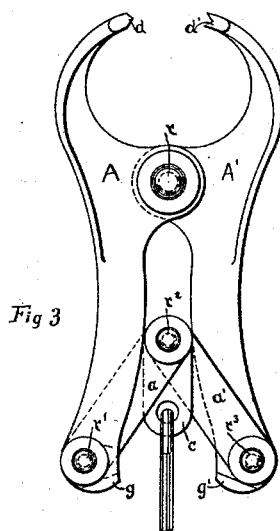
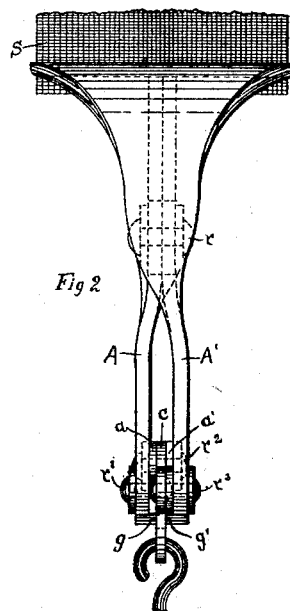
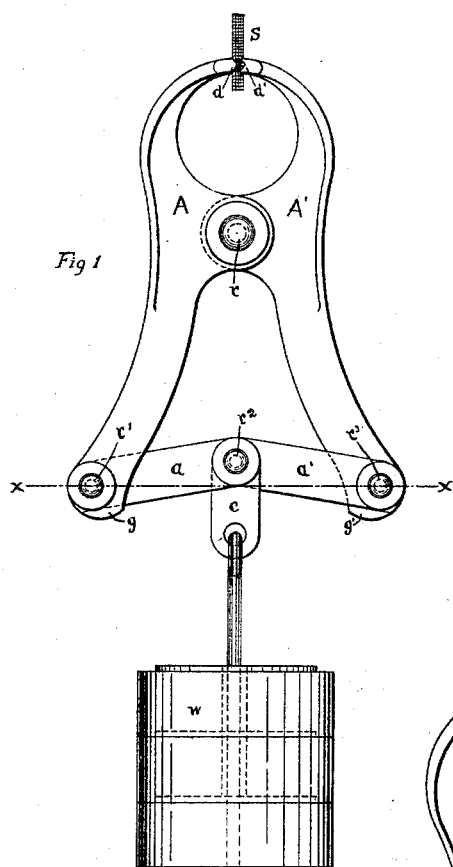


(No Model.)

S. THURSTENSEN.  
CLAMP FOR KNITTING MACHINES.

No. 456,710.

Patented July 28, 1891.



WITNESSES:

*Geo. Wren.*  
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INVENTOR

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# UNITED STATES PATENT OFFICE.

SOREN THURSTENSEN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF  
ONE-HALF TO CHARLES H. EMERSON, OF BROOKLYN, NEW YORK.

## CLAMP FOR KNITTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 456,710, dated July 28, 1891.

Application filed April 14, 1891. Serial No. 388,875. (No model.)

*To all whom it may concern:*

Be it known that I, SOREN THURSTENSEN, of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Clamps for Knitting-Machines, of which the following is a specification.

The object of my invention is to attach a clamp and weight to the fabric knit to prevent the same from being lifted up when the needles are raised in the machine.

In the accompanying drawings, Figure 1 represents a front elevation of the clamp when attached to the fabric. Fig. 2 is a side elevation of the same, and Fig. 3 represents the position of the clamp as held before attaching it to the fabric.

In said drawings,  $A A'$  are two levers swinging freely on the pivot  $r$ , with the end  $d$  of lever  $A$  beveled to fit the groove  $d'$  in the lever  $A'$ . The object of this is to give the clamp a better hold on the fabric. On the other ends of the levers  $A A'$  are connected the arms  $a a'$  and the link  $c$ . Said arms and link are secured with washers and pivots loosely riveted up to allow the arms and link to swing freely on the pivots  $r' r^2 r^3$ . The long arms of the levers  $A A'$  are bent outward, leaving space enough between so as to allow the arms  $a a'$  and link  $c$  to swing freely between them. This is shown clearly in Fig. 2.

From the link  $c$ , Fig. 1, is suspended a weight  $w$ . This weight serves to tighten the grip on the fabric and also to pull the fabric down on the needles.

At the end of each of the long arms of levers  $A A'$  is put the stops  $g g'$ , projecting inward about the thickness of the arms  $a a'$ , as best shown in Fig. 2. These stops are to pre-

vent the arms  $a a'$  from being pulled so far down as to spring the levers  $A A'$  and letting the center of pivot  $r^2$  below the line  $x x$  and thus destroying the effective work of the clamp.

$S$  represents the knitted fabric, which is held securely between the ends  $d d'$  of levers  $A A'$ , as shown.

The operation of the device described is as follows: With one hand the long arms of the levers  $A A'$  are pressed together, leaving it in the position shown in Fig. 3. With the other hand the fabric is placed between the ends  $d d'$  of said levers. Releasing the pressure on the long arms, but still retaining hold on the clamp, the weight will pull the arms  $a a'$  down, and thus by swinging the levers  $A A'$  a firm grip is secured on the fabric.

Having thus fully described my invention, I do claim—

1. In a clamp, the combination of the levers  $A A'$  with the movable arms  $a a'$ , the link  $c$ , and the weight  $w$ , all substantially as specified.

2. In a clamp, the combination of the lever  $A'$  with the groove  $d'$  in one end of said lever, and the lever  $A$ , having the end  $d$  beveled to fit the groove  $d'$  in lever  $A'$ , said levers having the stops  $g g'$ , projecting inward underneath the arms  $a a'$ , and said arms  $a a'$ , all substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SOREN THURSTENSEN.

Witnesses:

GEO. WREN,

CONRAD S. JACOBS.