

M. Magrath,
Chain for Hanging Sash.
No. 112,938. *Patented Mar. 21. 1871.*

Fig 1.

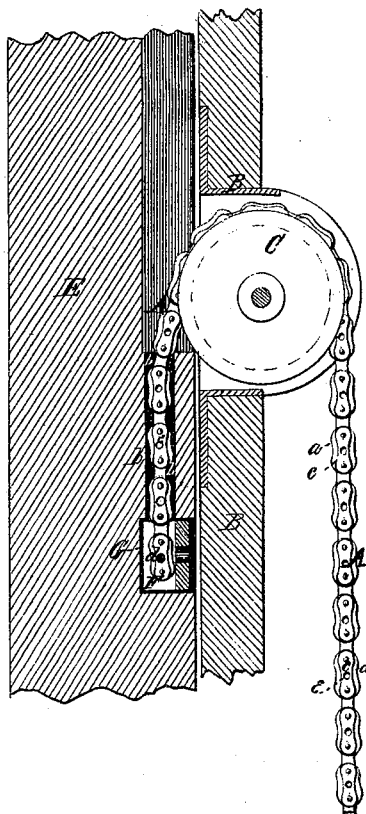


Fig 2

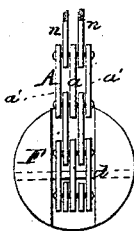


Fig 3



Witnesses.

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United States Patent Office.

MICHAEL MAGRATH, OF NEW YORK, N. Y.

Letters Patent No. 112,938, dated March 21, 1871.

IMPROVEMENT IN CHAINS FOR HANGING SASH.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, MICHAEL MAGRATH, of New York, in the county of New York and State of New York, have invented certain Improvements in Devices for Hanging Sash, of which the following is a specification, reference being had to the accompanying drawing.

My invention relates to the novel construction of chains for hanging sash.

Figure 1 is a vertical section of a portion of a sash and frame with my improvements applied;

Figure 2 is a view of a portion of the chain and the stop used for securing it to the sash; and

Figure 3 is a transverse section of the chain and a portion of a pulley.

In the ordinary method of hanging sash by means of cords and pulleys, there has always been more or less trouble, owing to the fact that the cords soon fray or wear out, thus necessitating their renewal, which is a difficult operation.

To obviate this difficulty and provide a more durable and efficient means of hanging sash, I propose to use chains for this purpose; and, in order to adapt chains to this purpose or use, I make them in the following manner:

I strike or punch out of sheet or plate metal a series of blanks or short pieces, *a* and *a'*, which have holes at each end and also at their center.

The pieces *a*, which I place at the center between the pieces *a'*, are made considerably wider than the others, as shown in fig. 3, thereby imparting to the body of the chain when finished a rounded outline or surface, by which means it is adapted to run in the groove of the ordinary pulley, as shown in fig. 3.

A link is composed of three of these blanks, arranged as there shown, and the links thus formed are connected to each other by two narrow blanks or pieces, *n*, to which they are connected by rivets in the usual manner, and as shown in figs. 1 and 2.

It is however, obvious that the links may be composed of a greater number of blanks or pieces, care being taken to make them of proper widths, so as to preserve the rounded outline or form, as already described.

The object of making these links with the holes *e* through their center is that the chain may cut off any

required length, and be readily fastened at one end to the weight, and at the other end to the sash, by simply inserting a pin or rivet in the hole.

In order to attach the chain to the sash in a secure manner and so that it can be readily detached when necessary, I form in the side of the sash *E* a groove or recess for the chain to lie in, as represented in fig. 1, this recess terminating at its lower end in a vertical hole, *b*, which extends from the open groove down to a hole, *G*, bored into the edge of the sash at right angles thereto, as shown in fig. 1.

I then provide a metal plug or stop, *F*, circular in form, and of a size to fit in the hole *G*, this stop *F* having a recess in or across its face on one side of sufficient width and depth to receive the links, as represented in fig. 2.

I then insert the free end of the chain through the hole *b* and out through the hole *G* in the sash *E*, and secure the plug or stop *F* thereto, by passing a pin or rivet *d* through the ears or projections on the rear side of the plug, and through the hole *e* in the link, as represented in fig. 2, after which the chain is drawn up tight, thus drawing the plug or stop *F* into the hole *G*, as represented in fig. 1.

A weight, *D*, is attached to the opposite end of the chain by means of a hook or link, *f*, secured to the link by a pin or rivet in a similar manner.

When thus constructed and arranged it will be found that the chain will operate with as much ease and as free from noise as a cord, and by this means I produce a very durable and efficient device for hanging sash, and one that is specially adapted to heavy windows.

Having thus described my invention,

What I claim is—

1. A chain, having its links composed of flat strips or pieces, of different widths, arranged substantially as described, whereby the chain has a rounded outline or surface to adapt it to run in a circular groove, substantially as described.

2. The links, composed of flat strips or pieces, and having the hole *e* through their center, substantially as and for the purpose set forth.

MICHAEL MAGRATH.

Witnesses:

GEO. C. BARCLAY,

THOMAS J. MAGUIRE.