A. J. FORD.

BLANKET CLAMPING MEANS FOR OFFSET PRINTING PRESSES.

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1,043,819. **Patented Nov. 12, 1912.**

Fig. 2

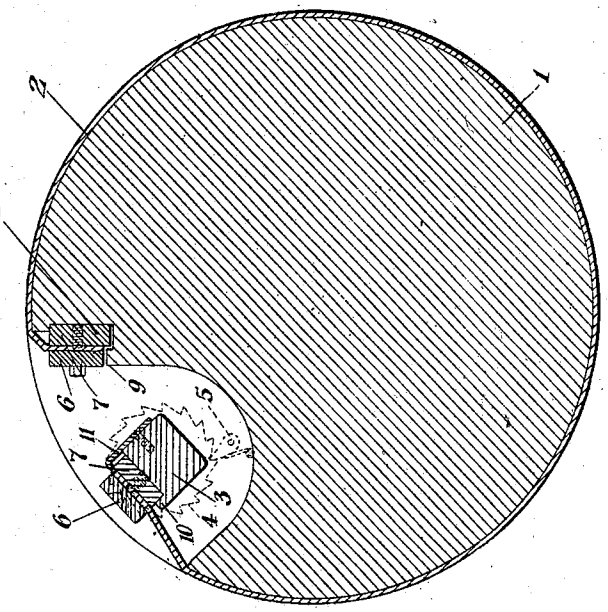
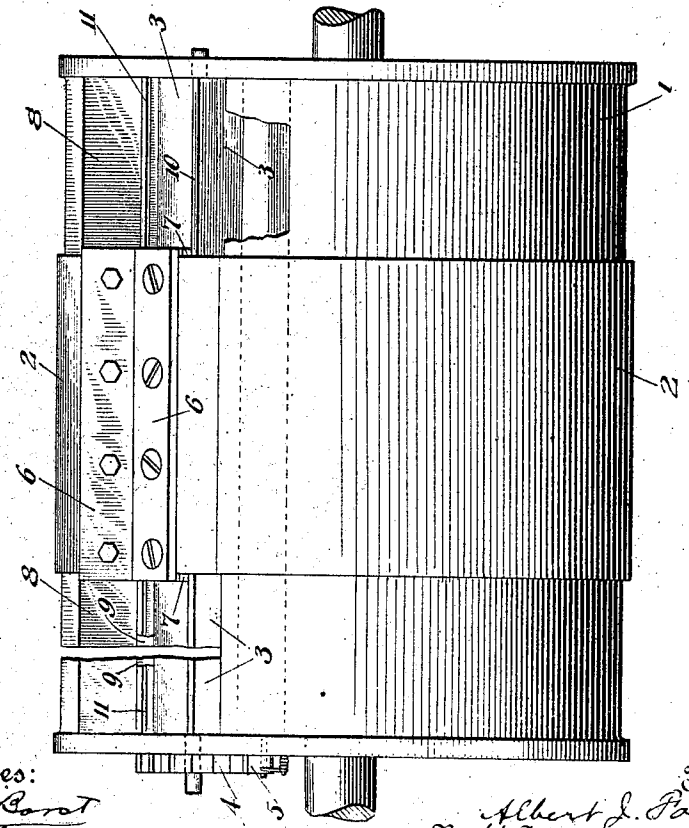


Fig. 1



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UNITED STATES PATENT OFFICE.

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BLANKET-CLAMPING MEANS FOR OFFSET PRINTING-PRESSES.

1,043,819. Specification of Letters Patent. Patented Nov. 12, 1912.

Application filed December 6, 1911. Serial No. 664,172.

To all whom it may concern:

Be it known that I, ALBERT J. FORD, a citizen of the United States, residing at the borough of Manhattan, city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Blanket-Clamping Means for Offset Printing-Presses, of which the following is a specification, reference being had therein to the accompanying drawings, forming part thereof.

My invention relates to improvements in blanket clamping means for offset printing presses.

In offset printing presses, it is common to cover the surface of a printing element of cylindrical or other form with a covering or blanket of rubber or other yielding material, commonly termed the transfer blanket, which serves as a transfer medium to receive the impression from the printing surface and to print it upon the surface to be printed.

My invention relates particularly to the means by which such a blanket is secured in place upon the printing element, and to means for adjusting the blanket in accordance with the form or design on the printing surface.

In the use of offset presses, it frequently happens that the design or part to be printed occupies a fraction of the full width of the press, and it is desirable that the transfer blankets, which are expensive, and of short life, should be but slightly wider than the impressions, as well as that they should be shiftable to that part of the width of the press at which the design to be printed is located.

An object of this invention is to provide means for using a blanket of any desired width or more than one blanket of narrow width, and for easily adjusting the blanket or blankets transversely of the press to any desired position, or positions.

Still other objects and advantages of the invention will appear from the following description.

The embodiment of the invention illustrated in the accompanying drawings will now be described and my invention will thereafter be pointed out in claims.

Figure 1 is a side elevation of a transfer cylinder embodying my invention. Fig. 2 is a central transverse section of the same.

