E. T. GARSED.

MACHINE FOR WRAPPING WARP CHAINS.

No. 587,194. Patented July 27, 1897. Inventor: Edward I.Garsed by his Attorneys Howson & Howson

## United States Patent Office.

EDWARD T. GARSED, OF GREENSBOROUGH, NORTH CAROLINA, ASSIGNOR OF ONE-HALF TO CEASAR CONE, OF SAME PLACE.

## MACHINE FOR WRAPPING WARP-CHAINS.

SPECIFICATION forming part of Letters Patent No. 587,194, dated July 27, 1897.

Application filed November 7, 1896. Serial No. 611,415. (No model.)

To all whom it may concern:

Be it known that I, EDWARD T. GARSED, a citizen of the United States, and a resident of Greensborough, North Carolina, have invented certain Improvements in Machines for Wrapping Warp-Chains, of which the following is a specification.

The object of my invention is to construct a machine which will wrap a thread around to a warp-chain, so as to prevent the warps in the chain becoming separated and entangled during the process of boiling, dyeing, or bleaching, which is done before the thread is beamed or quilled.

Referring to the accompanying drawing, the figure represents a side view of my improved machine for wrapping warp-chains.

A is the frame of the machine, of any suitable construction, and mounted on this frame is a standard B, on which is fixed a bobbin, spool, cone, or tube D, having an open center, and on which is the thread used for wrapping the warp-chains.

E is a brake of any suitable construction, having weights e, so as to regulate the friction, the brake being so formed as to always rest upon the surface of the bobbin.

x is the warp-chain, which passes from a spool C in the present instance, but it may pass from a ball.

C' is a carrier-roller mounted in suitable bearings for guiding the warp-chain. The warp-chain passes through the bracket B and through the bobbin or spool and between rolls 35 F F' to the can or other receptacle G. In the present instance the roll F is provided with a belt-wheel f and is driven from any convenient power-shaft. This is the only driven part of the machine. The spool is station-40 ary, and as the warp-chain is drawn through the bobbin or spool by the feed-rolls F F' the

thread from the bobbin, which in the first instance is attached to the warp-chain, passes onto the chain, and as it unwinds from the spool it travels around the warp, so that it is 45 laid upon the warp in a spiral manner. The amount of tension applied by the brake E will decide how tight the thread shall be wound upon the warp.

It will thus be seen that I am enabled to 50 make a very simple machine for wrapping warp-threads, and which, while shown in the accompanying drawing as an independent machine, can nevertheless be applied to any machine making warps or chains. It will also 55 be understood that the machine may be arranged vertically instead of horizontally and may be arranged in an inclined position, depending altogether upon adjacent machines.

The machine made in accordance with my 60 invention can be run at a greater speed than any machine heretofore made for the same purpose, as the thread will be placed upon the warp by the simple unwinding of the bobbin or spool as fast as the warp-chain can 65 be drawn through the bobbin or spool.

I claim as my invention—

The combination in a machine for wrapping warp-chains, of the bracket carrying a fixed bobbin or spool having an open center, feed-70 rolls for drawing the warp through the bobbin or spool and a brake resting upon the threads wound on the spool or bobbin, substantially as described.

In testimony whereof I have signed my 75 name to this specification in the presence of two subscribing witnesses.

EDW. T. GARSED.

Witnesses:

J. N. RICHARDSON, JAS. A. HODGIN.