A. L. CLARK.

LEAF TURNER.

No. 189,698. Patented April 17, 1877.

Fig. 1.

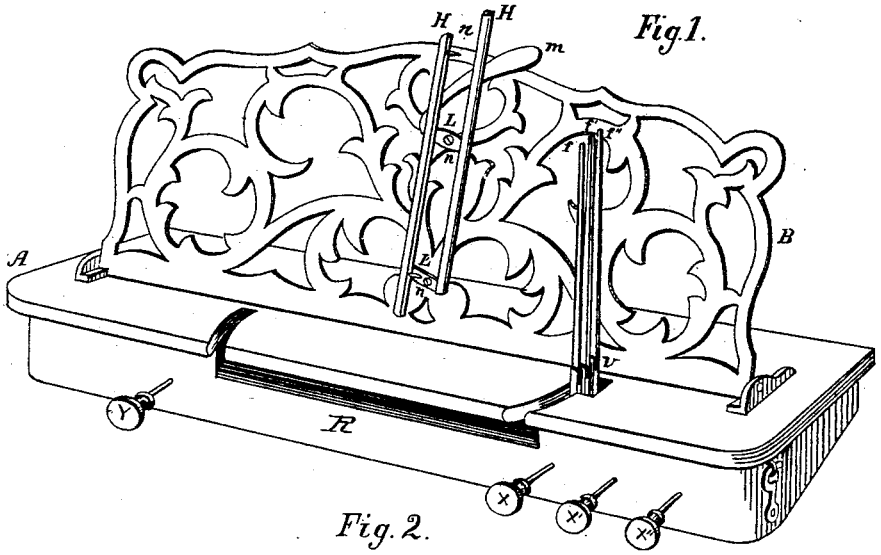


Fig. 2.

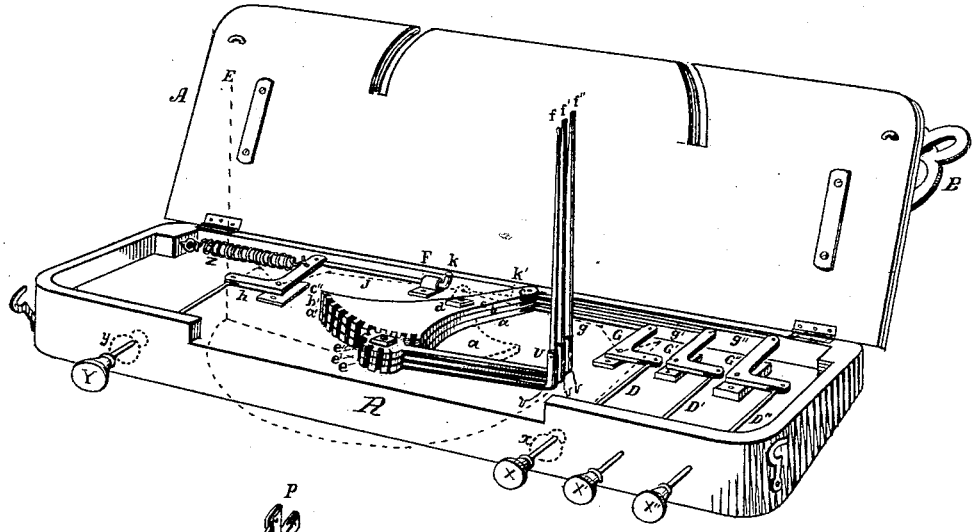
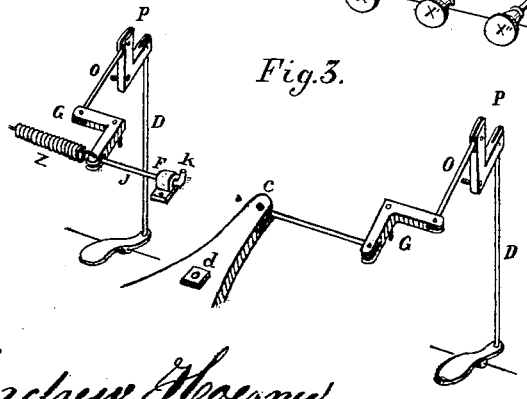


Fig. 3.



