

J. W. POINCE.
 AUTOMATIC LEAF TURNER FOR SHEET MUSIC.
 APPLICATION FILED MAR. 2, 1908.

969,494.

Patented Sept. 6, 1910.

2 SHEETS—SHEET 1.

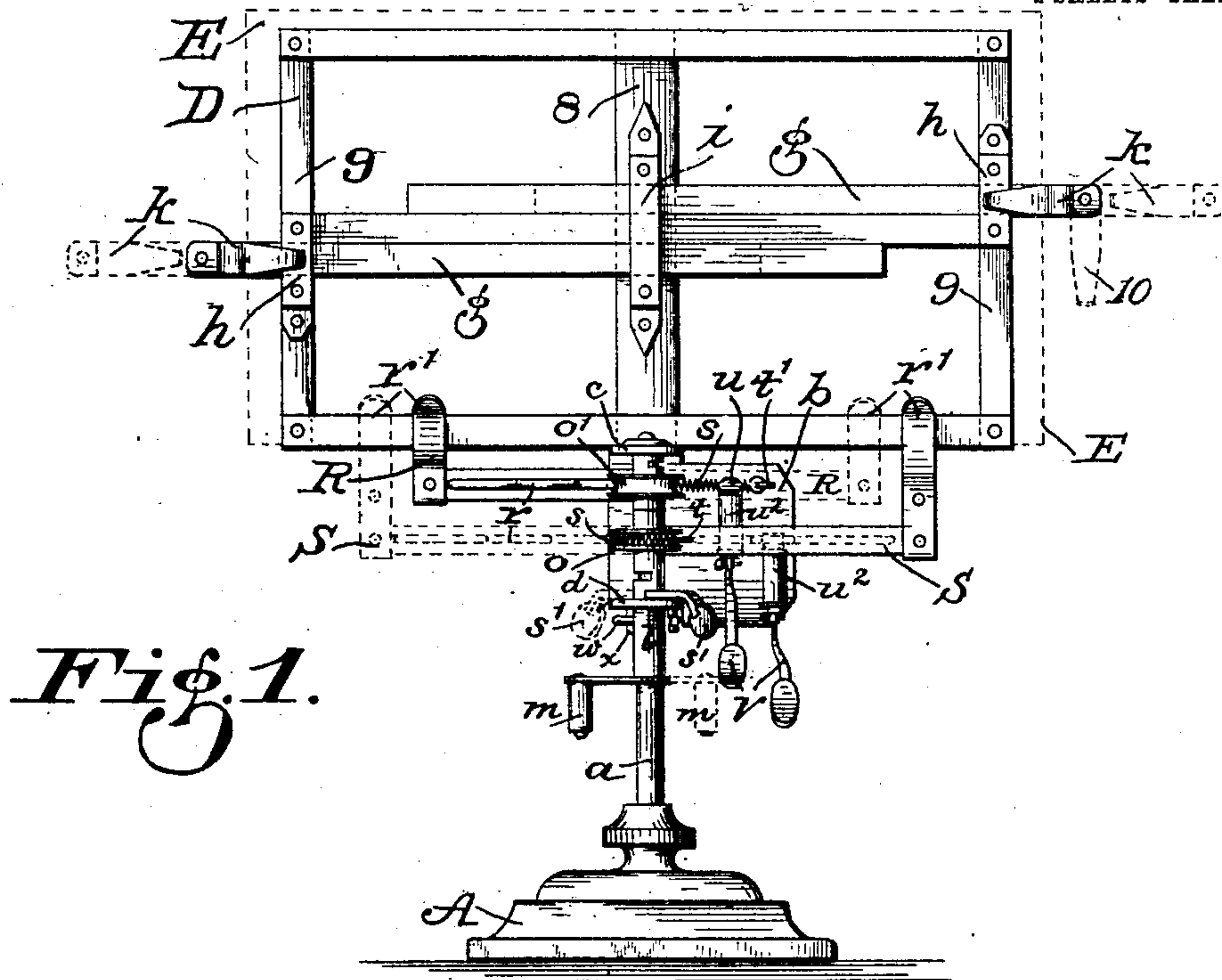


Fig. 1.

