

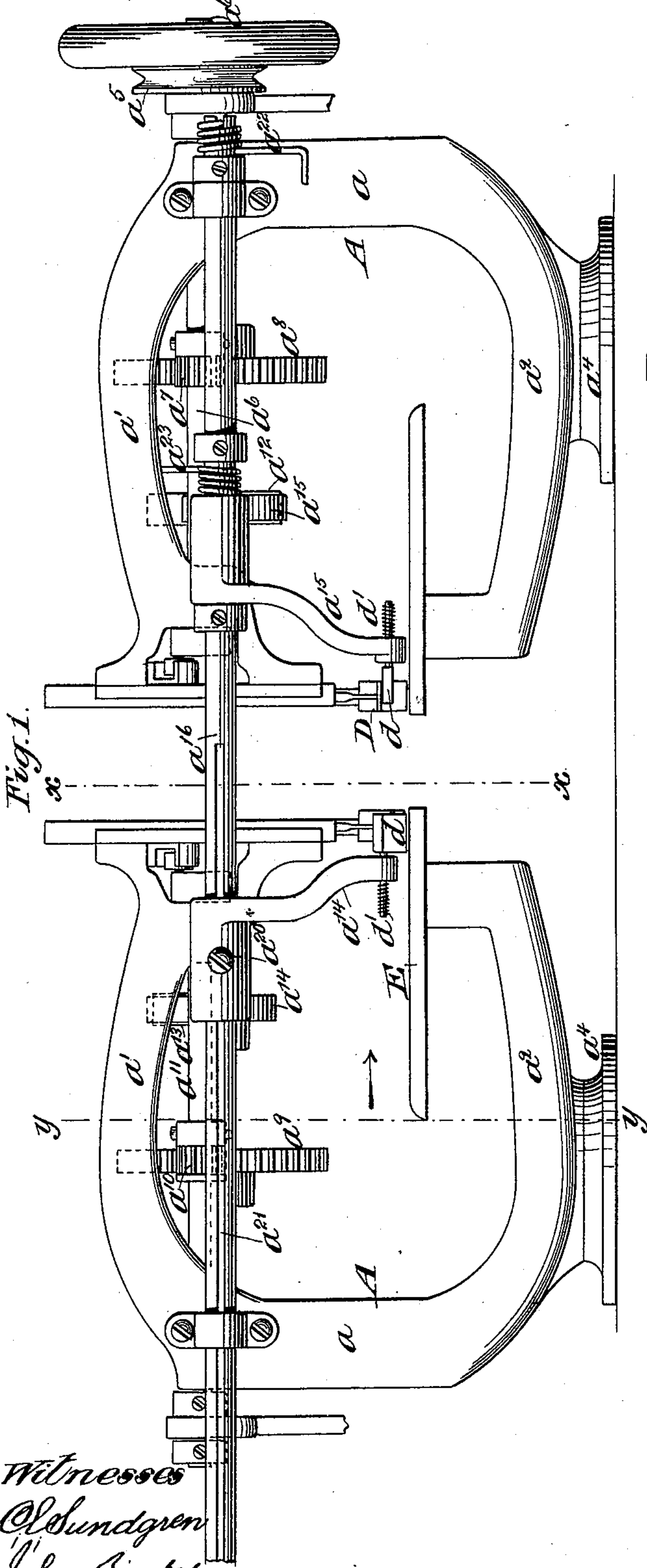
(No Model.)

