

(No Model.)

T. NICKELS.
BINDING TOOL AND CHAIN.

No. 302,277.

Patented July 22, 1884.

Fig. 1.

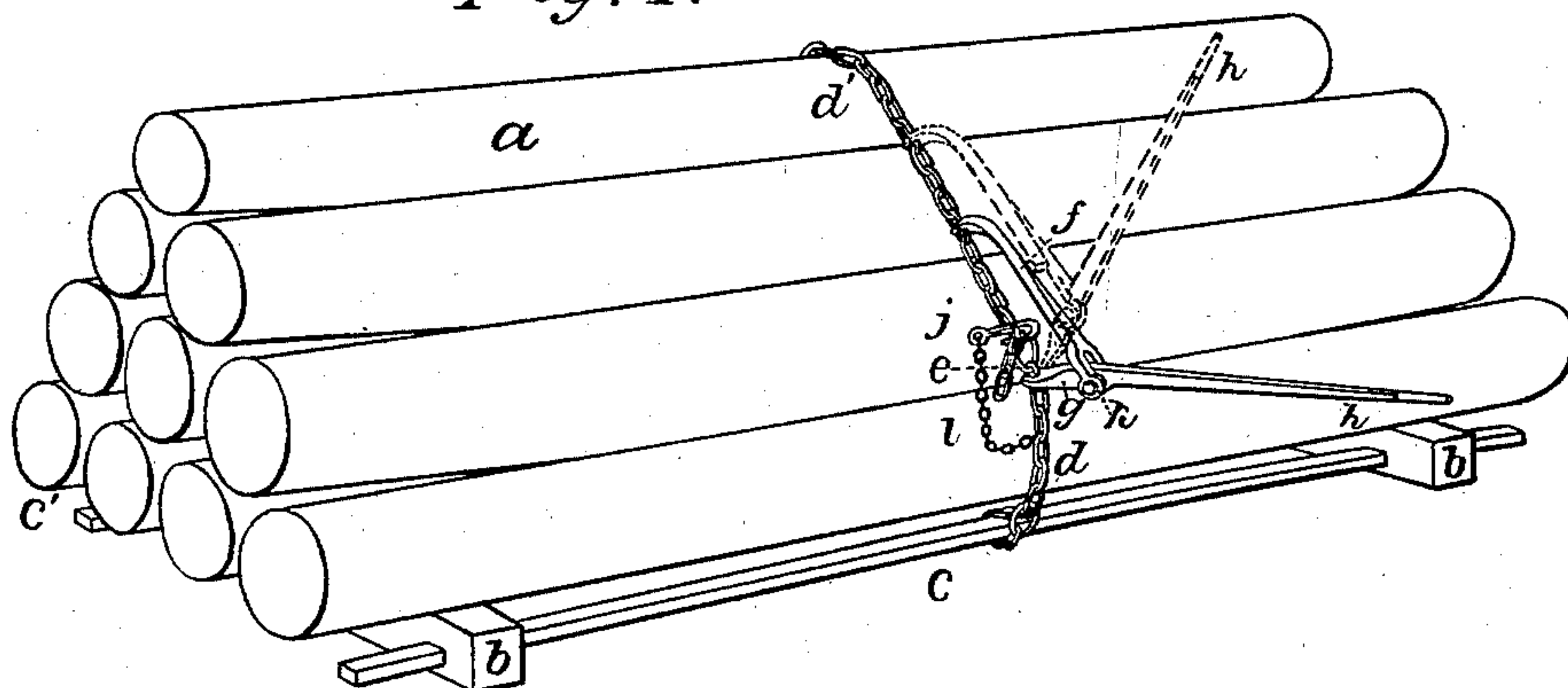


Fig. 2.