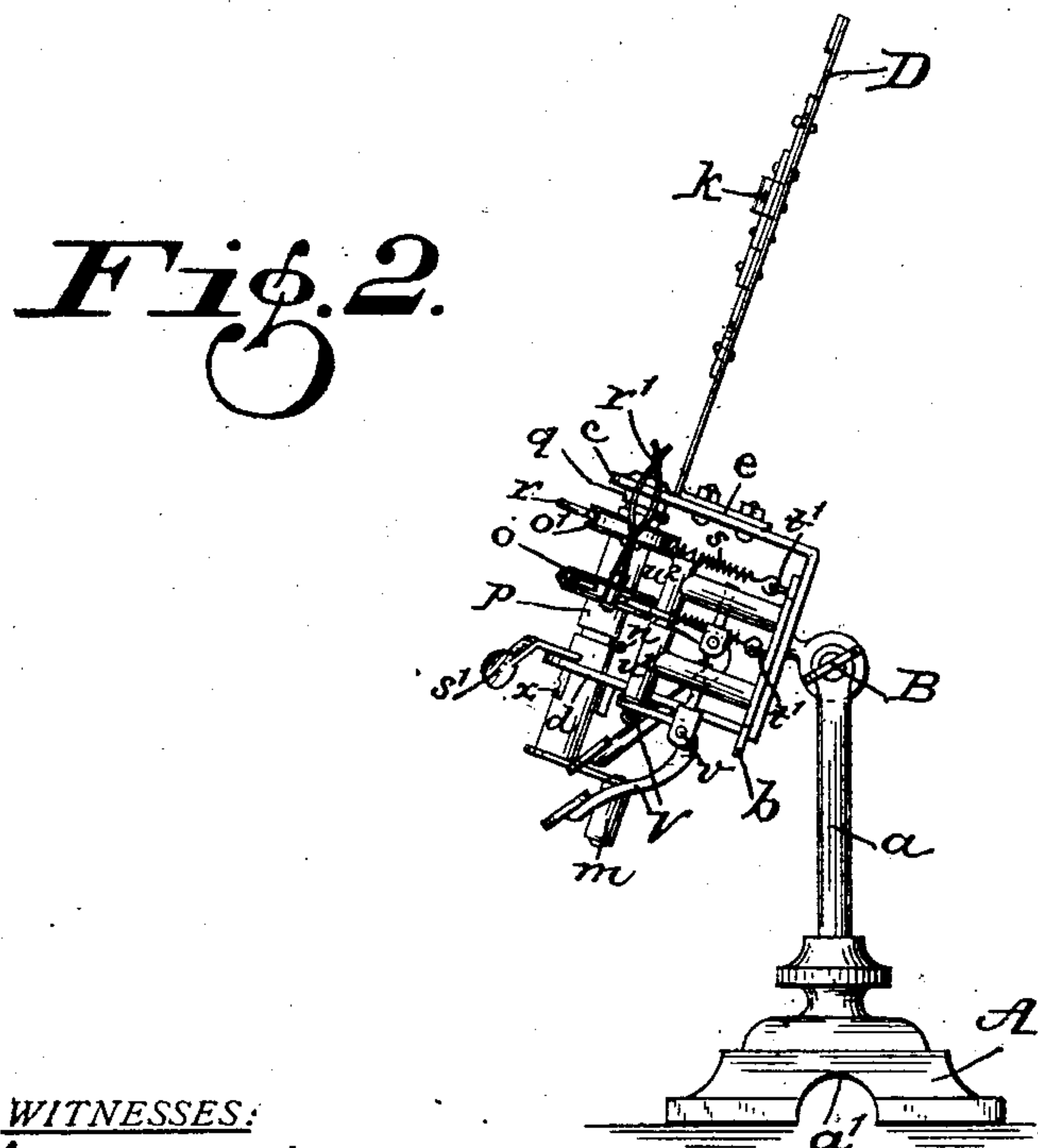


Fig. 2.

WITNESSES:
 Jas. O. Hartsorn.
 Martin M. Johnson.

