

(No Model.)

T. J. PARKINSON.
LEAF TURNER.

No. 409,370.

Patented Aug. 20, 1889.

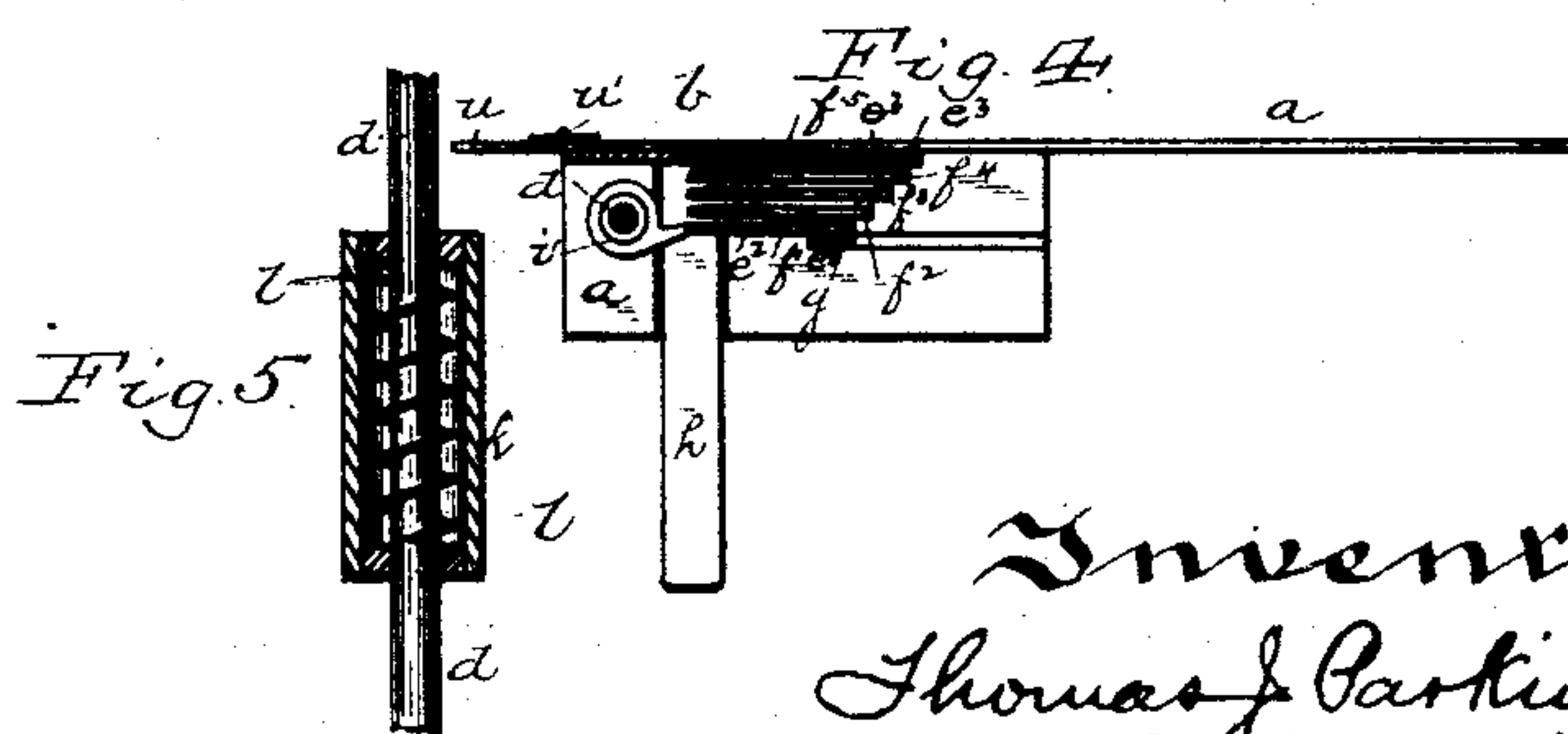
