

No. 626,974.

Patented June 13, 1899.

J. P. CRONIN.

CREEL FRAME.

(Application filed Dec. 18, 1898.)

(No Model.)

2 Sheets—Sheet 1.

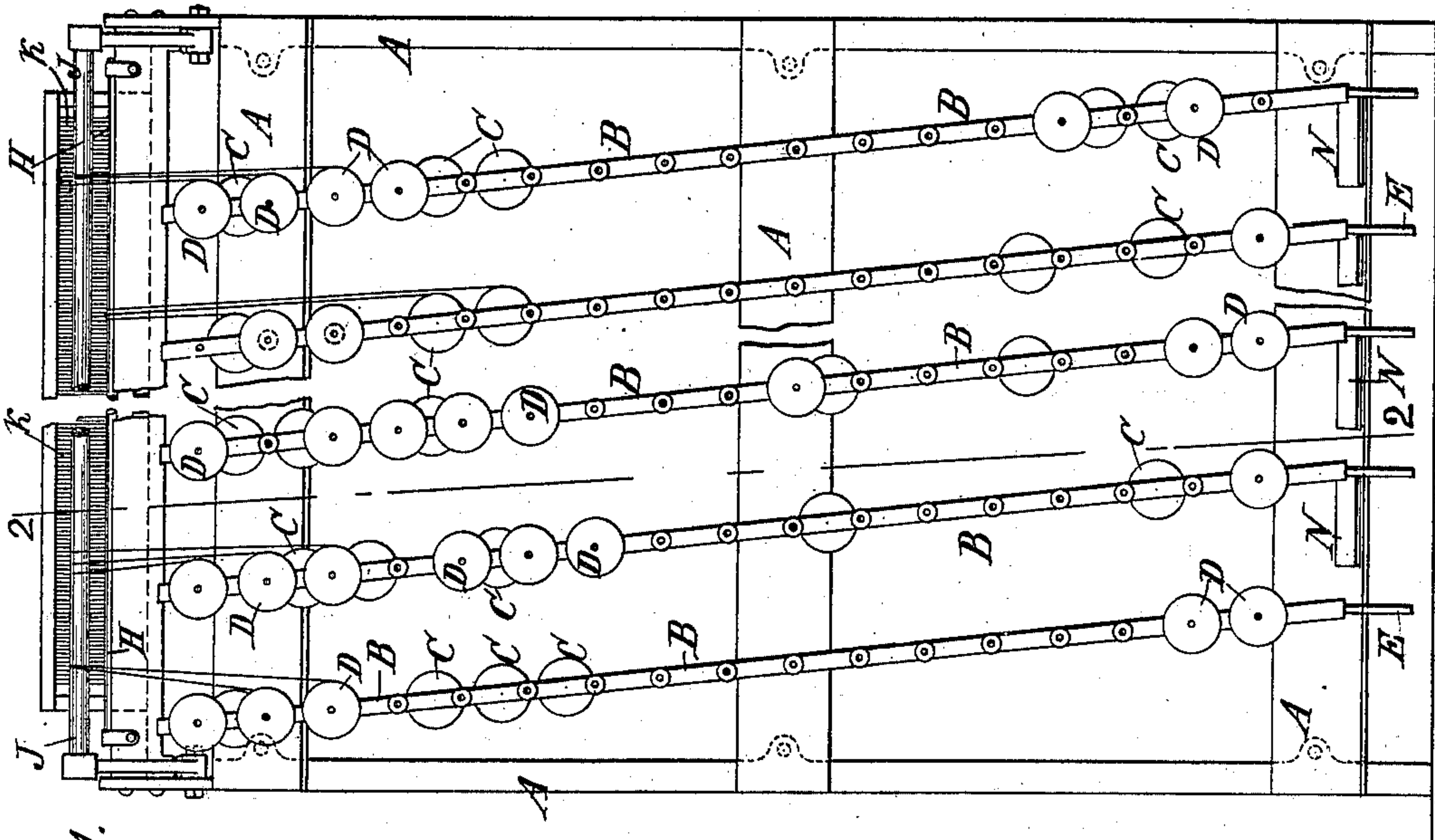


FIG. 1.

