

(No Model.)

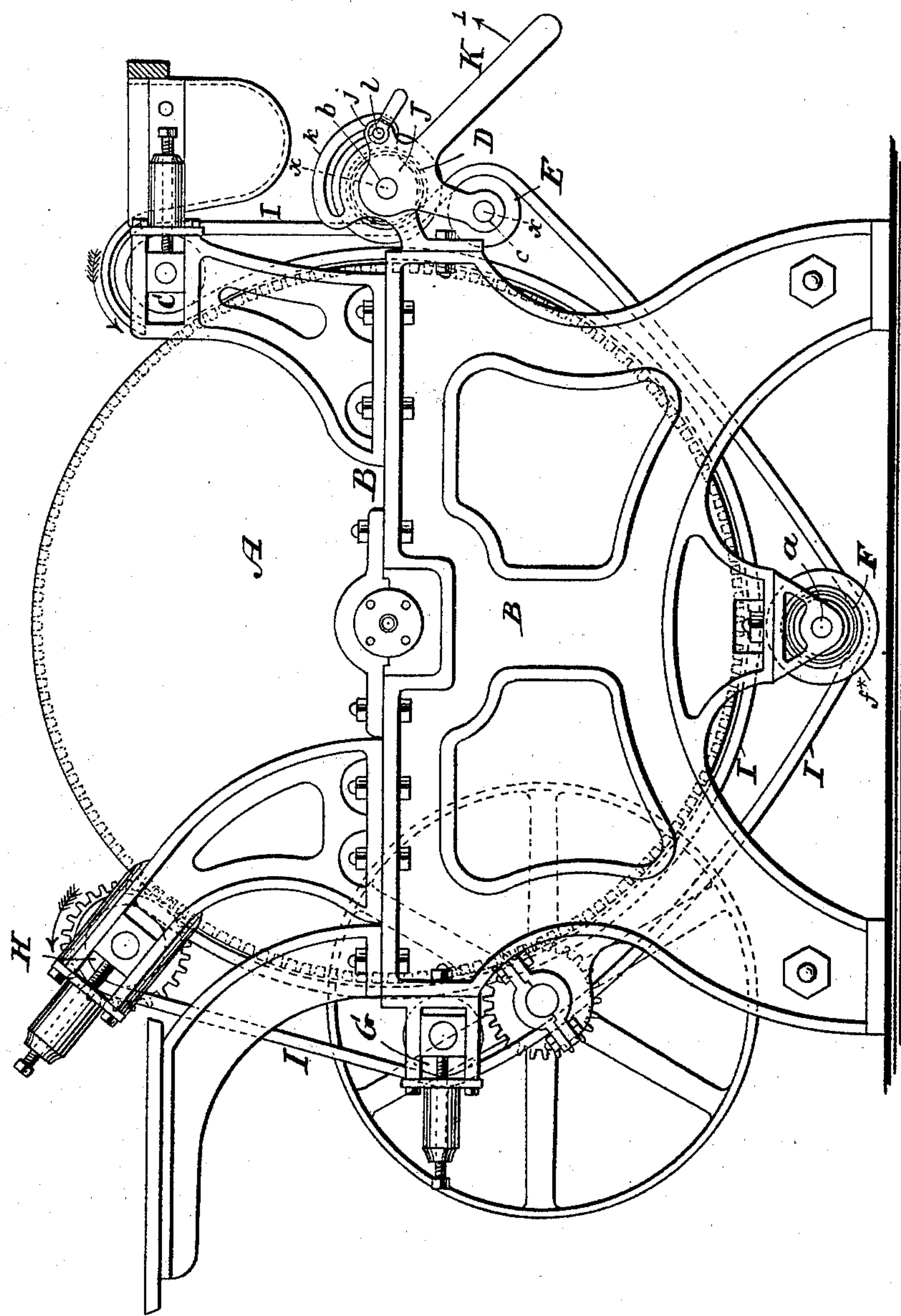
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H. E. SMITH.
GUIDE FOR ENDLESS APRONS.

No. 441,983.

Patented Dec. 2, 1890.

Fig. 1.



WITNESSES

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William Miller

INVENTOR

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(No Model.)

