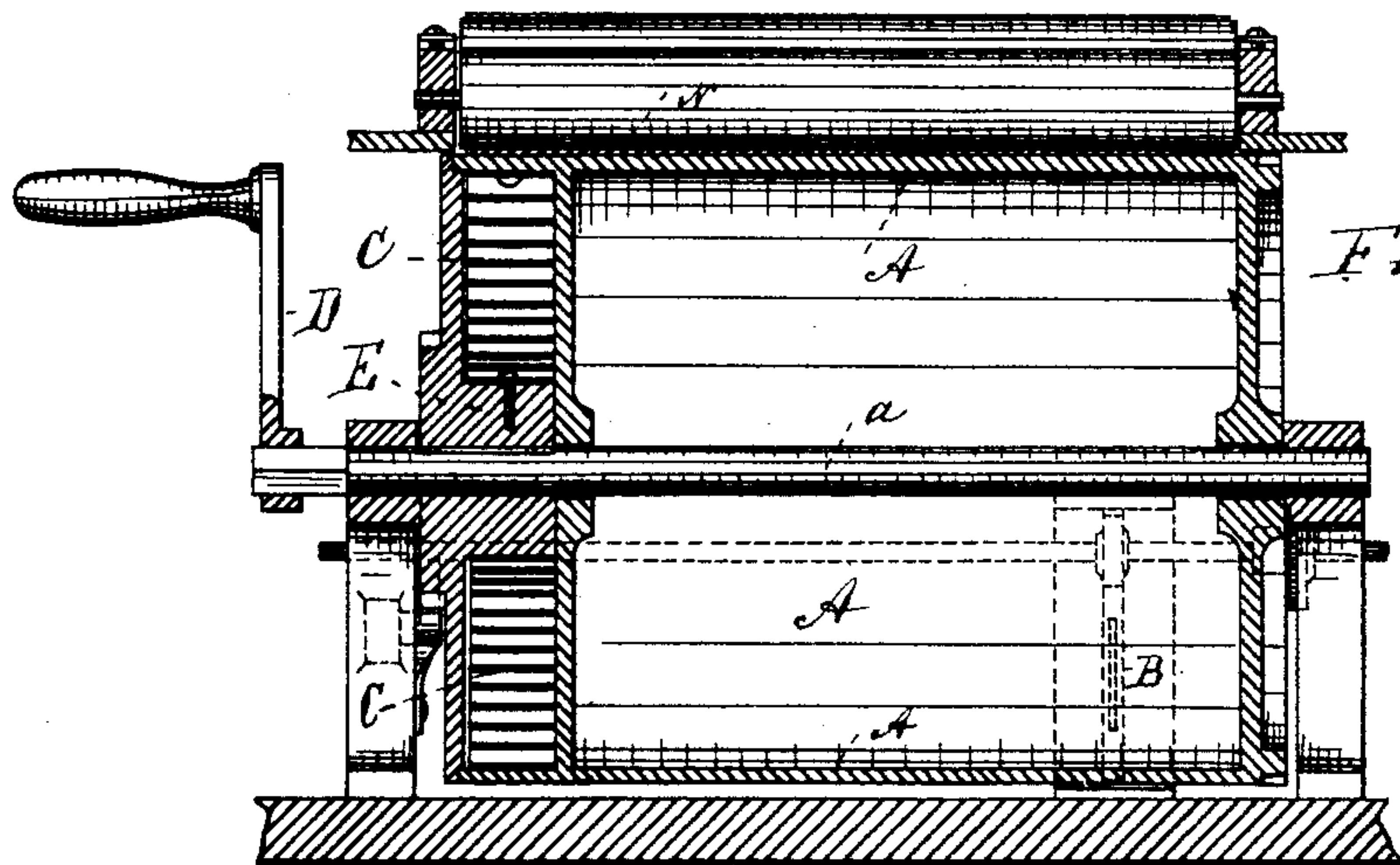


Fig. 7

Witnesses:
W. Wagner.
A. Goughman.

Inventor:
J. L. Müller
by his attorneys
Roder & Bensen

UNITED STATES PATENT OFFICE.

JOHANN LUDWIG MÜLLER, OF LEIPSIC, GERMANY.

