

G. H. NASH.
Music-Leaf Turner.
No. 224,943. Patented Feb. 24, 1880.

Fig. 1.

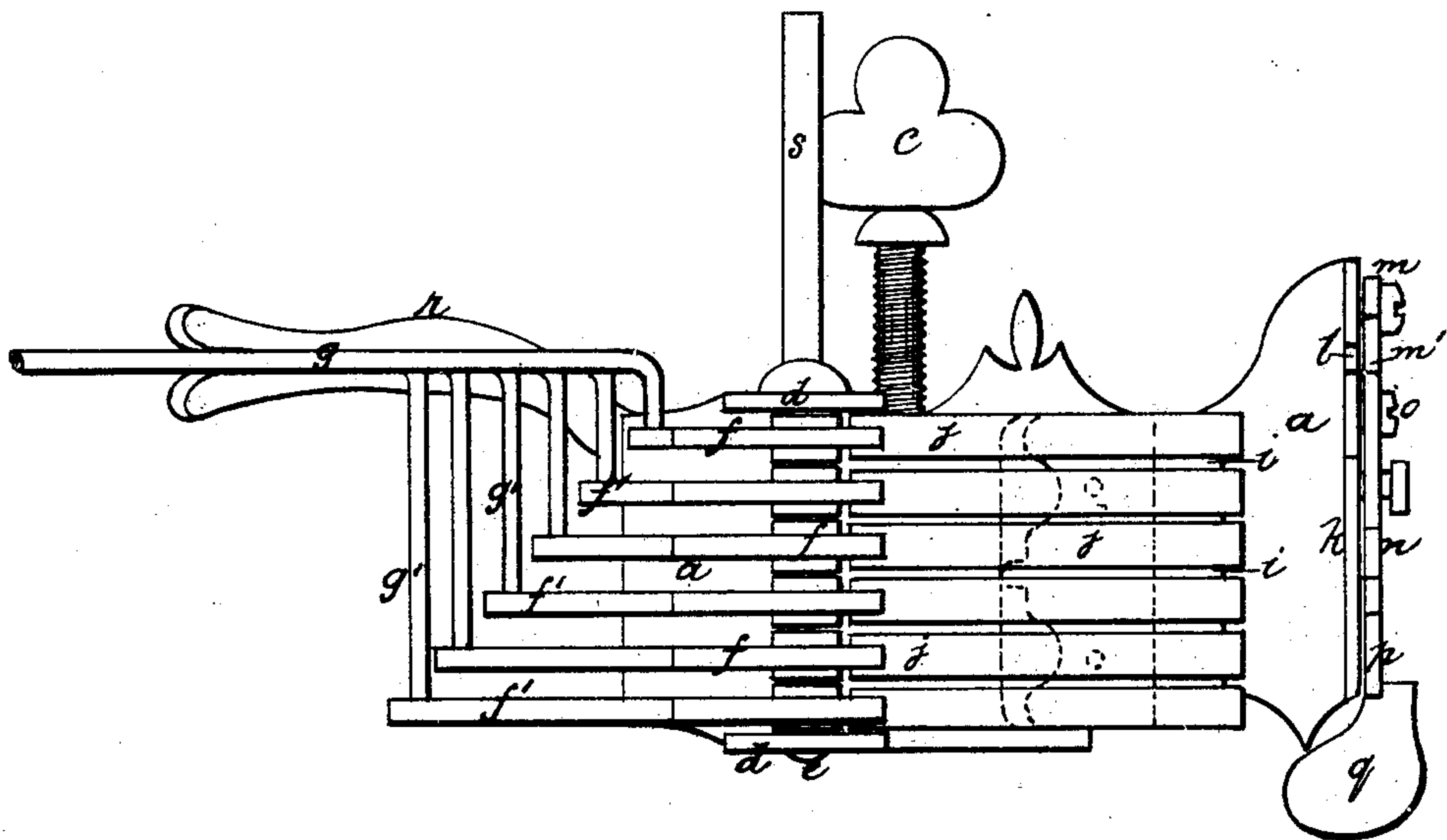
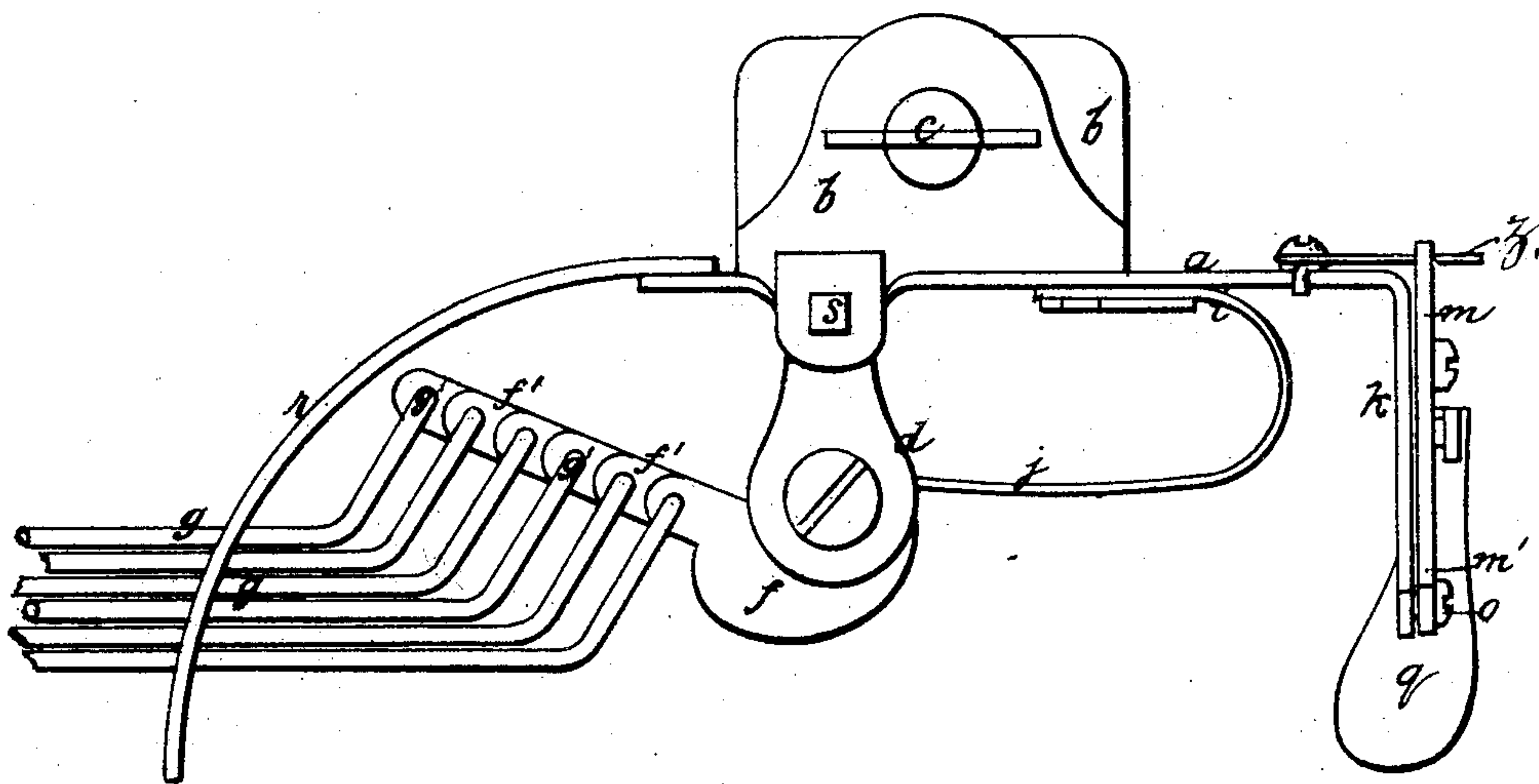


