

(No Model.)

J. S. LUDLAM & J. A. CLAUS.

A. E. G. LUDLAM, Administratrix of J. S. LUDLAM, Deceased.

THREAD CUTTING ATTACHMENT FOR LOOM TEMPLES.

No. 591,857.

Patented Oct. 19, 1897.

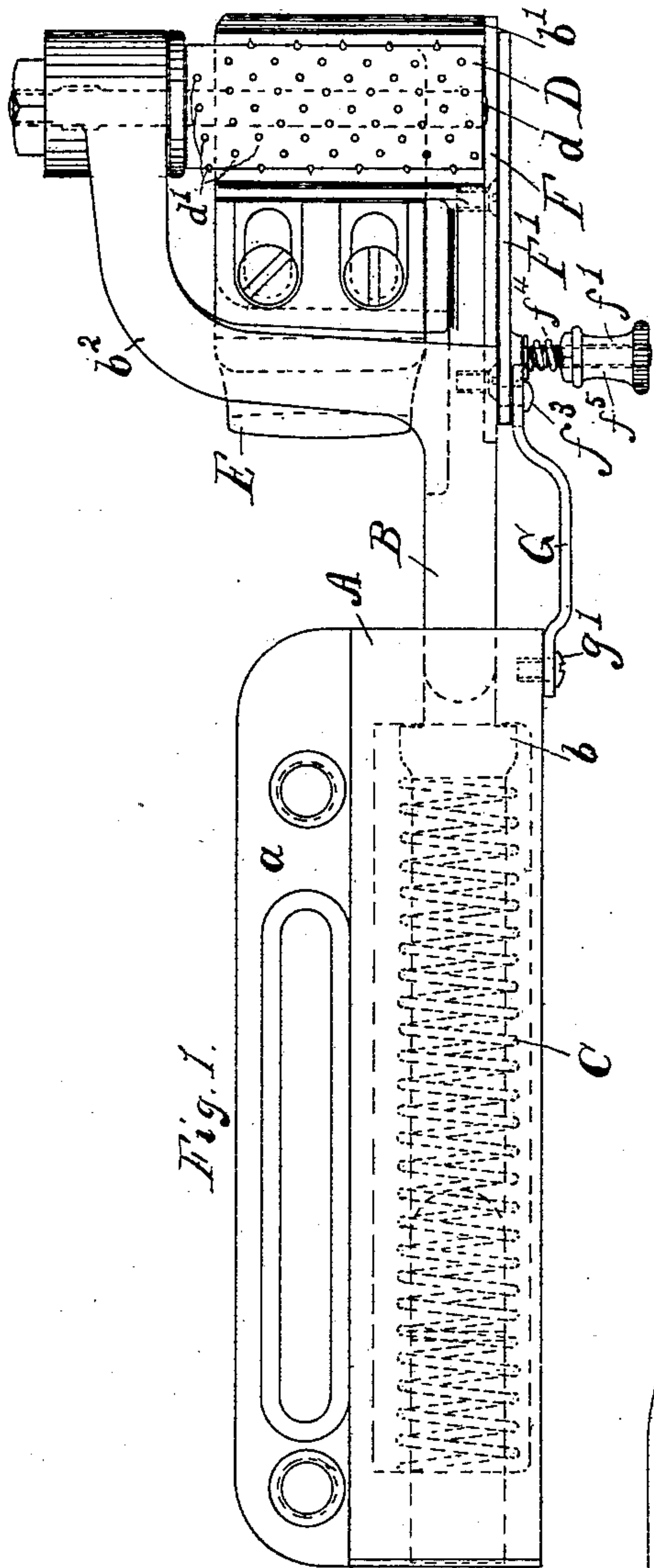


Fig. 1.