MECHANICAL MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 459,590, dated September 15, 1891.

Application filed July 2, 1890. Serial No. 357,485. (No model.)

To all whom it may concern:

Be it known that I, JOHANN LUDWIG MÜLLER, of Leipsic, in the Kingdom of Saxony, Germany, have invented a new and useful
5 Improvement in Mechanical Musical Instruments, of which the following is a specification.

This invention relates to a mechanical musical instrument of novel construction; and it
10 consists in the various features of improvement more fully pointed out in the claim.

In the accompanying drawings, Figures 1, 2, 3, and 4 are longitudinal sections of the principal parts of my improved mechanical
15 musical instrument, showing the action in different positions. Fig. 5 is a longitudinal section of the entire instrument. Fig. 6 is a top view of one end of the instrument; and Fig. 7, a vertical transverse section through
20 the drum on line M M, Fig. 5.

The letter N represents the perforated sheet of paper that is fed over the levers that operate the reeds.

A is the receiving-drum of the sheet N.
25 This drum is revolved by means of a spring C within the drum, the speed being regulated by a vane B. One end of the spring C is attached to the drum itself, while its other end is attached to a hub E, fast on shaft *a*
30 of the drum. A crank D on shaft *a* serves to wind up the spring and to set the instrument in motion. The sheet N may be either made sectional or it may be endless, and is provided with the perforations *m*, that en-
35 gage the reed-operating levers *b*. Each of the levers *b* is provided at its top with a nose *n*, that has an inclined edge *o* and is free to enter perforation *m*. By a slide-joint the lever *b* is connected to a second lever *d*, piv-
40 oted at *i* to the casing. Below the lever *b* there is the reed *k*, acted upon by a second nose *c* of lever *b*. The lever *b* is acted upon by two springs *f* *l*, of which the spring *f* has the tendency to throw the nose *n* up, while
45 the spring *l* has the tendency to push lever *b* against lever *d*. Beneath the nose *c* the lever *b* is provided with a slot *g*, in which is secured one end of a soft damper *h*, the other end of which is secured to a fixed bracket *h'*.

50 The operation of the device is as follows: The music-sheet being fed over the lever *b* will hold such lever down; but as soon as an

opening *m* of the sheet is in line with the nose *n* the lever is liberated and the spring
f will throw it up, so that the nose *n* pro- 55
jects through the opening. While the spring *f* forces the nose *n* up, the spring *l* holds the lever *b* back, as in Fig. 2, so that the nose *c* is above and out of line with the reed *k*. As the music-sheet continues to be fed forward 60
the edge of the opening *m* will engage the inclined edge *o* of nose *n* and draw such nose along, thus opening the joint between the levers *b* *d* against action of spring *l*. By this
advance of lever *b* the nose *c* is brought 65
above the free end of reed *k*, Fig. 3. The continued motion of the music-sheet causes the descent of the lever *b*, inasmuch as the edge of the opening *m*, by its constant pressure against the inclined edge *o*, will press the
nose *n*, and accordingly the lever *b*, down. 70
When the opening *m* is at the point of clearing the nose *n*, the lever *b* will have been so far depressed that the nose *c* comes into contact with and sounds the reed, Fig. 4. After 75
the opening *m* has passed the nose the spring *l* will throw the lever *b* backward and close the joint between the parts *b* *d*, so that the position shown in Fig. 1 is resumed. In this way the nose *c* is again placed behind reed *k*. 80
and ready for the next forward motion of lever *b*. As the nose *n* passes up into an opening *m* and the lever *b* is thus swung up, the upper end of the damper *h* is carried up with it and finally brought into contact with the
reed, Fig. 3. Thus the vibrations of the reed 85
are checked and finally stopped, after which the reed is struck by nose *c*, as in Fig. 4, to produce the sound. The above-described action is simple, effective, and reliable. 90

What I claim is—

The combination of lever *b*, having slot *g* and noses *n* *c*, with lever *d*, reed *k*, springs *f* *l*, acting upon lever *b*, and with damper *h*, one end of which is secured within slot *g*, 95
substantially as specified.

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

JOHANN LUDWIG MÜLLER.

Witnesses:

MAX MATTHÄI,

CARL BORNGRAEBER.