May 22, 1928. 1,670,337

E. M. BRACKETT ET AL.

STRIP FEEDING DEVICE

Filed June 21, 1926

Fig. 1.

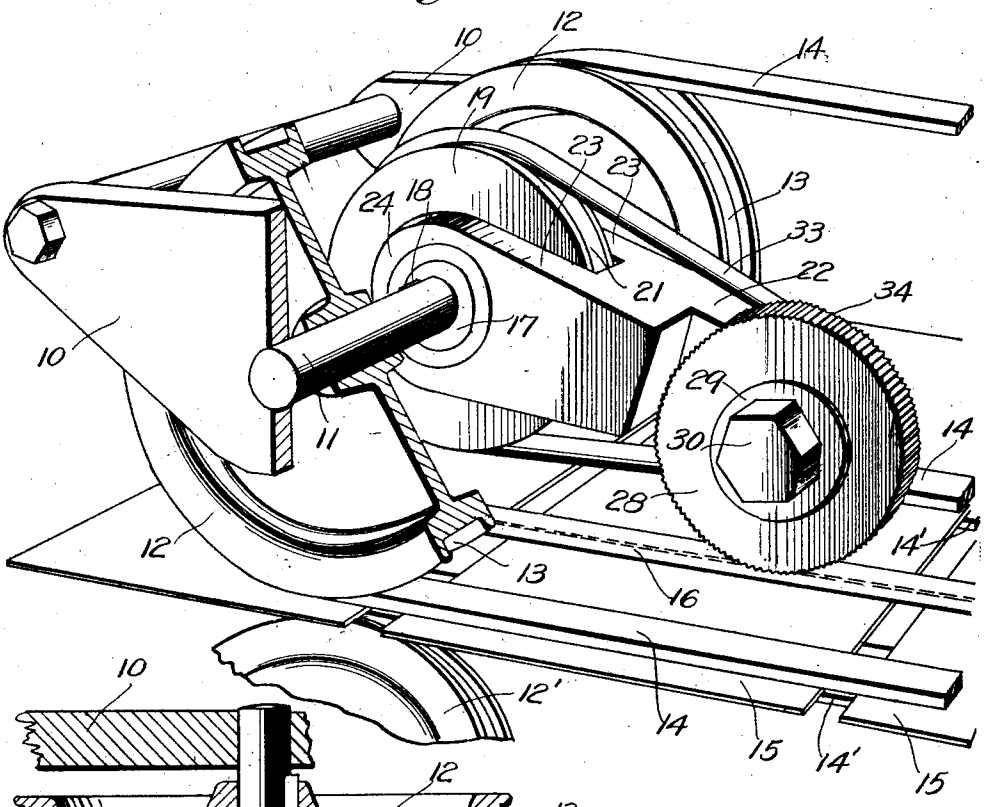
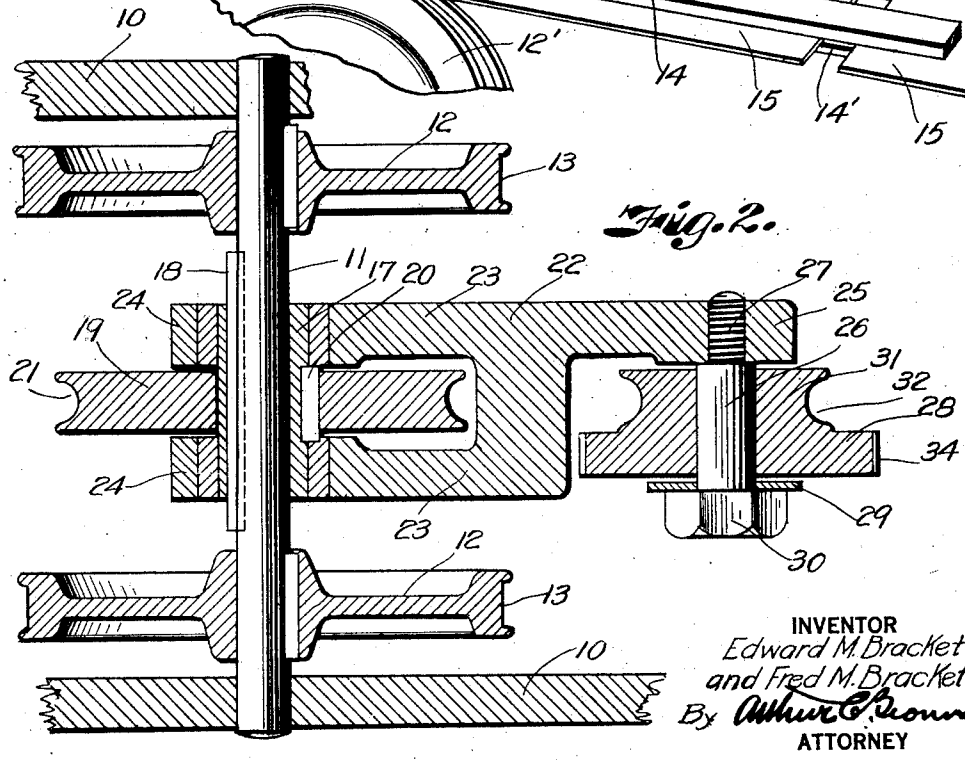


Fig. 2.



