W. D. PALEN & H. COULSTON.

SPIKED FEED APRON.

APPLICATION FILED OCT. 25, 1916.

1,215,183.

Patented Feb. 6, 1917.

Fig. 1.

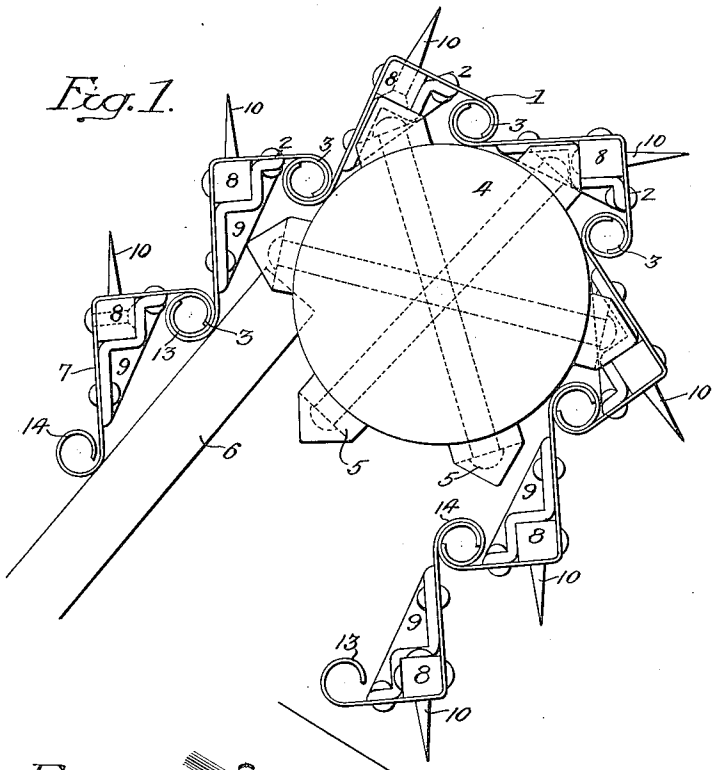


Fig. 2.

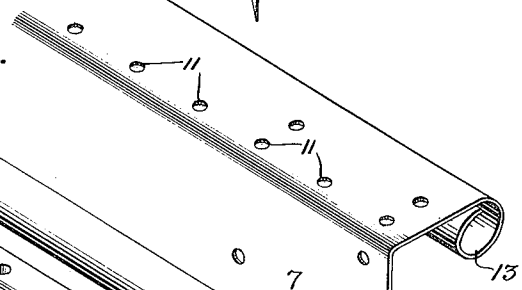


Fig. 3.

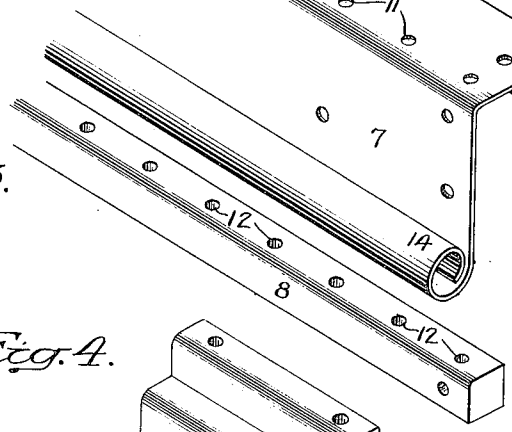
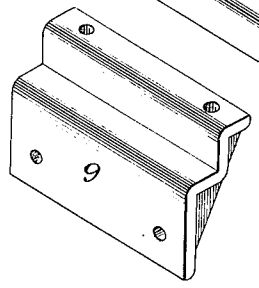


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM D. PALEN AND HARRY COULSTON, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS TO THE PHILADELPHIA TEXTILE MACHINERY COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

SPIKED FEED-APRON.

1,215,183. Specification of Letters Patent. Patented Feb. 6, 1917.

Application filed October 25, 1916. Serial No. 127,677.