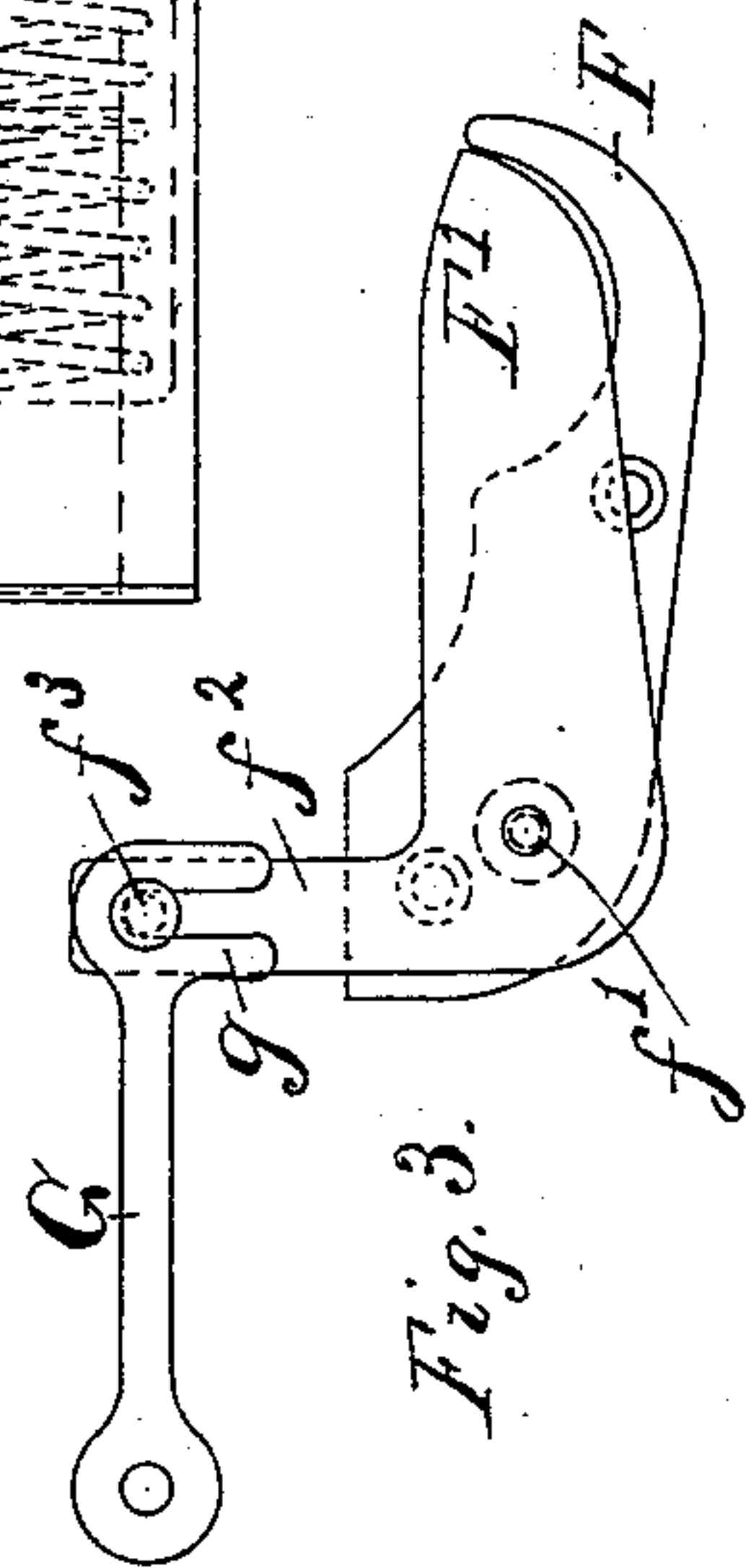


Fig. 3.