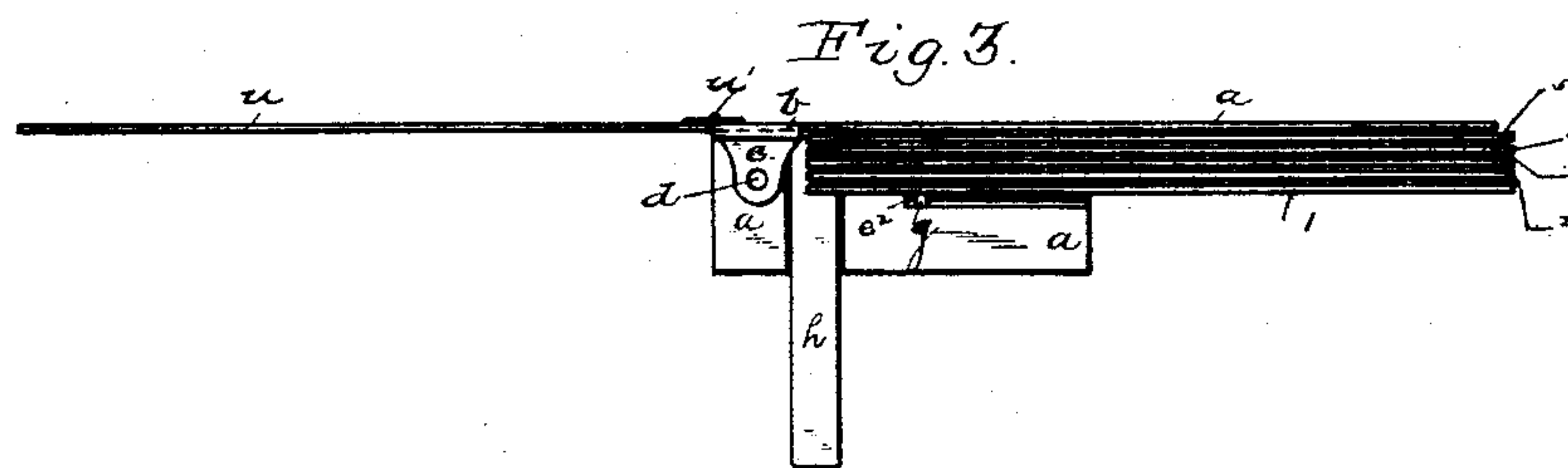
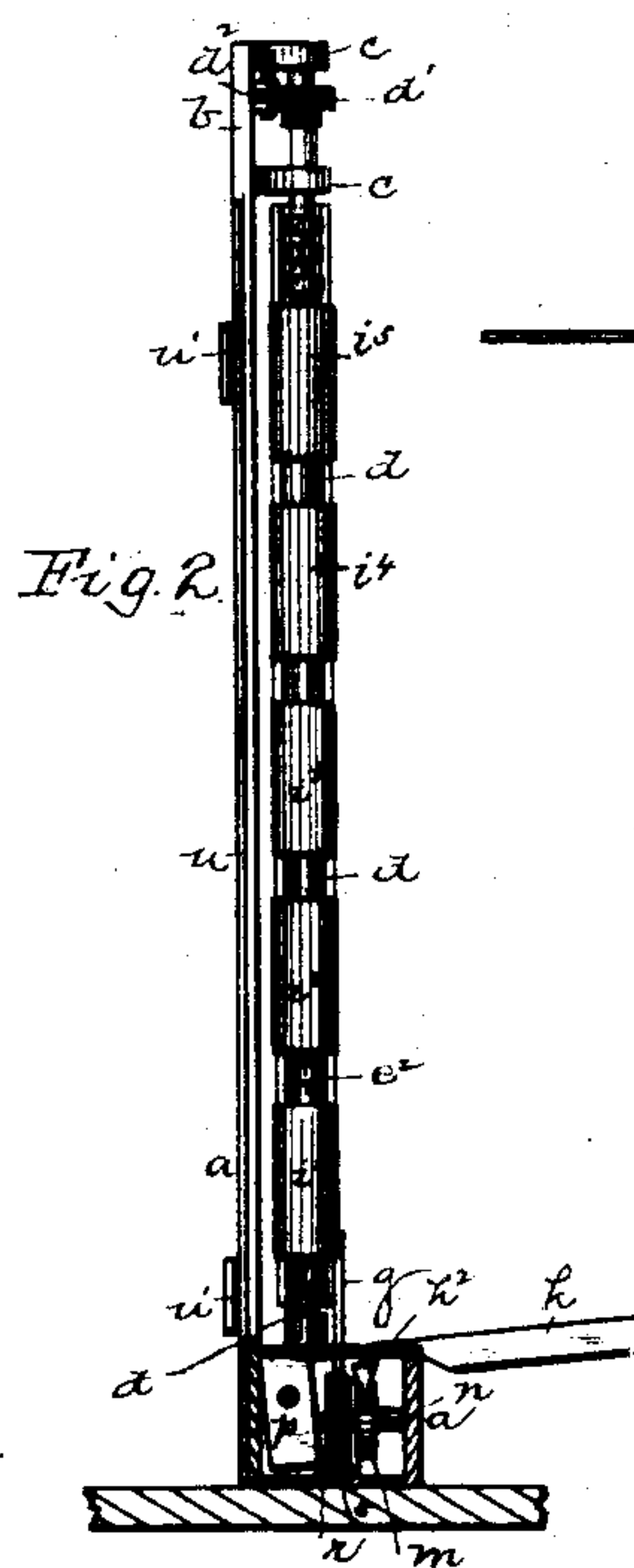