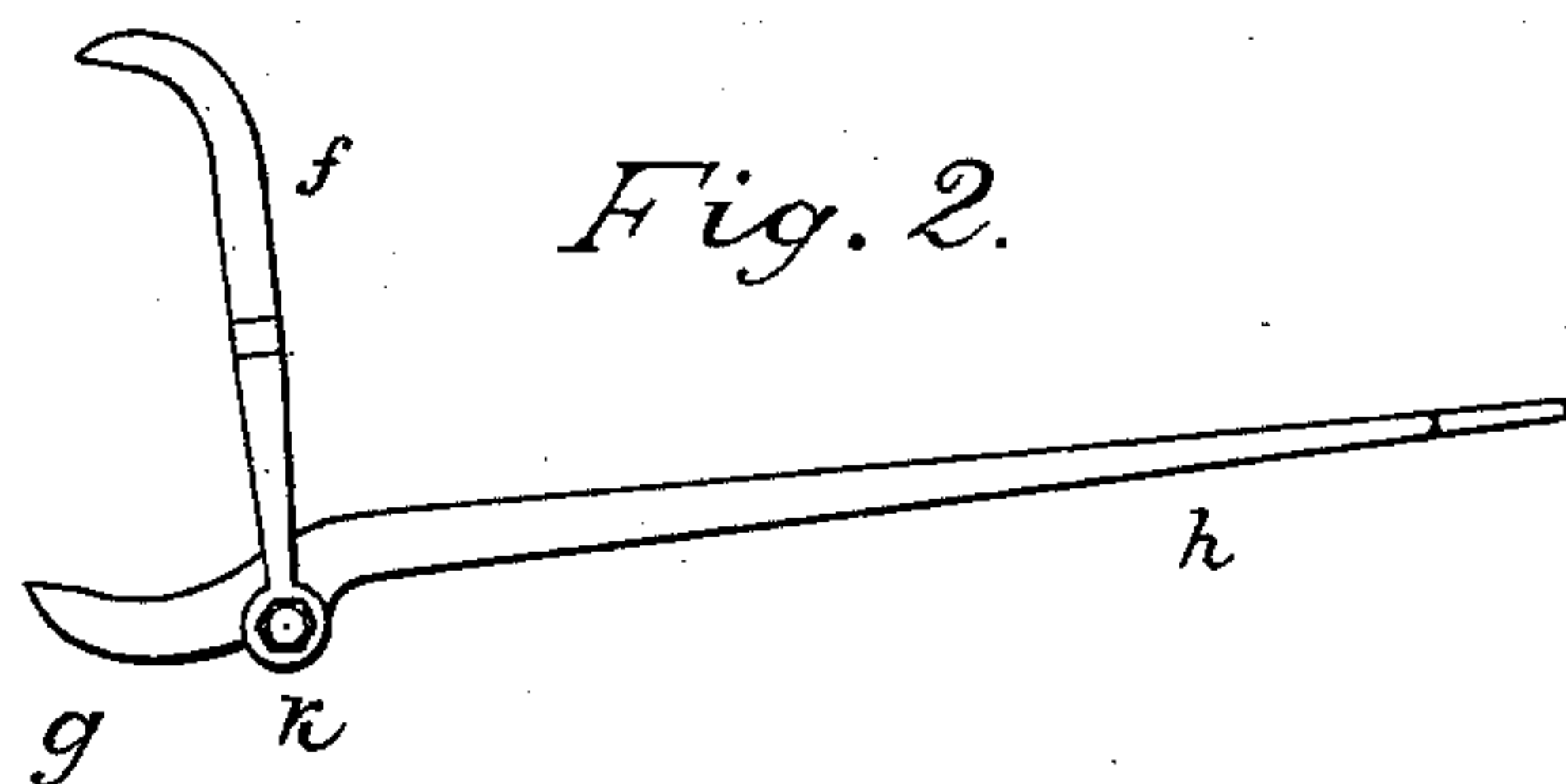


Fig. 3.

