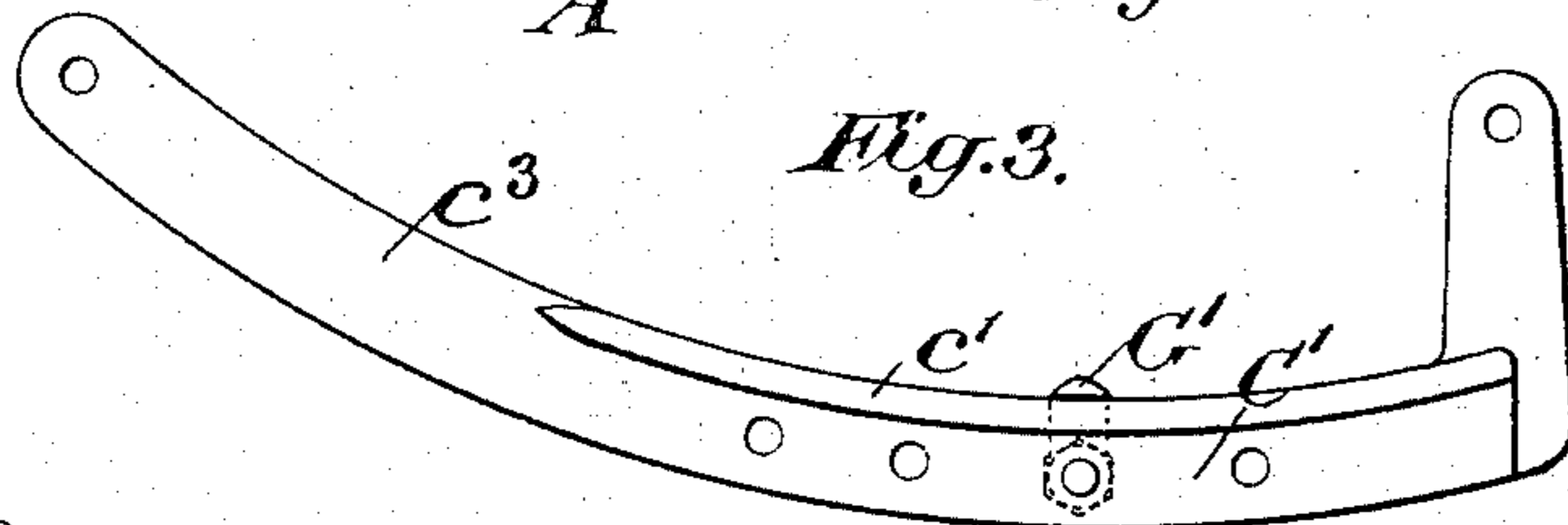
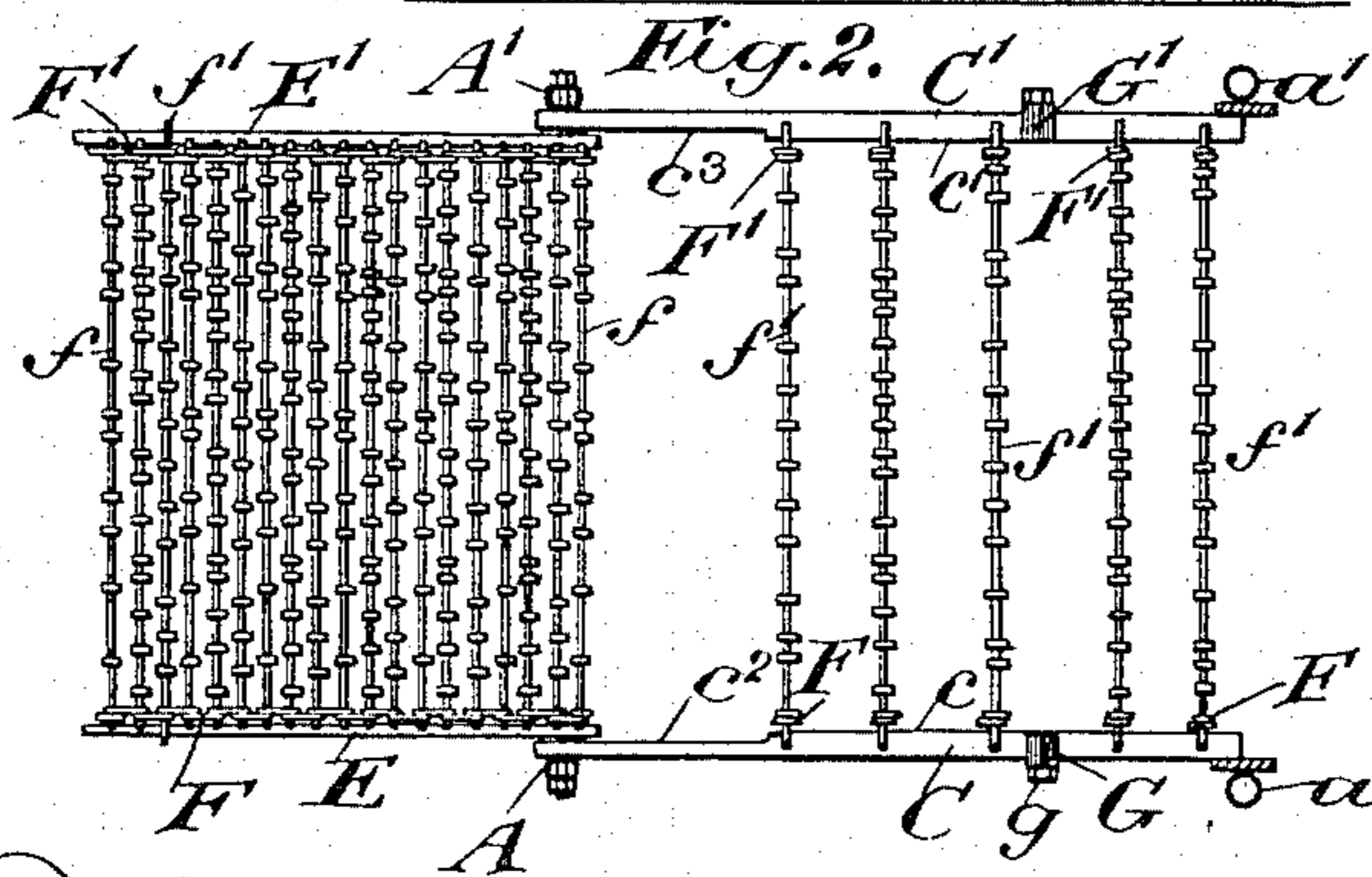