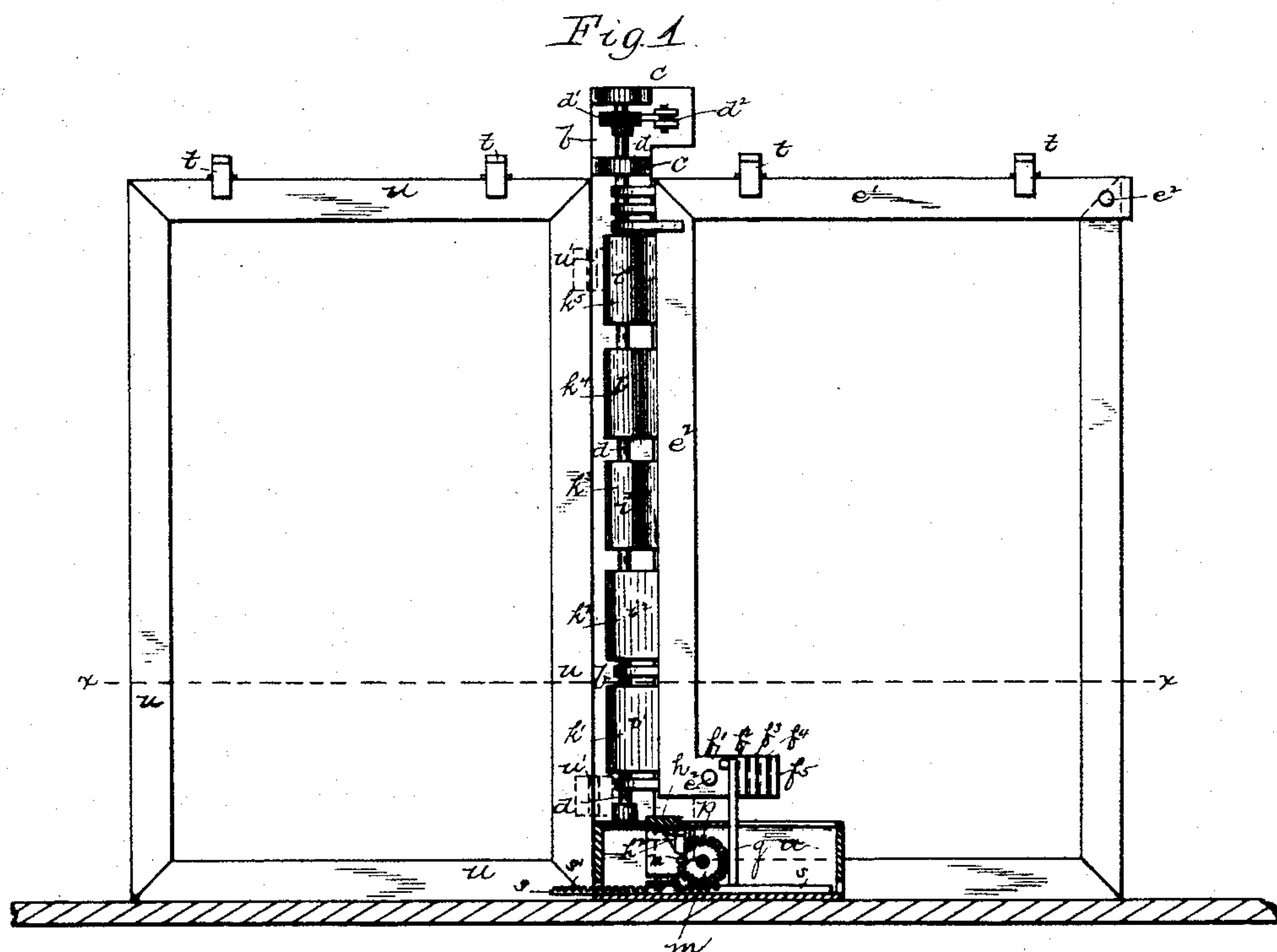
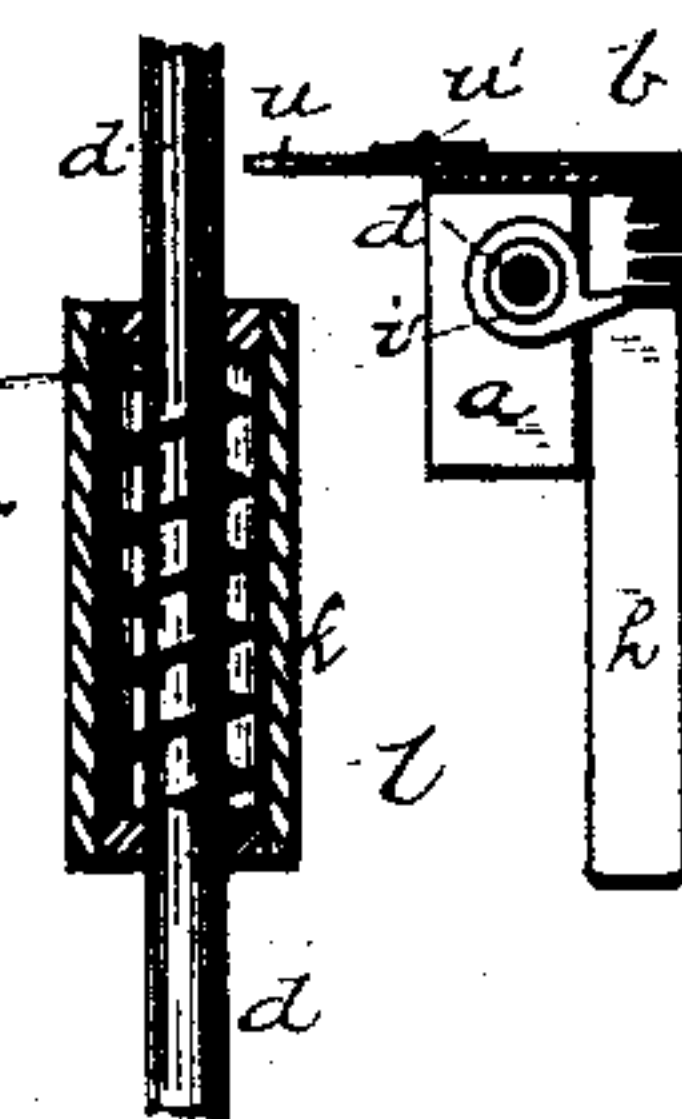


Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

THOMAS J. PARKINSON, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR OF ONE-FOURTH TO J. B. HYNDMAN, OF SAME PLACE.

LEAF-TURNER.

SPECIFICATION forming part of Letters Patent No. 409,370, dated August 20, 1889.

Application filed January 16, 1889. Serial No. 296,473. (No model.)

To all whom it may concern:

Be it known that I, THOMAS J. PARKINSON, a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Leaf-Turners; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to devices for turning the leaves of sheet-music—such as the notes of music employed with pianos, organs, and other musical instruments—its object being to provide apparatus for holding the different sheets of music in proper position for the reading of the same by the musician, and enabling him to turn the sheets without the difficulty of taking hold of each sheet and turning it, which often interferes with his playing, and to hold the several sheets, when turned, in such position that there is no difficulty in reading the notes thereon.

It is well known that the mass of musical notes are contained on large sheets, which are not of such stiffness that they will stand in the position in which they are placed on the rack, and that considerable difficulty is found by the performer in turning the sheet, especially when performing some difficult piece, and in placing the sheet in such position that it can easily be read, such operation often interfering with his performance to such an extent as to cause a break in the music, which is extremely objectionable both to him and to the listeners. By my invention I provide a means for turning the sheets and holding them in proper position without touching the sheets, all that is necessary being to press a key, by which the sheets are automatically turned and held in place.

In my improved leaf-turner I employ a series of holders, to which the sheets are attached at their upper ends, said holders being each independently pivoted on a central shaft and having springs for turning the same, and having at their lower ends lips, which engage with a finger or bar and retain them in proper position, and said finger being moved a proper distance to free each holder successively and permit the spring operating the same to give a half-turn, and so carry over the sheet in such position that the opposite

side may be read, means being provided, as hereinafter described and claimed, for operating said finger.

To enable others skilled in the art to make and use my invention, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is a face view of my improved leaf-turner, the face of the stand or base being removed to show the operative mechanism. Fig. 2 is an edge or side view of the same. Fig. 3 is a top view; Fig. 4, a cross-section on the line xx , Fig. 1; and Fig. 5 is a detail view of one of the spring-bearings, illustrating the method in which the operative spring is connected to the holder and supporting shaft or bar.

Like letters of reference indicate like parts in each.

The base a of my improved leaf-turner is generally made of a size corresponding to the rest or shelf of the rack on which the music is generally placed, or to which my improved leaf-turner is secured in any suitable way.

Extending up from the base a is the standard b , which has at the upper end the bearing or bearings c , in which the upper end of the shaft or bar d is journaled, the lower end of said bar being journaled in the base a , as shown. Secured to the bar d are the several leaf-holders, which are preferably made of light metal pieces, the holders being made as light as possible. These holders have the top bars e' , which are secured to the side or vertical bars e^2 , by means of which the holders are journaled to the bar d . In the construction shown there are five of these leaf-turners, marked, respectively, 1 2 3 4 5 and each leaf-holder has at the lower end thereof a lip, said lips being marked f' f^2 f^3 f^4 f^5 , according as they extend out from their respective holders, and each successive lip being made longer than the one in front of it, so that the first leaf can be freed by the finger g , hereinafter referred to, as it is moved along without freeing the other lips, such movement being imparted to the finger as to free but one of such lips at a time, and to free one whenever the key h is depressed, when the leaf-holder is carried over by suitable spring mechanism, as hereinafter described, to

the other side of the shaft or bar d , so exposing the opposite side or page of the sheet of music which is secured thereto. Each leaf-holder has a bearing which fits around the shaft d , the several bearings being marked $i^1 i^2 i^3 i^4 i^5$, according to the leaf-holders to which they are secured, and each leaf-holder has also a spring-bearing, which fits around the shaft d and contains a spring secured to both said shaft and to the body k of the bearing, so that when the leaf-holder is freed, as above stated, the said spring will cause the leaf-holder to swing to the opposite side of the shaft, so turning the sheet of music. This spring-bearing can be formed in any suitable way, the simplest form known to me and that preferred by me being shown in Fig. 5, in which the coiled spring l encircles the shaft d within the body k , and has one end thereof secured to the bearing.

The several spring-bearings on the shaft are marked $k^1 k^2 k^3 k^4 k^5$, according to the different sheet-holders to which they are secured. In order to regulate the tension of said springs and the swinging movement of the leaf-holders, I provide at the upper end of the shaft d the ratchet-wheel d^1 , with which a pawl d^2 engages, and in forming the leaf-turner the several springs are simply placed around the shaft within their bearings and their ends secured in place, and then the necessary spring-tension imparted thereto by the turning of the shaft, which is then held from turning by the pawl d^2 .

