

(No Model.)

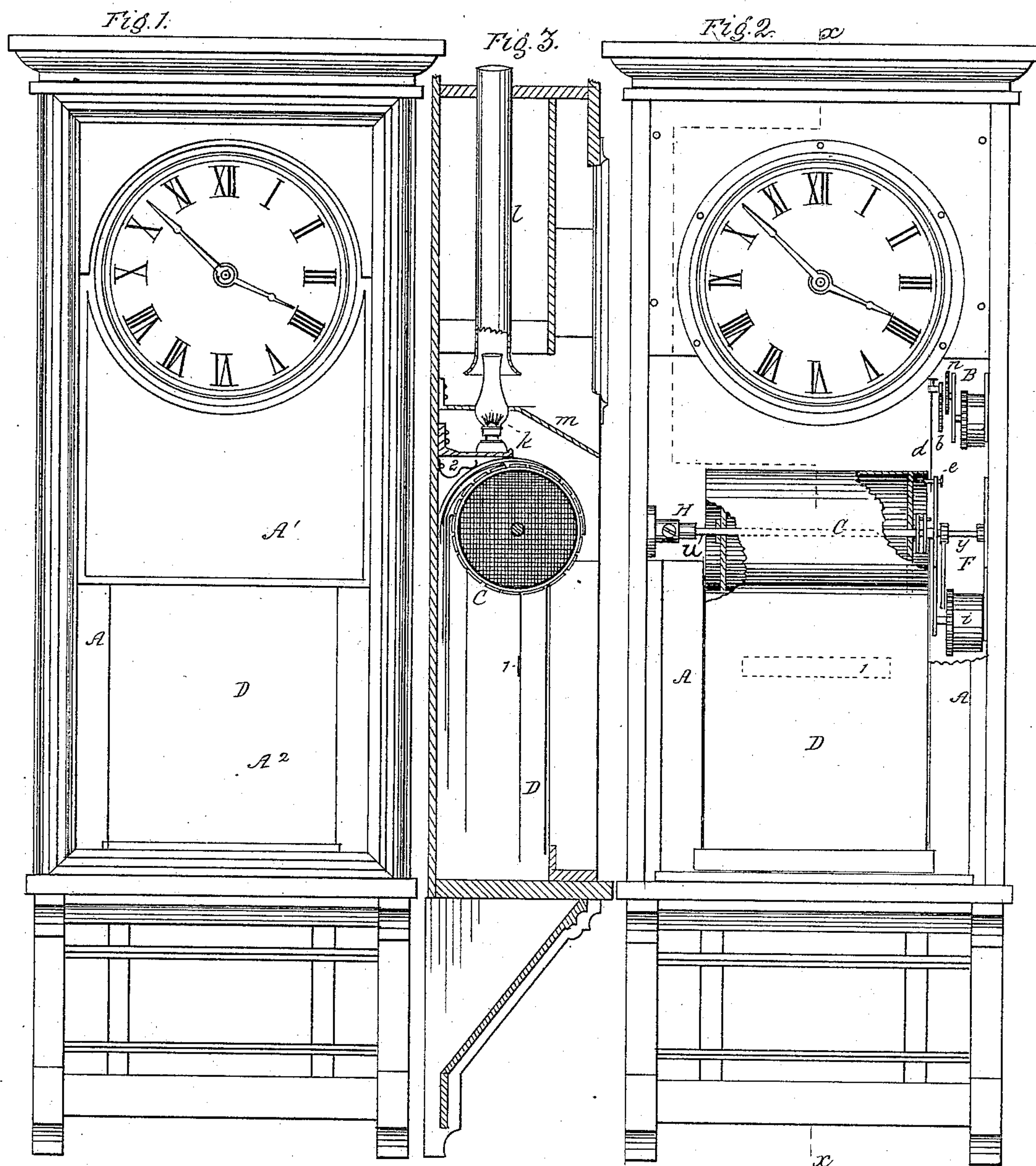
2 Sheets—Sheet 1.

W. AKIN.

AUTOMATIC ADVERTISING DEVICE.

No. 309,182.

Patented Dec. 16, 1884.



