

C. Hall.

Making Chains.

N^o 57,127.

Patented Aug. 14, 1866.

Fig. 2.

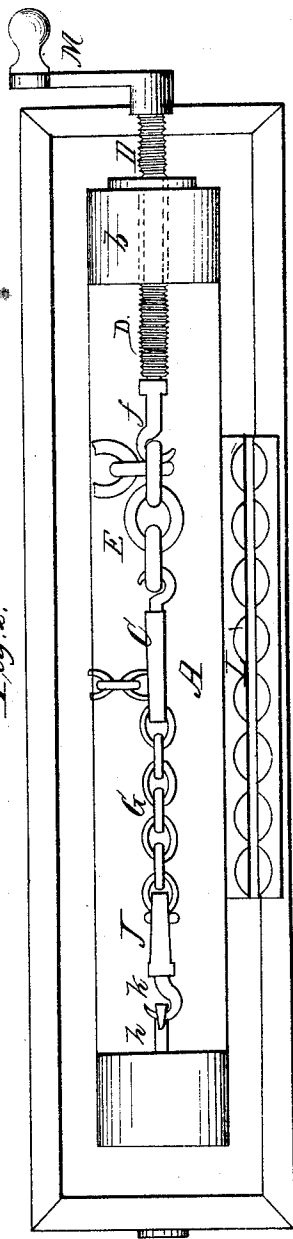


Fig. 1.

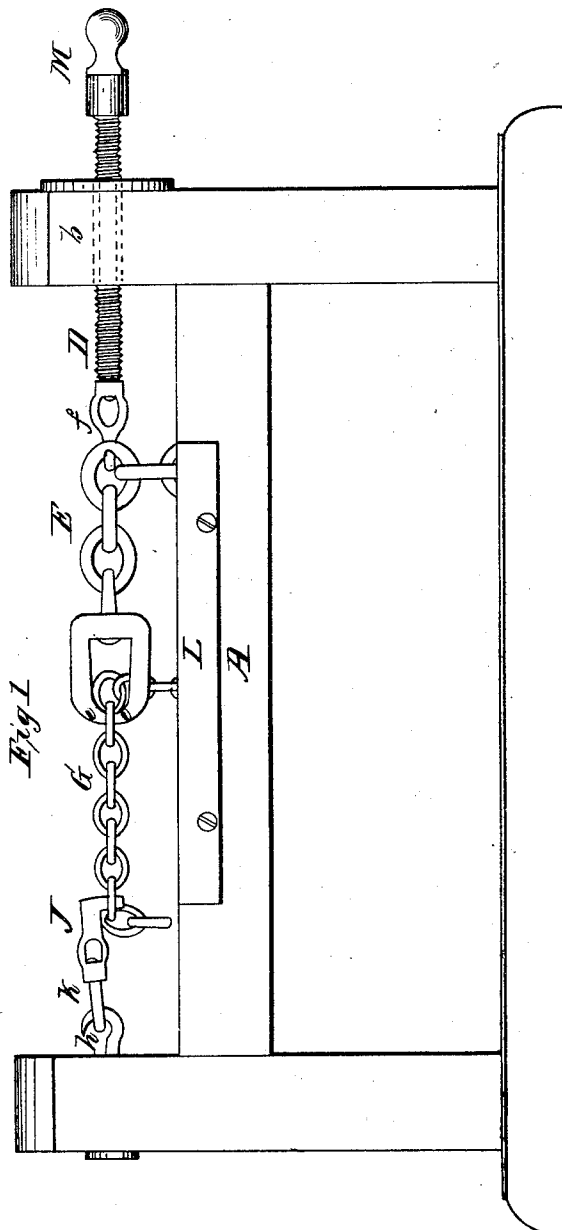


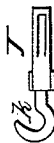
Fig. 3.



Fig. 4.



Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES HALL, OF NEW YORK, N. Y.

IMPROVED MACHINE FOR ADJUSTING CHAIN-CABLES.

Specification forming part of Letters Patent No. 57,127, dated August 14, 1866.

To all whom it may concern:

Be it known that I, CHARLES HALL, of the city, county, and State of New York, have invented certain new and useful Improvements in Machines for Adjusting Chain-Cables, so as to make the links thereof of uniform length; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 represents a side view of a chain-adjusting machine embodying my invention. Fig. 2 represents a plan of the same; and Figs. 3, 4, and 5 represent portions of the same.

