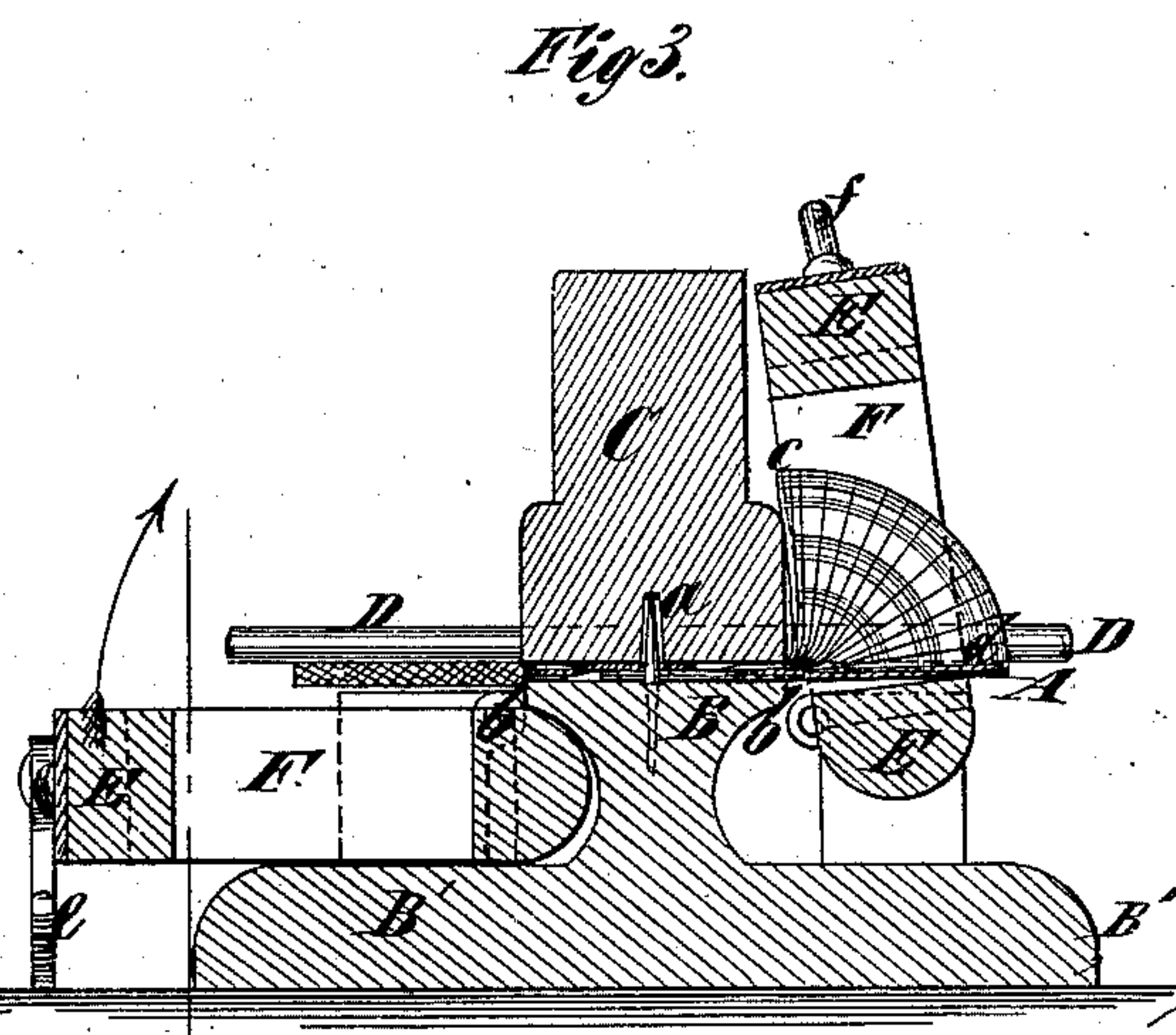
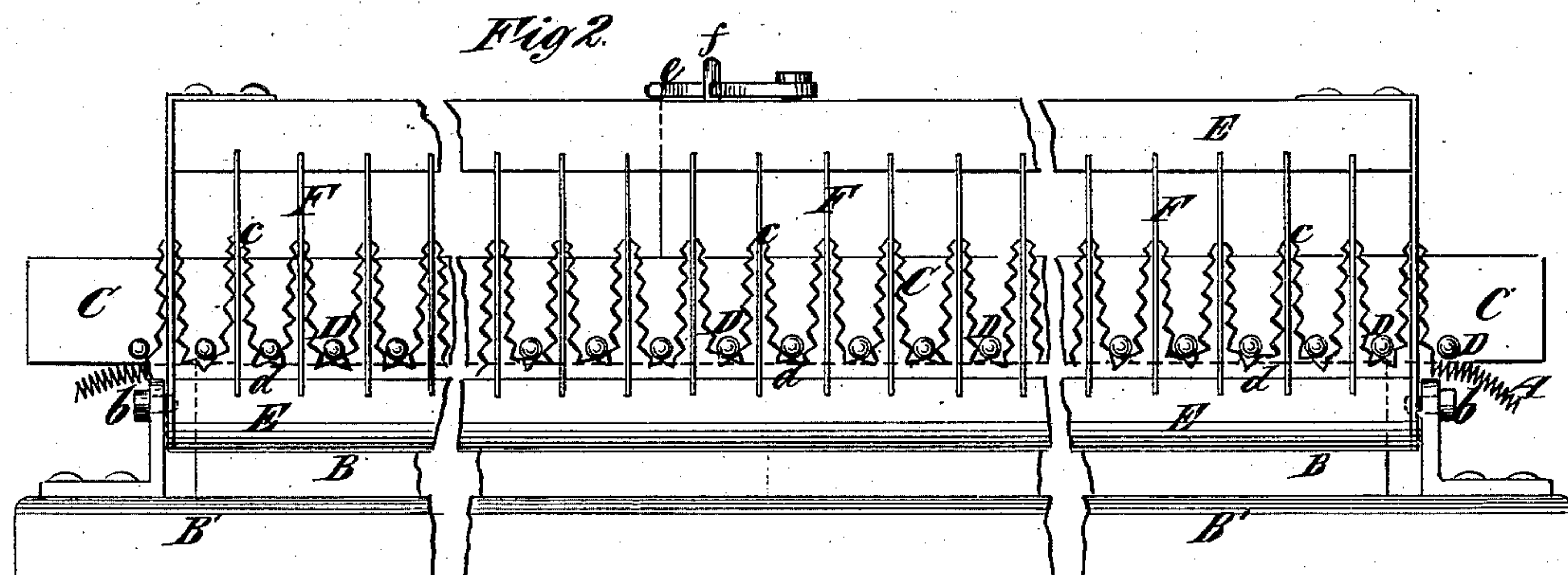