Witnesses:
M. O. Fopping
Aubrey C. Wilson

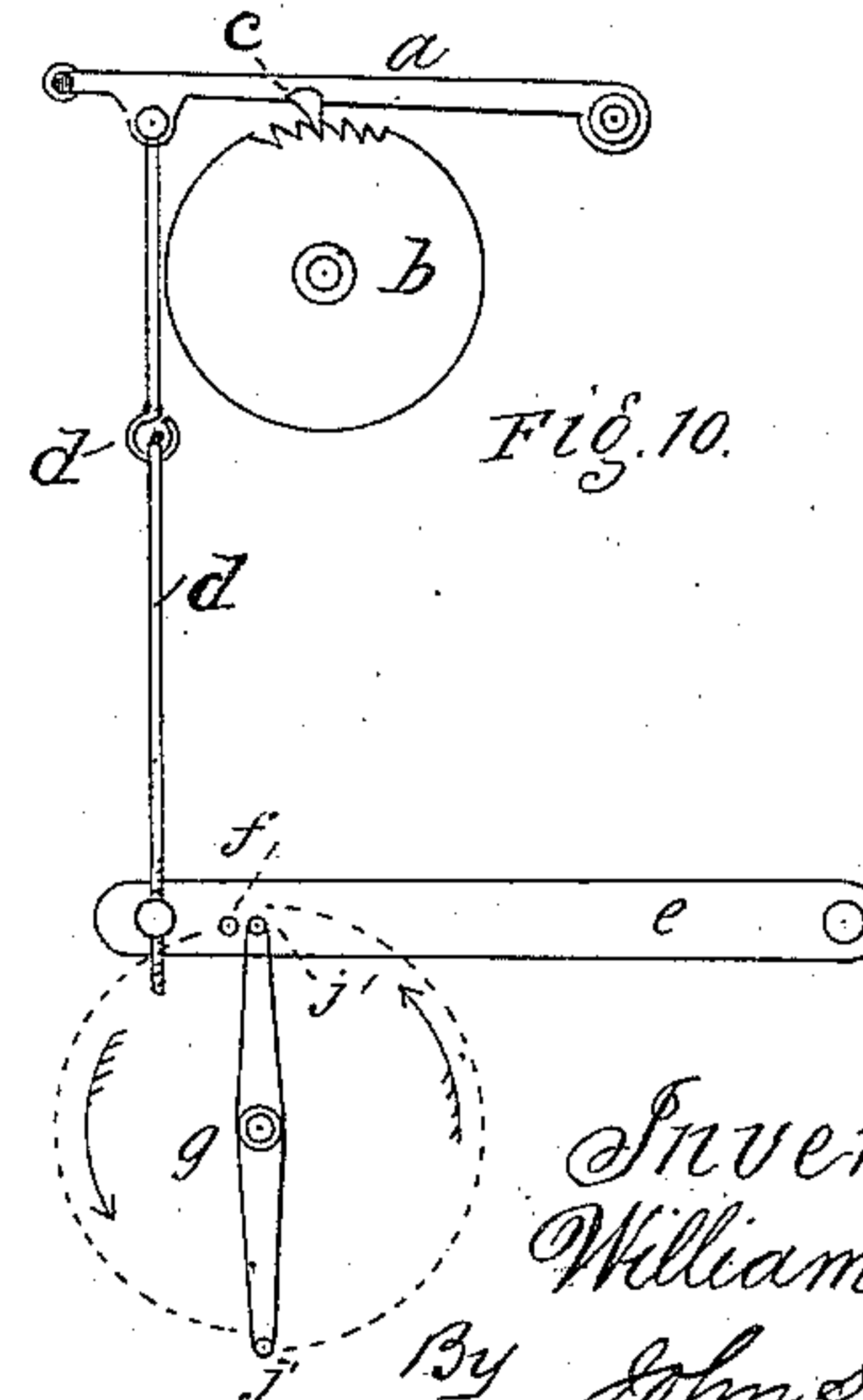
