

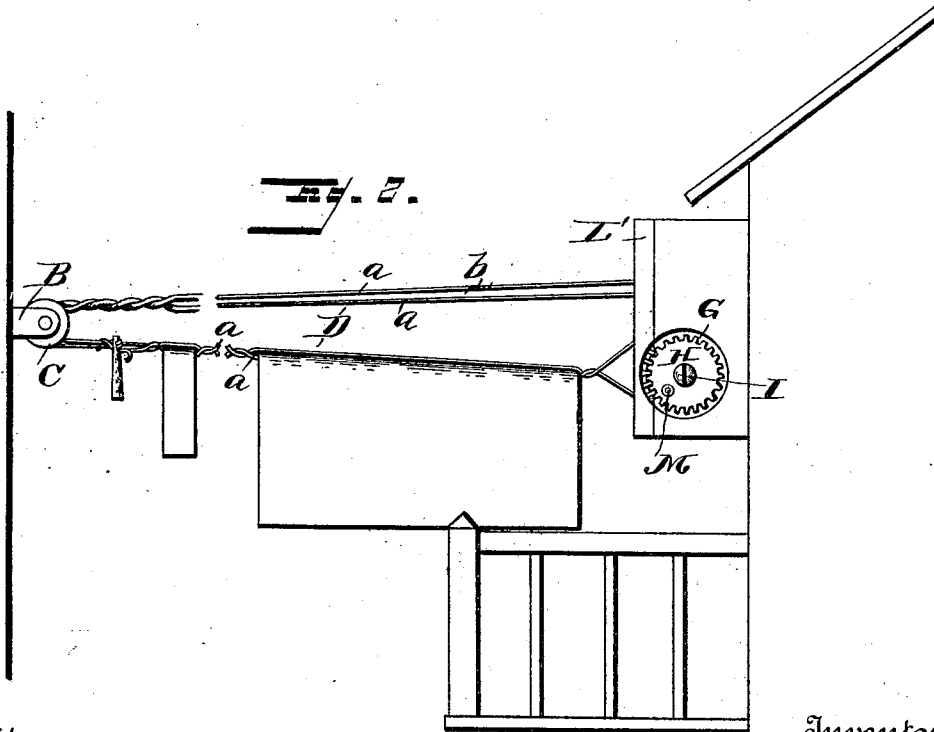
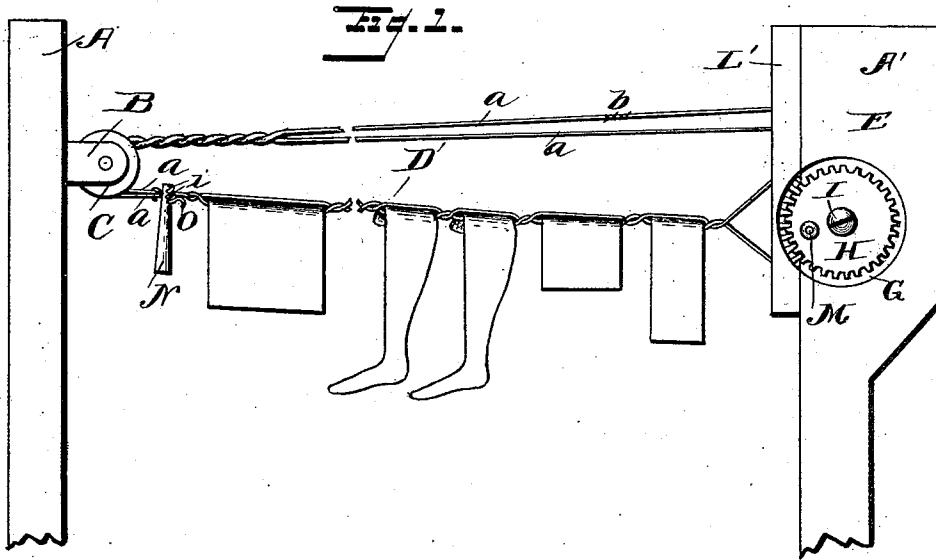
(No Model.)

2 Sheets—Sheet 1.

F. S. McKAY.
CLOTHES LINE.

No. 515,354.

Patented Feb. 27, 1894.