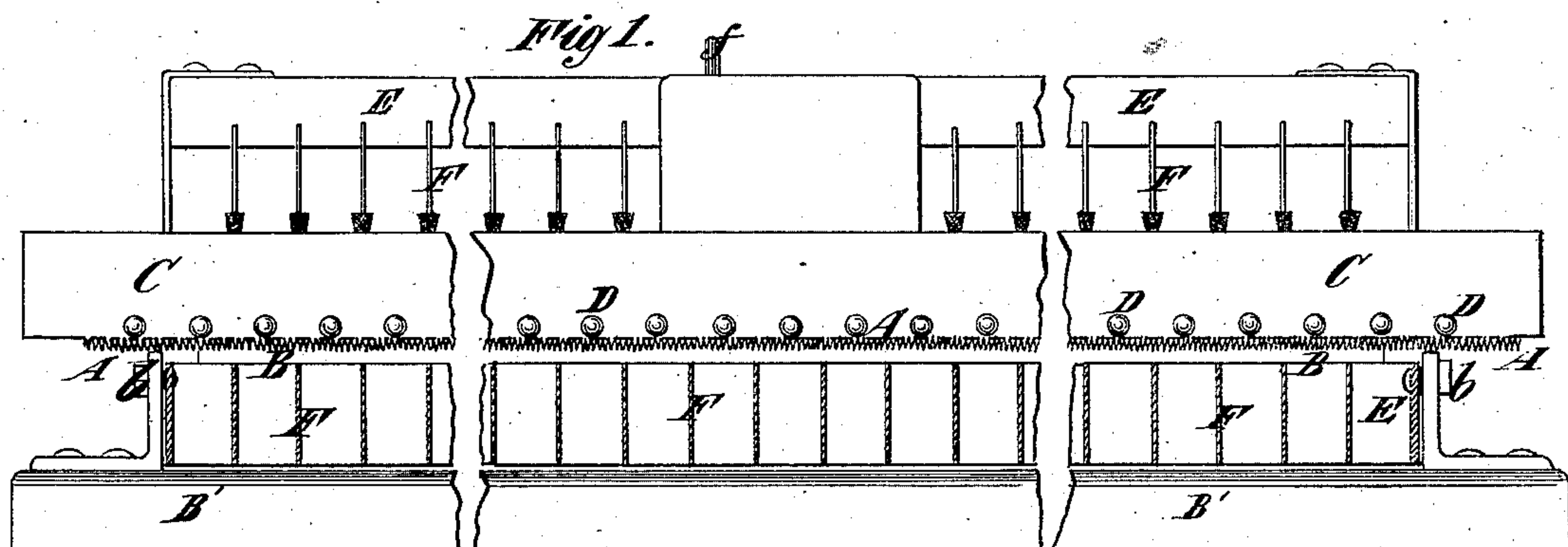


