A. C. SCHOEN.

MACHINE FOR PRINTING WARPS.

APPLICATION FILED JUNE 22, 1909.

954,890.

Patented Apr. 12, 1910.

Fig. 1.

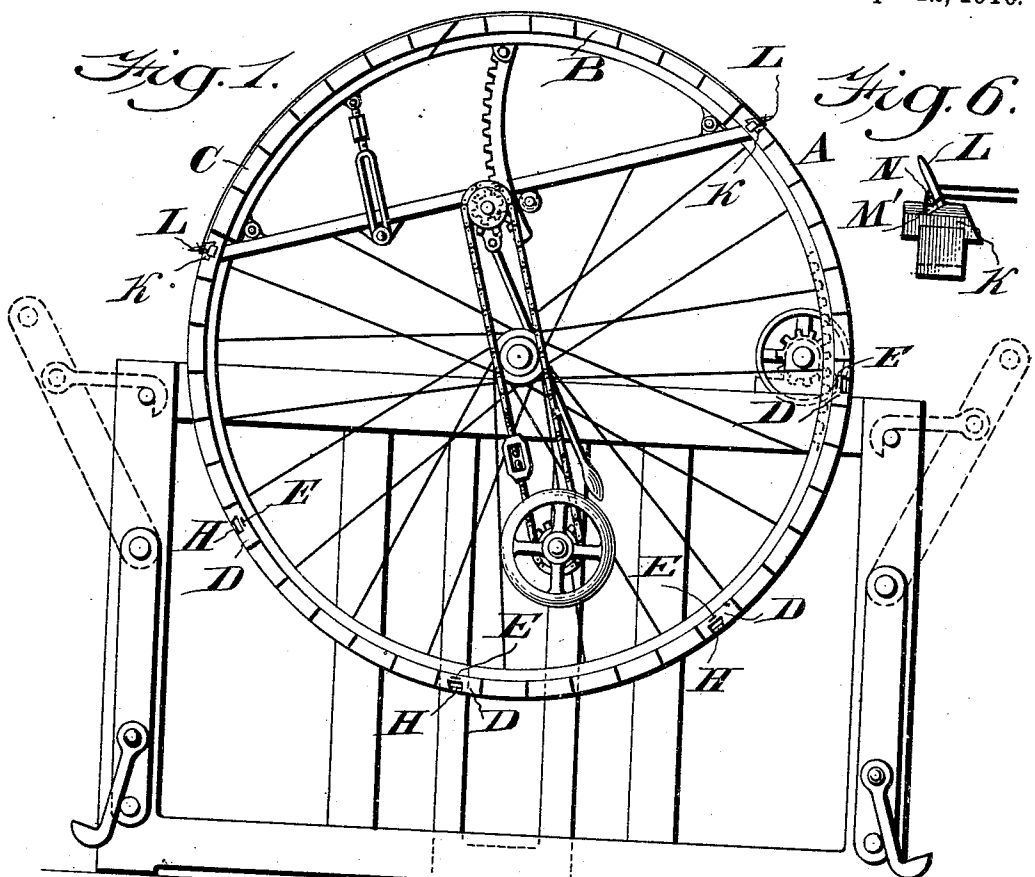


Fig. 6.

Fig. 2.

Fig. 3.

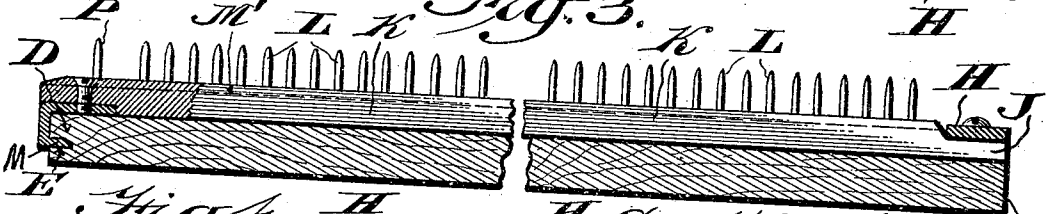


Fig. 4.

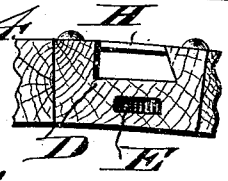
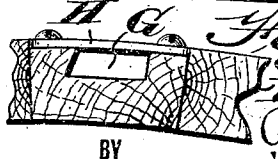


Fig. 5.



WITNESSES

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MACHINE FOR PRINTING WARPS.

954,890. Specification of Letters Patent. Patented Apr. 12, 1910.

Application filed June 22, 1909. Serial No. 503,675.

To all whom it may concern:

Be it known that I, AUGUST C. SCHOEN, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Machine for Printing Warps, of which the following is a specification.

My invention relates to an improvement in a machine for printing warps, for which Letters Patent of the United States, No. 839,083 were granted to me, August C. Schoen, assignor to Stinson Bros., on the 18th day of December, 1906, said machine embodying a drum on which warp may be wrapped, the same being adapted to be reduced in diameter, whereby the warps may be readily removed and afterward restored to its normal condition.