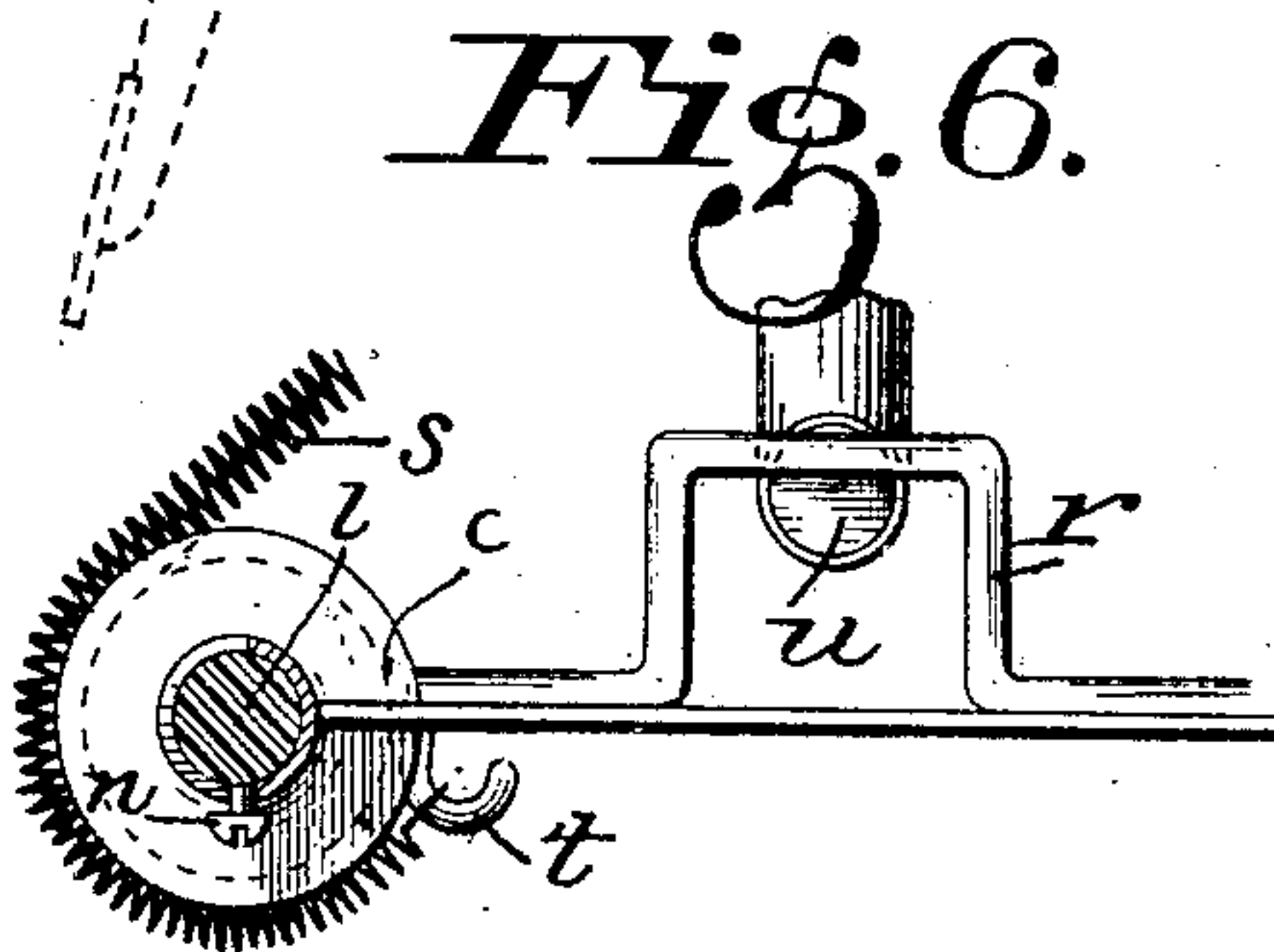
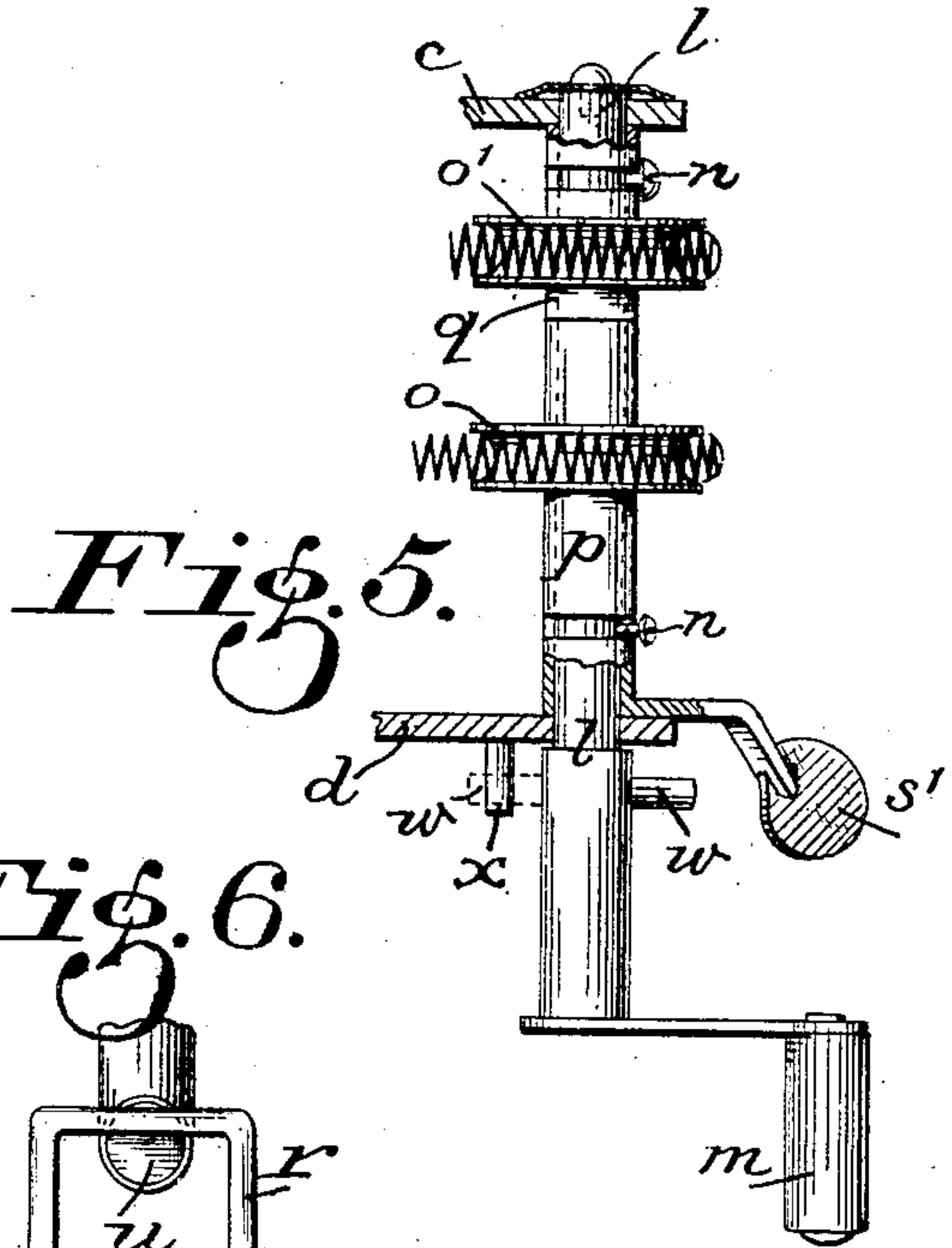
