

King & Johnson,
Chain.

No. 94,757.

Patented Sep. 14. 1869.

FIG. 1.

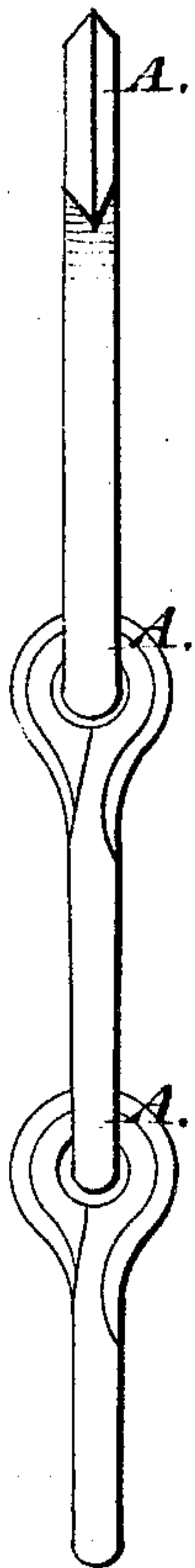
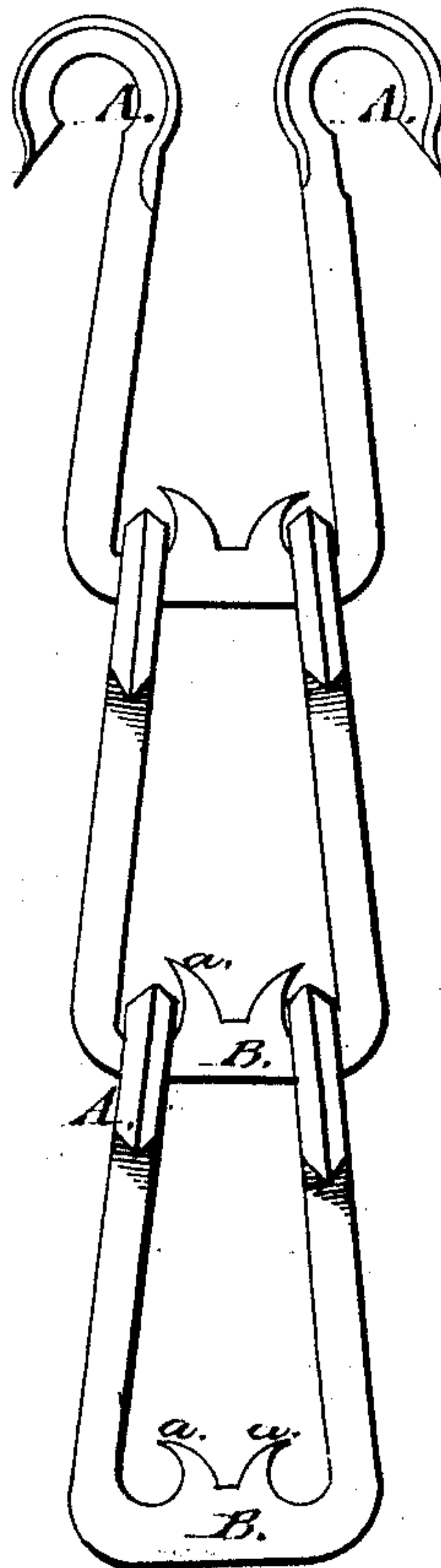


FIG. 2.



WITNESSES:
J. H. Burridge
E. O. Maite.

INVENTOR:
O. King
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United States Patent Office.

CHESTER KING AND S. P. JOHNSON, OF CLEVELAND, OHIO; SAID JOHNSON ASSIGNS HIS RIGHT TO SAID KING.

Letters Patent No. 94,757, dated September 14, 1869.

IMPROVED FLAT CHAIN.

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

To all whom it may concern:

Be it known that we, CHESTER KING and S. P. JOHNSON, of Cleveland, in the county of Cuyahoga, and State of Ohio, have invented certain new and useful Improvements in Chains; and we do hereby declare that the following is a full and complete description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is an edge view of the chain.

Figure 2, a side view of the same.

Like letters of reference refer to like parts in the several views presented.

The nature of this invention relates to a flat chain, the peculiar construction of which being such that the links thereof cannot be compressed together, in consequence of any unusual strain or twisting exerted upon it.

This chain, as will be seen in fig. 2, is of a flat character, and is made of cast malleable iron.

The upper end of each link terminates in a hook, A, whereas the lower ends are connected by a bar, B, to which said hooks are secured, as shown in the drawing.

Projecting from the bar, upwardly between the hooks, is a pair of curving lugs, *a*, whereby the said hooks are retained in close relation to the sides of the link, forming a circular bearing or hole, into which the hook is caught and secured.

By thus interposing the lugs between the hooks, they are, in consequence thereof, prevented from being sprung together, should the chain be subjected to sudden or violent twisting; hence, the open character of the links will be preserved, and at all times in proper condition to run over and receive the points of the sprocket-wheel, in connection with which it is used for drawing water, and for which purpose it is mainly intended.

We are aware that flat chains have been used, and still are used for this purpose above specified, but such chains are usually made of wire, bent into proper shape for the links, and connected to each other by hooks.

In some of such chains the bar to which the hooks are attached is straight, in consequence of which the chain, on being twisted, and which it is liable to be by the swinging and rotary movement of the bucket, the hooks become forced together, and thereby prevent the chain from engaging the wheel, and therefore it becomes inoperative.

To avoid this defect, some chains have the bar indented upwardly, thereby presenting a shoulder against which the hooks may draw, but in consequence of the weakness of the material, and the constant strain exerted upon the bar by the sprockets of the wheel, and the tendency of the hooks to draw near to each other, the indentation or curve given to the bar straightens, and, therefore, becomes of no practical value after being used for a short while.

This difficulty is entirely obviated in our chains, as the curving nature of the lugs between the hooks is such as to enclose them, with the exception of a little space at the top, thereby forming a hole for the admission of the hook, and from which they cannot be forced by the twisting of the chain.

As above said, the links are made of cast malleable iron, instead of wire, and, therefore, are stronger and more durable than the ordinary chain.

In order to mould them, the hooks of the pattern are arranged as shown in the upper link in fig. 2, which, when the links are to be strung together, are twisted around, as shown in the second and third links, also shown in fig. 1.

What we claim as our invention, and desire to secure by Letters Patent, is—

The herein-described chain, the links of which are provided with lugs *a*, and form the hooks for connecting the links together, in the manner substantially as described, and for the purpose set forth.

CHESTER KING.
S. P. JOHNSON.

Witnesses:

J. H. BURRIDGE,
ALLAN T. BRINSMADE.