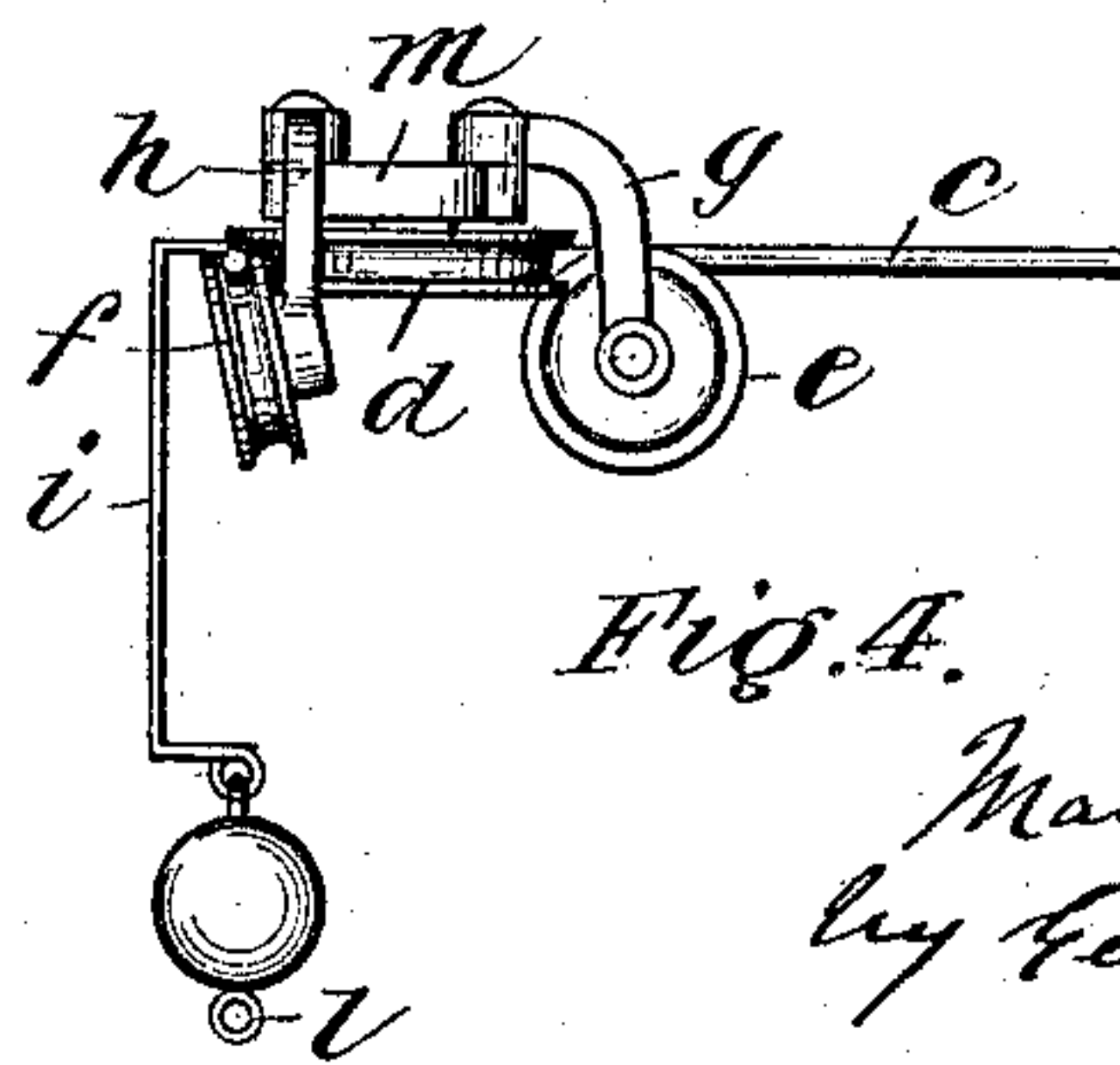
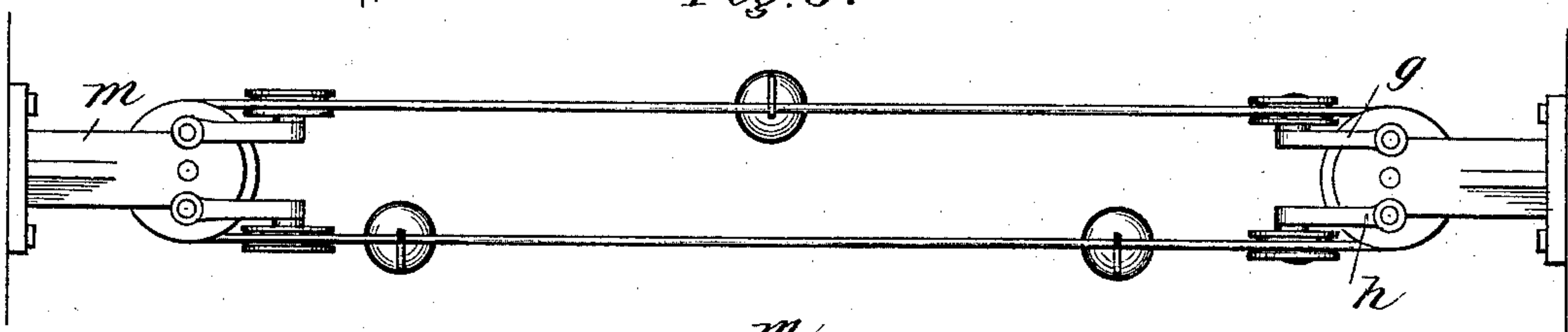