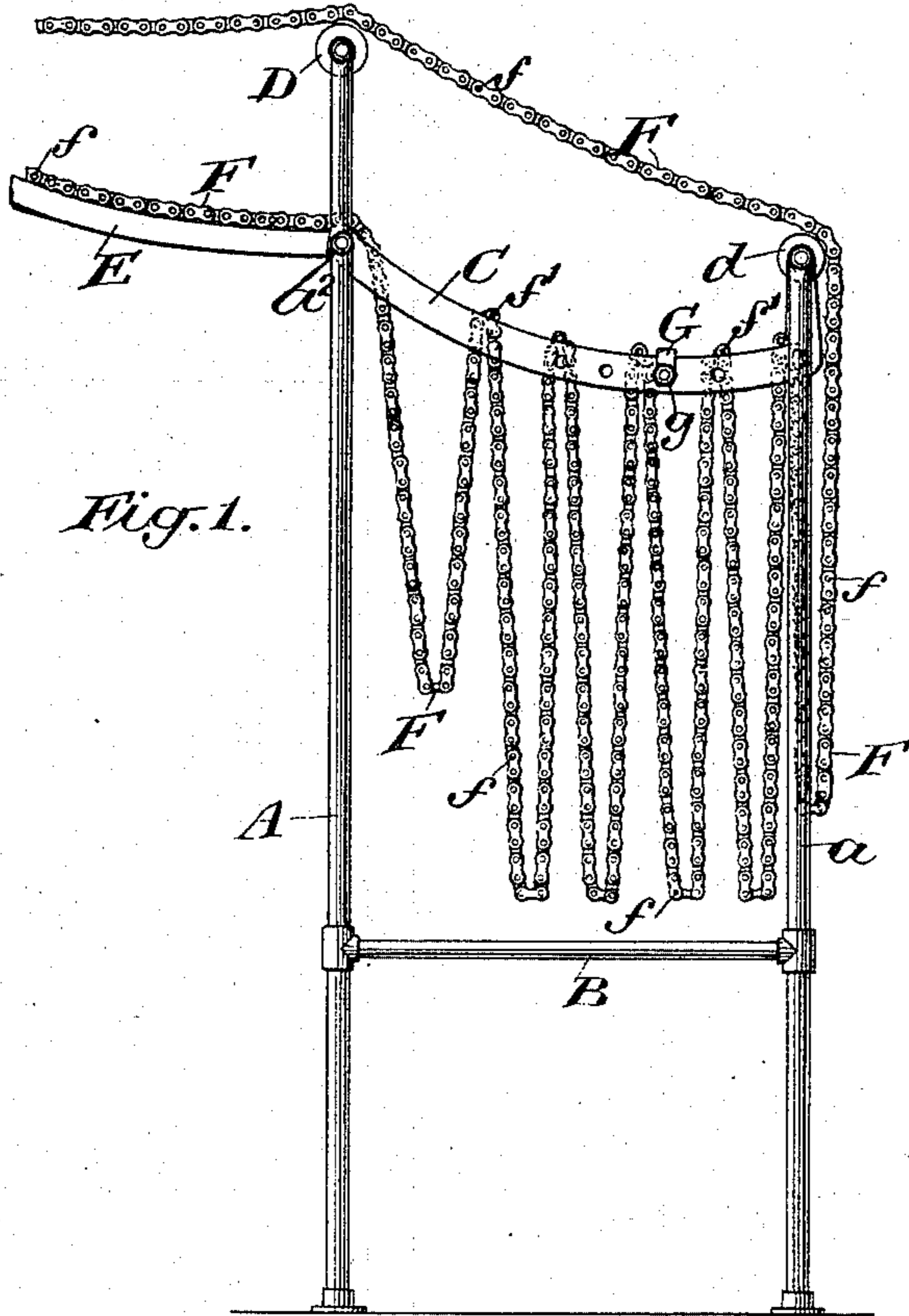