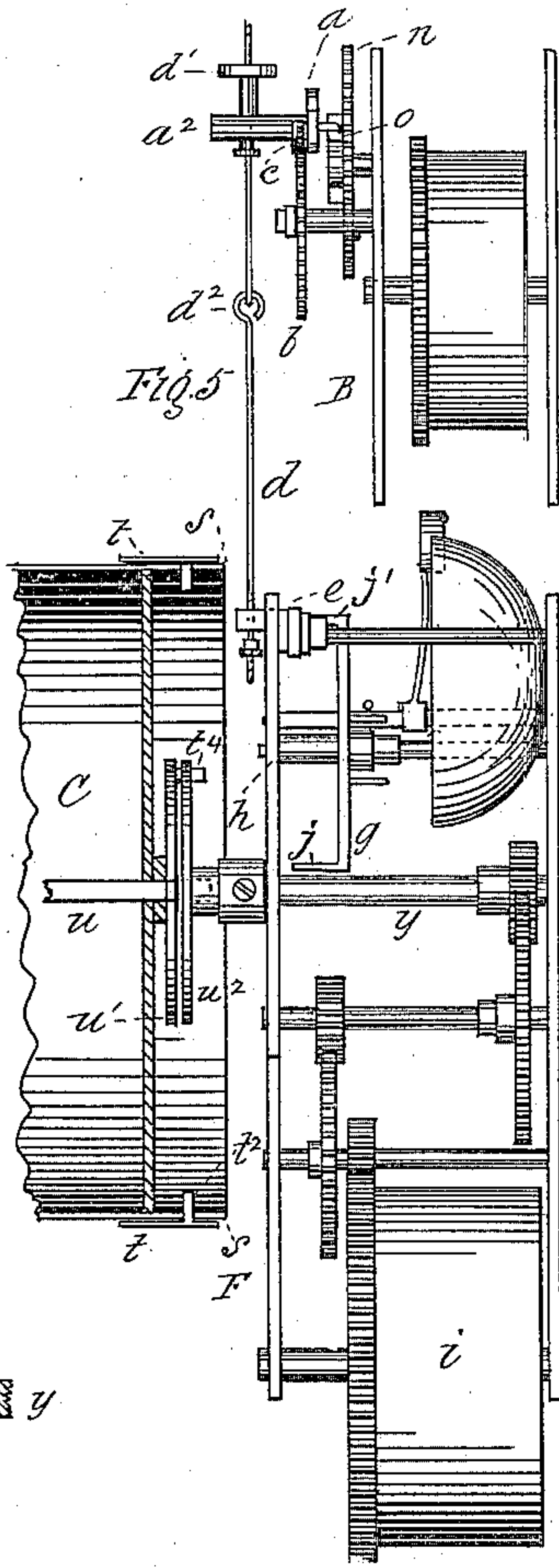
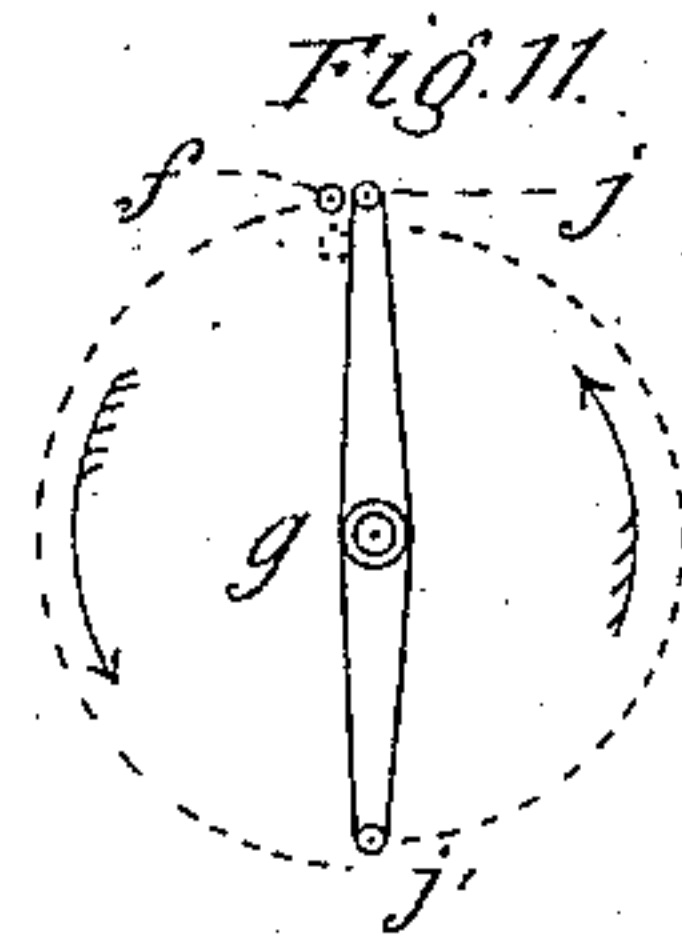