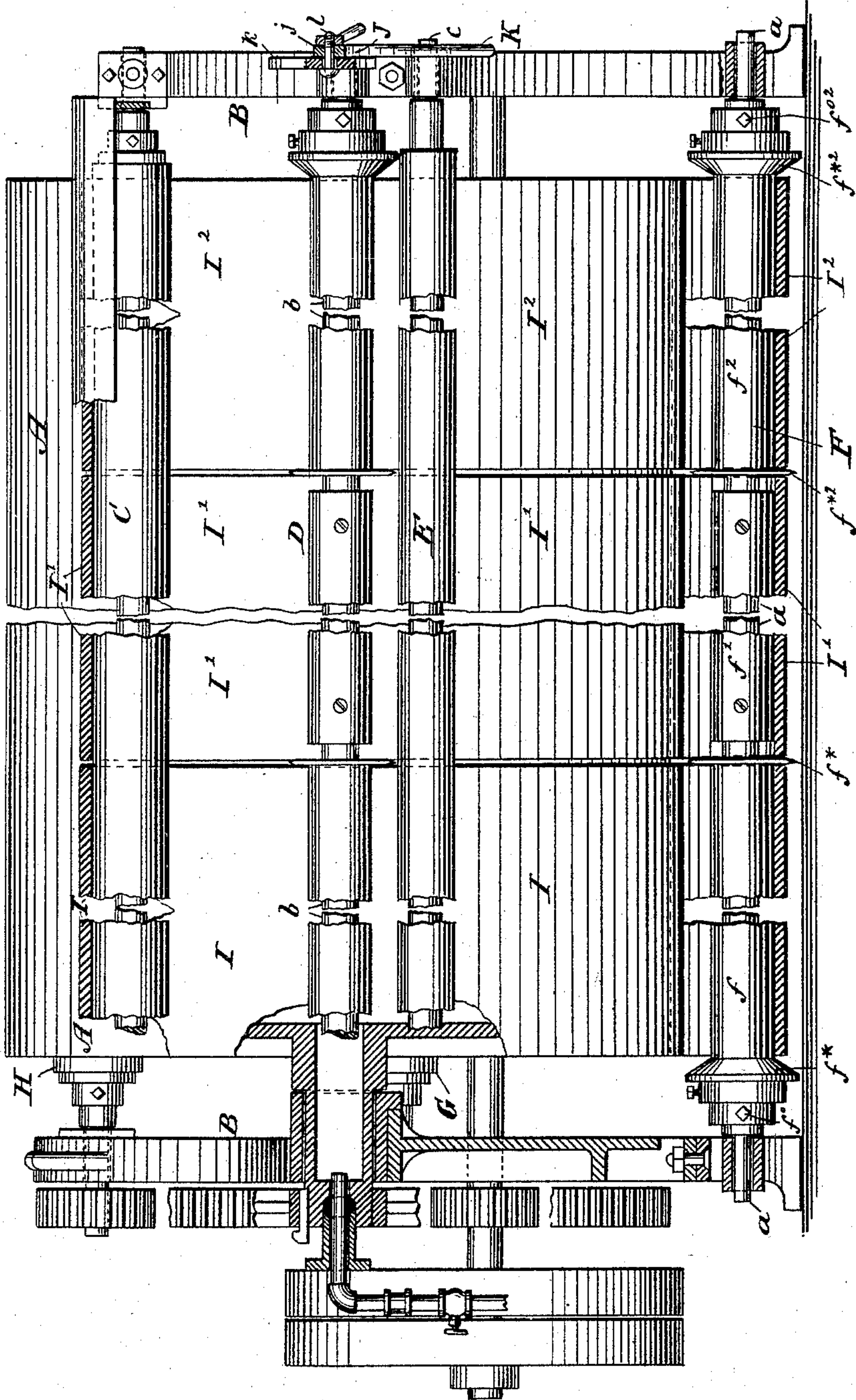
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Fig. 2.



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Fig. 3.