The present invention consists in applying to a drum which holds warp for the purpose stated, means for holding a limited length of warp relatively to the size of the article to be produced, so that only such length will be printed, while the remainder of the drum will be unoccupied.

For the purpose of explaining the invention, the accompanying drawing illustrates a satisfactory reduction of the same to practice, but the important instrumentalities thereof may be varied, and so it is to be understood that the invention is not limited to the specific arrangement and organization shown and described.

Figure 1 represents a side elevation of a warp-printing machine embodying my invention. Fig. 2 represents a peripheral view of a portion of the same on an enlarged scale. Fig. 3 represents a longitudinal section thereof. Figs. 4 and 5 represent views of portions of opposite sides of the drum on an enlarged scale. Fig. 6 represents a side elevation of a portion at a right angle to Fig. 3.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawing:—A designates a drum whose periphery is formed with movable sections B, C, whereby the drum may be collapsed or reduced in diameter for conveniently removing warp or yarn therefrom in a most convenient manner, the means employed for operatively sustaining said sections and withdrawing the same, being substantially the same as those in the aforesaid Letters Patent, but to the same I do not wish to limit my present invention. In one side D of the drum are recesses or sockets E and in the opposite side F are recesses G, over which latter are plates or beams H adapted to form keepers or sockets for the tongues J on one end of bars, beams, or plates K, which latter occupy grooves extending transversely across the periphery of the drum and are provided with outwardly projecting teeth L thereon forming combs on which yarn or warps may be hooked at intervals, as will be hereinafter fully explained. On the opposite ends of said plates are inturned hooks M, which are adapted to enter the recesses E as keepers, whereby the combs will be firmly retained on the drum and may be conveniently removed by lateral motion therefrom when so desired, it being seen that the combs occupy positions transversely across the periphery of the drum. In the present case, two of the combs are in position in Fig. 1, consequently a short length of warps may be hooked upon the teeth and spaced-apart in order to be held properly while being printed thereon to form a short rug or other article to be produced from the same. For longer warps, a comb will be applied to and secured to the drum farther removed from what may be termed the starting comb, Fig. 1 showing a provision for at least six combs on the drum, so that a similar number of combs may be employed for holding warps of six different lengths on the drum, but as is evident, a greater or less number of combs may be provided for on the drum as desired.

In order to prevent warps from slipping from the combs, the plate K has therein back of the base of the teeth the longitudinally-extending groove M′, which is adapted to receive the wire N, which is passed through or over the bends of the warps and seats the same in said groove M′, thus preventing improper rising of said bends and displacement of the warps, said wire being tied-on or otherwise connected with end teeth of the combs as at P, and so retained in position. Furthermore, I may use a smaller drum than heretofore and so reduce the expense of lapping the warp and printing the same, while also adapting the device to do more work than where the warp is lapped entirely around the drum, and less stock is required to be carried.

Having thus described my invention, what

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

1. In a printing machine of the character described, a drum, the same having recesses, beams supported transversely on the periphery of said drum and removably fitted in said recesses, teeth fixedly mounted on said beams and projecting outwardly therefrom, and means on the beams engaging with coöperating means on the drum for holding the said beams interchangeably in position.

2. In a warp printing machine, a drum, and combs removably and interchangeably located on the periphery of said drum and having tongues and hooks, and means for cooperation therewith for removably connecting said combs with the opposite sides of the drum.

3. In a warp printing machine, a drum, and combs removably and interchangeably located on the periphery of said drum and having tongues and hooks, means for cooperating therewith for removably connecting said combs with the opposite sides of the drum, and means for preventing displacement of said combs.

4. In a warp-printing machine, a drum, and a comb adapted to occupy the periphery thereof and a tongue and a hook on the opposite ends of the plate of said comb, the sides of said drum having means in which said tongue and hook may be retained.

5. In a warp-printing machine, a drum having in the peripheral portion thereof at intervals series of sockets, a plurality of transversely extending combs, the beams of which being adapted to be removably fitted in said sockets, and means extending transversely with the teeth of the combs adapted to hold the warps on said teeth.

6. In a warp-printing machine, a drum, a plurality of combs, the latter having its beams adapted to be removably fitted in the periphery of said drum at intervals said drum being provided with transversely extending grooves, and members extending transversely with said teeth to engage the warps and hold the same on the teeth in said grooves.

7. In a warp printing machine, a drum provided with recesses around the periphery thereof, yarn-supporting members removably and interchangeably retained in said recesses, and holding means on the ends of said members, the same being engageable with the sides of the drum.

8. In a warp printing machine, a drum, and combs, the latter being removably and interchangeably retained on the periphery of the drum, and holding means for the ends of said combs engageable with coöperating means on the opposite sides of the drum, whereby any one of said combs may be removed when desired.

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Witnesses:
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