To all whom it may concern:

Be it known that we, WILLIAM D. PALEN and HARRY COULSTON, citizens of the United States, and residents of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented certain Improvements in Spiked Feed-Aprons, of which the following is a specification.

One object of our invention is to improve the construction of spiked feed aprons adapted for automatic feeders for cotton, wool, hair, or other textile fibers.

A further object of the invention is to make the apron entirely of metal and to dispense with the usual chains or belts.

In the accompanying drawing: Figure 1, is a side view of sufficient of a spiked feed apron and sprocket wheel to illustrate our invention; and Figs. 2, 3 and 4, are detached perspective views of details of the sections of the apron.

The apron 1 consists of sections 2 coupled together by hinged joints 3. 4 is a sprocket wheel having teeth 5 arranged to engage the apron. 6 is a guide over which the apron travels. This apron can be of any length and width desired, depending upon the character of the machine to which the invention is applied.

Each of the sections 2 is made of three parts, a sheet metal body portion 7, an insert 8 made of steel and rectangular in cross section, and a brace 9 made preferably of wrought iron. The sheet metal body portion 7 is bent at an angle, as shown in Fig. 2, and is perforated for the passage of the spikes 10, which are driven through the perforations 11 in said body portion and in the perforations 12 in the insert 8, as clearly shown in Fig. 1. This sheet metal body portion is reinforced or stiffened by the braces 9, which also hold the rectangular insert in place, as shown in Fig. 1. Each edge of the body portion 7 is rolled, as shown in Fig. 1, to form a hinge joint. The upper edge 13 engages the lower edge 14 of an adjoining section so that when the sections are coupled together they articulate, making a flexible yet secure attachment.

This construction dispenses entirely with the wooden slats and also with the separate carrying chains or belts. In some instance, the insert 8 may be made of wood instead of metal, but we prefer to make it of square rolled steel as this is more substantial than wood.

While we have shown straight spikes of a certain length, these spikes may be arranged differently, according to the type of machine to which the apron is applied.

The rectangular inserts, being located on the inner side of the sections, are utilized as abutments for the teeth 5 of the sprocket wheel 4; the teeth being shaped so as to enter the space of the angle formed by the base of the insert and one edge of the plate, as clearly shown in Fig. 1. The teeth are discontinued at the point where the braces 9 are located.

While the invention is particularly adapted for use as a feed apron for an automatic feeder for textile fibers, it can be used for other purposes without departing from the invention.

We claim:—

1. A section for a feed apron consisting of a sheet metal plate bent at an angle and having spikes secured thereto and having two longitudinal edges rolled to form hinged joints, so that the rolled edge of one section will couple with the rolled edge of an adjoining section.

2. A section for a feed apron consisting of a sheet metal plate bent at an angle and having each longitudinal edge rolled to form a hinged joint, so that each edge can be coupled to the rolled edge of an adjoining section; an insert secured in the angle of the plates; and spikes extending through the plate and into the insert.

3. A section for a feed apron consisting of a sheet metal plate bent at an angle and having its edges rolled to form hinged joints, so that one section can be coupled to another; a rectangular metallic insert; spikes extending through the sheet metal plate and into the insert; and braces secured to the plate and acting as stiffening members for the sections.

4. A spiked feed apron consisting of a series of sections, each section consisting of a sheet metal plate rolled at each edge, the rolled edge of one plate interlocking with the other plate and forming an articulated joint; a rectangular steel insert secured to the plate; spikes extending through the plate and into the insert; and braces forming stiffening members for the sections, the

inserts being arranged so as to be engaged by the teeth of a sprocket wheel.

5. The combination in a spiked feed apron, of a series of sections, each consisting of a sheet metal plate bent at right angles and having longitudinal edges rolled to form hinged joints, the rolled edge of one section coupling with the rolled edge of an adjoining section; an insert rectangular in cross section located in the angle of the plate; and spikes on each section, the rectangular insert being so proportioned that it will act as an abutment for the teeth of the sprocket wheel around which the apron passes.

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