Fig. 3.



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Fig. 2.

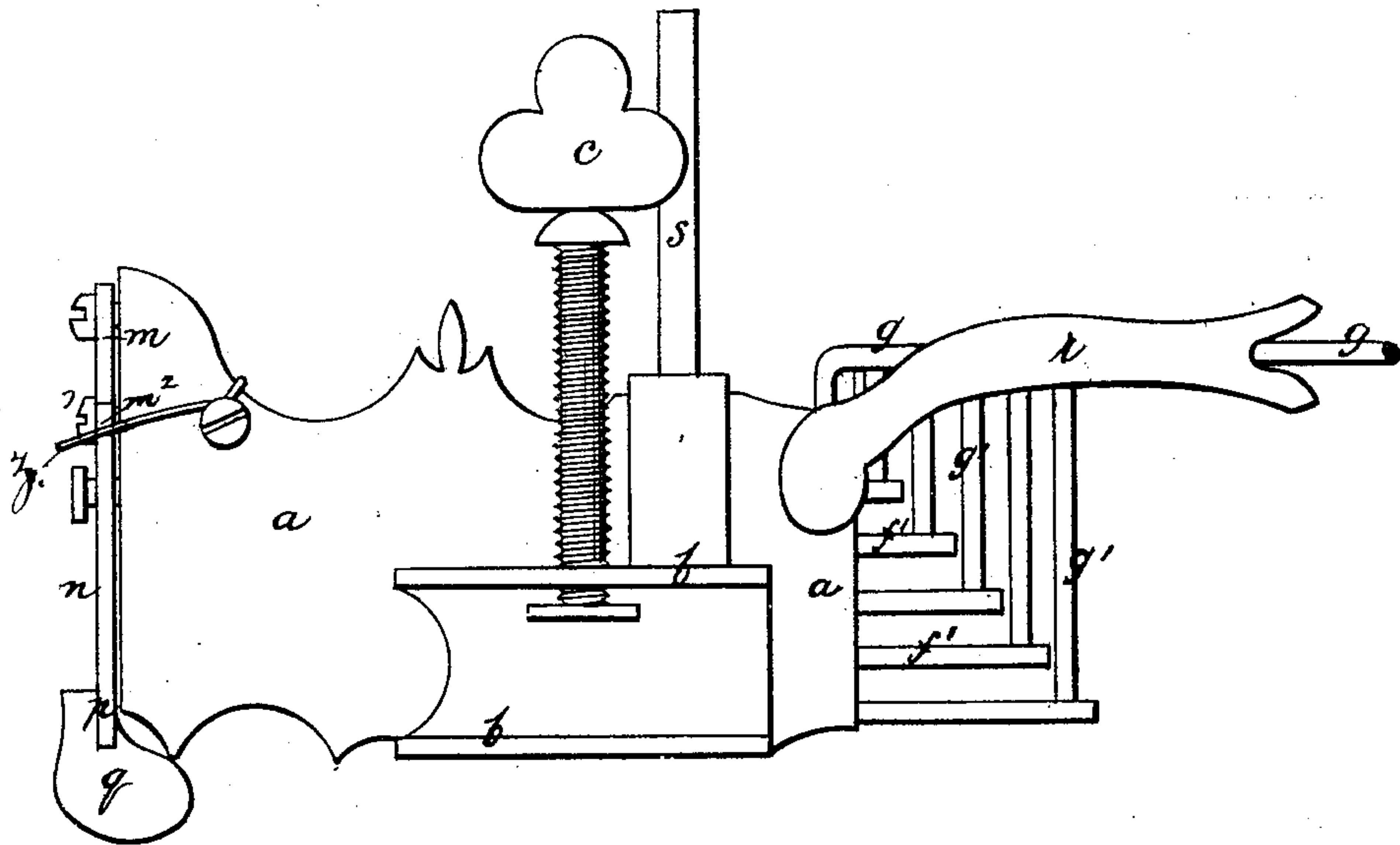


Fig. 6.