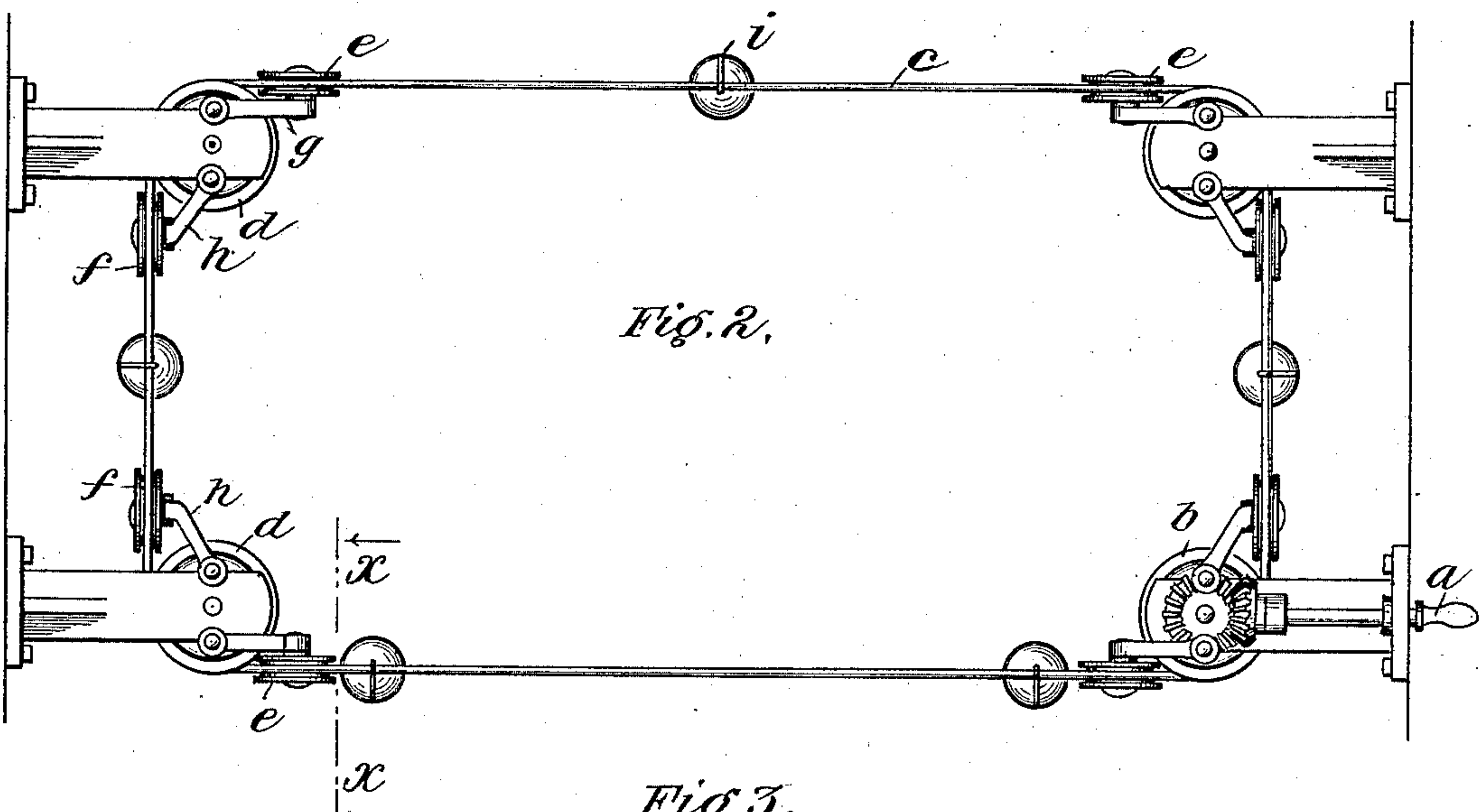
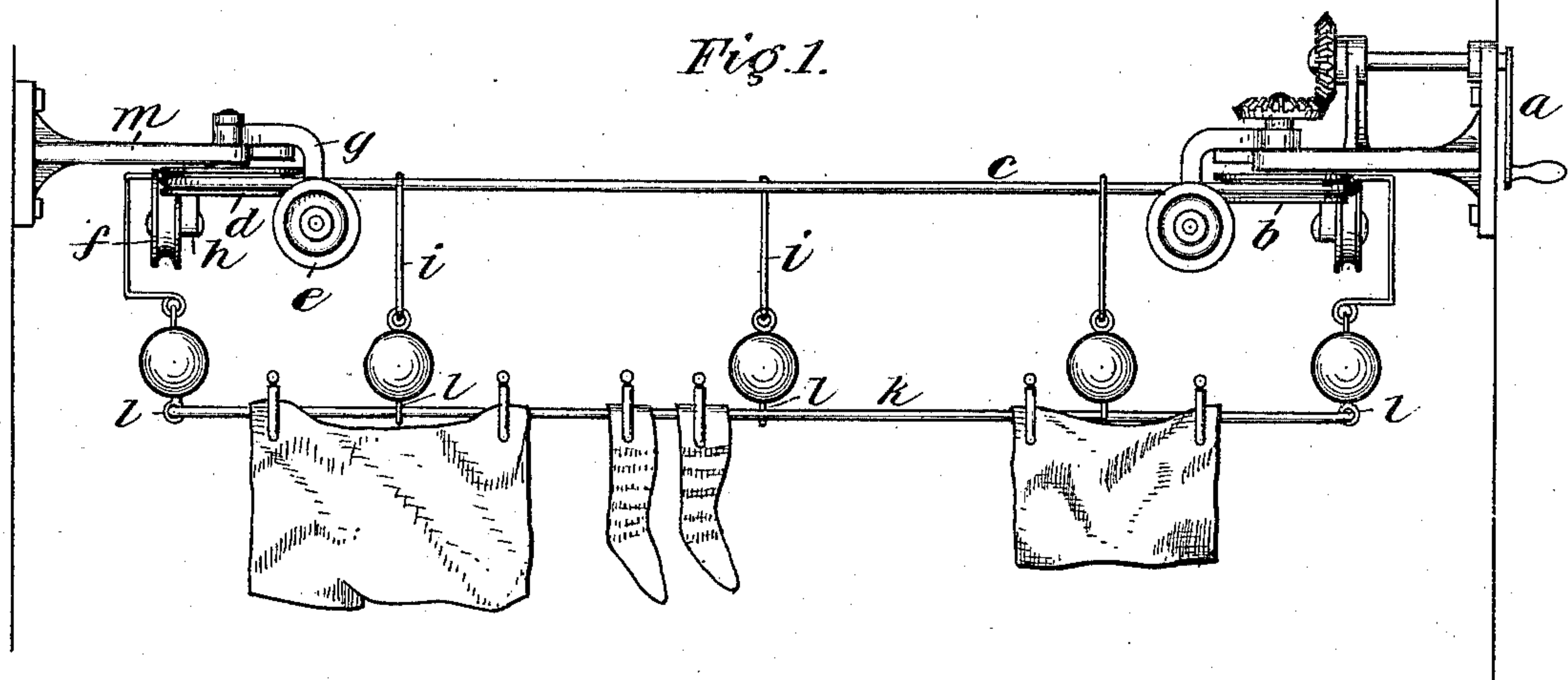