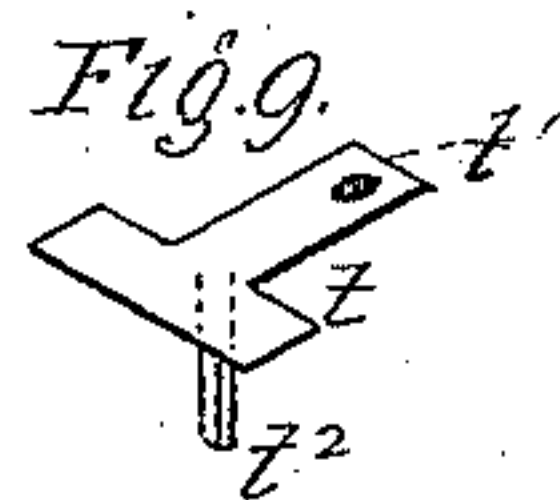
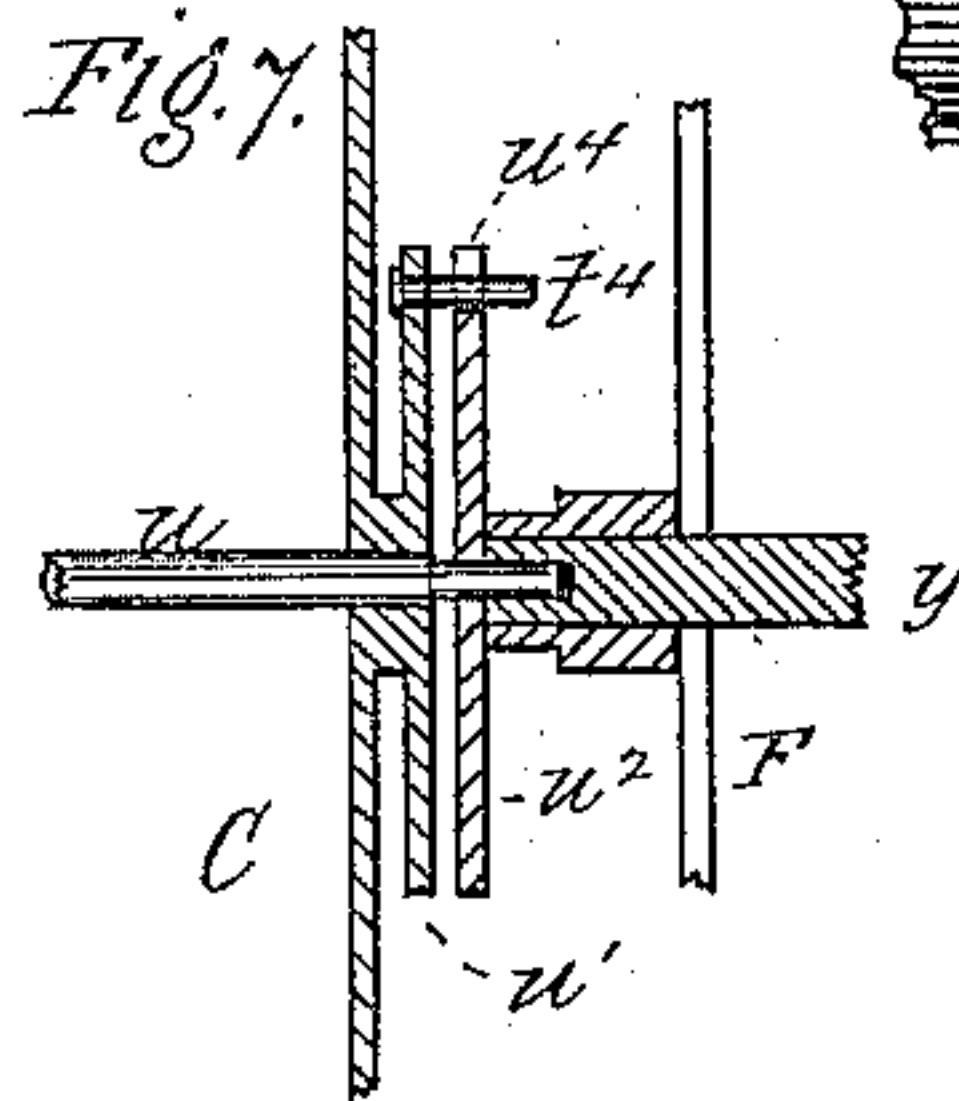