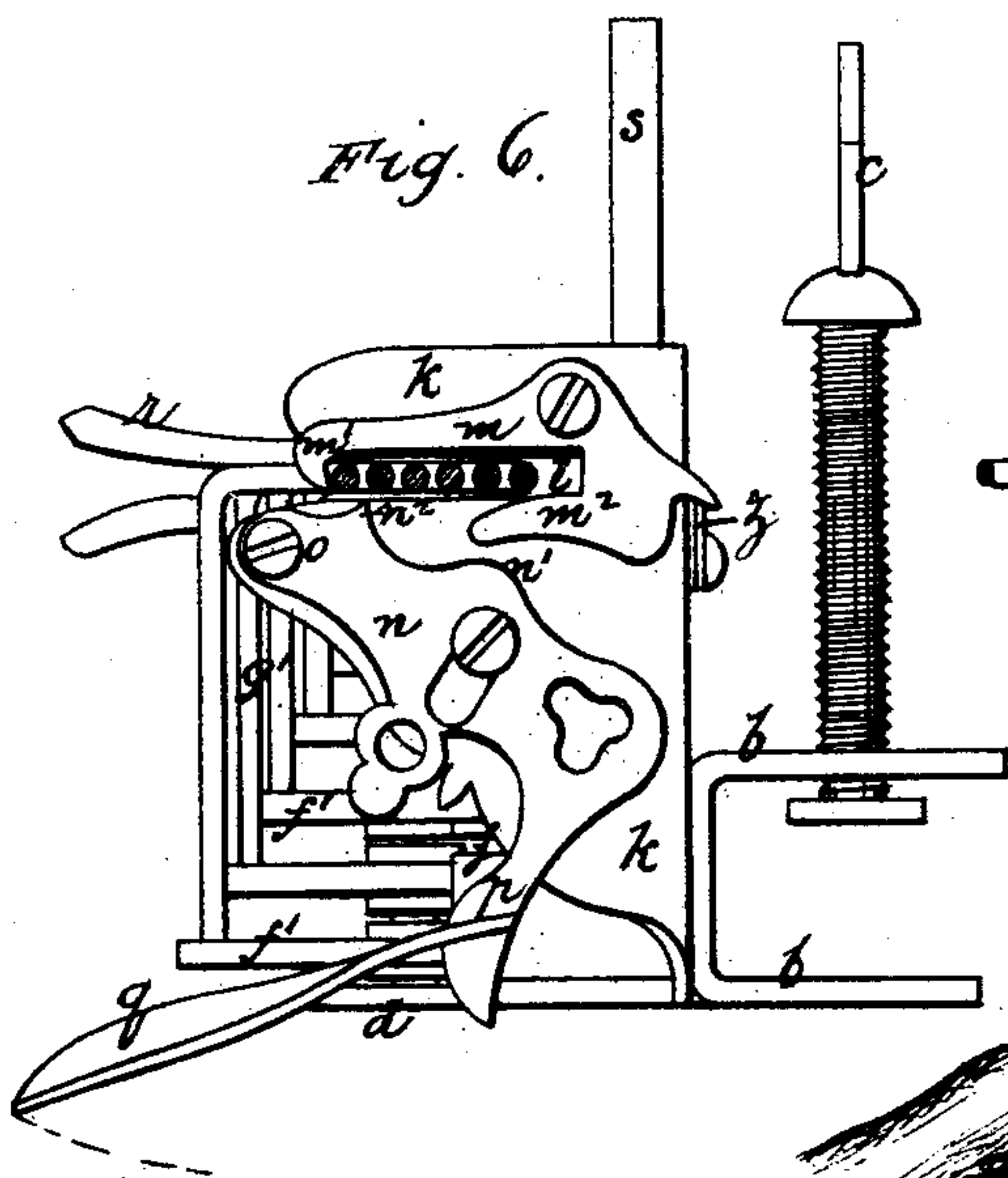
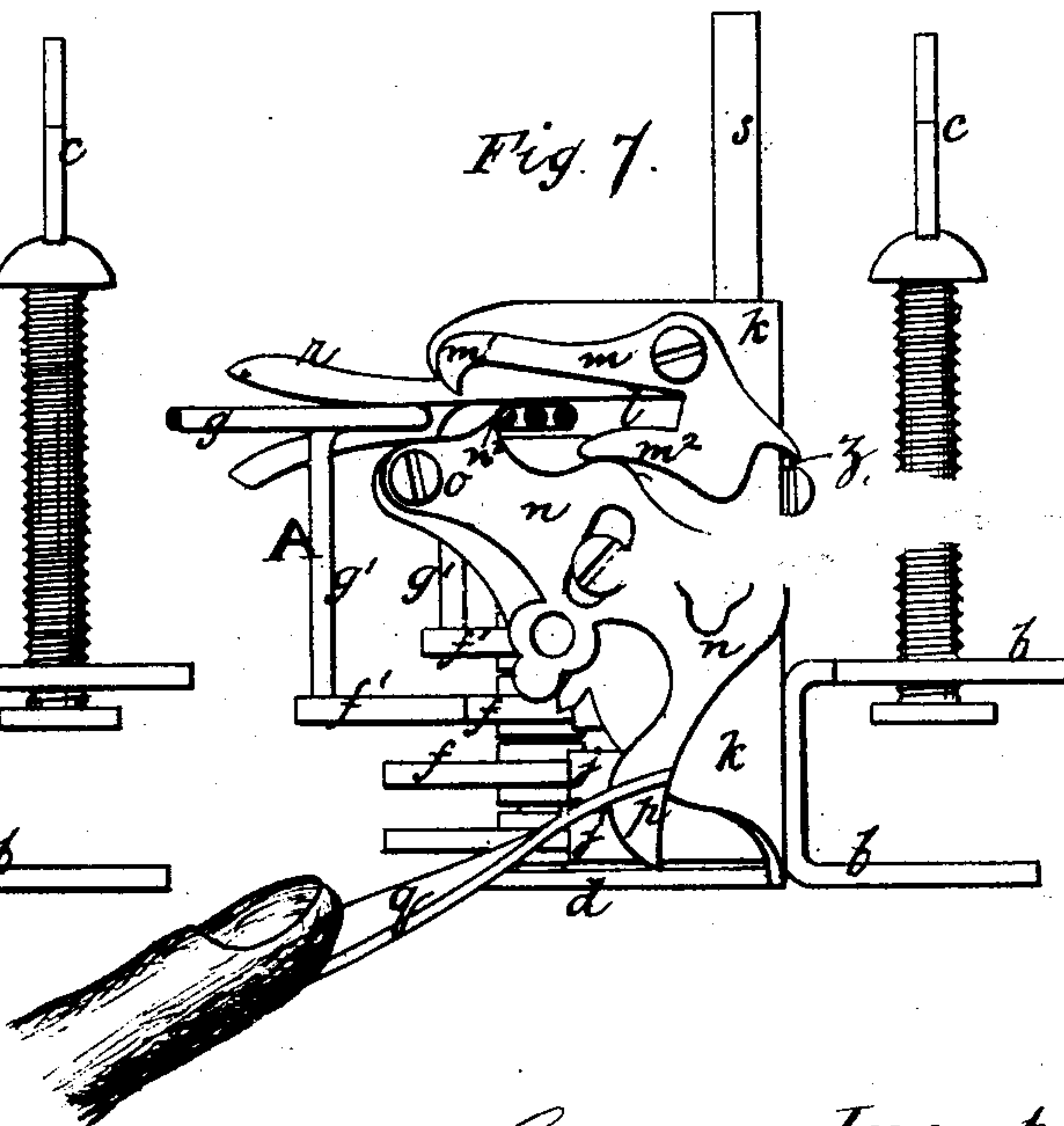


Fig. 7.