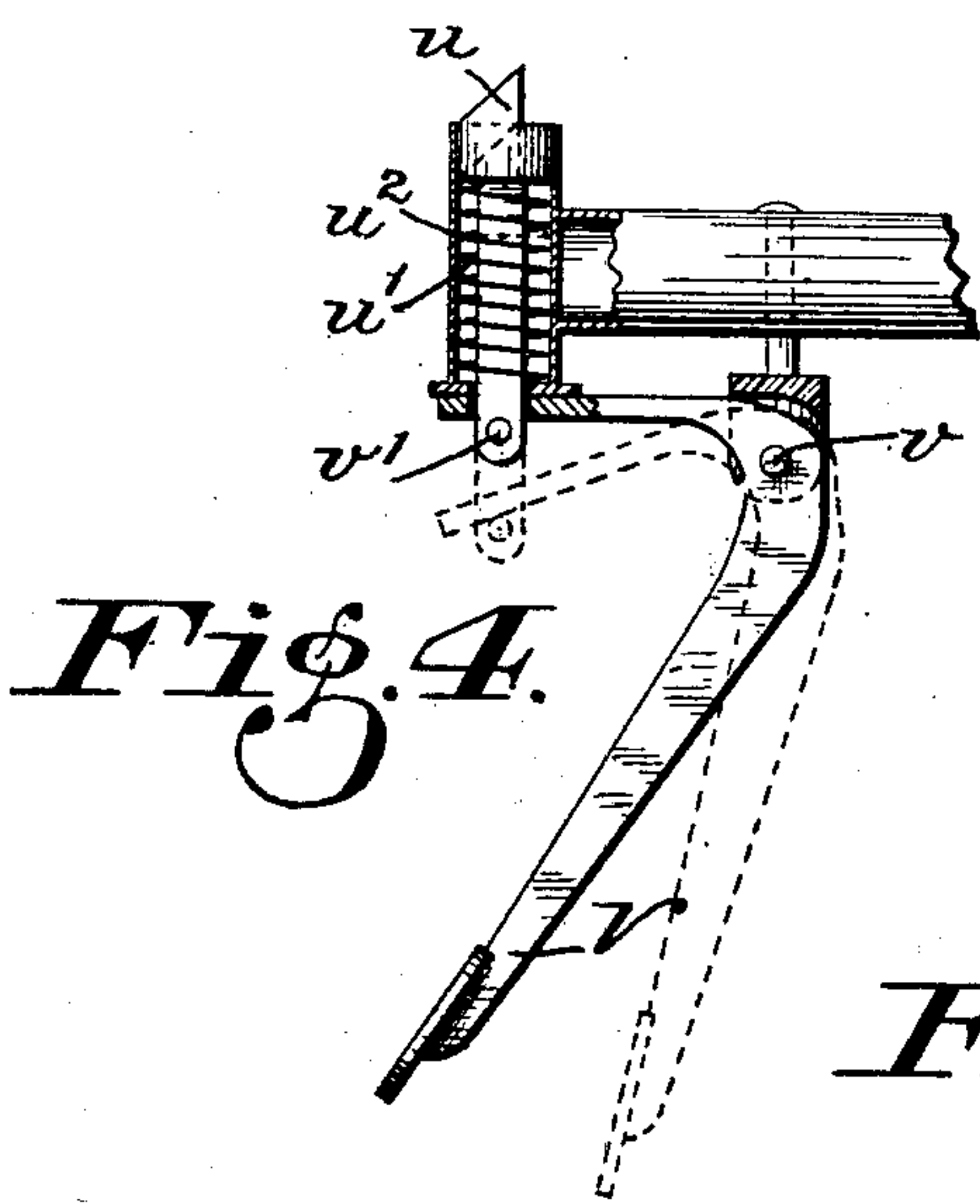
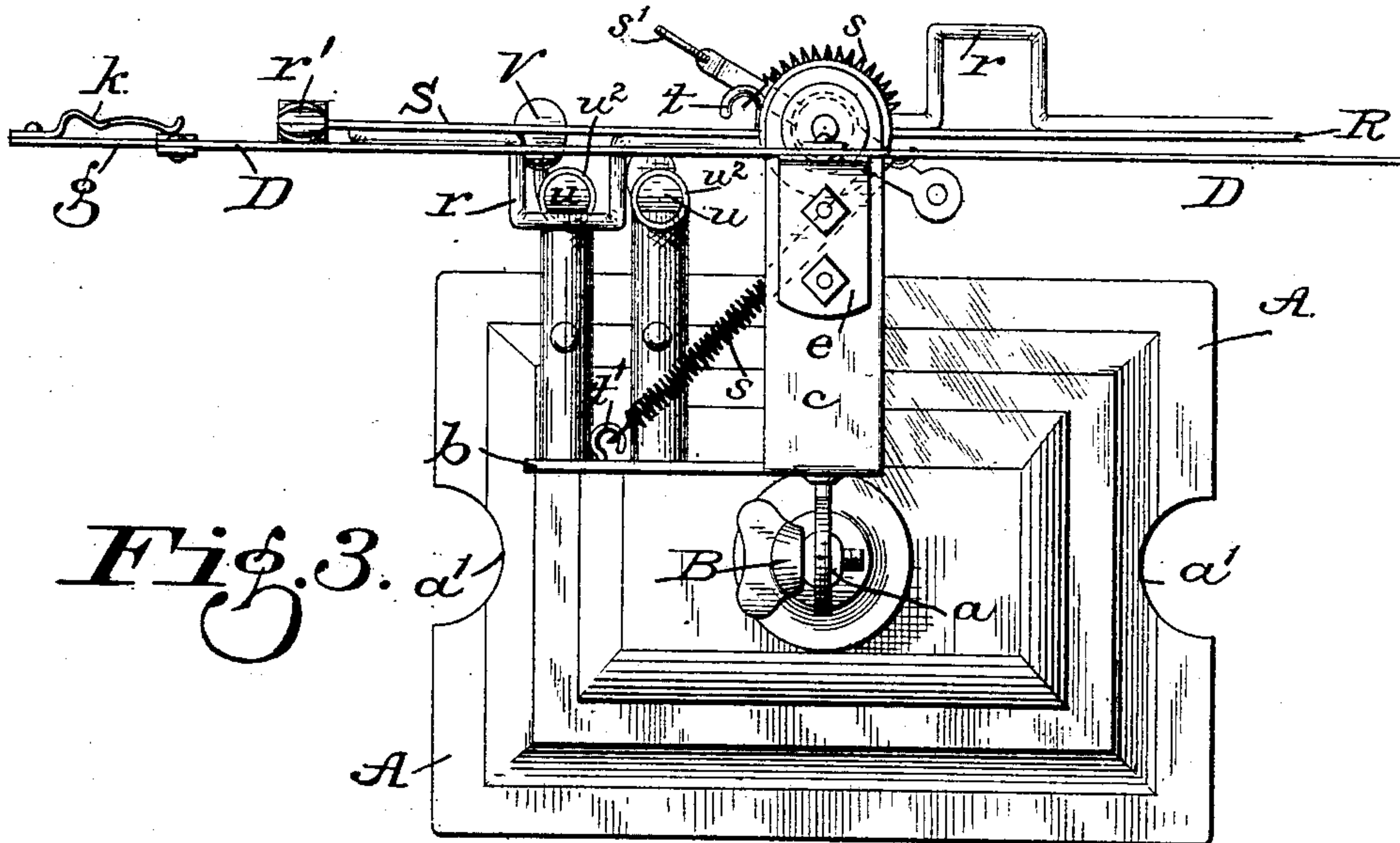
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 BY Frank M. Burnham
 ATTORNEY.