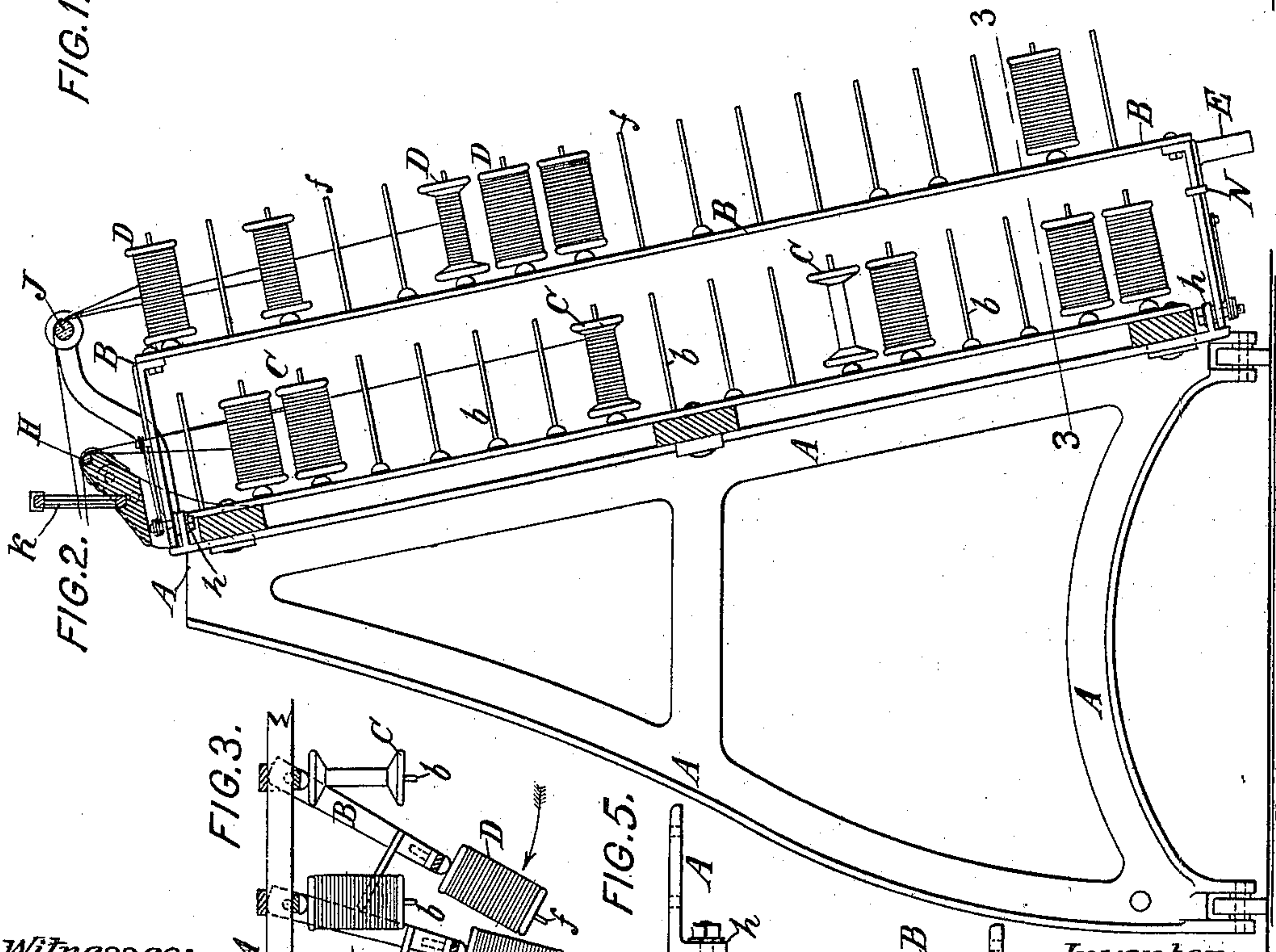


FIG. 2.