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Fig. 4.

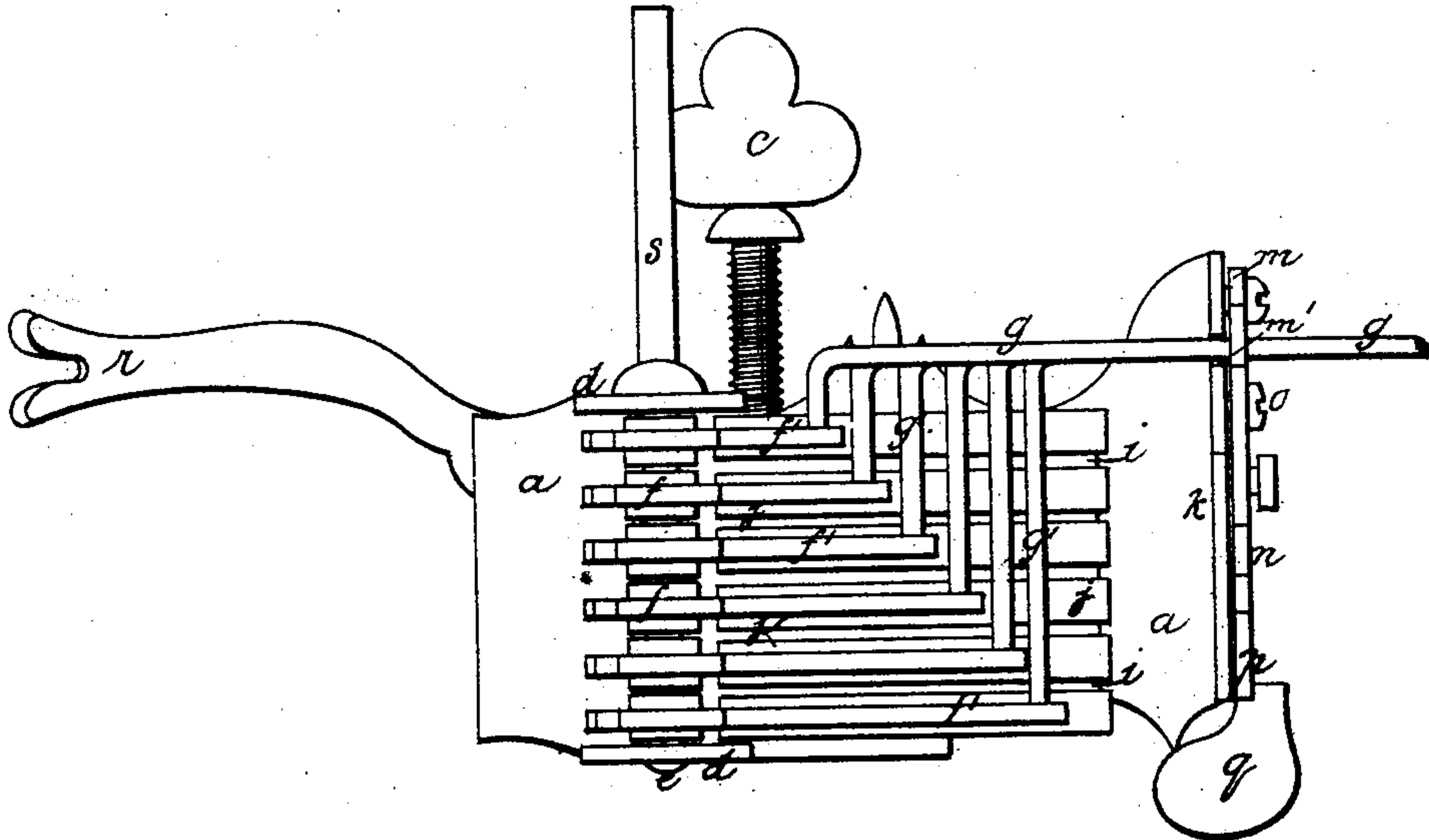


Fig. 5.