(No Model.)

M. GINDORFF.
CLOTHES DRIER.

No. 387,225.

Patented Aug. 7, 1888.



Witnesses:
Sam. B. Dover.
Wm. M. Giller.

Inventor.
Matthew Gindorff.
by George P. Barton,
attorney.

UNITED STATES PATENT OFFICE.

MATTHEW GINDORFF, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE HALF TO
MATHIAS DAPPEN, OF SAME PLACE.

CLOTHES-DRIER.

SPECIFICATION forming part of Letters Patent No. 387,225, dated August 7, 1888.

Application filed July 19, 1887. Serial No. 244,684. (No model.)

To all whom it may concern:

Be it known that I, MATTHEW GINDORFF, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Clothes-Driers, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to clothes-driers; and its object is to furnish apparatus whereby the line may be suspended in courts or between buildings, so that the clothes may be hung thereon at any given place, as at a window. By means of suitable apparatus the line may be carried around in either direction as the clothes are being hung out until the line is full.

My invention consists in a cable carried upon pulleys mounted upon suitable brackets, and weighted hangers suspended thereon at intervals, the clothes-line proper being carried by the hangers out of the way of the supporting-cable and brackets.

My invention is illustrated in the accompanying drawings, in which Figure 1 is an elevation of my clothes-drier. Fig. 2 is a plan view of the same. Fig. 3 is a plan view showing the line as suspended between two sets of pulleys. Fig. 4 is a detail elevation, as seen from section-line *x x* of Fig. 2, showing the manner of tilting the pulleys so as to be out of the path of the hangers.