The object of the machine to which my improvements are applied is to adjust the lengths of the links of chain-cables to a standard length by stretching them, so that the chain is fitted to run properly upon chain wheels or pulleys.

My invention has reference, particularly, to the means of grasping the links of the chain; and the first part of it consists of the combination of a frame to sustain the strain incident to stretching the chain with a clamp link-holder to hold one part of the chain, and with a screw or other mechanism to apply force to the chain held by the clamp link-holder.

My invention consists, further, of the combination of a frame, to sustain the strain incident to stretching the chain with a hook to hold one part of the chain and with a screw or other mechanism to apply force to the chain held by the hook link-holder.

My invention consists, further, of a peculiar clamp link-holder composed, substantially, of two jaws, which are recessed to receive and hold one of the links of the chain to be adjusted.

My invention consists, further, of a peculiar hook link-holder, recessed on its inner side to receive one of the links of the chain to be adjusted.

The chain-adjusting machine represented in the accompanying drawings embodies all parts of my invention. It has a strong frame, A, which sustains the movable members of the machine and the strain produced by adjusting the chain. At one end of this frame there is a standard, b, which supports the clamp link-holder C and the mechanism by which force is applied to the chain, which mechanism is

in this instance a screw, D, arranged to turn in a nut secured in the standard b. The inner end of the screw D is fitted with a swivel-hook, f, which is connected with the clamp link-holder C through the intervention of a chain, E, of greater strength than the one whose links are to be adjusted. The clamp link-holder C has two hook-formed jaws, e e, which are separated by a slot or opening, m, of sufficient width to permit a link of the chain G (to be adjusted) to pass edgewise between them. The inner sides of these jaws are recessed, as seen at x, Figs. 3 and 4, to receive a link of the chain on edge and to hold it from slipping laterally. Hence any link of the chain to be adjusted can be readily inserted in the clamp link-holder by slipping it between the jaws, and may be securely held there by the engagement of the adjacent link in the recess of the jaws.

At the end of the frame of the machine opposite to the standard b there is a second standard, b', which is fitted with a strong hook, h, and the hook link-holder J is connected with this hook by a swivel-hook, k. The hook link-holder is recessed at its inner side, so as to receive the edgewise link of the chain next the one into which the hook is entered, so that the chain is held securely by the hook.

In order to facilitate the examination of the links of the chain by the workman, a gage, L, is secured to the side of the machine in a convenient position for the application of the chain.

In operating with this machine, one link of the chain G to be adjusted is engaged with the clamp link-holder C, and another with the hook link-holder. Power is then applied to turn the screw D by means of a crank, M, or otherwise, so as to separate the hook link-holder and clamp link-holder, and stretch the links of the chain to the desired extent. As the links can be readily engaged with or disengaged from either the clamp link-holder or the hook link-holder, and these two may be set at any desired distance apart, (the connection with the screw being maintained by the chain E,) the machine affords a ready means of adjusting either one link at a time, or several links of the chain, and of shifting the chain in the machine until all the links are adjusted.

The precise construction of the means for ap-

plying force is not important, for it is evident that a rack operated by a series of cog-wheels, or a bar operated by a system of levers, or a pumping-jack may be substituted for the screw. So, also, the clamp link-holder may be used in the place of the hook link-holder, or the latter in the place of the former, if deemed expedient; and if the third and fourth parts of my invention are not to be used a clamp link-holder or a hook link-holder without recesses in their jaws may be employed.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of a stretching-frame, for sustaining the strain incident to stretching the chain, with a clamp link-holder and with means of applying force to the chain held by the link-holder, substantially as set forth.

2. The combination of a stretching-frame, for sustaining the strain incident to stretching the chain, with a hook link-holder and with means of applying force to the chain held by the hook link-holder, substantially as set forth.

3. The clamp link-holder, with recessed jaws, constructed substantially as set forth.

4. The hook link-holder, recessed at its inner side, substantially as set forth.

In testimony whereof I have hereunto set my hand this 26th day of February, 1866.

CHARLES HALL.

Witnesses:

E. S. RENWICK,
W. L. BENNEM.