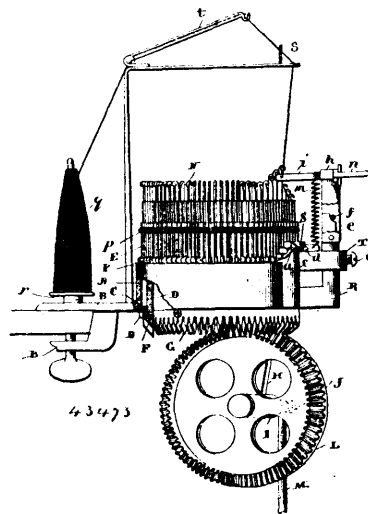


having engagement with said cam, substantially as illustrated and described. 18th. The combination, in a can crimping machine, of a horizontal driving shaft, a vertical shaft, driving connection between the driving shaft and vertical shaft, a vertical shaft rotated by driving connection between it and first mentioned vertical shaft, cams upon the first mentioned vertical shaft, a vertical shaft carrying crimping discs, and reciprocating connection between said cams and the vertical shaft carrying crimping discs, substantially as illustrated and described. 19th. The combination, in a can crimping machine, of a horizontal driving shaft, a vertical shaft, driving connection between said horizontal driving shaft and the vertical shaft, a vertical shaft carrying a disc and having driving connection between it and the first mentioned vertical shaft, cams upon said first mentioned vertical shaft, a vertical shaft carrying crimping discs, and adjustable connections between said cams and the vertical shaft carrying crimping discs, substantially as illustrated and described. 20th. The combination, in a can crimping machine, of a horizontal driving shaft, a vertical shaft, driving connection between the horizontal driving shaft and the vertical shaft, a vertical shaft carrying a disc and being rotated by driving connection between it and the first mentioned vertical shaft, a vertical shaft carrying two brackets, one of said brackets having pivoted thereto a crimping disc and carrying a smoothing disc to follow the crimping disc, the other bracket carrying a crimping disc, one of the brackets having vertical adjustment upon the shaft to which it is attached, cams upon the first mentioned vertical shaft to reciprocate the vertical shaft carrying the brackets, and a cam upon first mentioned vertical shaft to reciprocate the smoothing disc, substantially as illustrated and described. 21st. The combination, in a can crimping machine, of a vertical shaft having an intermittent rotary movement, a carrier frame fixed upon the shaft, a series of discs having spindles journaled around the carrier frame, a friction face around the carrier frame, a friction bearing in the friction face, and a vertical shaft carrying crimping discs, substantially as illustrated and described. 22nd. The combination, in a can crimping machine, of a vertical shaft having an intermittent rotary movement, a carrier frame fixed upon the shaft, a series of discs having spindles journaled around the carrier frame, a shaft carrying crimping discs, and smoothing discs to follow one of the crimping discs, substantially as illustrated and described. 23rd. The combination, in a can crimping machine, of a vertical shaft having an intermittent rotary movement, a carrier frame fixed upon the shaft, a series of discs having spindles journaled around the carrier frame, a vertical shaft carrying brackets having arms to which are pivoted crimping discs, one of the brackets having vertical adjustment upon said shaft, substantially as illustrated and described. 24th. The combination, in a can crimping machine, of a vertical shaft having an intermittent rotary movement, a carrier frame fixed upon the shaft, a series of discs having spindles journaled around the carrier frame, a bracket having pivoted thereto a crimping disc, and carrying a smoothing disc to follow the crimping disc, and means to reciprocate said bracket, with means for independently reciprocating the smoothing disc, substantially as illustrated and described. 25th. The combination, in a can crimping machine, of a vertical shaft having an intermittent rotary movement, a carrier frame fixed upon the shaft, a series of discs having spindles journaled around the carrier frame, a bracket having pivoted thereto a crimping disc, and carrying a smoothing disc to follow the crimping disc, and means to reciprocate said bracket, with means for independently reciprocating the smoothing disc, substantially as illustrated and described. 26th. The combination, in a can crimping machine, of a vertical shaft having an intermittent rotary movement, a carrier frame fixed upon said shaft, a series of discs journaled around the carrier frame, a vertical shaft carrying two brackets, one of the brackets having pivoted thereto a crimping disc and carrying a smoothing disc to follow the crimping disc, and the other bracket having pivoted thereto a crimping disc, one of the said brackets having vertical adjustment upon said shaft, substantially as illustrated and described. 27th. The combination in a can crimping machine, of a vertical shaft having an intermittent rotary movement, a carrier frame fixed upon the shaft, a series of discs journaled around the carrier frame, a vertical shaft carrying two brackets, one of the brackets having pivoted thereto a crimping disc and carrying a smoothing disc, the other bracket having pivoted thereto a crimping disc, and means to reciprocate said vertical shaft carrying brackets, and means to reciprocate the smoothing disc, substantially as illustrated and described. 28th. The combination in a can crimping machine, of a horizontal driving shaft, a vertical shaft, driving connection between the horizontal driving shaft and the vertical shaft, a vertical shaft carrying a disc which is rotated by driving connection between it and the first mentioned vertical shaft, a vertical shaft carrying brackets, to which are pivoted crimping discs, one of the brackets carrying a smoothing disc to follow one of the crimping discs, cams upon the first mentioned vertical shaft to reciprocate the shaft carrying brackets, and means to independently reciprocate the smoothing disc, substantially as illustrated and described. 29th. The combination in a can crimping machine, of a vertical shaft having an intermittent rotary movement, a carrier frame fixed upon the intermittently rotating shaft, a series of discs journaled around the carrier frame, a horizontal driving shaft, a vertical shaft having cams thereon, driving connection between the horizontal driving shaft and the vertical shaft having cams thereon, a vertical shaft carrying a disc supported