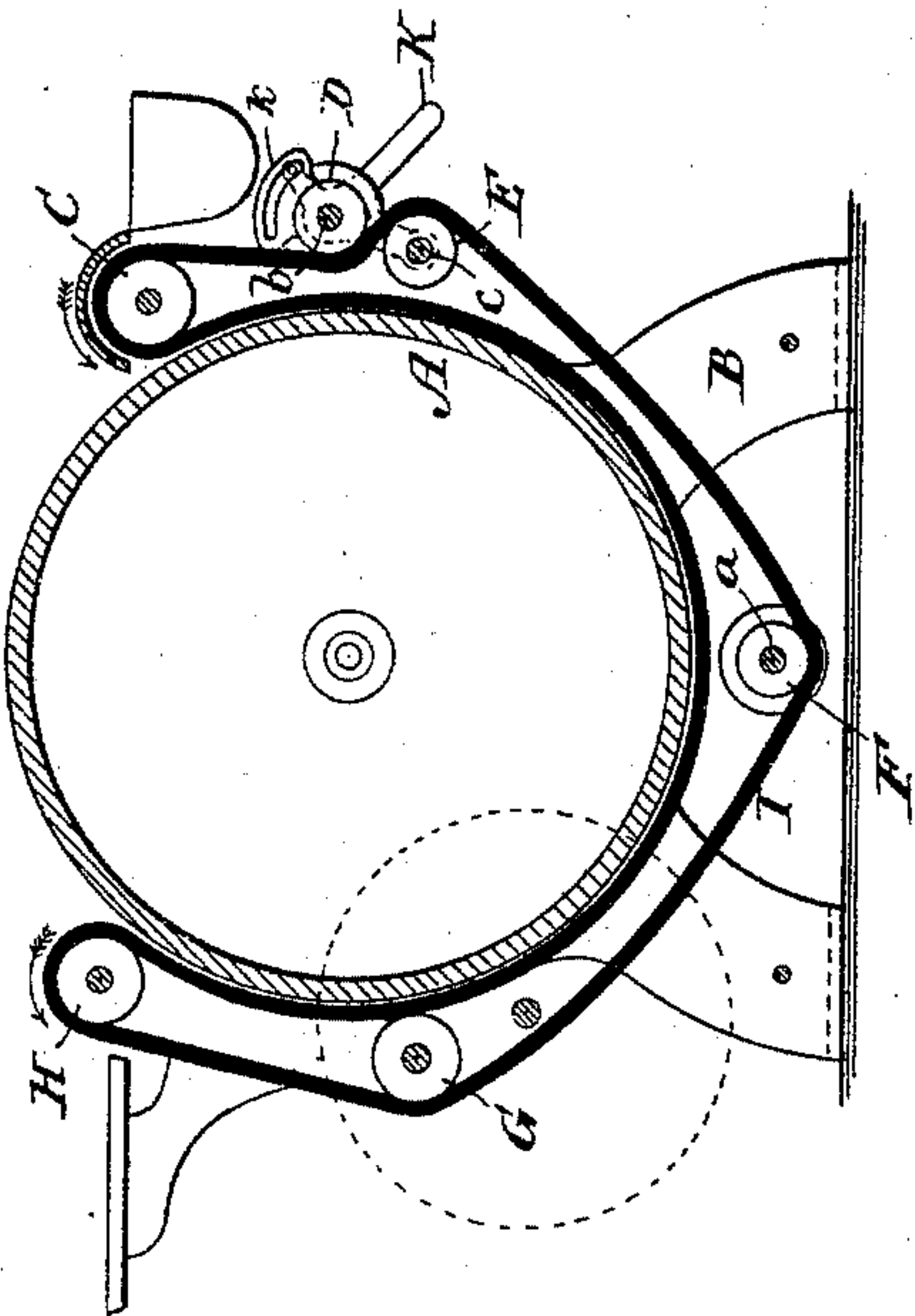
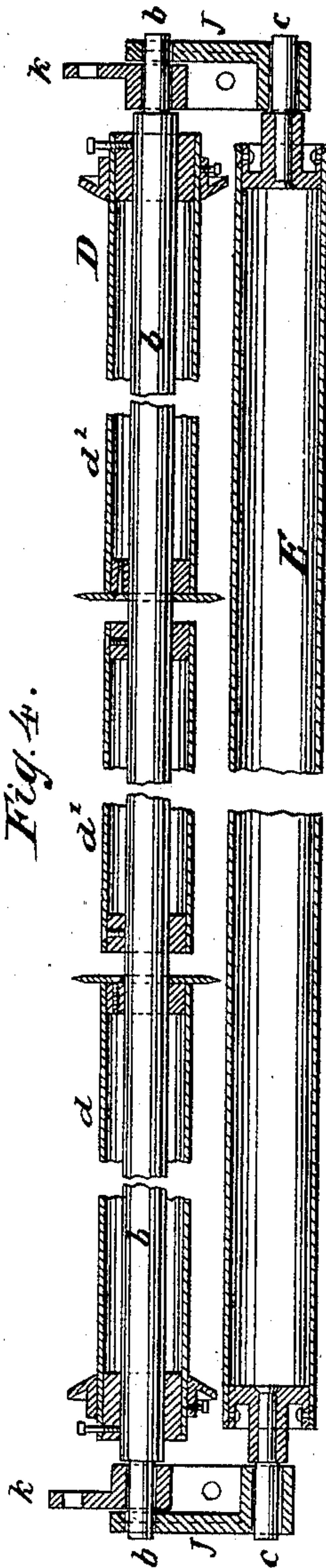


Fig. 4.



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UNITED STATES PATENT OFFICE.