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UNITED STATES PATENT OFFICE.

JOHN W. POINCE, OF DAYTON, OHIO.

AUTOMATIC LEAF-TURNER FOR SHEET-MUSIC.

969,494.

Specification of Letters Patent.

Patented Sept. 6, 1910.

Application filed March 2, 1908. Serial No. 418,771.

To all whom it may concern:

Be it known that I, JOHN W. POINCE, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Automatic Leaf-Turners for Sheet-Music; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to an automatic leaf turner for sheet music: and while it is obvious and will become quite apparent that this device may be slightly modified in its construction,—all within the scope and spirit of the invention and without departing from the principles of the same,—so as to be applicable in its use to various classes and styles of musical instruments; it is more especially designed and intended for service on pianos and organs, in form which it is herein shown, described and claimed.

Some of the principal objects of my said invention consist in producing a device which can be quickly and readily operated, so as to automatically turn the leaves or pages of a piece of sheet music without the operator or player being forced to use his hand or hands on said leaves or pages,—thereby interrupting and stopping him in his playing, or without the annoyance and hindrance of an assistant;—also to produce a device of this kind or class, composed of few parts; simple in construction; and one which can be manufactured at a small cost, a further object being in producing a device which is intended, together with the above advantages, to take the place of the old stationary music rack, or book rest or support, with which all pianos or organs are provided.

This invention, referring briefly and in general terms to the construction of my device, consists essentially in certain improved parts or mechanical elements, and the very peculiar and novel combination, arrangement and construction of the same, as will be hereinafter fully and specifically described in detail and set forth in the subjoined claims in accordance with the statutes in such cases made and provided therefor.

