No. 886,454. PATENTED MAY 5, 1908.

F. L. WOOD.

PAPER FEED MECHANISM.

APPLICATION FILED DEC. 12, 1907.

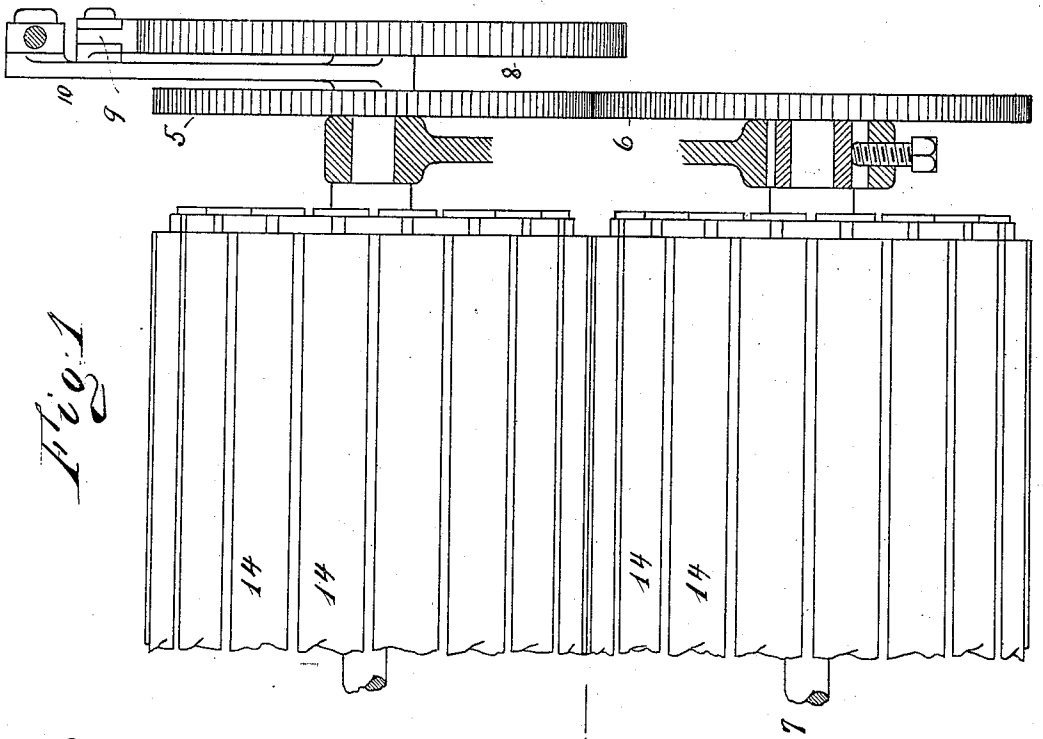


Fig. 1.

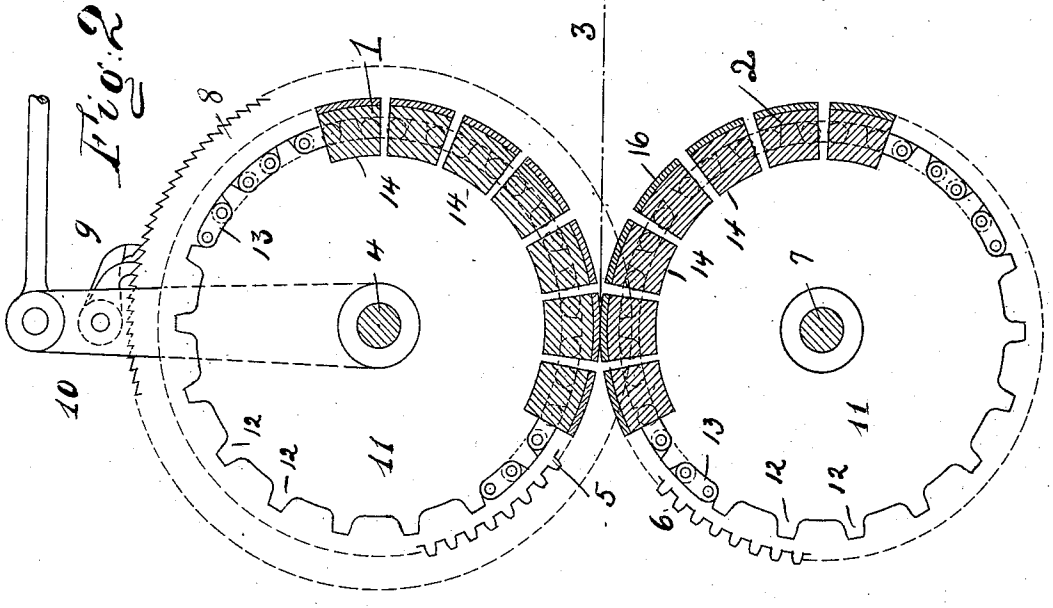


Fig. 2.