In Figs. 1 and 2 I have shown a crank, *a*, connected with a gear-wheel, which is in engagement with a pinion on the shaft of the horizontal pulley *b*. By turning the crank it is evident that the pulley *b*, which is fixed upon its shaft, will be turned, and thus the cable or carrier *c* may be carried back and forth in either direction.

In Fig. 3 I have not shown the gear mechanism, since it is evident that my clothes-drier might be used without such gear mechanism, the cable being carried around directly by hand. At each angle of the line I provide upon a suitable bracket a horizontal pulley, *b* or *d*. This pulley is simply an idler provided with a groove for the cable or cord *c*. I provide, also, in addition to the horizontal

pulley, two other pulleys, *e f*, which are placed upright, or nearly so. These pulleys are separately mounted upon swinging arms *g h*, and are provided with grooves, upon which grooves the cable is supported. These swinging arms, which carry the upright pulleys, may be turned upon their pivots in either direction, so that their pulleys will come under and support the cable, no matter what may be its angle. Thus, for example, in Fig. 3, the clothes-drier being suspended from two opposite brackets the swinging arms *g* and *h* are turned around so as to be parallel.

In Figs. 1, 2, and 4 the swinging arms *g h* are shown at angles to one another. The wheels or pulleys *e f* thus support the cable, no matter what may be its angle. Hangers *i* are rigidly secured to the cable at suitable distances apart. These hangers are preferably of the form shown, and are provided with weights, as shown. The hangers each consist of a link secured to the cable at its upper end and provided with an eye at its lower end for suspending the weight. This link is bent outward, so that it will pass by the wheels as the cable is drawn back and forth.

The pulleys *e f* are preferably so mounted as to tip inwardly at the bottom, so that under no circumstances will they come in the path of the links, though the supports may be swung by the wind or otherwise. The clothes-line *k* is run through the eyes *l*, provided, as shown, upon the weights. It will be seen that each bracket *m* supports a large horizontal pulley and two swinging arms, each carrying a small pulley. The small pulleys are suspended upon their swinging arms in such position that the cable passing around the large pulley will be supported by the small pulleys, and no matter what the angle or direction of the cable may be the small pulleys are readily adjusted so that the cable will be tangent to both of the small pulleys on each side of the large pulley.

The clothes-line may be conveniently joined together with a hook and eye, and thus may be readily taken down and put up, so that it need not be left out exposed.

I have not illustrated the hook and eye in the drawings, since the line might be spliced

together or otherwise united. The manner of joining the line together is not material to my invention.

5 The weights should be sufficient, so that the line under no circumstances will be blown up so as to catch upon the cable or brackets.

It is evident that my invention admits of many modifications with respect to the pulleys, swinging brackets, and weighted hang-
10 ers. The pulleys should be larger as the distance between them is increased. The line in all cases is, however, suspended below the endless cable, and any part of it is always readily accessible from any point along its path.

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

1. The combination, with the movable endless cable, of weighted supports secured thereto at intervals, and the clothes-line suspended
20 from said weighted supports, whereby the clothes-line is carried with the cable and held down in position out of the way of the cable, substantially as specified.

2. In a clothes-drier, the combination, with
25 a bracket, of a horizontal pulley and two swinging arms, each carrying a separate pulley, the upper edges of the pulleys carried on the swinging arms being tangent to the horizontal pulley and adapted to support a cable,
30 substantially as described.

3. The combination, with the clothes-line, of weighted supports provided with eyes through which the clothes-line is strung, of an endless cable to which the supports are at-

tached, and pulley devices for supporting and
35 guiding the cable, each pulley device consisting of a horizontal wheel and two wheels tangent thereto upon pivoted arms and adapted to run under and support the cable without
40 coming into the path of the supports as they are carried around with the cable, substantially as specified.

4. The combination, with a horizontal pulley, of two pulleys slightly inclined inwardly from the perpendicular and suspended upon
45 swinging arms, a cable passing around the horizontal pulley and over the said slightly-inclined pulleys, and the supports attached at intervals to the cable, whereby said slightly-inclined pulleys may be adjusted to support
50 the cable running at different angles without coming into the path of the supports, substantially as described.

5. The combination, with pulley mechanism for carrying the endless cable which supports
55 the clothes-line, of gear mechanism for turning one of the pulleys and thereby moving the endless cable in either direction, the weighted hangers suspended upon the cable at intervals, and the clothes-line *k*, run through
60 eyes *l*, provided upon the weights, substantially as specified.

In witness whereof I hereunto subscribe my name this 16th day of July, A. D. 1887.

MATTHEW GINDORFF.

Witnesses:

GEORGE P. BARTON,
WM. M. GILLER.