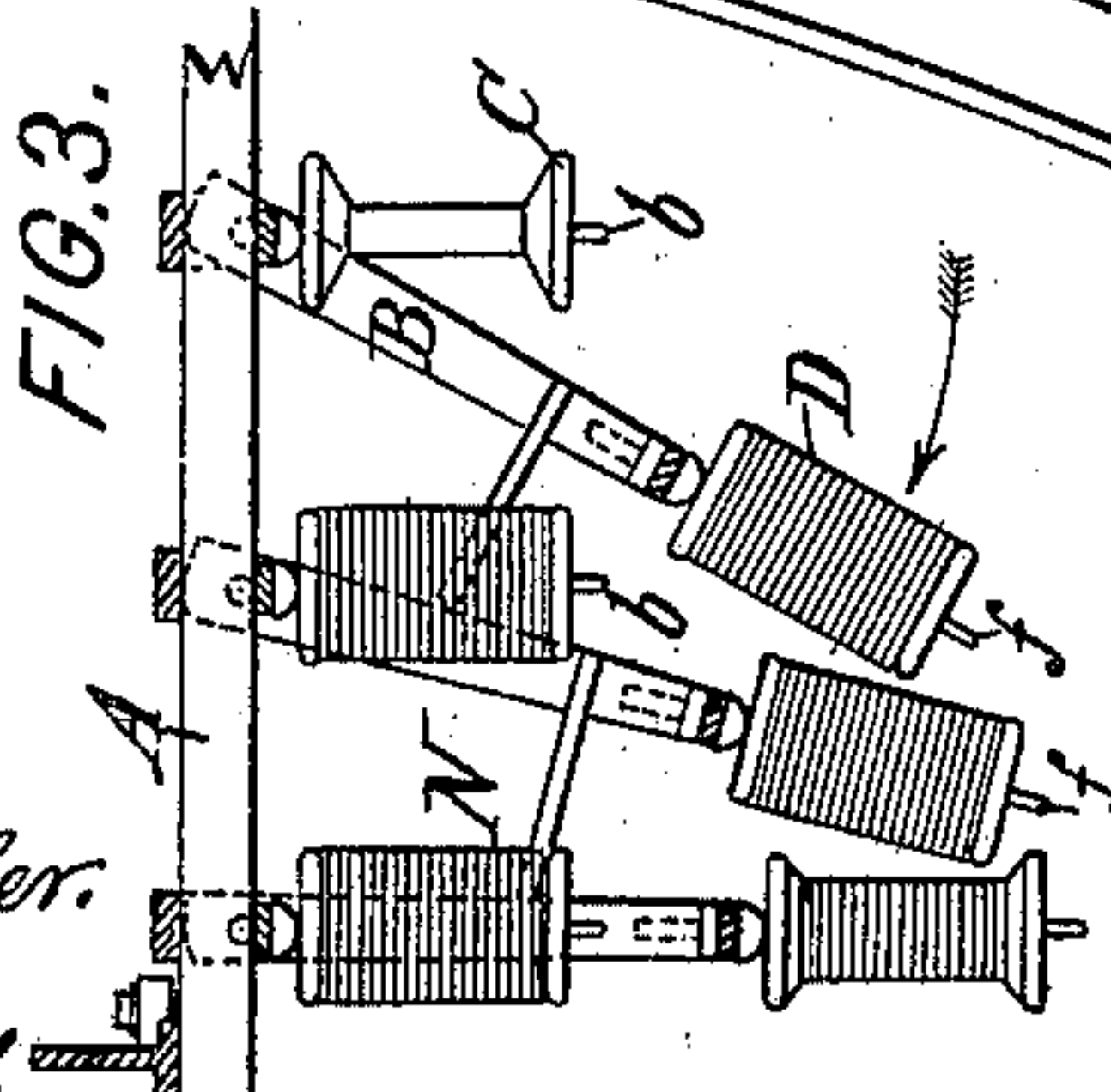