Referring to the accompanying drawings illustrating my invention and wherein the same letters and numerals of reference are employed to indicate or point out the same parts wherever occurring throughout the several views:—Figure 1, is a front elevation of my device; Fig. 2, is a side elevation; and Fig. 3, is an enlarged plan view partially broken away, of same. Fig. 4, is a side view partially in section and broken away, of one of the spring actuated retaining plungers and lever for operating the same, by which the turning arm and its clip are held in position. Fig. 5, is a side view partly in section, and broken away, of the operating crank and attachments for operating the turning arms,—as seen when said arms are hid by reason of having been thrown to the opposite side and there held by the retaining plungers; when turning a leaf or page of sheet music; and Fig. 6, is a plan view partially broken away of one of the turning arms,—sheave-disk and actuating spring,—showing the same as held back by the retaining plunger.

In describing my said invention specifically, and referring in detail to the various mechanical parts or elements of construction of my automatic leaf turner for sheet music; as shown throughout the several views of the drawings and pointed out by means of the letters and numerals of reference as aforesaid; A refers to the base, which is intended preferably to be constructed out of suitable metal, the same as the rest of the entire device, and may be of any suitable and convenient form or style of construction as desired, according to the musical instrument on which it is to rest or be connected, but it is herein shown of a suitable shape and intended to be heavy enough to rest firmly and securely on the front ledge or shelf of the piano or organ just over the keyboard, being provided on the under surface with a groove or concaved recess a^1 adapted to rest over the strip of beading with which said ledge is usually provided; although the weight of said base will be sufficient to support the device in an upright position in case said beading perchance is omitted. Extending vertically from said base and formed integral therewith, or screw-threaded thereto in an ordinary and well known manner, or otherwise connected as desired; is the supporting standard a , adjustably secured to the top of which by means of a set-

screw as shown at B—or otherwise,—so as to incline the book rest at the angle desired, is the plate *b* from which extends at right angles an upper and lower arm, *c* and *d* respectively.

Book-rest or support D, consists of a frame of the approximate shape as shown more fully in Fig. 1, against which is placed the open sheets or book of sheet music, as indicated therein by dotted lines at E: said book-rest, resting in the center on said upper arm, and being provided at its rear with a foot *e* by which it is securely connected to and supported from the upper arm *c*; and is further provided with adjusting arms *g* resting in ordinary slotted guides *h* and *i*—and bears against the respective braces 8 and 9 of the frame of said book-rest on which said guides are mounted, so as to have an adjustable movement laterally,—as fully shown by dotted lines in Fig. 1,—when it is desired to support in an open position said sheets or book of sheet music, which is somewhat too wide for said frame. Clips *k*, each of which is movably riveted to the outer end of each of these arms *g*, and are constructed out of metal sufficiently resilient to grip and hold the edges of the leaves or page of music (not intended to be turned), when slipped between the clip and said arm to which said clip is riveted, and by reason of said rivet said clip can be turned or moved to the position shown in dotted lines at 10, when releasing or disengaging said pages or leaves.

Pivotal support and located between the upper and lower supporting arms *c* and *d*—as more fully and particularly shown in Fig. 5;—is the crank *l*, provided with stops *n* and having the handle *m*; and loosely surrounding and incasing said crank are the sleeves or sleeve sections *p* and *q* each provided with a short slot, the edges of each of which engage one of the stops *n*, sleeves *p* and *q* each having formed integral therewith a sheave-disk *o* and *o*¹ respectively,—which are similar to a small sheave-wheel or pulley,—and are also provided with a turning-arm or leaf-turner; the arm marked R being for convenience in operating, somewhat shorter than the one marked S, thus permitting said arms to readily turn the leaf or page from left to right, or from right to left: *i. e.*, from one side to the other, without conflicting or interfering,—as is clearly and fully shown by solid and dotted lines in Fig. 1: said arms each being provided on one side with a rib for reinforcing the strength thereof, which is formed with a loop *r*—see Figs. 3 and 6,—and are each further provided at the end with a spring finger clip *r*¹ adapted to grasp and grip between the fingers and at the bottom edge thereof, the leaf or page to be turned; *i. e.*, the loose leaf or page, which is of course in-

dependent of the body of leaves or pages held stationary by the clips *k* of adjusting arms *g*; as heretofore described and readily understood (Fig. 1).