(No Model.)

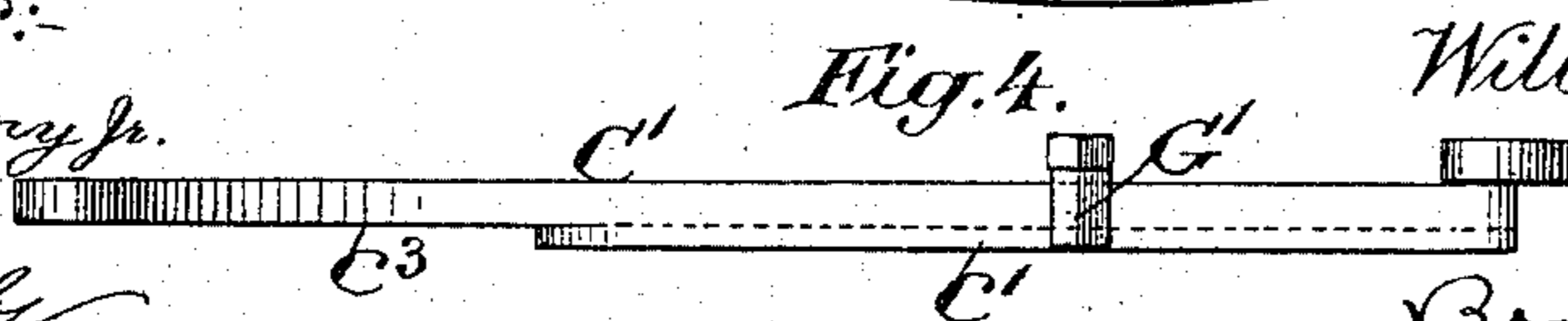
W. J. LUTTON.  
PATTERN CHAIN SUPPORT FOR LOOMS.

No. 573,279.

Patented Dec. 15, 1896.



Witnesses:-  
George Barry Jr.  
C. E. Combs.



Inventor:-  
William J. Lutton  
by attorneys  
Brown & Ward

# UNITED STATES PATENT OFFICE.

WILLIAM J. LUTTON, OF PATERSON, NEW JERSEY.