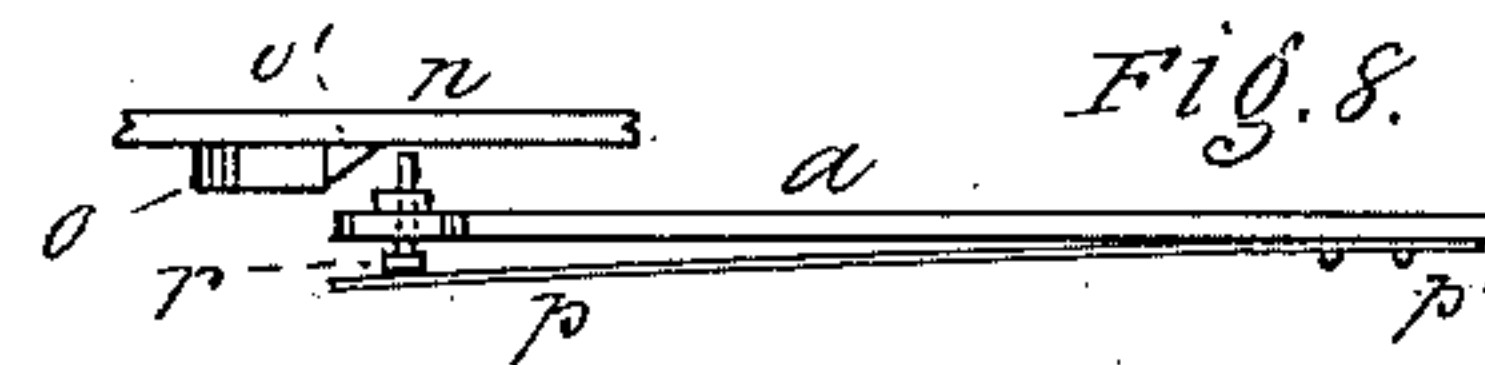
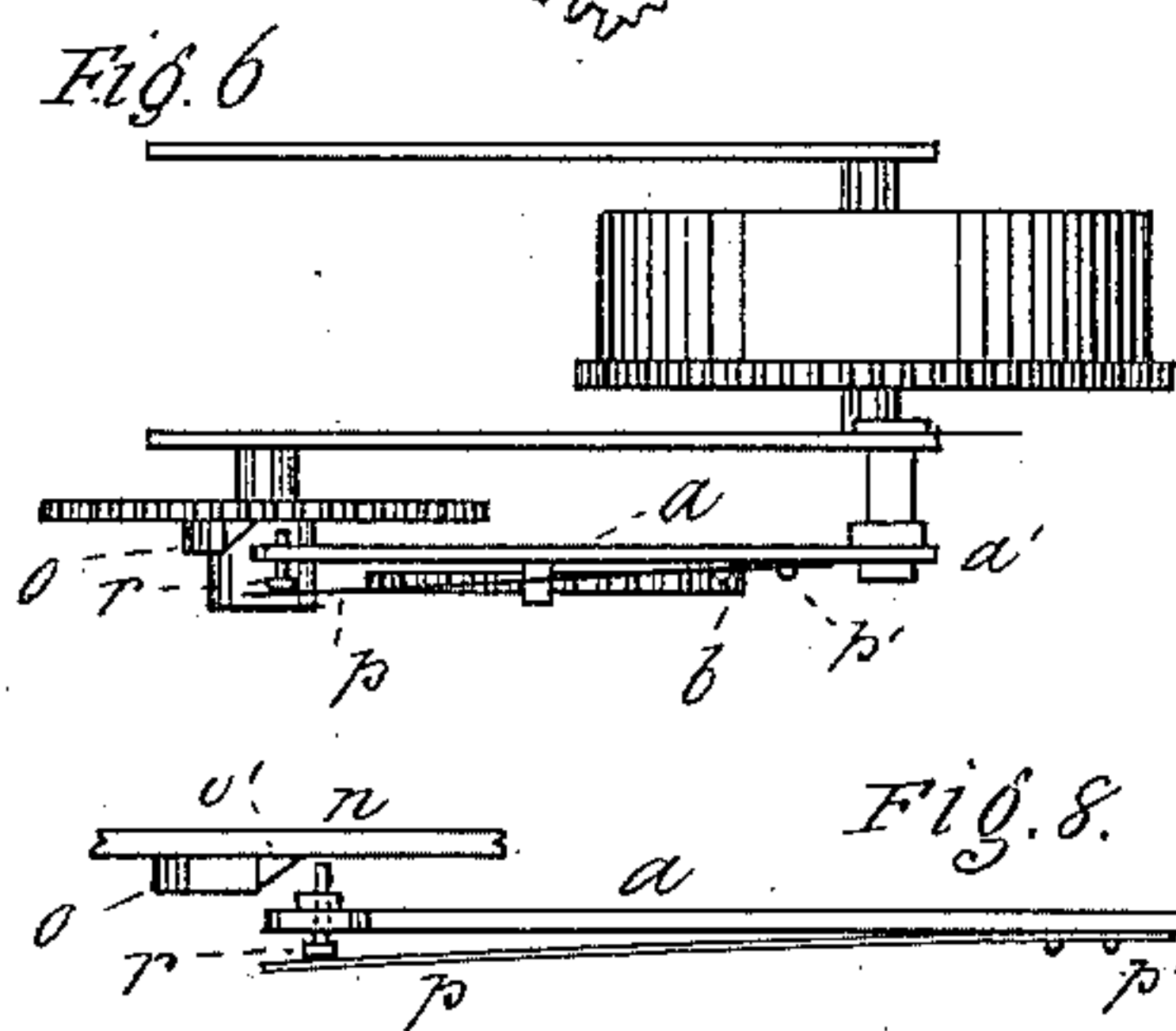