Turning arms or leaf turners S and R are each provided with a small hook *t*, one of which rests in the groove of each of the respective sheave disks *o* and *o*¹, and to each of said hooks is connected the end of a coil spring *s*, of suitable resilient or reacting power; the opposite end of each of said springs being held by another small hook *t*¹ projecting from plate *b*,—and as can now be readily seen and understood from the drawings,—when the device is operated and the turning arms or leaf turners are thrown to the right, springs *s* as they relax and expand will have a slight winding movement and rest in the groove in sheave disks *o* and *o*¹.

Sleeve or sleeve section *p* is provided with a small lever *s*¹, which when grasped between the operator's or player's finger and thumb, and moved from the left to the right—as fully indicated by dotted and solid lines in Fig. 1,—will turn said sleeve and sheave disk *o* and also its turning arm S, together with the leaf or page of music held by its spring-clip *r*¹ until loop *r* of said arm has passed over and is held or retained by the inclined and notched head of one of the spring actuated plungers *u*—see more particularly Figs. 3, 4 and 6; there being one for the loop of each turning-arm,—which rests the same as its coil actuating spring *u*¹, in a hollow cylindrical body *u*²; said body terminating in a supporting arm or portion extending at right angles therefrom, and connected to and supported by plate *b*, and having connected therewith a joint to which is fulcrumed at *v*, a lever V to which is connected at *v*¹ said plunger *u*, (see Fig. 4); and by simply moving lever V to the position shown therein in dotted lines, spring *u*¹ will be compressed and plunger *u* will have receded to the position here also shown in dotted lines, and thus releasing loop *r* from the notched head of said plunger, thus setting free coil spring *s* which will now contract and throw said turning arm back again to its first position at the left. A stud *w* projects from crank *l* and engages stops *x* of lower arm *d*, and in conjunction with stops *n* (heretofore described), limits the movement of said turning arms from left to right.

It will be readily understood that by means of stops *n*, that when the crank is turned by means of its handle *m* from left to right, turning arms S and R both, and the pages held by their clips will be turned from the left to right (Fig. 1); and when so desired by simply turning small-lever *s*¹ of sleeve *p* alone, its arm S can be turned independent of the shorter arm R—which latter will now remain on the left:—thus

both leaves or pages may be turned simultaneously from left to right or only one leaf as desired; and by operating the spring actuated plunger by means of its lever V which holds the loop of either of the turning arms, this arm will be released and through the medium of its coil spring s will turn said arm back to the position at the left as heretofore described.

10 Having now described my invention and the device setting forth the same, what I claim is:—

1. The combination in an automatic leaf turner with a supporting means and book-
15 rest; of the plate provided with arms; a crank-shaft journaled between said arms and provided with studs; the sleeves carried by said crank-shaft and which engage said studs; sheave-disks formed integral with
20 said sleeves; a leaf turning arm connected to each of said disks; means for operating said sleeves and disks so as to operate said leaf-turning arms in turning the leaves; all substantially in the manner and for the purposes described.

25 2. An automatic leaf turner for sheet music having a book rest; a supporting standard and base; a supporting plate hav-

ing arms extending therefrom; a crank-shaft journaled in said arms and provided
30 with studs; sleeves carried on said shaft and adapted to engage said studs; leaf turners carried by said sleeves; means connected to said plate for operating said arms; and
35 spring actuated means for holding each of said leaf-turners or releasing them as desired; all substantially in the manner and for the purposes described.

3. The combination in an automatic leaf turner of a book-rest; with a supporting
40 means having a grooved base; a plate provided with arms, and adjustably connected to said supporting means; the crank-shaft journaled in said arms and provided with studs; sleeve sections carried by said shaft
45 and adapted to engage said studs; turning-arms and resilient members for operating same; spring actuated plungers provided with means for operating same; all substantially as and for the purposes described.

In testimony whereof, I, affix my signature, in presence of two witnesses.

JOHN W. POINCE.

Witnesses:

W. C. DEEM,

A. C. McDONALD.