G. G. BATES.  
Machine for Making Ruche.

No. 232,437.

Patented Sept. 21, 1880.



Witnesses:

John Becker,  
Fred Haynes

Inventor

George G. Bates,  
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# UNITED STATES PATENT OFFICE.

GEORGE G. BATES, OF NEW YORK, N. Y.

## MACHINE FOR MAKING RUCHES.

SPECIFICATION forming part of Letters Patent No. 232,437, dated September 21, 1880.

Application filed December 31, 1879.

*To all whom it may concern:*

Be it known that I, GEORGE G. BATES, of the city, county, and State of New York, have invented certain new and useful Improvements in Machines for Making Ruches, of which the following is a specification.

My invention, while it is adapted for making ruches of various forms, is particularly intended for use in making ruches in which the transverse section presents a flat portion or band from which the flutes project entirely on one side; and it consists in the combination of means of clamping or holding the band or one edge of the crimped, plaited, or other full-edged material of which a ruche is to be formed, and two sets of creasing or fluting devices, of which those of one set are arranged to swing between those of the other set, for the purpose of producing the fluting of the ruche.

Both of said series of creasing devices may consist of pins, pegs, rods, or sticks, or sharp blades; or one series may consist of pins, pegs, rods, or sticks, and the other of sharp blades, and the bed or support may be provided with upwardly-extending pins or points, which penetrate the material and hold it in position.

In the accompanying drawings, Figure 1 represents a side elevation of a portion of a double machine embodying my invention, in which are two swinging frames, one upon each side of the bed or support, and one of which is shown in section before it is swung up to form the flutes. Fig. 2 represents a side elevation of a portion of said machine with the frame swung up to form the flutes; and Fig. 3 represents a transverse section of such machine.

Similar letters of reference designate corresponding parts in all the figures.

The material from which the ruche is to be made is formed in strips of full or closely and deeply crimped goods, as shown by the strip A in Fig. 1. A band or flat portion is formed along one edge, either by flattening the crimps alone or by fastening a band upon one or both sides of such flattened portion by adhesive material or by stitching.

B C designate devices between which the ruche is held in a horizontal position, with the portion thereof which is to form the flutes overhanging or extending beyond the edge thereof. In the present instance the part B, which con-

stitutes a bed or support, is made to hold two ruches, which project from it on opposite sides, and it is provided with a broad foot, B', to afford a stable support. The part C constitutes a cap-piece or strip of the same width as the top surface of the bed or support, and which is made detachable and removable to permit a ruche or two ruches to be placed in position on the bed or support. In the top of the bed or support may be inserted upwardly-projecting pins or points *a*, which penetrate the ruches and hold them securely, and these pins or points may be of considerable length, as here represented, and the cap-piece or strip C provided with holes for said pins or points in its under surface.

D designates a number of creasing devices, represented as consisting of round pins projecting, in this instance, from the cap-piece or strip C in an approximately horizontal position at regular intervals apart over the ruche A. When a double machine, as is here represented, is constructed, the creasers D project on each side of the cap-piece or strip C.

E designates frames which are hinged at their ends to the bed or support at *b*, and which have arranged at regular intervals within them, and intermediate between the creasing devices D, other creasing devices, F, which, in the present instance, are composed of blades or plates. These frames, with their creasers, are shown as adapted to be swung from an approximately horizontal to an approximately vertical position; but they may be made to swing through any number of degrees more or less than a quarter circle.

As the frames E are swung upward the creasers F draw the ruche upward between the stationary creasers D and form flutes, as clearly represented in Figs. 2 and 3.

As the creasers D are round pins and the creasers F blades or thin plates, the flutes so formed along one edge of the ruche will present a series of sharp bends, *c*, and along the other edge a series of rounded curves, *d*; but, if desirable, the stationary creasers might consist of blades, and the other series of pins; or both might consist of either pins or blades.

As here represented one of the frames E is provided with a hook, *e*, and the other with a catch, *f*, with which the hook may engage, so



that when swung upward the two frames may be secured to prevent their return. The ruches are then slightly steamed by means of a jet, in order to set the flutes of the ruches, and after  
5 being allowed to dry for a proper length of time may be removed from the machine.

The bed or support B, cap-piece C, and frames E may be made of any length, so as to flute a considerable amount of ruche at one operation, and in Figs. 1 and 2 these parts are represented as broken away to reduce the length  
10 of the machine in the drawings.

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

15 1. The combination, with clamping devices for clamping or holding the band or straight edge of the material to form the ruche, of two

sets of creasing or fluting devices, of which those of one set are arranged to swing between those of the other set, for the purpose of producing the fluting of the ruche, substantially  
20 as specified.

2. The combination, with the bed or support B and the removable cap-piece C, provided with creasers D, of the swinging frame E, provided with creasers F, which, when the frame  
25 is swung, pass between the first said creasers and stretch or draw the ruche over them to form flutes, substantially as specified.

GEO. G. BATES.

Witnesses:

FREDK. HAYNES,  
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