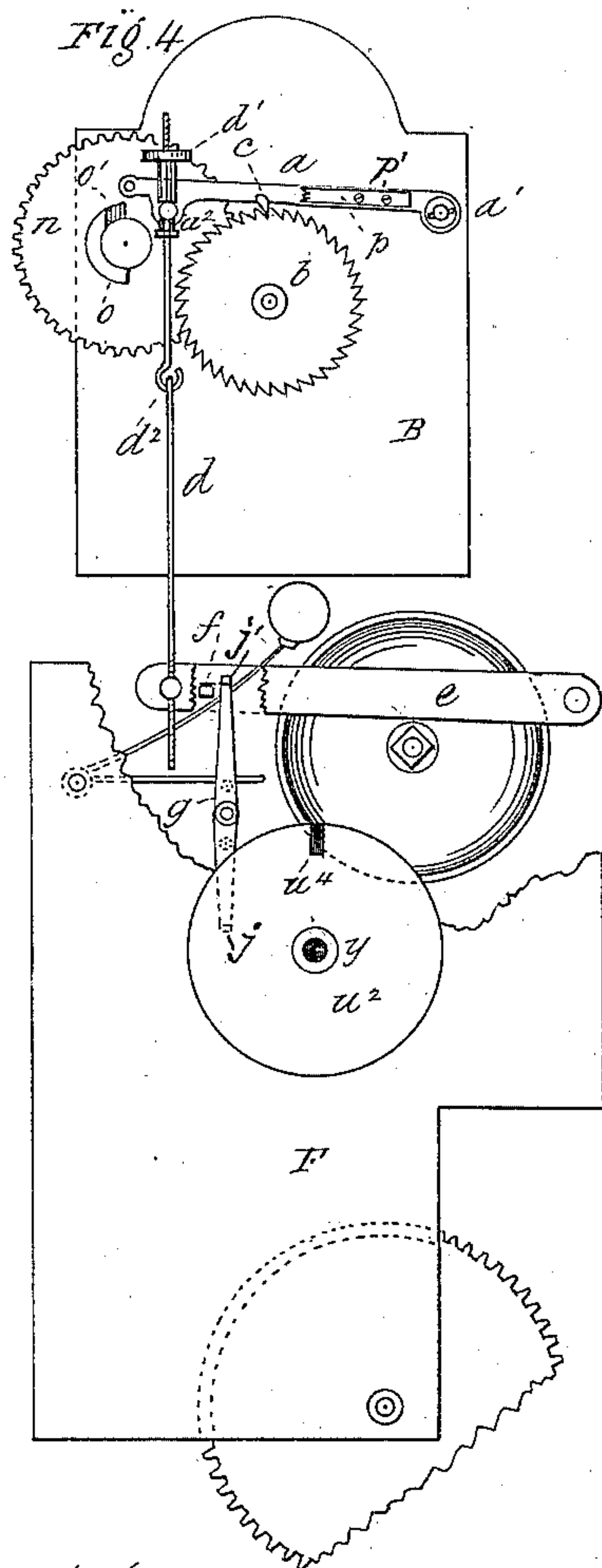
Inventor:
William Akin.
By John S. Thornton
Attorney.