Witnesses

C. B. Hunt.
W. S. Shepard.

Inventor

F. S. McKay
J. A. Little
Attorneys

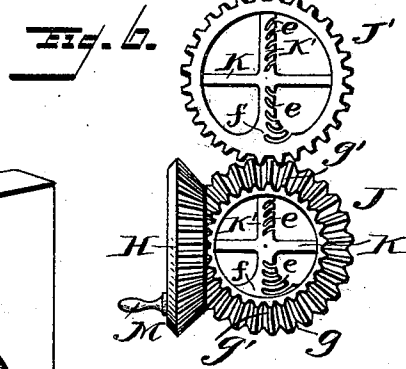
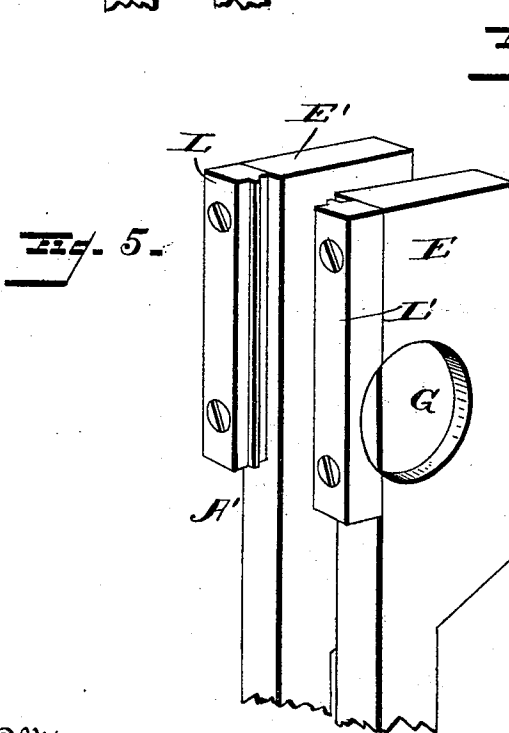
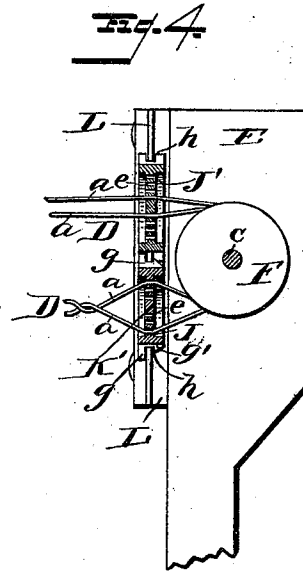
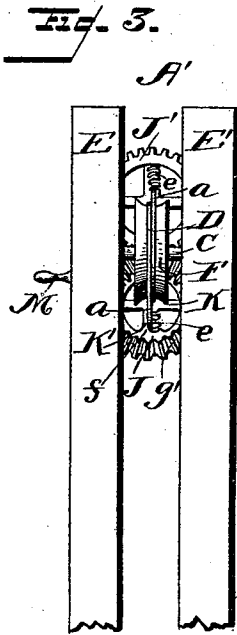
(No Model.)

2 Sheets—Sheet 2.

F. S. McKAY.
CLOTHES LINE.

No. 515,354.

Patented Feb. 27, 1894.



Witnesses
C. E. Hunt.
H. S. Shepard

F. S. McKay
Inventor
by J. R. Little,
his Attorney

UNITED STATES PATENT OFFICE.

FREDERICK S. MCKAY, OF HATLEY, CANADA.

CLOTHES-LINE.

SPECIFICATION forming part of Letters Patent No. 515,354, dated February 27, 1894.

Application filed April 15, 1893. Serial No. 470,504. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK S. MCKAY, a subject of the Queen of Great Britain, residing at Hatley, in the county of Stanstead and Province of Quebec, Canada, have invented a new and useful Clothes-Line, of which the following is a specification.

My invention relates to clothes-line apparatus, and is in the nature of an improvement on my prior patent granted on the 28th of April, 1891, No. 451,065, to which reference may be had.

The prime object of my improvement is to provide novel and efficient means for readily securing the articles on the clothes-line by twisting the same in a prescribed manner; said means being arranged and located in a convenient manner so that the device can be operated by a single person from a given point.