## PATTERN-CHAIN SUPPORT FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 573,279, dated December 15, 1896.

Application filed September 27, 1895. Serial No. 563,824. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM J. LUTTON, of Paterson, in the county of Passaic and State of New Jersey, have invented a new and useful Improvement in Pattern-Chain Supports for Looms, of which the following is a specification.

My invention relates to an improvement in pattern-chain supports for looms in which provision is made for suspending the chain in a succession of depending loops intermediate of the part of the chain which, for the time being, is in action to control the operation of the needles.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a view of the support in side elevation, showing the position of the chain thereon. Fig. 2 is a top plan view, partly in section. Fig. 3 is an enlarged view in detail, in side elevation, of the supporting-rails; and Fig. 4 is a top plan view of the same.

The support comprises four standards, those at the rear being denoted, respectively, by  $A A'$  and those at the front being denoted by  $a a'$ , the standards being connected by low-down girders  $B$  and at their upper ends by the chain-supporting rails  $C C'$ , which extend, respectively, from the rear standard  $A$  to the front standard  $a$  and from the rear standard  $A'$  to the front standard  $a'$ . The rear standards are taller than the front standards and carry at their upper ends rollers  $D$  for the reception of the links at the opposite edges of the pattern-chain. The side rails  $C C'$  from their connection at  $a^2$  with the rear standards curve downwardly and forwardly to a point between the front standards  $a a'$ , and thence extend upwardly to the tops of the standards  $a a'$ , to which they are connected, and are there provided with rollers  $d$  for the reception of the links at the opposite edges of the pattern-chain. The supporting-rails  $C C'$  are each provided with inwardly-extending flanges  $c c'$ , along which the ends of certain of the cross-rods of the pattern-chain ride, the said flanges  $c c'$  being cut away, as shown at  $c^2 c^3$ , for a short distance from the rear

standards sufficiently to permit the cross-rods of shorter length to drop through.

To the rear of the standards  $A A'$  and forming a continuation of the side supporting-rails  $C C'$  at their rear ends are supports  $E E'$  sufficiently near together to retain the ends of the shorter, as well as the longer, cross-rods thereon during the passage of the chain from the roller or wheel, (not shown,) where the chain is brought into action.

The series of side links of the opposite edges of the pattern-chain are denoted, respectively, by  $F F'$ , the shorter cross-rods, which form the greater portion of the chain, by  $f$ , and the longer cross-rods, which are inserted at intervals throughout the length of the chain, by  $f'$ . As the chain travels along down the guides  $E E'$  to the point where the supporting side rails  $C C'$  are located the shorter cross-rods  $f$  are dropped between the cut-away portions  $c^2 c^3$  of the flanges on the side rails, while the longer cross-rods  $f'$  are carried along past the cut-away portions  $c^2 c^3$ , thereby holding the chain suspended at intervals and in such a manner that it will not be liable to become kinked and the cross-rods will not be liable to become displaced. As it passes off the ends of the flanges  $c c'$  at the front the chain is directed up and over the rollers  $d$ , thence to the rollers  $D$ , and thence to the roller or wheel, (not shown,) where the chain is brought into action.

In order to retard the downward sliding of the longer rods and the consequent tendency to slip off the ends of the flanges  $c c'$  before the previously-released loop is drawn up over the rollers  $d$ , I provide beveled or rounded faced stops  $G G'$ , which uprise from the upper faces of the flanges  $c c'$  in such a position that the ends of the longer cross-rods  $f'$  will be forced to ride over them during their travel. These stops  $G G'$  may be conveniently secured to the side rails by screws  $g$ , extending through depending flanges on the stops at the outside of the supporting-rings.

What I claim is—

The combination with the pattern-chain provided with cross-rods of varying lengths, of front and rear standards, and chain-sup-

porting rails extending downwardly and forwardly from the rear to the front standards, each of the said rails being provided with an inwardly-extending flange along which the  
5 longer of said cross-rods ride, the said flanges being cut away for a short distance from the rear standards sufficiently to permit the cross-

rods of shorter length to drop through, substantially as set forth.

WILLIAM J. LUTTON.

Witnesses:

THOMAS W. RANDALL,  
CHARLES F. MOREHEAD.