2 Sheets—Sheet 1.

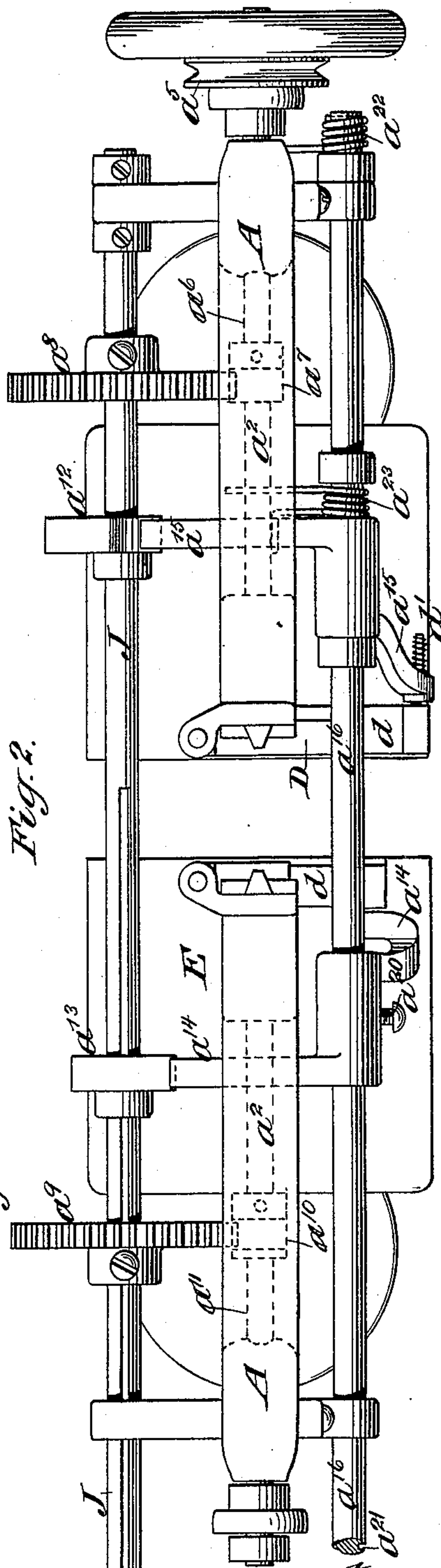
A. FAULKNER.
SEWING MACHINE.

No. 404,966.

Patented June 11, 1889.



Witnesses
O Sundgren
John Rinder



Inventor:
Edw Faulkner
by attorneys
Roscoe Griswold

(No Model.)

2 Sheets—Sheet 2.

A. FAULKNER.
SEWING MACHINE.

No. 404,966.

Patented June 11, 1889.

Fig. 3.