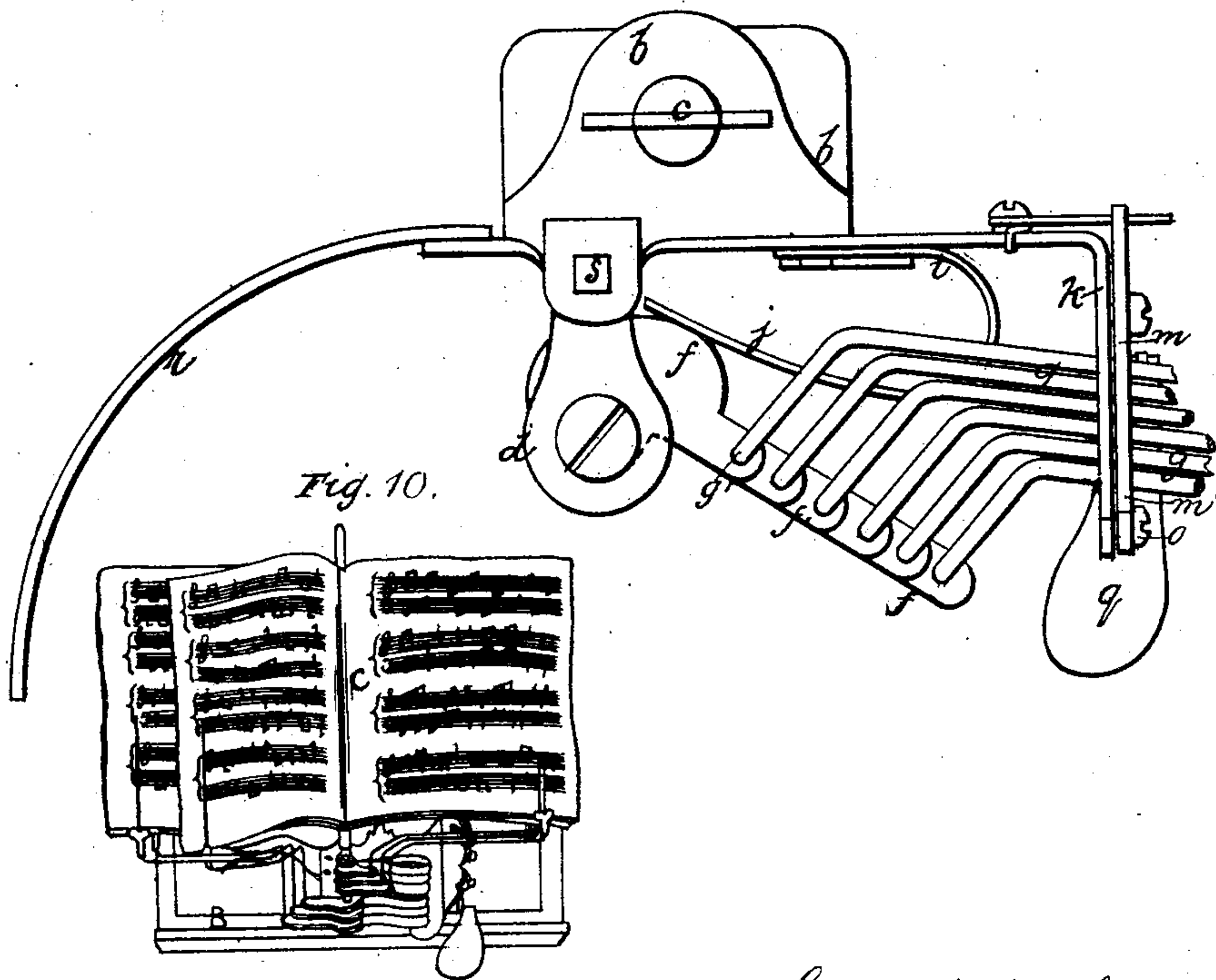
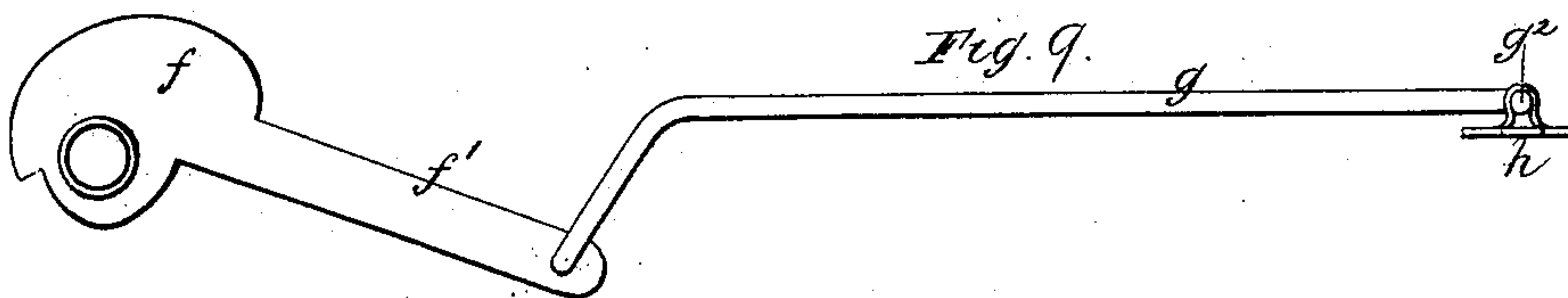