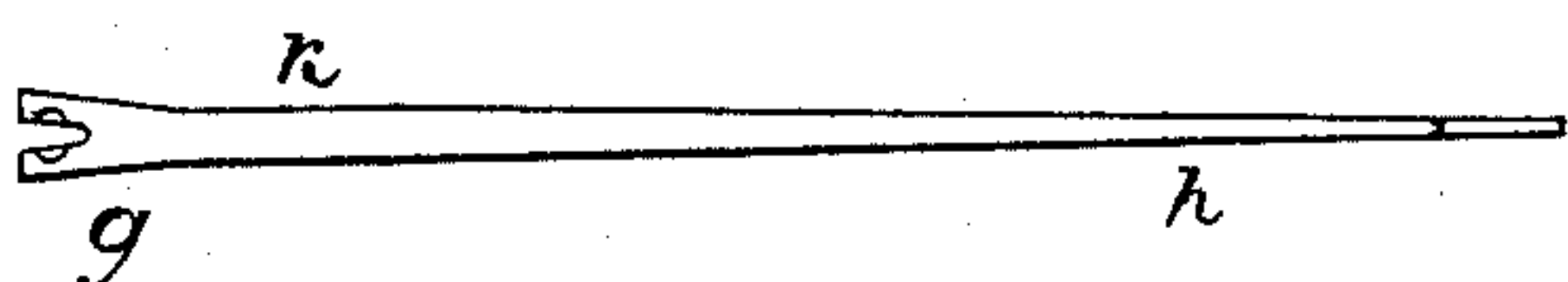


Fig. 4.

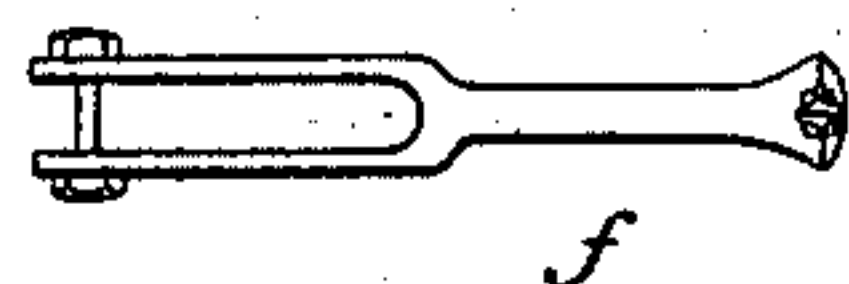
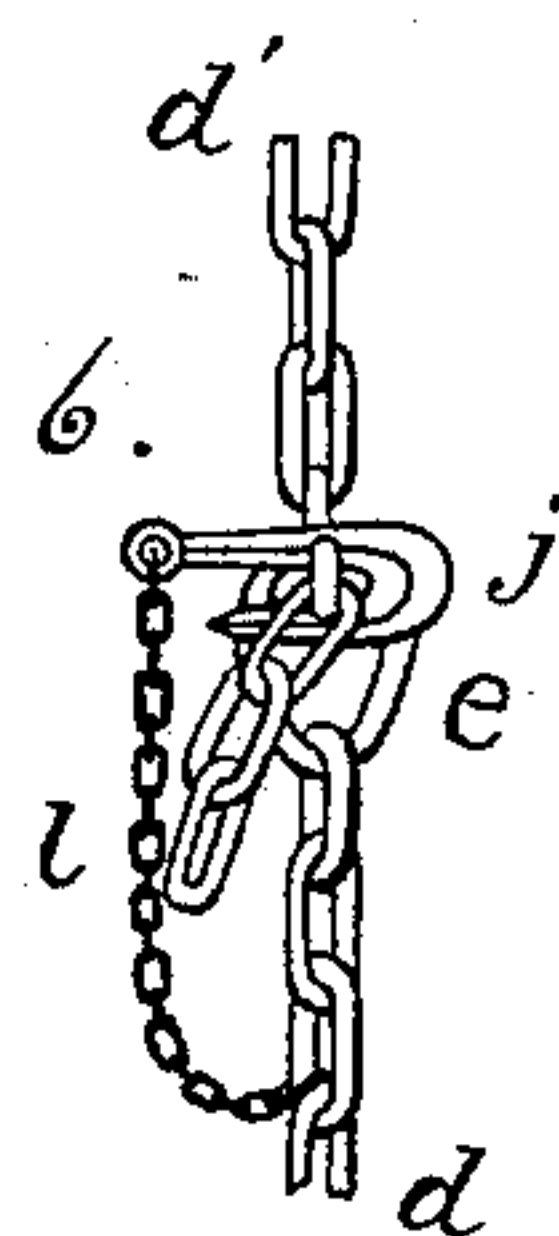


Fig. 5.



Fig. 6.



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UNITED STATES PATENT OFFICE.

THOMAS NICKELS, OF EAST SAGINAW, MICHIGAN, ASSIGNOR OF ONE-HALF
TO PHILLIP H. KETCHAM, OF SAME PLACE.