W. AKIN.

AUTOMATIC ADVERTISING DEVICE.

No. 309,182.

Patented Dec. 16, 1884.



Witnesses:
M. H. Zipping
Aubrey C. Wilson

Inventor:
William Akin:
By John S. Thornton
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM AKIN, OF NEW YORK, N. Y.

AUTOMATIC ADVERTISING DEVICE.

SPECIFICATION forming part of Letters Patent No. 309,182, dated December 16, 1884.

Application filed December 20, 1883. (No model.) Patented in England December 12, 1882, No. 5,937.

To all whom it may concern:

Be it known that I, WILLIAM AKIN, of the city of New York, in the county and State of New York, have invented certain new and useful Improvements in Automatic Advertising Devices; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, on two sheets, which form a part of this specification.

This invention relates to improvements in an automatic advertising apparatus, for which Letters Patent of the United States, No. 268,595, were granted to me on the 5th day of December, 1882, which said apparatus consists of mechanism attached to an ordinary clock to display a number of advertisements consecutively, and each for a fixed period of time.

My present invention consists in certain improved constructions of parts of the apparatus, as hereinafter particularly set forth and described.

In the accompanying drawings, on Sheet No. 1, Figure 1 represents an exterior front view of my improved advertising apparatus; Fig. 2, a front elevation of the same, with the front cover or door removed, and Fig. 3 a vertical section on the line *x x*. On Sheet No. 2, Fig. 4 is a front elevation, Fig. 5 a side elevation, and Fig. 6 a top view, of my improved mechanism, and Figs. 7 to 11, inclusive, are details hereinafter referred to and explained.

Similar letters of reference indicate the same parts in all the several figures.

A represents the case for holding the mechanism. Ordinarily I attach said mechanism to a clock-case, but other suitable case or frame may be employed.

B is the clock movement or motor, which determines the length of time during which each of the advertising-sheets is to be displayed, and which actuates the escapement (hereinafter described) to allow the drum C to rotate at the expiration of said length of time.

D are the advertising-sheets, and F is the auxiliary clock-work or motor by which the escapement is driven or operated and the drum rotated.

The first of my improvements consists in an improved escapement, which is composed of

the following parts, namely: *a* is a lever pivoted at its rear end, *a'*, to the frame of the clock-work B, or other suitable support above and in line with a wheel, *b*, having ratchet-teeth. This lever *a* is provided with a ratchet-tooth, *c*, which engages with the teeth of the wheel *b*, and attached to said lever, at a short distance from its free end, is a stud, *a''*, through which the connecting-rod *d* is passed. The connecting-rod *d* is connected at its lower end to the free end of a second lever, *e*, which is pivoted at its rear end to the frame of the clock-work or motor F, so that whenever the lever *a* is raised by its ratchet-tooth *c* engaging with the teeth of the wheel *b* the lever *e* is correspondingly raised. Upon this lever *e* is provided a stop-pin, *f*. A fly, *g*, consisting of a straight bar, is fixed at a short distance from its center upon a shaft, *h*, of the clock-work F, upon which said shaft is also a pinion which is driven, through the medium of suitable gearing, by the spring-wheel *i*. This fly *g* is provided with pins *j* and *j'*, one at each end, which are placed in such relative position that when the stop-pin *f* stands at a certain point and the fly *g* is rotated, the pin *j* will pass over the same and the pin *j'* will come in contact therewith, and when it is raised so that the pin *j* will come in contact therewith, the pin *j'* will pass underneath the same. The rod *d* is provided with adjusting-screws *d'*, for adjusting the distance between the levers *a* and *e*, with a loop, *d''*, to impart flexibility thereto. The operation of this escapement is as follows: When the lever *a* is at its lowest position and its ratchet-tooth *c* at the lowest point between the teeth of the wheel *b*, the pin *j'* rests against the stop-pin *f*, thereby stopping the fly. It is shown in this position in Fig. 10. When, by the rotation of the wheel *b*, the ratchet-tooth *c* has been raised one-half way up one of the teeth of said wheel, the lever *e* will have been raised a sufficient distance to allow the pin *j'* to pass underneath the stop-pin *f*, thus releasing the fly, which latter will make a half-revolution and be again stopped by the pin *j* coming against the stop-pin. (See Fig. 11.) When, by the continued rotation of the wheel *b*, the ratchet-tooth *c* has been brought over the summit of the tooth, the levers (being then unsupported) will immediately drop to

their lowest position, thereby permitting the pin j to pass over the stop-pin f , and the fly will then make another half-revolution, at the completion of which it will be again stopped by the pin j' coming in contact with f . These operations are repeated as each tooth of the wheel b passes underneath the ratchet-tooth c . The drum C is fixed upon a shaft, which is connected with the same train as the fly g , so that it rotates simultaneously with the fly, and at each movement of the latter another advertising-sheet is brought into view in place of the one which was displayed while the fly was at rest.