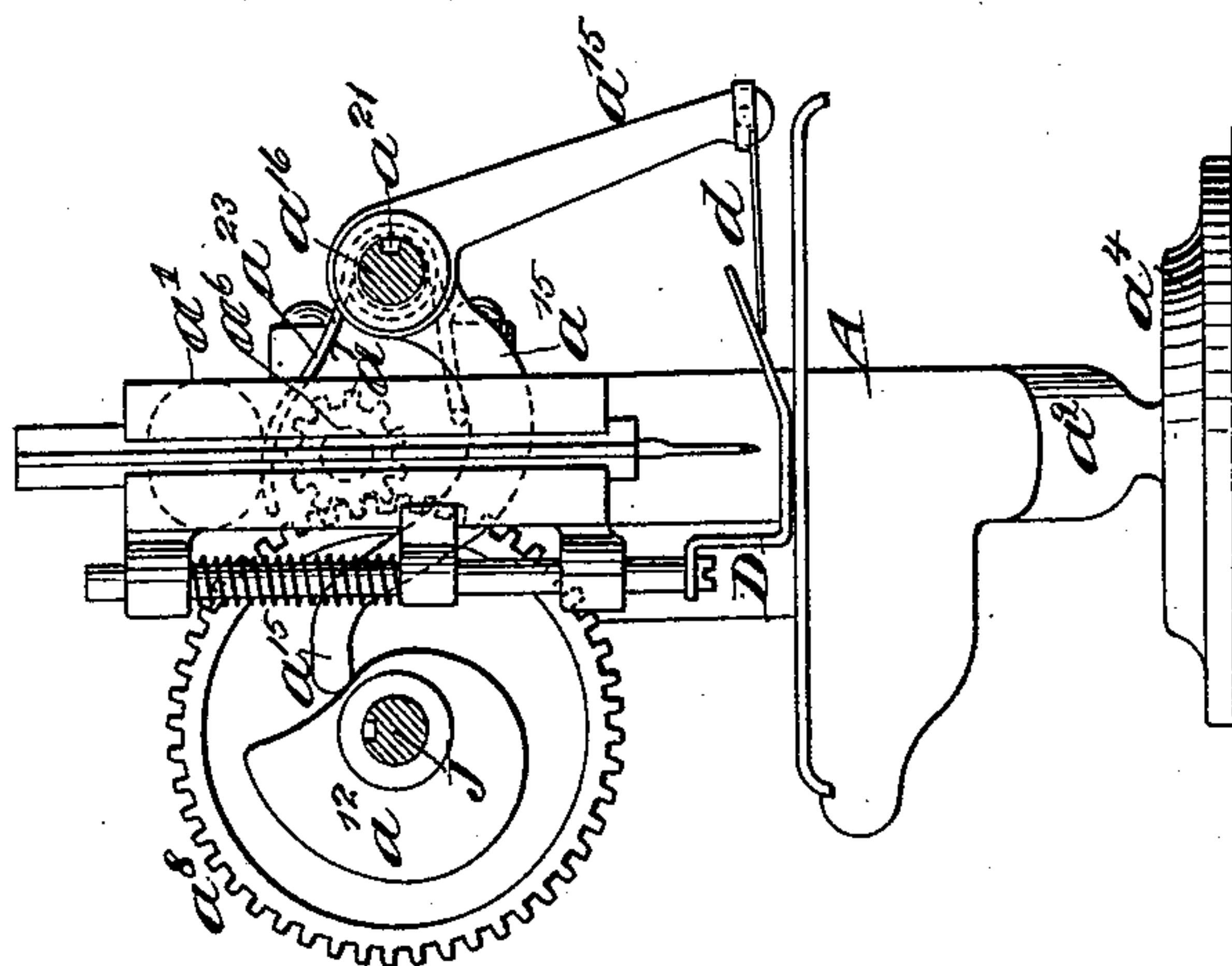
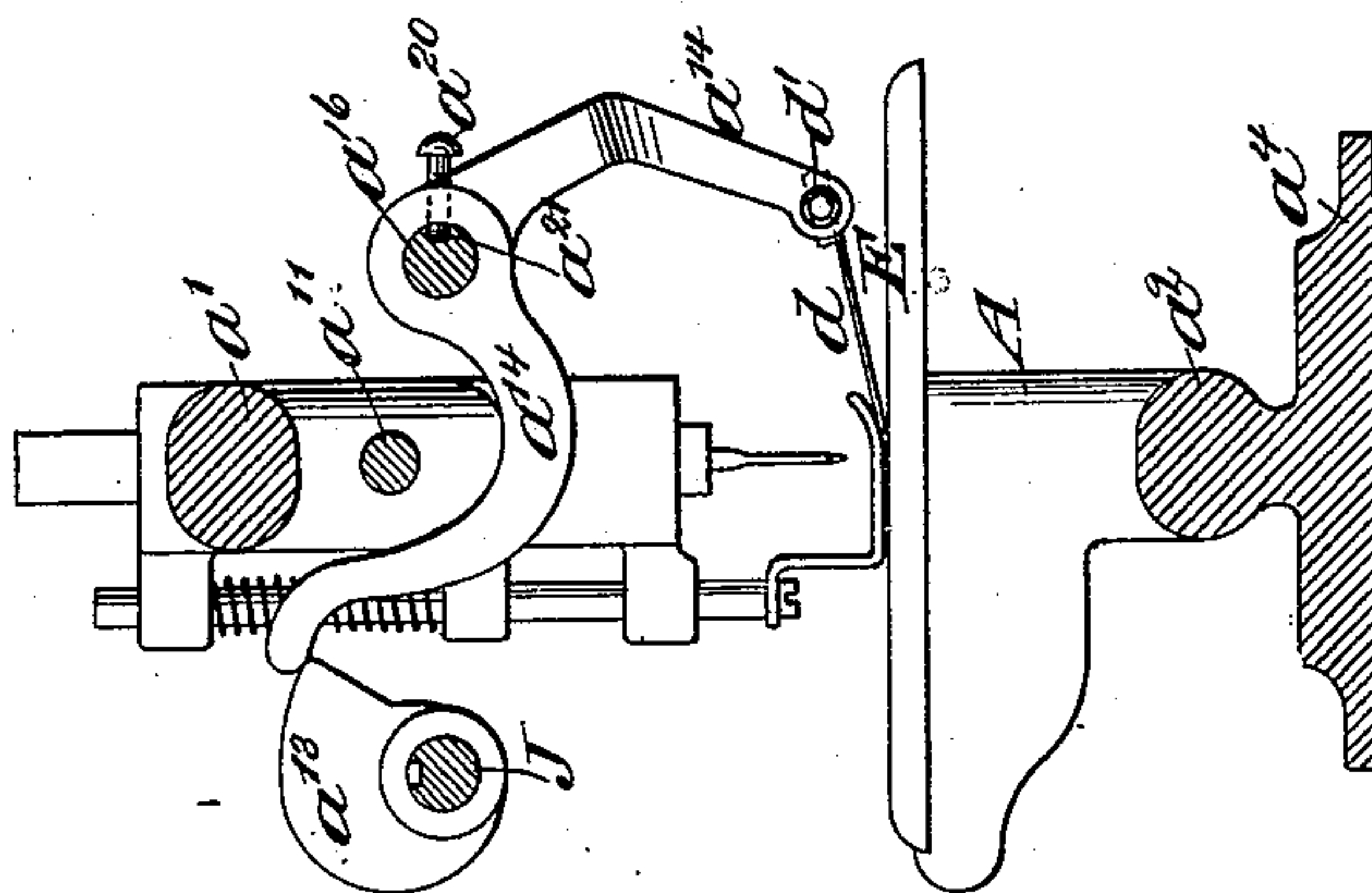