HAMILTON E. SMITH, OF NEW YORK, N. Y.

GUIDE FOR ENDLESS APRONS.

SPECIFICATION forming part of Letters Patent No. 441,983, dated December 2, 1890.

Application filed April 3, 1890. Serial No. 346,488. (No model.)

To all whom it may concern:

Be it known that I, HAMILTON E. SMITH, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Guides for Endless Aprons, of which the following is a specification.

This invention relates to certain devices for guiding and tightening endless aprons mounted to run edge to edge; and the objects of my invention are, first, to provide means for keeping the edges of the aprons close together, and, second, to keep the aprons taut. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an end view. Fig. 2 is a front elevation, partly in section. Fig. 3 is a transverse vertical section on a smaller scale than the remaining figures. Fig. 4 is a longitudinal section in the plane $x x$, Fig. 1.

In the drawings, the letter A designates a drum or roller such as may be used, for instance, in machines for ironing clothes. This roller is journaled in a frame B, and in this frame are also mounted a series of rollers C, D, E, F, G, and H. On these rollers runs an endless apron I in the manner indicated in Fig. 3. If this apron is of great width, it must be woven in two or more sections, and in the example represented by the drawings said endless apron is made in three sections $I I' I^2$, and in order to keep the edges of the different sections close together I make the roller F in sections $f f' f^2$, one for each section of the apron. The section f is secured on the shaft a by means of a set-screw f^0 , so that if this set-screw is loosened said section can be moved on the shaft in the direction of its axis. The section f' is permanently secured on the shaft a by any suitable means, so that it revolves with said shaft but cannot be moved thereon in the direction of its axis, and the section f^2 is secured on the shaft a by a set-screw f^{02} in the same manner as section f .

The roller D, Fig. 4, is constructed in three sections $d d' d^2$, which are secured on the shaft b in the same manner as the corresponding sections of the roller F, so that the sections d and d^2 can be readily adjusted in the direction of their axis, while the middle sec-

tion d' is fixed on the shaft and requires no adjustment.

The guide-rollers C, E, G, and H are made each of a single piece, as indicated in Figs. 2 and 4, where the roller E is shown in front elevation and section. As the apron runs over its guide-rollers in the direction of the arrows shown near it in Figs. 1 and 3, that portion of the same which is contained between the rollers G and F is liable to sag down, and the sections of the apron have a tendency to run apart, so that gaps will be formed between their adjoining edges. In order to counteract this tendency, the sections $f f^2$ of the roller F are provided with end flanges $f^* f^{*2}$, so that by moving these sections inward the sections $I I^2$ of the apron are compelled to follow, and the formation of perceptible gaps between the adjoining edges of the several sections $I I' I^2$ of the apron can be prevented. In order to insure this purpose and to compel the sections of the apron to run edge to edge while passing beneath the drum or roller A, the sectional roller D is provided, and the sections of this roller can be readily so adjusted that the adjoining edges of the sections of the apron will close up in passing over the guide-roller C to the drum A. The shaft c of the guide-roller E has its bearing in brackets J, Figs. 2 and 4, which swing loosely on the shaft b of the roller D, and from one of which extends a handle K and an ear j . When the handle K is moved in the direction of arrow I, Fig. 1, the ear j sweeps over a slotted segment k which projects from the frame B, and a clamping-screw l serves to secure said ear in the desired position. By inspecting Fig. 1 it will be readily seen that when the handle K is moved in the direction of arrow I, the guide-roller E is forced outward and the endless apron is tightened.

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

1. The combination, with two endless aprons mounted to run edge to edge, and with the rollers on which said aprons run, of a guide-roller composed of a section mounted to revolve, but fixed in regard to a movement in the direction of its axis, and a flanged section which is mounted both to revolve and to

be adjusted in the direction of its axis, substantially as described.

2. The combination, with the endless aprons I I' I² and the drum or roller A, of the rollers 5 C, G, and H, each made in one continuous piece, and the guide-rollers F and D, each made in sections to correspond to the aprons I I' I², the outside sections of said rollers being flanged and mounted on their respective 10 shafts, so that they can be adjusted toward or from the middle sections, substantially as described.

3. The combination, with a frame, an endless apron, a series of apron-supporting rollers, and stationary shaft-bearings on the frame

in which is journaled the shaft of one of the apron-supporting rollers, of the swinging brackets journaled on said roller-shaft, a tension-roller for the apron carried by the brackets, and a clamping-screw for rigidly attaching one of the brackets to one of the stationary bearings, substantially as described. 20

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

HAMILTON E. SMITH.

Witnesses:

WM. C. HAUFF,

E. F. KASTENHUBER.