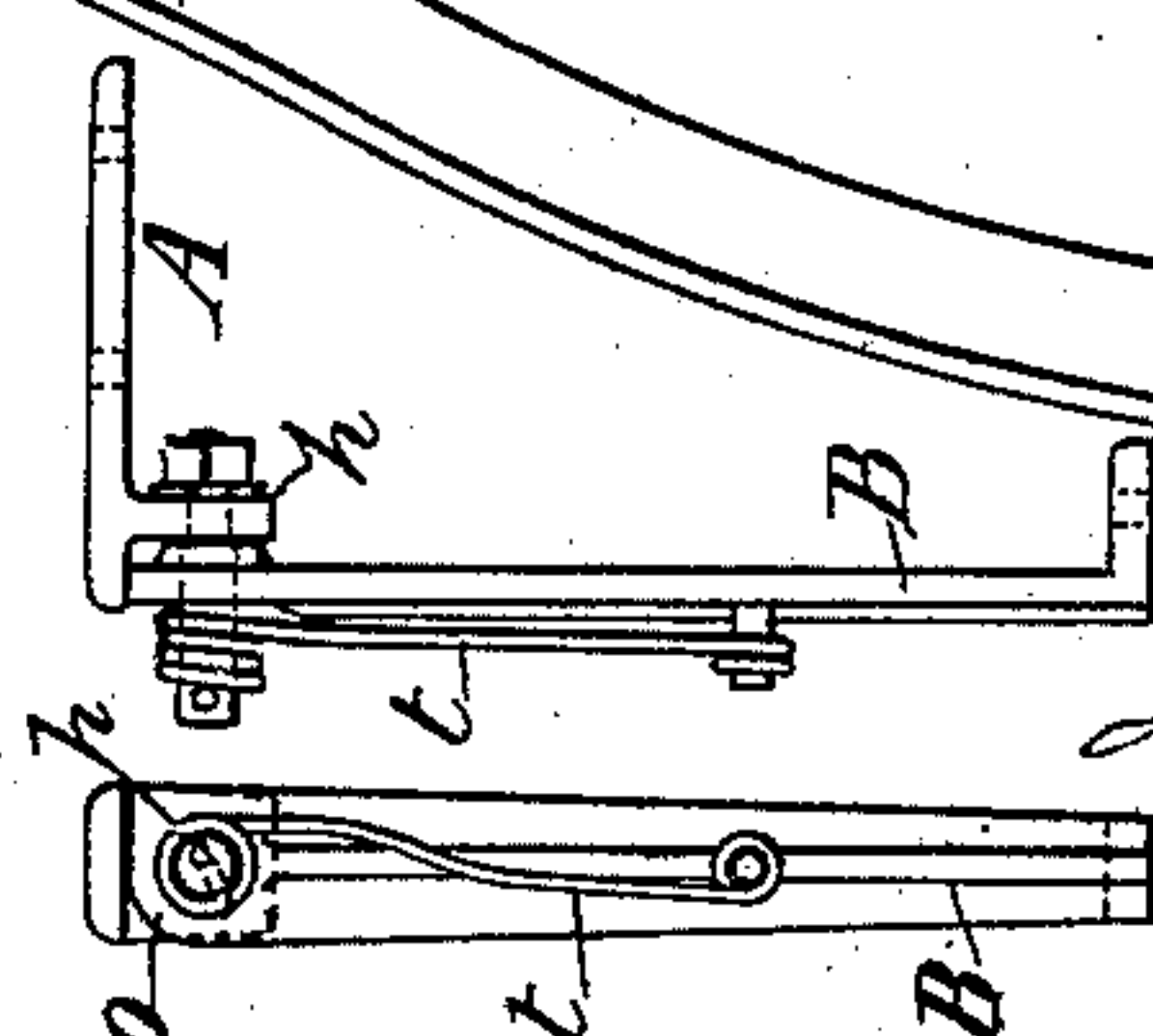