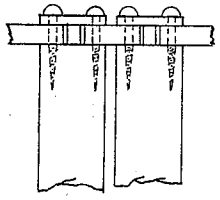


Fig. 3.

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PAPER-FEED MECHANISM.

No. 886,454. Specification of Letters Patent. Patented May 5, 1908.

Application filed December 12, 1907. Serial No. 406,148.

To all whom it may concern:

Be it known that I, FREDERICK L. WOOD, a citizen of the United States, and resident of Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Paper-Feed Mechanism, of which the following is a specification.

This invention relates to a new and improved paper feed mechanism especially adapted for machines for making perforated music sheets and the object of my invention is to provide a new and improved paper feed which is simple in construction, reliable and positive in action.

In the accompanying drawings, in which like letters of reference indicate like parts in all the figures:—Figure 1 is a front view of part of my improved feed mechanism, parts being broken away and others shown in section. Fig. 2 is a vertical transverse sectional view, parts being shown in elevation. Fig. 3 is a detail sectional view showing the manner of securing the bars.

The feed mechanism consists of two feed rollers or drums 1 and 2 between which the paper 3 is passed, this paper being shown in dotted lines in Fig. 2. The feed roller or drum 1 has an axle 4 suitably mounted and carrying a cog wheel 5 which engages a cog wheel 6 on the axle 7 of the feed roller 2. A ratchet wheel 8 is fixed on the axle 4 of the feed roller 1 and is engaged by the pawls 9 on the rocking lever 10 mounted on the axle 4, so that by operating the rocking lever both rollers are rotated. Each roller is provided with end sprocket wheels 11 having sprocket teeth 12 for engaging the links of an endless sprocket chain 13, which sprocket chain is of such length as to fit quite snugly around the sprocket wheel 12, the single links of the chain passing into the recesses formed between the teeth 12 and the double links embracing its teeth 12. A series of bars 14 extend the length of the roller between the two sprocket chains at the two ends of each roller, said bars being secured at their ends to the chains in such a manner that the ends of the bars form the inner members of the double links, as clearly shown in Fig. 3. The outer faces of the bars 14 are rounded on a circular line and provided with a covering 16 of felt, rubber or leather. It will be noted that the bars 14 are not rigidly carried by the frame of the rollers but are supported on the frame of the roller exclusively and entirely by means of the end sprocket chains. This permits the bars to give slightly when the thickness of the paper to be fed is increased, but at the same time the bars have sufficient slack to settle down upon the paper and grip the same sufficiently to carry it along, thus at all times insuring a positive and sure feed.

Having described my invention what I claim as new and desire to secure by Letters Patent is:—

1. In a paper feed mechanism, a feed roller composed of end sprocket wheels, an endless chain completely encircling each end sprocket wheel and mounted securely on its end sprocket wheel and bars attached to the two chains and forming the periphery of the roller, substantially as set forth.

2. A feed roller having a sprocket wheel at each end, an endless sprocket chain completely surrounding each wheel and remaining permanently on said wheel, bars having their ends secured to the sprocket chains of the two disks and forming the periphery of he roller, substantially as set forth.

3. In a paper feed mechanism roller, the combination with two sprocket wheels mounted on a shaft, a sprocket chain completely surrounding each sprocket wheel and remaining permanently on the same, bars attached to the sprocket chains on the two wheels and forming the periphery of the roller, the ends of said bars being secured to the sides of the sprocket chains, substantially as set forth.

4. In a paper feed mechanism roller, the combination with two sprocket wheels mounted on a shaft, a sprocket chain surrounding each sprocket wheel and held permanently on the same, bars mounted between the chains and forming the periphery of the roller, the ends of said bars resting against the inner sides of the sprocket chains and secured to said inner sides, substantially as set forth.

5. In a paper feed mechanism roller, the combination with two sprocket wheels, secured on a shaft, a sprocket chain surrounding each sprocket wheel and held permanently on the same, bars mounted between the chains to form the periphery of the roller, the ends of said bars resting against the inner sides of the sprocket chains and the pivots of the sprocket chains passing through the links

of the sprocket chains into the ends of the bars, in which they are secured, substantially as set forth.

6. In a paper feed mechanism, a feed roller having its entire periphery entirely surrounding the roller formed of bars extending lengthwise of the roller, and flexible members surrounding circular parts of the roller frame and permanently held on said circular parts, to which flexible members the ends of the bars forming the periphery of the roller are held, substantially as set forth.

Signed at Worcester, in the county of Worcester and State of Massachusetts this 2nd day of Dec. A. D. 1907.

FREDERICK L. WOOD.

Witnesses:
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