Fig. 4.



Witnesses:

Olundgren
John Birken

Inventor

Alfred Faulkner
 by attorneys
 Brown & Gridwold

UNITED STATES PATENT OFFICE.

ALFRED FAULKNER, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO ELI W. BROADBENT, OF NEW YORK, N. Y.

SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 404,966, dated June 11, 1889.

Application filed January 10, 1889. Serial No. 295,965. (No model.)

To all whom it may concern:

Be it known that I, ALFRED FAULKNER, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Means for Operating Sewing-Machine Plaiters, of which the following is a specification.

I will describe in detail mechanism embodying my improvement, and then point out the novel features in claims.

In the accompanying drawings, Figure 1 is a side elevation of two sewing-machines embodying my improvement. Fig. 2 is a plan or top view of the same. Fig. 3 is a sectional elevation taken on the line $x x$ of Fig. 1, and looking toward the machine shown at the right in said figure. Fig. 4 is a sectional elevation taken on the line $y y$ of Fig. 1, and looking in the direction of the arrow shown on the machine at the left of said figure.

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

A designates the two frames of the machine. Each of these frames comprises an upright portion a , and also an upper arm a' and lower arm a^2 . The machines are supported upon base-pieces a^4 . Both machines are driven from a common source—namely, from a pulley a^5 , mounted upon a shaft a^6 , journaled in suitable bearings in the machine to the right of Fig. 1. On the shaft is mounted a pinion a^7 , which pinion gears with a gear-wheel a^8 , mounted on a shaft J, extending throughout the length of both machines and journaled in suitable bearings thereon. Upon the shaft J is another gear-wheel a^9 , which gear-wheel meshes with a pinion a^{10} on a shaft a^{11} , journaled in suitable bearings in the machine shown to the left of Fig. 1. Upon the shaft J is also mounted a cam a^{12} , which cam is adjacent to the machine to the right of Fig. 1. Upon the same shaft J is also mounted another cam a^{13} , adjacent to the other machine.