FIG. 3.

FIG. 4.



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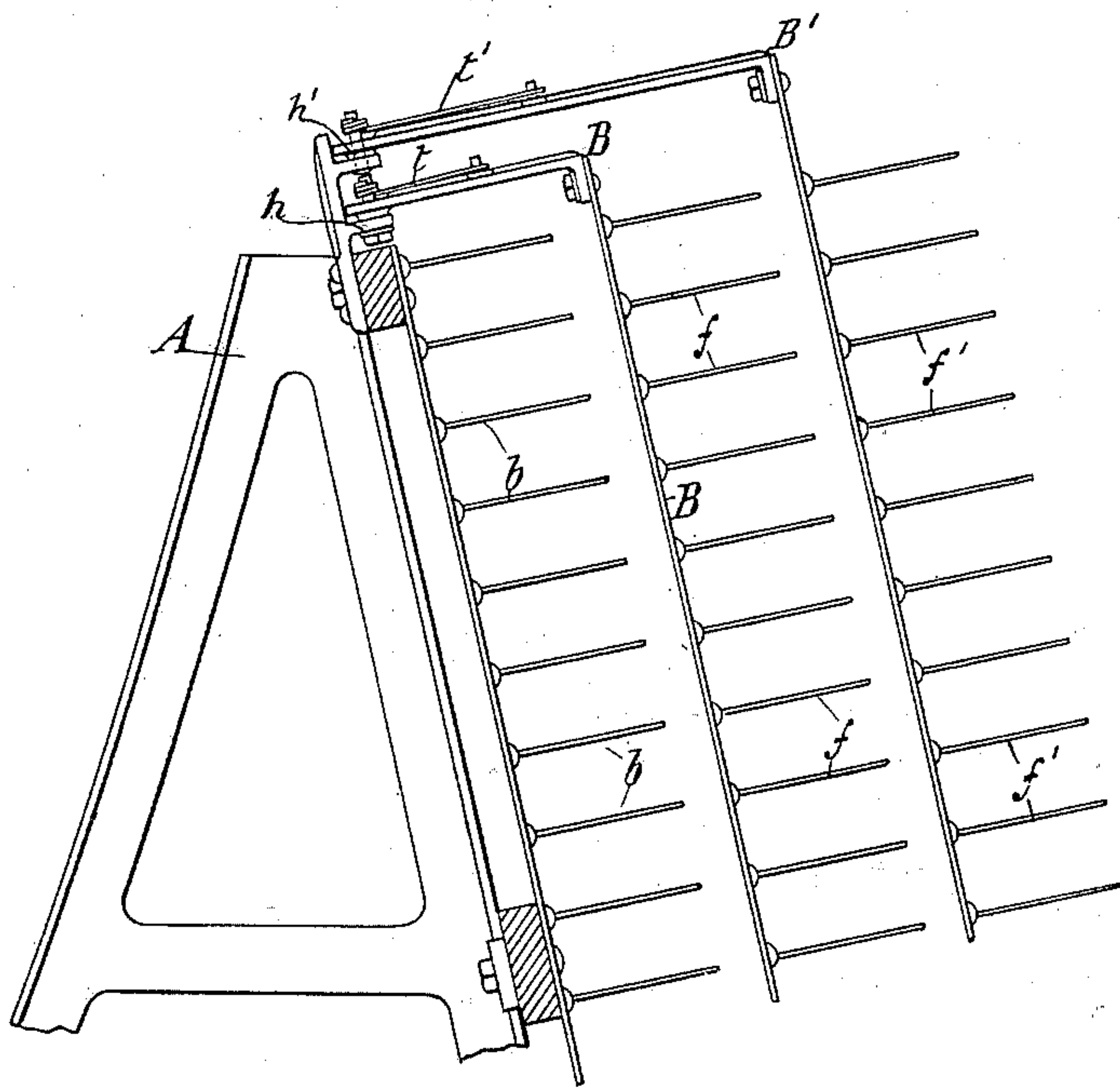
J. P. CRONIN.
CREEL FRAME.