This invention has for its further object to furnish certain other auxiliary and co-operating appliances necessary for producing an operative and labor-saving device of this class.

Another object of my invention is to provide an improved clothes-line apparatus which shall be simple and durable in construction, inexpensive in manufacture, easy and convenient in operation, and capable of general adaptability.

For the attainment of these several objects, and for other purposes hereinafter enumerated, this invention comprises certain improvements in the construction, arrangement and operation of parts, substantially as hereinafter fully described and particularly pointed out in the claims.

Referring to the accompanying drawings, forming a part of this specification—Figure 1 is a view in side elevation of my complete device showing it in operative position in a yard. Fig. 2 is a similar view showing the invention as adapted to be operated from an elevated position or location, such as a veranda or window. Fig. 3 is a detail end or face elevation of the frame containing the line-twisting-devices. Fig. 4 is a central vertical section of Fig. 3. Fig. 5 is a detail perspective view of the support for the two twisting disks. Fig. 6 is a detail view of the crank-gear or disk and its connection with one of the twisting-disks. Fig. 7 is a detail perspective view of

the twist-holder or tightener, shown detached from the line.

Like letters of reference mark the same or corresponding parts in the several views of the drawings.

Referring to Fig. 1, A A' designate two posts or supports which are separated the desired distance and are of any suitable shape or construction, according to the special location of the device. On the post A and at a point on its inner face the required height above the ground is secured a bearing bracket, B, in which is journaled a sheave or pulley, C, and over such sheave or pulley runs a doubled wire or fibrous rope or cable, D, which is composed of two strands, *a a*. The rope D has its two ends spliced or tied together, as at *b*, forming an endless doubled rope passing over the pulley C. At the other end of the cord or rope D, the post A' is located and is composed of two vertical parallel standards, E E', suitably braced and held apart a slight distance, between which is journaled a sheave or pulley, F, mounted on a shaft, *c*, which, in turn, rests loosely in journal-openings in the two opposite standards E E'.

The outer side of the standard E is provided near its top with a circular recess, G, in which is journaled a crank beveled-gear, H, mounted on a stud-shaft, I, and preferably in the form of a screw so as to be removable at will. Intermeshing with the gear H is a twister disk, J, skeleton in form and comprising the four intersecting spokes K K', the spokes K' being provided on one side with a series of longitudinally-disposed undercut curved notches, *e e*, designed to receive and hold in set position the strands *a a* of the rope D which passes through this twister disk. One of the spokes K' is weighted by an integral web or enlargement, *f*, formed at the junction of the spoke and its rim, such weight being for the purpose of normally maintaining the twister in a prescribed position under the influence of gravity. The rim of the disk J is provided peripherally with a series of cog-teeth, *g g*, intermeshing with the similar teeth on the circumference of the twister-disk J' above; and on the rear side of the rim of the disk J are formed bevel-gear-teeth, *g'*, intermeshing with those of the gear H. The twister-disk J' is substantially the same in construction and

arrangement as the disk J except that it has not bevel-teeth on the rear portion of its rim.

The twister-disks J J' are held in engagement and position by face-plates, L L', each consisting of a rectangular plate preferably formed of a non-oxidizable metal, bolted to the front face of a standard E or E' and having its edge adjacent to the two disks J J' projecting into a groove or channel, h, running centrally and circumferentially around the rim or tread of each twister disk, as shown. By this construction the disks J J' are held in upright position by the two face-plates L L'. It will be understood that the twister disks are held in engagement with each other and one of them with the gear H, by the rope D. I do not, however, confine myself to any special form or arrangement for supporting the twister disk, nor to any particular construction of the frame for the operating parts, since it is manifest that the form of these parts will depend upon the location in which they are placed.

