G. L. JAEGER.

Guide for Endless Aprons.

No. 218,030. Patented July 29, 1879.

Fig. 1.

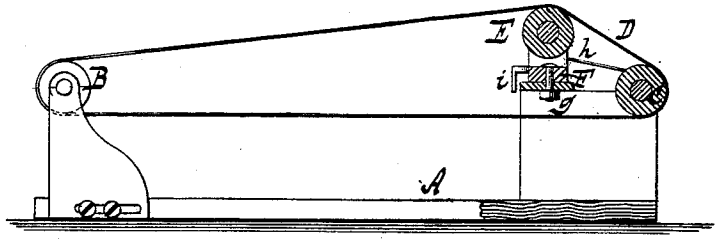


Fig. 4.

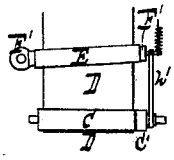


Fig. 2.

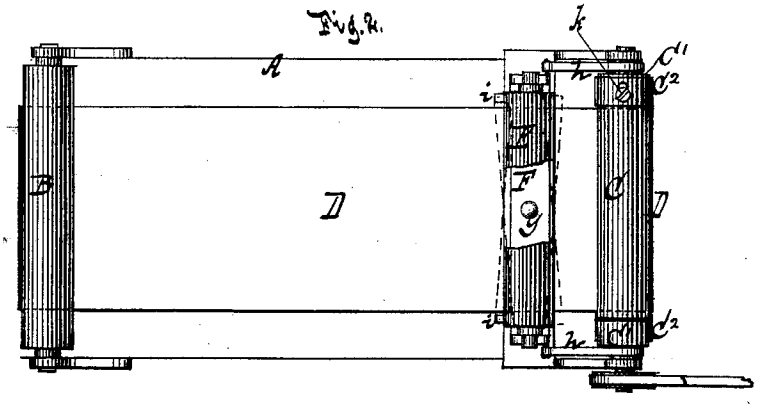
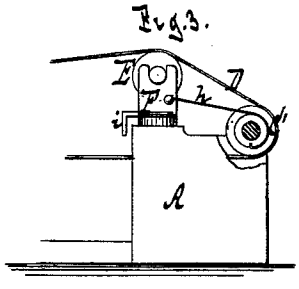


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

GUSTAV L. JAEGER, OF NEW YORK, N. Y.

IMPROVEMENT IN GUIDES FOR ENDLESS APRONS.

Specification forming part of Letters Patent No. **218,030**, dated July 29, 1879; application filed June 26, 1879.

To all whom it may concern:

Be it known that I, GUSTAV L. JAEGER, of the city, county, and State of New York, have invented a new and useful Improvement in Guides for Endless Aprons, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a longitudinal vertical section of my guide. Fig. 2 is a plan or top view thereof. Fig. 3 is a side view of the same. Fig. 4 shows a modification.

Similar letters indicate corresponding parts.

My invention relates to devices for guiding endless aprons on their rollers in machinery; and consists in combining, with an endless apron and apron-supporting rollers, a guide-roller, a movable bearing or bearings for such roller, and one or two bands for setting the guide-roller, which are connected to the movable bearing or bearings, and engage with one of the apron-supporting rollers in such a manner that when the apron gets out of the center the same acts on the band or bands to tighten the same, whereby the guide-roller is set to return the apron to the center.

It also consists in certain details of construction.

In the drawings, the letter A designates a machine-frame, on which are mounted two rollers, B C, supporting an endless apron, D. The letter E designates a guide-roller acting on the endless apron.

In the example shown in Figs. 1 to 3, inclusive, this roller E has its bearings in a frame, F, which I fasten to a cross-piece of the machine-frame A by means of a pivot, *g*, arranging this pivot at or near the center of the frame, which is also the center of the apron D in a transverse direction. To the frame F, I fasten two bands, *h*, of metal, leather, or other flexible material, one at or near each end, and arrange these bands to engage the apron-supporting roller C on opposite sides of the apron in such a manner that if the apron gets out of the center in its passage over the roller C one or the other of the bands is tightened by its means.

In this example I have accomplished the purpose last mentioned by providing the apron-supporting roller C with two loose sections, C^1 C^1, one on each side of the apron D, the roller being fixed, and attaching the bands *h* to a hub or projection on the roller-sections, as clearly shown, so that as the apron veers to one side or the other it runs on one of the roller-sections and turns the same, thereby tightening one of the bands. A like result, however, can be produced by making the roller C and its sections C^1 C^1 in one piece, and stretching the bands *h* over the same on opposite sides of the apron D, so that the apron will act directly on the bands instead of through the medium of the roller-sections. Each of the roller-sections C^1 C^1 carries a sleeve, C^2, which is adjustable, the same being fastened by means of a set-screw, *k*, passing through a longitudinal slot therein. In some cases only one of the roller-sections C^1 C^1 is provided with a sleeve of this description.

It will be readily seen that by means of the sleeve C^2 the roller-sections C^1 C^1 are adapted to aprons of different widths, or to an apron which may shrink in use, such as one made of felt.

When one or the other of the bands *h* is tightened, the frame F is thereby brought to an oblique position, and the guide-roller E, being likewise adjusted, acts upon the apron D with a tendency to return the same to the center, and inasmuch as the bands are tightened through the medium of the apron, the latter is automatically kept in a central position. With the pivoted frame F are combined two stops, *i*, one near each end, for the purpose of regulating its extent of motion. These stops *i* may, if desired, be made adjustable.

In Fig. 4 I have shown a frame, F′, to support the guide-roller E, pivoted at one end instead of in the center, and connected to a spring at its other or free end, this spring serving to retract the same when the band *h*′, also connected to such end of the frame, is released. I thus use only one band; and it may be here remarked that one band will also answer the purpose when the frame is pivoted at the center, as in Fig. 2.

In some cases the pivoted frame F or F′ may be omitted, and in lieu thereof the guide-roller E arranged in bearings, one of which is stationary, and constructed to allow the roller to move therein, while the other bearing is

movable, and connected to a band and spring or weight for setting and retracting the same.

By being mounted on a central pivot the frame F is adapted to be set at either end by the bands *h* or by other suitable means.

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

1. The combination, with an endless apron and apron-supporting rollers, of a guide-roller, a movable bearing or bearings for such roller, and one or two bands for setting the roller, fastened to the movable bearing or bearings, and engaging with one of the apron-supporting rollers, substantially in the manner and for the purpose described.

2. The combination, with an endless apron and apron-supporting rollers, of a guide-roller and a frame forming bearings for such roller, pivoted at or near the center, substantially as and for the purpose described.

3. The combination, with an endless apron and apron-supporting rollers, of a guide-roller, a pivoted frame forming bearings for such roller, and one or two bands for setting the roller, connected to the frame, and engaging with one of the apron-supporting rollers, substantially in the manner and for the purpose set forth.

4. The combination, with the apron-supporting roller C, pivoted frame F, and bands *h*, of the roller-sections C^1 C^1, substantially as and for the purpose described.

5. The combination, with the apron-supporting roller C, pivoted frame F, and bands *h*, of the roller-sections C^1 C^1, either or both carrying an adjustable sleeve, C^2, substantially as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 24th day of June, 1879.

GUSTAV L. JAEGER. L. S.]

Witnesses:

W. HAUFF,

CHAS. WAHLERS.