(Application filed Dec. 16, 1898.)

(No Model.)

2 Sheets—Sheet 2.

FIG. 6.



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UNITED STATES PATENT OFFICE.

JOHN P. CRONIN, OF PATERSON, NEW JERSEY.

CREEL-FRAME.

SPECIFICATION forming part of Letters Patent No. 626,974, dated June 13, 1899.

Application filed December 16, 1898. Serial No. 699,415. (No model.)

To all whom it may concern:

Be it known that I, JOHN P. CRONIN, a citizen of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented a new and useful Improvement in Creel-Frames, of which the following is a specification.

My invention relates to creel-frames which are used in warping apparatus; and the object of my invention is to increase the capacity of the creel-frame without materially increasing its size.

The creel-frame herein described is an improvement upon that shown in Letters Patent of the United States heretofore granted to me, dated November 8, 1898, and numbered 613,760.

In my former invention described in the Letters Patent aforesaid the creel-frame was provided with pins adapted to support two or more sets of bobbins one above the other, each pin being connected directly to the body of the frame.

My present improvement consists in a construction whereby the pins in the sets above the first set are arranged in one or more groups and secured to the frame by means of oscillating or swinging yokes, and also consists in certain other improved devices the nature of which will appear in the description hereinafter given.

In the accompanying drawings, in which like letters of reference indicate similar parts, Figure 1 is a front elevation of my improved creel-frame broken into two parts, showing the same provided with two sets of pins and bobbins. Fig. 2 is a side view of Fig. 1, partly in section, on the line 2 2 of Fig. 1. Fig. 3 is a detail, partly in section, on the line 3 3 of Fig. 2, showing the position of the upper set of bobbins and their supporting-pins when the latter have been turned to one side, as hereinafter described. Fig. 4 is an enlarged detail showing one end of the swinging yoke, upon which are mounted the second set of pins; and Fig. 5 is a side view of Fig. 4, showing one way of securing the swinging yoke to the body of the creel-frame and the spring which is adapted to hold it in its normal position. Fig. 6 is a side view of a part of my improved creel-frame, partly in section, showing the frame provided with two series of

swinging yokes pivoted to the main body of the frame, one series of yokes rising above the other series and each yoke having mounted thereon a group of pins which are adapted to support bobbins thereon.

A is the main body of the creel-frame, to which are rigidly attached the pins *b b*, which support the bobbins C.

B B' are swinging yokes, upon which are mounted the pins *f f'*, respectively, which support the bobbins D D. The yokes B B' are pivoted at each end to the frame of the creel, as shown at *h h'*, each of the yokes B being placed over a row of the pins *b b*, as shown in Fig. 2, and each of the yokes B' being placed over a yoke B, as shown in Fig. 6.

H is a glass rod, over which pass the threads from the bobbins C. J is a similar rod, over which pass the threads from the bobbins D.

k are the small vertical glass rods between which the threads pass and thence to a cross-reed in the usual manner.

The frame A is constructed in the ordinary manner, and the pins are arranged in oblique rows to prevent the interference of the threads from the several bobbins, as is usual in creel-frames.

The yokes may be readily turned to one side, as shown in Fig. 3, and thus permit access to the bobbins upon the pins beneath for any purpose without disturbing any of the bobbins on the yokes.

The yokes may be turned to one side by the hand or in any other convenient manner.

In the drawings I have shown the lower end of the yoke provided with a leg E, (see Figs. 1 and 2,) projecting downward against which the foot may be pressed to turn the yoke to one side, thereby leaving both hands of the operator free. It is obvious that other devices for moving the yoke may be employed without departing from my invention. Also in order to economize space by permitting the several rows of pins to be placed closer together I provide the lower ends of the yokes with a laterally-projecting arm N (see Fig. 1) or similar suitable device of such length that as the yoke is turned to one side and before the bobbins on that yoke come into contact with the bobbins on the next yoke the end of the arm N will impinge against the latter yoke and in turn move it to one side,

thus removing the bobbins thereon out of the way of the bobbins on the yoke first moved, as shown in Fig. 3. It would be no departure from my invention if all the yokes in any one series were made to move at the same time.