BINDING TOOL AND CHAIN.

SPECIFICATION forming part of Letters Patent No. 302,277, dated July 22, 1884.

Application filed March 14, 1884. (No model.)

To all whom it may concern:

Be it known that I, THOMAS NICKELS, a citizen of the United States, residing at East Saginaw, Saginaw county, State of Michigan, have
5 invented a new and useful Binding-Tool and Method of Binding, of which the following is a specification.

My invention relates to improvements in binding-tools and methods of binding to facilitate the taking up of the slack of the chain in
10 binding a load of logs or other merchandise and fastening the same; and the objects of my invention are to provide a tool that can easily be detached from the chain after the operation of binding is completed, and one in which
15 the power expended by the operator is greatly increased by the lever principle upon which it is constructed, and which is simple in construction and quickly and easily operated,
20 and when removed from the chain can be used for binding other loads and leave the binding intact; and, also, a method of fastening the binding-chain, which can be quickly and easily loosened without the use of the
25 binding-tool. These objects I attain by the tool or implement and method of binding illustrated in the accompanying drawings, which make a part of this specification.

In the drawings, Figure 1 is a perspective
30 view of a load of logs, showing the application of the tool to the chain in the act of binding, and the method of fastening the chain. Fig. 2 is a side view of the tool. Fig. 3 is a top view of the lever to which the power is applied. Fig. 4 is an under side or bottom
35 view of the hook which engages with the slack-chain. Fig. 5 is the chain-hook with which the operation of binding is completed. Fig. 6 is a detail and enlarged view of the method of
40 fastening the binding-chain.

Similar letters refer to similar parts throughout the several views.

A represents a load of logs on the bunks or
45 holsters *b b*, which are disposed on runners, wheels, or car-trucks, as the case may be, and connected by the sway-bars *c c'*, one at either end of the bunks. On one sway-bar or its equivalent is attached a short chain,

d, on the loose end of which is a ring, *e*, and an auxiliary chain, *l*, to which is attached the
50 chain-hook *j*. To the other sway-bar or its equivalent is attached a long chain, *d'*, which is thrown over the load in the act of binding.

g h represent the lever, to which the power is applied at *h*.

f represents the hook which engages with
55 the long chain *d'*, and which is hinged or jointed to the lever *g h* at *k*—a point much nearer to the claw end *g* than to the handle end *h*—thus multiplying the power applied. In the
60 act of binding, after the chain *d'* is thrown over the load, its end is passed through the ring *e* and the chain pulled taut. The claw end of the lever *g h* is then applied to a link in the chain *d* near the ring *e*, and the tool
65 placed in the position indicated by the dotted lines, the claw in the end of the hook *f* engaged with a link in the chain *d'*, and the lever *g h* brought by the operator to the position shown by the full lines, thus taking all the slack
70 out of the chain and springing the sway-bars *c* and *c'* up to the load, the spring of which keeps the chain in strain as the load settles together. The chain-hook *j*, which is attached to the chain *d* by the auxiliary or branch chain
75 *l*, is then placed across the ring *e* on a link in the chain *d'*, after the slack taken up by the tool has been pulled through the ring *e*, which secures the chain *d'*, and the tool *f g h* is removed, which completes the operation of binding.
80

The operation of unbinding is accomplished by knocking out the chain-hook *j*, which loosens the chain *d'* and allows the logs to be
85 rolled from the bunks *b b*.

I am aware that levers with hook attachments have been used for different purposes and of different construction; but

What I claim as my particular invention, and desire to secure by Letters Patent, is—
90

1. The tool or implement *f g h*, constructed of the lever *g h*, slotted at one end to engage with the chain; and the hook *f*, which is slotted at one end to engage with the chain, and is hinged or jointed by the other end to the
95 lever *g h* nearer to the slotted end than to the

handle end, under the arrangement and for the purpose substantially as shown and described.

2. The combination of the chain-hook *j* on
5 the end of the auxiliary chain *l*, and the auxiliary chain *l* with the short binding-chain *d*, on the end of which is the ring *e*, under the

arrangement and for co-operation substantially as shown and described.

THOMAS NICKELS.

Witnesses:

W. E. ALLINGTON,
C. A. MOORES.