$a^{14} a^{15}$ designate bell-crank levers, one of the arms of which contacts with the cams $a^{13} a^{12}$, respectively. The lever a^{14} has a sliding connection with a shaft a^{16} , extending throughout the length of the machine upon the side thereof opposite the shaft J, and journaled in suitable bearings upon the frames of the machines. The connection of the lever a^{14} with

the shaft a^{16} is made by means of a screw a^{20} , extending into a longitudinal slot a^{21} in the shaft a^{16} . This connection admits of the lever a^{14} turning with the shaft a^{16} . The shaft a^{16} is rocked by means of the cam a^{13} and the arm of the lever a^{14} , bearing thereon. When the shaft is rocked in one direction by said cam, it is rocked in the other direction by means of a spring a^{22} , bearing at one end against the frame of the machine at the right and having its other end secured to said shaft. The arm a^{15} is loose upon the shaft a^{16} , and has a spring a^{23} connected to it at one end and bearing against the frame of the machine to the right at the other end. One arm of the lever a^{15} bears against the cam a^{12} , by which means the lever is rocked in one direction. It is rocked in the other direction by means of the spring a^{23} . The arrangement and formation of the cams $a^{12} a^{13}$ in the example of my improvement shown is such that the levers $a^{14} a^{15}$ are rocked alternately in the same direction. Each of the lower or downwardly-extending arms of the levers $a^{14} a^{15}$ bears a knife or tongue d , which knife or tongue has a pivotal connection with said lever-arm near one of the ends of the former. The other ends of the knives or tongues are forced against bearing-surfaces by means of springs d' , which springs surround the pivots or shanks of the knives or tongues, and are connected at one end thereto and at the other of their ends with said arms. Upon one of the machines the knife or tongue is forced upwardly by the spring against the bearing-surface upon the under side of an upwardly-inclined portion of a presser-foot D. The other tongue or knife is forced downwardly against a bearing-surface constituting the top of a work-bed E. One of the knives or tongues therefore bears upon the top of the material to be plaited and the other bears against the under side thereof. When the tongues or knives are moved forward or toward the needles, they therefore form plaits, the folds of which extend in reverse directions. As the levers $a^{14} a^{15}$ are rocked alternately in the same direction, a plait is of course being formed by one of the tongues or knives, while the other tongue or knife is being withdrawn.

By my arrangement two sets of plaiting

attachments, together with two sewing-machines, are operated from a single source, and the arrangement and operation is such that plaiting may be formed, the plaits of which
5 will extend in opposite directions upon the same side of the material.

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

1. The combination, with two sewing-machines, of a main shaft, a second shaft deriving motion from said main shaft, a third shaft deriving motion from the second-named shaft, cams on said second-named shaft, a rock-shaft, bell-crank levers on said rock-shaft having
15 one of their arms bearing upon said cams, and plaiting knives or tongues upon the other arms of said bell-crank levers, substantially as specified.

2. The combination, with two sewing-machines, of a main shaft, a second shaft deriving motion from the main shaft, a third shaft deriving motion from the second-named shaft, cams on said second-named shaft, a rock-shaft, bell-crank levers mounted on the rock-shaft,

one of which levers is loose on said shaft and
25 both of which have arms bearing against said cams, said cams being so timed that the levers are operated alternately in the same direction, and plaiting knives or tongues on the other arms of the levers, substantially as
30 specified.

3. The combination, with two sewing-machines, of a main shaft, a second shaft deriving motion from the main shaft, a third shaft deriving motion from the said second shaft, 35 cams on said second-named shaft, a rock-shaft, bell-crank levers mounted on said rock-shaft having arms bearing upon said cams, and plaiting knives or tongues on the other arms of said levers, said second-named shaft and
40 the rock-shaft being arranged upon opposite sides of the machine, substantially as specified.

ALFRED FAULKNER.

Witnesses:

FREDK. HAYNES,

ARTHUR H. GAMBLIN.