Attest:

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UNITED STATES PATENT OFFICE.

ALFRED L. CLARK, OF DUBUQUE, IOWA.

IMPROVEMENT IN LEAF-TURNERS.

Specification forming part of Letters Patent No. **189,698**, dated April 17, 1877; application filed April 4, 1877.

To all whom it may concern:

Be it known that I, ALFRED L. CLARK, of Dubuque, in the county of Dubuque and State of Iowa, have invented certain new and useful Improvements in Book-Leaf Turners; and I do hereby declare that the following is a full, clear, and exact description thereof, which 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 of reference marked thereon, which form a part of this specification.

The nature of my invention consists in the construction and arrangement of a leaf-turning mechanism for books, music, &c., as will be hereinafter more fully set forth.

In the annexed drawing, Figure 1 is a perspective view of my invention with the cover of the case closed. Fig. 2 is a similar view with the cover of the case thrown back to show the interior operating mechanism. Fig. 3 is a detailed view, showing a modification.

R represents the case containing the operating mechanism, said case being provided with a hinged cover, A, upon which is a folding rack or rest, B.

On the front of the rack B are two parallel bars H H, pivoted to the ends of two metal plates, L L, which are pivoted centrally to the rack B, and the upper plate L is formed with a lever or handle, *m*, by means of which the bars H are brought close up against each other for holding the book firmly by pins *n*, projecting from one of said bars, as shown.

In the center of the case R is a series of fan-shaped plates, *a b c*, placed on top of each other, and pivoted by a single bolt or pin, *d*. The broad front ends of these plates are formed with a series of cogs, *a' b' c''*, in the form of segments, and these mesh with a corresponding series of pinions, *e e' e''*, also placed one on top of the other, and pivoted by means of a single central bolt or pin. These pinions are provided with arms *v v v*, extending horizontally outward, and their outer ends bent upward at right angles. The upturned portions of the arms *v* are slotted vertically, and in the same are hinged or pivoted the fingers *f f' f''*, for turning the leaves. These fingers, being thus jointed, can be folded down when not in use. The back ends of the series of plates *a b c* are, by rods *g g' g''*, connected with a corresponding series of elbow-levers, G G' G'', pivoted separately at their angles in the case R, and to the other ends of said elbow-levers are attached rods D D' D'', which pass out through the front of the case, and are provided with knobs X X' X'', respectively.

By pressing the knob X inward, the plate *a* is turned on its pivot, and operates the pinion *e*, so as to throw the finger *f* from one side to the other. By pulling out said knob X, the finger *f* is returned to its former position; or, when all the fingers have been brought over with their respective leaves, they may be all simultaneously returned by pressing in a knob, Y, which is, by a rod, *y*, connected with one end of an elbow-lever, *h*, and from the other end of said lever a rod, J, extends through a bearing, F. The end of this rod is turned upward to operate on the inner ends of all the plates *a b c*, and thus at one operation return the fingers *f f' f''* to their former position. A spring, Z, brings the knob Y out again.

In Fig. 3 I have shown how this mechanism may be operated with the foot or knee. The elbow-lever G is, by a rod, O, connected with a similar lever, P, and this latter lever, by the rod D, connected with the pedal or a button on the under side of the instrument.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the rack B, of the parallel bars H H, pivoted plates L L, lever *m*, and pins *n*, substantially as and for the purposes herein set forth.

2. The combination of the series of cogged segmental plates *a b c*, the rods *g g' g''*, the corresponding series of separately-pivoted elbow-levers G G' G'', and rods D D' D'' with knobs X X' X'', substantially as and for the purposes herein set forth.

3. The combination of the knob Y, rod *y*, elbow-lever *h*, spring Z, and rod J, for operating the series of plates *a b c* simultaneously, substantially as herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

ALFRED L. CLARK.

Witnesses:

C. H. WATSON,

HOWARD C. CODY.