The second of my improvements (which, however, I do not claim as part of the invention) consists in devices for adapting the apparatus to be used in store-windows at night and in dimly-lighted places by throwing a strong light upon the advertising-sheets as they are being displayed. For this purpose I employ a lamp, k , (or as a modification thereof a gas-jet may be used,) which I place in the vacant space in the upper part of the case A , as shown in Fig. 3, upon any suitable support. m is a reflector of any suitable material, secured in proper position to throw the light from the lamp or gas-jet upon the sheet that is being displayed; and l is a pipe or flue, the upper end of which extends above the top of the case for the purpose of carrying off the heat and smoke. That portion A' of the cover or door of the case A which is opposite the drum and the lamp is opaque, and the lower portion, A'' , opposite the extended sheet D , is transparent. By these means the apparatus may be used in dimly-lighted places, as the advertisements are made legible by the strong light thrown upon them.

The third of my improvements consists in improved devices for throwing the mechanism that operates the drum out of gear for any desired length of time—as, for instance, during the night-season. n is a wheel driven by the clock-work B , and geared to make one revolution in twenty-four hours. Upon its shaft is a segmental shoulder or cam, o , the front edge of which is beveled, as at o' . A fine spring, p , is attached to the side of the lever a at p' , through the free end of which said lever is passed a pin, r , which is fitted to slide freely back and forth at right angles to the plane of the wheel n , and is pressed inward by the spring p . The segmental cam o is proportioned circumferentially to the wheel n , according to the length of time it is desired the drum shall remain at rest, as described in the Letters Patent above mentioned.

The essential features of this improvement consists in substituting the oscillating pin r in place of the spring marked Q' in the drawing in said Letters Patent, which latter was attached to the lever and was not sufficiently pliant, but had a tendency to stop the clock-work when it came in contact with the cam; but by making the contact-point (or pin r) and arranging it to operate as above described,

this difficulty is entirely avoided. In Fig. 8 this device is shown detached on an enlarged scale.

The fourth of my improvements relates to the construction of the drum C . The ends of said drum are constructed to form projecting annular flanges s s , and upon said flanges the clips t are secured by which the advertising-sheets are held. These clips are made in the form shown in Fig. 9, being of steel or of spring-brass, and secured at their rear ends by screw-nails, as at t' , and having a pin, t'' , on their under side, which passes through a slot in the periphery of the drum. By means of this construction the sheets can readily be placed in position or removed by pressing upon said pins to raise the front edges of the clips. A central shaft, u , passes through the drum, one end of which has bearings in an adjustable sleeve, H , attached to the case A , as shown in Fig. 2, and near its opposite end is secured a disk, u' , having a pin, t'' , near its periphery. This disk and the shaft are secured to the drum by any suitable means. A second disk, u'' , secured at the end of a shaft, y , which is driven through the medium of suitable gearing by the spring-wheel i . The end of the shaft y is mortised to form a bearing for the drum-shaft u , as shown in Fig. 7, and the disk u'' is provided with a slot, u^t , to receive the pin t'' , so that the drum C is rotated by the shaft y . 1 1 are sheets of metal, attached to the backs of the sheets D to insure their being carried over the top of the drum, so as to drop at the proper time, and 2 is a spring attached at its rear end to the back of the case A , the free end of which presses on the sheets D for the purpose of preventing their being carried over the drum prematurely.

What I claim as my invention is—

1. The escapement herein described, composed of the ratchet-wheel b , the lever a , provided with the ratchet-tooth c , the lever e , provided with the stop-pin f , and the eccentrically-pivoted fly g , provided with the pins j and j' , the whole constructed substantially as described.

2. In combination with the wheel n , rotated as described, the beveled segmental cam o , spring p , attached to the lever a , and pin r , fitted to slide in the end of said lever a , all as shown and described.

3. The drum C , constructed with projecting edges s , and provided with the clips t , said clips being secured to said drum by screw-nails, and provided with the pins t'' , adapted to pass through a slot in the drum and hold the sheets, as shown and described.

4. In combination with the drum C and its shaft u , the adjustable bearing H , the disk u' , having pin t'' , and disk u'' , fitted on the mortised shaft y , and provided with slot u^t , as shown and described, for the purpose set forth.

Witnesses: WILLIAM AKIN.

M. H. TOPPING,
JOHN S. THORNTON.