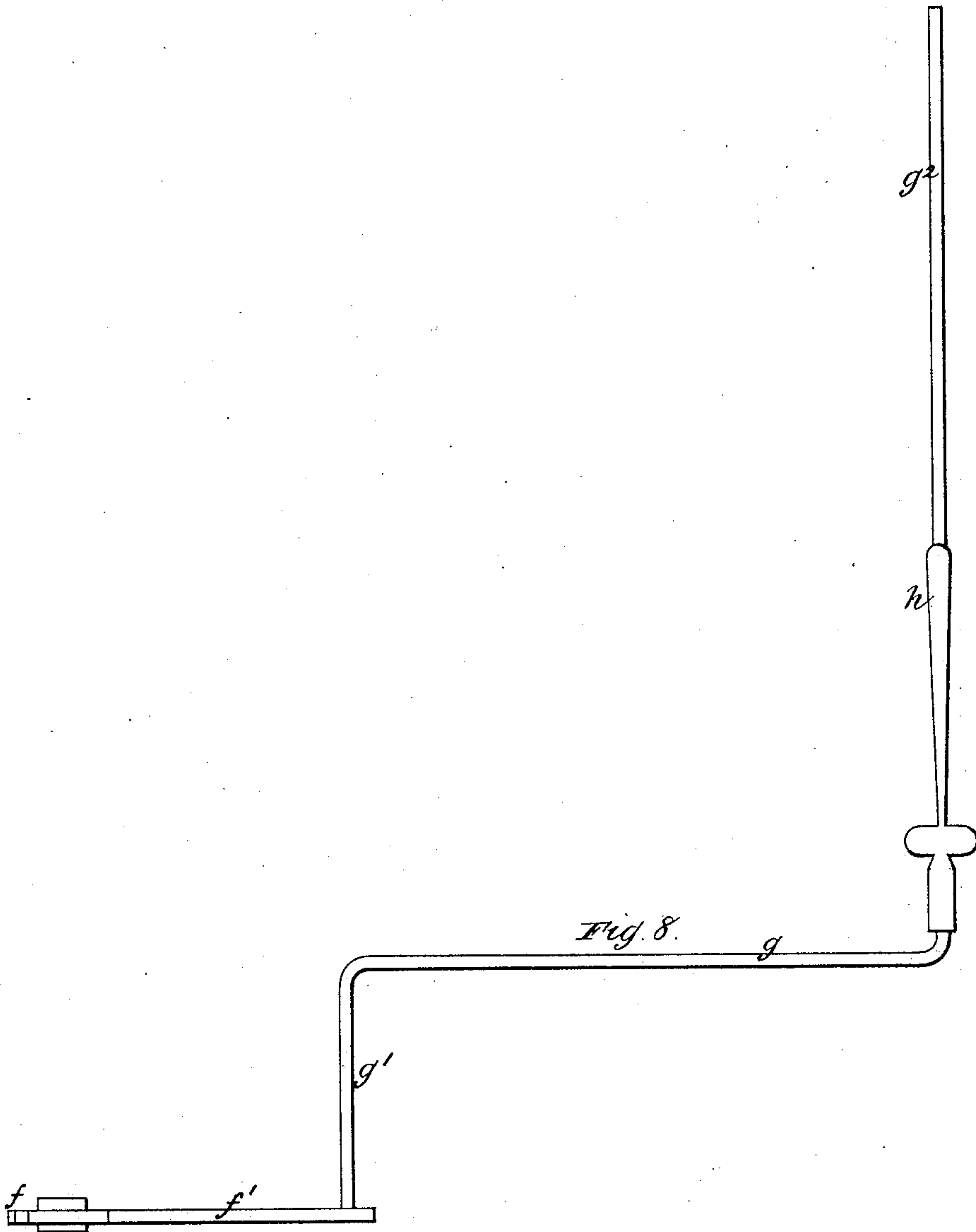