above the orbit of the discs of the carrier frame, driving connection between said shaft and the vertical shaft having cams thereon, a vertical shaft carrying crimping discs, suitable connection between said cams and said shaft carrying crimping discs whereby the crimping discs are reciprocated by said cams, a smoothing disc to follow one of the crimping discs, means to independently reciprocate said smoothing disc, and means for raising successively the discs journaled around the carrier frame after each intermittent movement of said frame so as to grip a can between said discs successively, and the disc that is supported above the orbit of the can carrier disc, substantially as illustrated and described.

No. 43,473. Circular Knitting Machine.

(Machine à tricot circulaire.)



Joseph E. Gearhart, Clearfield, Pennsylvania, U.S.A., 5th July, 1893; 6 years.

Claim.—1st. A circular knitting machine comprising a base having a depression to form a cam, a cam above the said depression, a revolvable cylinder within the said cam, and means for revolving the said cylinder. 2nd. A circular knitting machine comprising a base having a depression to form a cam, a cam above the said depression, a latch at the upper end of the said depression, a revolvable cylinder within the said cam, and a means for revolving the said cylinder. 3rd. A circular knitting machine comprising a base having a depression to form a cam, a vertical support outside of the said cam, and a cam adjustable held upon and at the inner end of the said support by means of a clamp, substantially as specified. 4th. A circular knitting machine comprising a base having a vertical portion having a cam, a revolvable cylinder inside of the said vertical portion carrying needles with shanks, a vertical support outside of the said vertical portion, a standard pivoted to the upper end of the said vertical portion, a thread guide pivoted or journaled at the upper end of the standard to be reversible, and a spring having one end secured to the inner end of the thread guide and its opposite end to a portion of the machine. 5th. A circular knitting machine comprising a base having a vertical portion provided with a cam, a revolvable cylinder inside of the said vertical portion, carrying needles with shanks, a means for revolving the cylinder, a vertical support outside of the said vertical portion, a standard pivoted to the upper end of the said support, a thread guide journaled in the upper end of the said standard having its inner end formed into a guide and its outer end formed into a handle, stops upon the standard which the handle engages, and a spring secured to the thread guide for holding it to its proper position and also for holding the said standard inward. 6th. A circular knitting machine comprising a base having a vertical portion provided with a cam depression, a spring actuated latch at each end of the depression which is normally held at its free end upon the vertical portion, a cam above the said depression, a revolvable cylinder inside of the said vertical portion carrying needles with shanks, and a means for revolving the said cylinder. 7th. A circular knitting machine comprising a base having a vertical portion provided with a cam, projections at each end of the said cam and outside thereof, latches having arms which are pivoted in the said projections and provided with inclined upper edges, springs for holding the free ends of the latches normally upon the said vertical portion, a revolvable cylinder inside of the said vertical portion, carrying needles with shanks, and a means for revolving the said cylinder.

No. 43,474. Boat. (Bateau.)

John James Robertson and William Robertson, both of Hamilton, Ontario, Canada, 5th July, 1893; 6 years.

Claim.—1st. A boat constructed with ribs bent over a mould, and an inner and outer layer of planking secured thereto with canvas,