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STRIP-FEEDING DEVICE.

Application filed June 21, 1926. Serial No. 117,625.

Our invention relates to strip feeding devices and more particularly to feeding binding strips engaging with sheets so that the same will feed at the same speed as the sheets.

It is the purpose of our invention to provide strip feeding means in co-operation with conveyor members that are adapted to feed sheets with strips in engagement therewith along, so that said strip feeding means feeds the strip at the same linear speed at which the conveyor belts and the sheets are traveling. This is necessary owing to the fact that a cold glue composition is applied to the strip and will not under any circumstances adhere instantaneously to the sheets. In order to accomplish this, the strip feeding member, which is rotatably mounted, is connected with a shaft upon which one or more of the conveyor belt pulleys is mounted to rotate with the shaft, in such a manner that the peripheral speed of the rotatable strip-engaging member is the same as the linear speed of the conveyor belt passing over the pulley.

Other objects and advantages of our invention will appear as the description of the accompanying drawings proceeds; however, we desire to have it distinctly understood that we do not intend to limit ourselves to the exact details shown or described, but that we intend to include as part of our invention all such obvious changes and modifications of parts as would occur to a person skilled in this art and as would fall within the scope of the claims.

In the drawings:

Fig. 1 is a perspective view of a portion of a strip applying machine, showing our improved strip feeding mechanism, and

Fig. 2 is a horizontal, sectional view thereof, partly broken away.

Referring more in detail to the drawings:

Our improved strip feeding mechanism is mounted upon a machine having the frame members 10, in which is journaled the shaft 11. Keyed to the shaft 11 are the pulleys 12 having the grooved peripheries 13 in which the conveyor belts 14 operate. A pair of such pulleys is shown in the drawings, each with a conveyor belt operating over the same. Similar conveyor belts 14′ operate over the pulleys 12′ and sheets 15 are fed forwardly between the belts 14 and 14′, one belt 14 being on one side of each sheet and one belt 14′ being on the other side of each sheet. The sheets are fed forwardly with their edges substantially abutting under the binding strip 16 and the binding strip is carried forwardly with the sheets 15 but it has been found to be necessary, in order to have the strip 16 fed at exactly the same speed as the sheets 15 and to prevent any unevenness in the application of the strip 16 to the sheets 15, to provide means for feeding the strips 16 positively at the same speed as the sheets 15.

In order to do this, a sleeve 17 is provided on the shaft 11, being keyed thereto by means of the key member 18, and the pulley 19 is keyed to the sleeve 17 by means of the key member 20. The pulley 19 is provided with a concave groove 21 for receiving a round belt.

A bifurcated arm 22 is provided with a pair of branches 23 forming a yoke-like portion extending on opposite sides of the pulley 19 and having bearing portions 24 embracing the sleeve 17 and rotatable thereon. The free end 25 of the arm 22 has a shaft 26 mounted thereon, said shaft being provided with a screw-threaded end 27, engaging in a screw-threaded opening in the arm 25. A rotatable strip-engaging member 28 is mounted on the shaft 26 and is rotatable thereon, said member being held in place on the shaft by means of the washer 29 mounted between the head 30 of the member 26 and the rotatable member 28. The rotatable strip-engaging member 28 is provided with an enlarged hub portion 31, having a concave groove 32 therein and forming a pulley integral with the rotatable member 28. The belt 33 passes over the pulley 19 and the pulley 31, lying in the grooves 21 and 32 to thus drive the rotatable strip-engaging member 28 when the pulleys 12 are rotated.

The member 28 is provided with a roughened or serrated periphery 34 for engagement with the strip 16.

The proportion of the pulleys 12, 19 and 31 to each other and to the rotatable member 28 is such that the peripheral speed of the member 28 is the same as the linear speed of the belts 14; thus the gripping surface 34 of the rotatable member 28 will move the strip 16 forwardly at the same speed as the strips 16 are being fed forwardly by the conveyor belts 14 and 14′.

What we claim and desire to secure by Letters Patent is:

1. In a machine of the character described, a conveyor belt, a belt pulley over which said belt operates, a shaft turning with said pulley, a pulley mounted on said shaft to rotate therewith, an arm on said shaft, a rotatable strip-engaging member on said arm, a pulley rotating therewith, and a driving connection between said last-mentioned pulleys, said pulleys being of such relative sizes that said strip-engaging member rotates at the same peripheral speed as the belt-engaging portion of said pulley.

2. In combination with sheet feeding mechanism including a plurality of pulleys having a common shaft, and conveyor belts operable by the pulleys, an arm loose on said shaft, a strip-engaging member rotatably mounted on said arm, pulleys in fixed relation to the shaft and to said rotatable member, and a belt on said last-named pulleys for operating the rotatable member synchronously with the belt pulleys.

In testimony whereof we affix our signatures.

EDWARD M. BRACKETT.
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