Fig. 10.

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UNITED STATES PATENT OFFICE.

GEORGE H. NASH, OF BIRMINGHAM, ENGLAND.

MUSIC-LEAF TURNER.

SPECIFICATION forming part of Letters Patent No. 224,943, dated February 24, 1880.

Application filed May 15, 1879.

To all whom it may concern:

Be it known that I, GEORGE HARRY NASH, of Birmingham, in the county of Warwick, England, have invented a certain Improved Apparatus for Turning Over the Leaves of Music, to be called the "Volti Subito," of which the following is a specification.

This invention has for its object the construction of a simple and efficient apparatus for turning over the leaves of music.

In the accompanying drawings, Figure 1 is a front elevation, Fig. 2 a back elevation, and Fig. 3 a plan, of my improved apparatus, the various parts being in the position they occupy when the apparatus is not in use. Fig. 4 is a front elevation, Fig. 5 a plan, and Fig. 6 an end view, of the apparatus, showing the parts in the position ready to turn over the leaves of music; Fig. 7, an end view, showing the position of the parts when a leaf is being carried over; Figs. 8 and 9, detached elevation and plan of one of the arms for carrying over the leaves; Fig. 10, perspective view, on a small scale, of the improved apparatus.

Similar letters in all the figures represent similar parts.

The improved apparatus is constructed of a suitably-shaped metal plate, *a*, provided at the back with a clamp, *b*, and thumb-screw *c*, for attaching it to the music desk or stand. Near one end of the plate *a*, and at the top and bottom thereof, I fix or form projecting brackets *d d*, forming bearings to carry a vertical arbor or shaft, *e*, on which work a number of eccentrics or cams, *f*, placed one above the other, each of such eccentrics carrying a horizontal arm, *g*, made of wire, the inner ends of such arms being turned down at right angles at *g'*, so as to be riveted or otherwise fixed to a projection, *f'*, on its corresponding eccentric *f*, each of such projections *f'* being shorter than the one next below it, as shown, to allow the vertical ends *g'* of the wire arms *g* to pass one another when the arms *g* turn, as hereinafter described. The outer ends, *g''*, of the wire arms are turned up vertically, and are provided with suitable spring-clips *h*, for holding the leaves of music to be turned.

To the front of the hereinbefore-described metal plate *a* I fix a curved spring, *i*, formed of sheet-steel, German silver, or other suitable metal, and having a number of blades, *j*, corre-

sponding to the number of the hereinbefore-described eccentrics *f*, the free ends of these blades pressing against the back part of the eccentrics, so as to always tend to move them (and consequently the wire arms) from the right-hand side to the left-hand side of the apparatus.

The right-hand end of the hereinbefore-described plate is formed with an angle or return end, *k*, having a horizontal slot, *l*, in the same plane with the horizontal wire arms *g*, and above this slot *l* is pivoted a slotted spring catch or detent, *m*, the nose *m'* of the said catch or detent, when in its normal position, extending across the front of the said horizontal slot, as shown in Fig. 6, and the tail end, *m''*, of this catch extends underneath the back part of the slot *l* in the end plate, *k*. Under the catch is a bell-crank-shaped lever, *n*, pivoted at its upper end, *o*, to the said end plate, *k*, and provided at its lower end, *p*, with a projecting arm or trigger, *q*, for operating the bell-cranked lever *n*. This lever has a projection, *n'*, for raising the catch *m*, and another projection, *n''*, for preventing more than one arm from turning at one time, as hereinafter described.

On the left-hand end of the hereinbefore-described metal plate I form a slotted guide, *r*, for receiving and holding the wire arms *g* as they turn over the leaves of music, and behind the vertical shaft *e*, carrying the eccentrics *f*, I fix a square pin or upright, *s*, which is placed a device for holding the back of the music.

I will now describe the action of my improved apparatus: The apparatus being fixed to a music stand or desk, Fig. 10, by means of its clamp *b* and screw *c*, and the back of the piece of music *C*, Fig. 10, placed in the open clips, the leaves of the piece of music to be turned over are placed in the clips *h* of the wire arms *g*, and the arms are moved into the slot *l* in the end plate, *k*, and will be held in the slot by the catch or detent *m*, as shown in Fig. 6, the eccentrics *f* of the arms *g* compressing the blades *j* of the spring *i*, as shown in Fig. 5, so as to keep the blades in tension. When a leaf is to be turned the arm or trigger *q* of the bell-crank lever is lightly pressed with the finger, and the projection *n'* on the said bell-crank lever will be pressed against the

tail end, m^2 , of the catch, the catch will be raised, as shown in Fig. 7, and will release the first wire arm, which will be turned or carried over, by the recoil of its spring acting on the eccentric of the arm, into the hereinbefore-described slotted guide r , the arm in its movement carrying with it the first leaf of music. When the catch is raised to release the arm the projection or catch n^2 on the bell-cranked lever is brought, as shown in Fig. 7, in front of the next arm, so that only one arm is released at a time, and, the pressure being removed, the catch is brought back to its normal position by its spring z , as shown in Fig. 6, ready to release the next arm when required, and so on for all the arms.

In the drawings I have shown the apparatus provided with six arms—that is to say, a number of arms sufficient for turning over six leaves of music; but it will be understood that a larger number of arms may be employed, if required; and in Fig. 7 two of the arms have been carried over and the third (marked A) is in the act of turning.

The escapement arrangement for holding and releasing the arms is applicable for other purposes—such as, for example, for throwing machinery out of gear.

Having thus described my said invention

and the best means I am acquainted with for carrying the same into effect, I wish it to be understood that I do not confine myself to the precise details herein laid down and shown in the drawings, as the same may be varied without departing from the peculiar character of my invention; but

What I do claim is—

1. The described apparatus for holding back the leaves of music, the same consisting of the supporting-frame, the set or series of arms g , severally provided with a cam piece or portion, f , the set of springs j , and the parts m n and slot l , these parts operating substantially as described.

2. The described escapement devices, the same consisting of the slot l in the plate, the slotted spring catch or detent m , and bell-cranked lever n , for holding and releasing the arms, as described and shown.

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