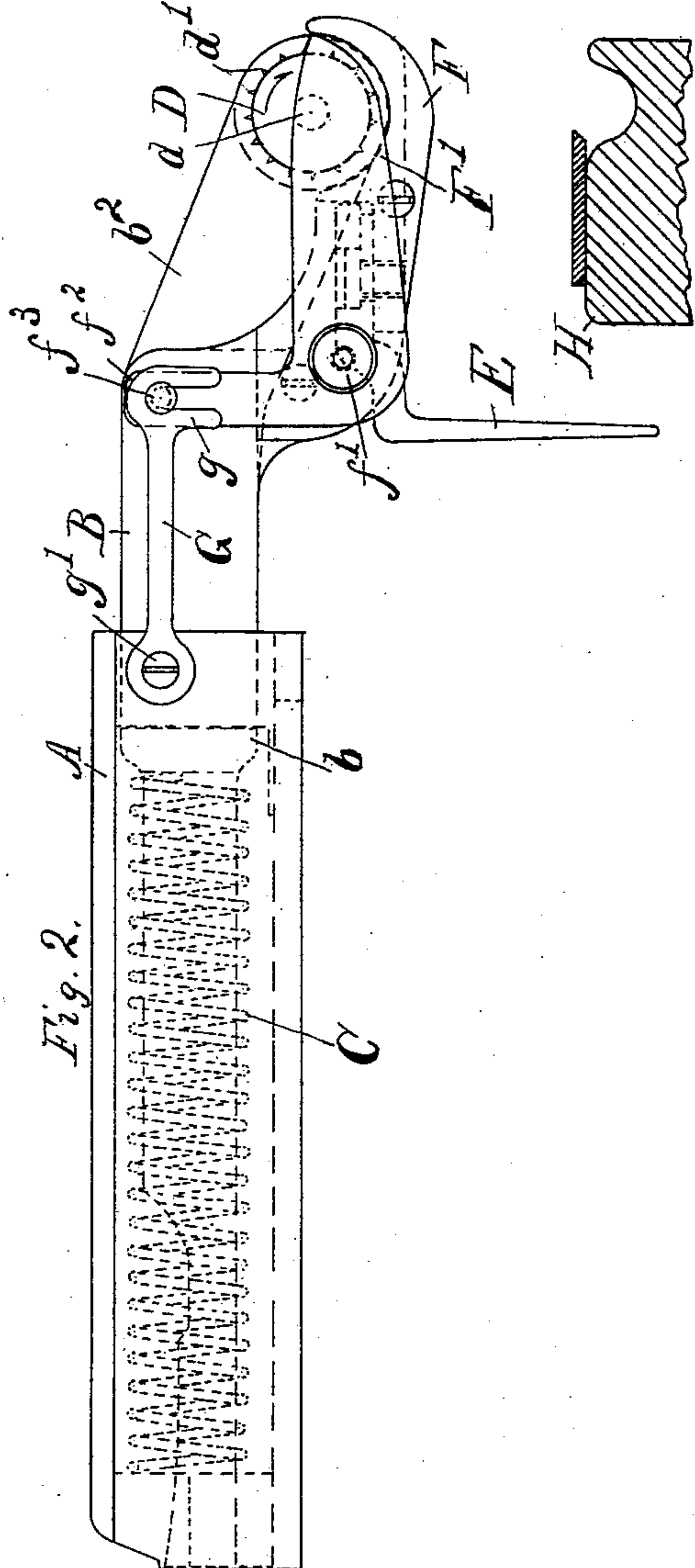


Fig. 2.

WITNESSES

Fred W. Ireland

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INVENTORS

Joseph S. Ludlam,
+ Joseph A. Claus,
By Albert M. Moore,
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UNITED STATES PATENT OFFICE.

JOSEPH S. LUDLAM AND JOSEPH A. CLAUS, OF LOWELL, MASSACHUSETTS;
ANNABELLA E. G. LUDLAM ADMINISTRATRIX OF SAID JOSEPH S. LUDLAM, DECEASED, ASSIGNORS, BY MESNE ASSIGNMENTS, TO THE DRAPER COMPANY, OF HOPEDALE, MASSACHUSETTS.

THREAD-CUTTING ATTACHMENT FOR LOOM-TEMPLES.

SPECIFICATION forming part of Letters Patent No. 591,857, dated October 19, 1897.

Application filed September 18, 1895. Renewed July 14, 1897. Serial No. 644,570. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH S. LUDLAM and JOSEPH A. CLAUS, citizens of the United States, residing at Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented a certain new and useful Improvement in Thread-Cutting Attachments for Loom-Temples, of which the following is a specification.

Our invention relates to thread-cutting attachments for loom-temple, and is adapted to cut the ends of filling-threads or weft-threads which are left hanging from the selvage of the cloth in the weaving of the same; and said invention consists in the devices and combinations hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a plan of a loom-temple provided with our improvement; Fig 2, an outside elevation of the same and a vertical section of the race-board of the lay at right angles to the path of the shuttle; Fig. 3, a similar elevation of our improvement detached.

The temple represented in the drawings consists of the case A, having an attaching-plate or slotted flange *a*, by means of which said case is attached to the breast-beam of a loom; the temple-bar or temple-shank B, having an annular shoulder or collar *b*, between which and the front of said case a spiral spring C is compressed to force said bar B toward the fell or making edge of the cloth, said collar *b* also limiting the movement of said bar toward said fell; the pod *b'* or presser; temple-roll D and its spindle or pin *d*; the heel E, adjustably secured to the bar and adapted to be struck by the lay to move the pod *b'* and temple-roll D toward the breast-beam the same distance the cloth is moved back by the blow of the lay; the temple-roll being rotated in the direction shown by the arrow marked thereon by the cloth pulling on the teeth *d'* of said roll as said roll is forced by the spring C toward the lay H after each beating up; these parts being all of the usual construction and operation, as found in the well-known "Dutcher" loom-temple, except