In order to prevent noise which might be caused by the striking of one sheet-holder against another as it swings, I place on the face or faces of each sheet-holder one or more rubber or other cushions, as at e^3 .

The mechanism employed by me for freeing the leaf-turners consists of the key h , which is journaled in the base a and has a spring secured thereto, or is loaded in any suitable way to hold it in its raised position, and carries at one side thereof the pawl h^2 , which engages with a ratchet m on the shaft n in the base a in such position that by depressing the key h said bar is caused to engage with the ratchet-wheel and carry the shaft n a distance corresponding to the movement of the pawl. This shaft n also carries a pinion p above a slide or guideway r , in which the bar s , carrying the finger g , moves, said bar having the rack-face s' thereon, which engages with the pinion p , so that upon the depressing of the key h , as the pawl h^2 engages with the ratchet-wheel m , it causes the turning of the pinion p and through the rack s' forces the finger g , carried by said bar s , along a sufficient distance to free one of the leaf-holders—such, for example, as the leaf-holder 1—which is then carried over by the spring l until it swings to the opposite side of the shaft and exposes that side of the sheet of music; and upon the next depression of the key in the same manner the leaf-holder 2 is

freed and swings over, one leaf-holder being freed upon each depression of the key, and only one such leaf-holder being so freed, as the several lips of the leaf-holders are of different lengths, as above described, the lips of shorter length being in front of those of longer length and the lips differing in length according to the movement of the finger g when the key is depressed.

The pawl h^2 may engage with the teeth of the pinion p , the ratchet-wheel m being omitted; but I prefer to employ both ratchet-wheel and pinion.

I prefer to form the cushions e^3 on the lips engaging with the finger g and to place them in such position near the ends of the lips as to form stop-shoulders for said finger, as shown in Fig. 4, as by so doing such cushions provide guides for the finger, so that when drawn back to engage with any one of the leaf-turners it will be directed to such position that it will be freed by but one depression of the key h .

The several sheets of music are secured to the leaf-holders by the clips t , which engage, with the horizontal arms e' of the leaf-holders in such position, the upper edges of the sheets of notes. The clip t nearest the vertical bar e^2 may be permanently secured in place; but the clip t' near the outer end of the arm e' is made adjustable along said arm to accommodate sheets of different sizes or widths. Back of the bar d , and extending out on each side of the standard b , are the stationary racks or music-supports u for supporting the first and last pages or back sheet of music, and a sufficient space is left between the standard b and shaft d to receive such sheet.

In order to provide for the folding of the leaf-turner so that it will not occupy so much space for easy carrying, I generally make the principal part of the base a on one side of the standard b , and I hinge the rack or support u on the opposite side of the standard, as at u' , so that it can be folded back against the body of the leaf-turner, and when in use can be opened out and held in place by any suitable device.

My improved leaf-turner can be formed at a comparatively small cost and be made light and strong, and it overcomes entirely the difficulty of turning the sheet-music, as all that is necessary is for the operator to depress the key h , which can easily be done during playing, when the leaf is automatically turned and the playing is not interrupted, and each successive leaf is turned in the same manner. The leaf-turner can rest on the ordinary music-rack, its weight being generally sufficient to hold it in place, or it may be secured in place by any suitable devices.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a leaf-turner, the combination, with the leaf-holders, of the key h , the bar s , carrying the finger g , and connections, substan-

tially as described, between said bar and said key, substantially as and for the purposes set forth.

2. In a leaf-turner, the combination of the
5 leaf-holder, the key *h*, carrying the pawl *h'*, pinion *p*, and rack-bar *s*, carrying the finger *g*, substantially as and for the purposes set forth.

3. In a leaf-turner, the combination of a se-
10 ries of spring-actuated leaf-holders journaled on a suitable shaft and having lips of different lengths, respectively, each provided with

a stop-shoulder at a prescribed distance from the end thereof, and a finger engaging with said lips and directed to position by said stop-
15 shoulders, substantially as and for the purposes set forth.

In testimony whereof I, the said THOMAS J. PARKINSON, have hereunto set my hand.

THOMAS J. PARKINSON.

Witnesses:

HARRY C. FEHL,
JAS. BRYAR, Jr.