In the drawings the yokes appear pivoted to the frame A; but they may be secured in any other suitable manner. Each yoke is provided with a spring t' , against which the yoke is turned to one side, the corner of the end of the yoke being rounded, as shown at o, Fig. 4, to permit of the movement, the said spring acting to return the yoke to its original position when the pressure upon it is released.

It is obvious that there may be any desired number of series of yokes rising one above the other. Thus there may be a succession of additional sets of pins above the set of pins rigidly attached to the main body of the frame rising one above the other, each additional set consisting of one or more groups of pins and each group of pins being mounted upon a movable yoke, which is loosely connected to the main body of the frame.

It is evident that the form, arrangement, and location of the several parts above described may be varied and other known devices may be substituted therefor without departing from the principle of my invention.

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

1. In a creel-frame, the combination of the main body of the frame and two or more sets of pins adapted to support bobbins thereon, the first set of pins being rigidly affixed to the main body of the frame, and the additional set or sets of pins being above the first set of pins, the pins in each additional set being arranged in one or more groups, and each group being secured, as a group, to the main body of the frame, by loose connections, so that the group may be turned to one side to allow access to the bobbins on the pins in the set beneath.

2. In a creel-frame, the combination of the main body of the frame and two or more sets of pins adapted to support bobbins thereon, the first set of pins being rigidly affixed to the main body of the frame, and the additional set or sets of pins being above the first set of pins, the pins in each additional set being arranged in one or more groups, and each group of pins being mounted upon a swinging yoke, which is pivotally connected to the main body of the frame.

3. In a creel-frame, the combination of the main body of the frame and a set of pins rigidly affixed to said frame and adapted to support bobbins thereon, with a swinging yoke

secured to the said frame and having mounted thereon one or more pins adapted to support bobbins above the first set of bobbins.

4. In a creel-frame, the combination of the main body of the frame and a set of pins rigidly affixed to said frame, and adapted to support bobbins thereon, with a swinging yoke secured to the said frame and having mounted thereon one or more pins adapted to support bobbins above the first set of bobbins, said swinging yoke being provided with a downwardly-projecting leg, or similar device, for the purposes herein described.

5. In a creel-frame, the combination of the main body of the frame and a set of pins rigidly affixed to said frame and adapted to support bobbins thereon, with two or more swinging yokes mounted side by side and secured to the said frame, each of said yokes carrying thereon one or more pins adapted to support bobbins thereon above the first set of pins, and each of said swinging yokes being provided with a laterally-projecting arm, or similar device, which is adapted to actuate the next adjacent swinging yoke, in the manner herein described.

6. In a creel-frame the combination of the main body of the frame and a set of pins rigidly affixed to said frame and adapted to support bobbins thereon, with two or more swinging yokes mounted side by side and secured to the said frame, each of said yokes carrying thereon one or more pins adapted to support bobbins thereon above the first set of pins, and each of said swinging yokes being provided with a downwardly-projecting leg and a laterally-projecting arm, which latter is adapted to actuate the next adjacent swinging yoke, in the manner herein described.

7. In a creel-frame, the combination of the main body of the frame and the pins b rigidly affixed to said frame, with the yoke B pivoted to the said frame and carrying pins f , and being provided with the arm N.

8. In a creel-frame, the combination of the main body of the frame and the pins b rigidly affixed to said frame, with the yoke B pivoted to the said frame and carrying the pins f , and being provided with the leg E and arm N.

9. A creel-frame consisting of the main body of the frame, the pins b rigidly affixed to said frame, and one or more swinging yokes pivoted to the said frame, each of said yokes having mounted thereon one or more pins f , said yokes being provided with the leg E, arm N and spring t , substantially as shown and described.

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Witnesses:

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