that the temple-head (or rear end of the temple-bar and the parts of the temple supported thereby) is believed to be our invention and is claimed in another application filed herewith, but is not herein claimed, said application being Serial No. 562,850. In said other application and herein the bar B is represented as provided with a laterally and backwardly extending arm *b²*, which supports the spindle *d* of the temple-roll parallel with the pod or cloth-presser *b'*, and said pod is secured at its outer end to said bar, the selvage of the cloth being introduced to the temple between said roll and pod and being held at the outer end of said pod and flush with the outer side of said bar. It will be understood, however, that our thread-cutting attachment herein described can be applied to any loom-temple capable of holding the selvage of the cloth being woven at the extreme outer side of the temple-head. Heretofore a stationary washer having a cutting edge has been secured to the cover, (commonly used above the temple-roll,) while another cutter or toothed blade has been secured to the temple-roll in such a manner as to cause the teeth of said last-named blade to roll past said cutting edge when said temple-roll moves in the direction above indicated, but this method is objectionable because of the danger of tearing the cloth by the teeth *d'* of the temple-roll or bending said teeth *d'* when the rotation of said roll is resisted by one or more threads between the cutters and because of the increased strength required in the spring C.

We secure to the outer face or side of the pod *b'* a stationary vertical blade F, the cutting edge of which is curved to the shape approximately of the upper surface or trough of said pod. The other or movable blade F' of our device is pivoted at *f'* on the temple-head and is provided with an upwardly-extending arm *f²*, having a lateral projection or stud *f³*, adapted to be engaged by a hook *g* on one end of a link G, the other end of said link being pivoted at *g'* on the case A in such a manner that by raising the hook *g* of said link the temple-bar and the parts sup-

ported thereby may be separated from the case A when necessary. A spiral spring f^4 may be interposed between the head f^5 of the pivot f' and the movable blade F' to hold
 5 said movable blade in contact with the blade F . The shear-blades $F F'$ are normally open sufficiently to allow the weft ends or thread to pass between them and are closed to cut
 10 off said threads when the lay H, in beating up, strikes the heel, owing to the resistance of the link which prevents the yielding of the upper end of the arm f^2 .

It will be seen that the action of our device does not depend on the movement of
 15 the temple-roll, but is entirely independent thereof, and therefore cannot injuriously affect the operation of said roll on said cloth, and that said action is positive, being due to the beating-up stroke of the lay and not to
 20 the action of a spring.

We claim as our invention—

1. A loom-temple having a reciprocating temple-bar and carrying a knife which is operated by the reciprocations of said bar to
 25 cut the filling end outside of the selvage, substantially as specified.

2. A temple-case, a reciprocating bar free to slide thereon and having fixed to it the stationary blade of a thread-cutting mechanism and having also pivotally mounted on
 30 it the movable blade of said cutting mechanism, combined with a connection between said movable blade and said case, whereby the said movable blade is actuated to cut the
 35 weft end as the said bar is moved into said case, substantially as described.

3. A thread-cutting mechanism consisting of a blade fixed to the head of a reciprocating bar of a loom-temple, and a second mov-

able blade pivoted to the shank of said bar 40 and provided with an extended arm, combined with a link adapted to connect said pivoted blade to a stationary part of the loom, as and for the purposes set forth.

4. The reciprocating bar of a loom-temple, 45 and a movable cutting-blade pivoted on said bar, and provided with an extended arm having a projecting stud, combined with a link pivoted on a fixed part of the loom and having a slot to embrace said stud, substantially 50 as described.

5. The combination with the reciprocating bar of a loom-temple having a fixed cutting-blade, and a movable cutting-blade mounted on said bar, of a spring to keep said movable 55 blade pressed toward said fixed blade, and means connected to said movable blade and to a fixed part of the loom to actuate said blades to cut the filling end, substantially as described. 60

6. The reciprocating bar of a loom-temple, its attached pod, a cutting-blade fixed to said pod and having a concaved edge conforming substantially to the shape of the inner face of the pod, combined with a movable cutting- 65 blade mounted on said bar and with means to actuate said movable blade to cut the weft end, substantially as described.

In witness whereof we have signed this specification, in the presence of two attesting 70 witnesses, this 6th day of September, A. D. 1895.

JOSEPH S. LUDLAM.
 JOSEPH A. CLAUS.

Witnesses:

ALBERT M. MOORE,
 FRED F. PACKARD.