As shown clearly in Figs. 1, and 6, the gear H is provided with a crank-handle, M, by which the operator rotates the gear H and consequently revolves the two twisters J J'; and it will also be noticed that the portion of the face-plate L' adjacent to the edge of the gear H is provided with an arc-shaped recess to permit free rotation of said gear and its engagement with the bevel-gear-teeth g' on the disk J. The lower portion of the rope D after passing over the pulley C passes back and goes through the lower twister disk J, one strand, a, being above the horizontal spokes, and the other below, and the strands are respectively held by the undercut notches e e in the vertical spokes K' which serve to permit the strands a a to be adjusted and maintained any desired distance apart, so that the operator can readily insert the article to be suspended between the strands. After passing through the lower twister J in the manner just described, the doubled rope goes around the pulley F and then through the upper twister J' in the same manner as through the lower one. It will be understood that in practice the upper strands, i. e., those passing through the twister J', must be closer together than the lower strands, and in order to accomplish such result the notches e e are made in the vertical spokes of each twister. It will also be understood that if the parts were inverted, as is sometimes contemplated in practice, the two twister-disks would still be operative; in other words, owing to the notches e e in the spokes K' K' of both twister-disks, I am enabled to invert the order of the parts and still produce the same result.

Referring to Fig. 7, N designates the twist-holder or tightener, which consists of a handle weighted at its lower end and provided at its upper extremity with two apertures, i i, arranged one above the other and designed to permit the loose passage of the strands, a a. Thus by taking hold of the handle, the

double cord or wire cable can be tightened and prevented from slipping by twisting it once around the upper end thereof. Between the two apertures i i, and on each side of the handle N, is a hook or clip, O, projecting laterally from the body of the handle, and consisting of an open hook downwardly curved as shown. By means of these hooks, the slack taken up by twisting the line around the end of the handle N can be anchored and held fast, by simply slipping the two strands of the rope under the hooks. This twist-holder or tightener acts to hold or retain the twists in the cord or cable which are formed by the disk-twister, to hold the first article placed on the line, and it also serves as a tightener to take up the slack which might result from the stretching of the cord or cable. When putting articles on the line, the action of the twister disks revolving in opposite directions, transfers the twists formed back of the lower disk over the back pulley through the upper disk to the upper line, and vice versa when the articles are being taken off the line.

The operation of the present device differs from that of my former patent in that the strands of the cable D are twisted by means of the gear H imparting its rotary motion to the disks J J', instead of directly rotating the single disk shown in said patent.

Fig. 2 illustrates the device attached to the window frame of a building, from which point the operator can operate the line without leaving the window.

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

1. In a clothes-line apparatus, the combination, with a rope or cable composed of two strands and passing over pulleys at each end, of twister-disks respectively controlling the twist of the said rope or cable, and intermeshing gearing for operating said twister disks; substantially as set forth.

2. In a clothes-line apparatus the combination, with an endless rope or cable composed of a plurality of strands and supported at each bend or end, of twister disks having separate orifices for the passage of the strands of the rope or cable, a mechanical connection between the two disks, and gearing for imparting rotary motion to said disks; substantially as set forth.

3. In a clothes-line apparatus, the combination, with an endless rope or cable composed of a plurality of strands and suitably supported at each bend, of twister disks having apertures for the passage of the rope or cable-strands and adapted to rotate in opposite directions, gearing for actuating said disks, and a crank-disk for imparting motion to said gearing, substantially as set forth.

4. In a clothes line apparatus, the combination, with the endless rope or cable composed of separate strands and supported at each bend, of twister disks controlling the twist of

the strands of said rope or cable, said disks consisting of wheels having intersecting spokes, two spokes in each disk being provided with a longitudinally-disposed series of under-cut recesses, and means for rotating said disks, substantially as set forth.

5 5. In a clothes-line apparatus, the combination, with the crank-gear; of the disk, J, having bevel-gear on the edge of its rim and gear teeth around its tread; the disk, J', intermeshing with the disk, J; the double rope or cable, D, passing through both disks, the pulleys, C and F; and a suitable frame; substantially as set forth.

15 6. In a clothes-line apparatus, the combination, with the two vertically-arranged intermeshing twister-disks, and each having a circumferential groove around its edge or tread;

of suitable supports for holding the two disks in operative relation, the edge of said supports projecting into the grooves or channels of the disks, substantially as set forth.

7. In a clothes-line apparatus, the combination, with the endless rope or cable composed of separate strands; and twisting mechanism; of the twist-holder or tightener consisting of a handle having two vertically-arranged orifices and provided with two lateral open hooks; substantially as set forth.

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

FREDERICK S. MCKAY.

Witnesses:

GEO. T. BRADSHAW,
WM. THOMPSON.