In the embodiment of my invention which is used for illustration herein, a cylinder 1 is employed which is designed for use as a transfer cylinder of an offset printing press, and a blanket 2 of rubber fabric is wrapped partly around the cylinder 1 and its ends are adjustably secured in a recess in the periphery of the cylinder extending longitudinally of the cylinder and transversely of the blanket, by means of clamping members on the ends of the blanket, one of these being shown as directly engaging the cylinder and the other as engaging a reel member shown as a reel-rod 3. As usual, the reel-rod provides for the tightening of the blanket about the cylinder by turning the reel-rod on its journals, which rotate in suitable bearings at the ends of the cylinder. To hold the reel-rod in adjusted position against the tension of the blanket, it is provided at one outer end with a ratchet wheel 4, which is engaged by a spring-pressed pawl 5 pivoted at the end of the cylinder. This journal is provided with a square projecting end for the application of a wrench or other tool for turning the reel-rod in its bearings.

The blanket-clamping member at each end of the blanket consists of two flat clamp-bars 6 and 7, between which the end of the blanket is clamped, and which are fastened together by bolts or screws as shown, so that each pair of clamp-bars forms a clamping unit or clamp; and each outer clamp-bar is shown as somewhat narrower than the inner clamp-bar so that the inner clamp-bar may be readily engaged in the locking sockets, as will now appear.

At one side of the recess in the cylinder, and near the periphery of the cylinder, is provided a locking groove or socket 8, extending longitudinally of the cylinder and transversely of the blanket. One edge of the socket 8 is undercut to form an overhanging or locking lip 9, which extends in front of the lower clamp-bar and serves to lock the clamp in the socket against the tension of the blanket.

The reel-rod is provided with a locking socket formed by a thrust shoulder 10 on the side opposed to the tension of the blanket, and the clamp-bars 6 and 7 are placed on the reel-rod bearing against this shoulder. The socket is completed by an overhanging part or locking lip provided on a flanged metallic strap 11 secured to the reel-rod by screws,

with the flanged edge extending over the inner clamping bar 7, on the side opposite to that which bears against the shoulder 10. In this way the clamp at this end of the blanket is securely locked to the reel-rod against the tension of the blanket. Both clamps, however, are free to move longitudinally of the cylinder or transversely of the blanket, and when it is desired to laterally adjust the blanket, it is only necessary to release the pawl 5 and thereby relieve the tension upon the blanket. The operator has then only to slide the clamp-bars along their sockets to effect the desired adjustment, after which the blanket may again be placed under tension by rotating the reel-rod.

When it is desired to remove the blanket, the reel-rod may be released sufficiently to permit the clamps to be removed from the sockets by first tipping them outward at their ends which abut against the thrust shoulders. Thus the blanket may be readily removed and readily attached by reverse movements, and the clamps and blankets may be provided in varying widths and one or more may be attached in desired positions transversely of the press, so that no greater width of blanket need be used than the particular impression requires and the blanket or blankets may be readily adjusted to desired position or positions.

It is obvious that various modifications may be made in the construction shown and above particularly described within the principle and scope of my invention.

I claim:—

1. The combination, with the printing element of a printing press, of a reel member for placing the blanket under longitudinal tension, and a blanket-clamping member arranged to be locked to the reel member, the coöperative faces of the two members being shaped to fit together so as to permit relative movement transversely of the blanket between the two members for adjustment, and to permit disengagement of the members by relative movement longitudinally of the blanket when the tension of the blanket is relieved, and to lock the blanket-clamping member against relative movement longitudinally of the blanket under the tension of the blanket.

2. The combination, with the printing element of a printing press, of a reel member for placing the blanket under longitudinal tension, and a blanket-clamping member arranged to be locked to the reel member, one of the members being provided with a locking socket for receiving a portion of the other member shaped to permit relative movement transversely of the blanket between the two members for adjustment, and to permit the blanket-clamping member to be rocked out of engagement with the reel member when tension of the blanket is relieved, and to lock the blanket-clamping member against relative movement longitudinally of the blanket under the tension of the blanket.

3. The combination, with the printing element of a printing press, of a reel-rod for placing the blanket under longitudinal tension, and a blanket-clamp for the end of the blanket arranged to be locked to the reel-rod, the reel-rod having a locking socket extending transversely of the blanket and adapted to receive the blanket-clamp and to permit the blanket clamp to be rocked into and out of engagement with the reel-rod when the tension of the blanket is relieved and to lock the blanket-clamp against relative movement longitudinally of the blanket under the tension of the blanket while permitting ready adjustment of the blanket-clamp transversely of the blanket.

4. The combination, with the printing element of a printing press, of a reel-rod for placing the blanket under longitudinal tension, and a blanket-clamp adapted to be secured to the reel-rod and comprising two bars between which the end of the blanket may be clamped, the inner clamp-bar and the reel-rod having their coöperative faces so shaped as to fit together and permit relative movement of the blanket-clamp transversely of the blanket while locking the blanket clamp against relative movement longitudinally of the blanket under the tension of the blanket.

5. The combination, with the printing element of a printing press, of a reel-rod for placing the blanket under longitudinal tension, and a blanket-clamp adapted to be secured to the reel-rod and comprising two bars between which the end of the blanket may be clamped, the reel-rod having a locking socket extending transversely of the blanket and adapted to receive the inner clamp-bar and permit relative movement of the blanket-clamp transversely of the blanket while locking the blanket-clamp against relative movement longitudinally of the blanket under the tension of the blanket.

6. The combination, with the printing element of a printing press, of a reel-rod for placing the blanket under longitudinal tension, and a blanket-clamp for one end of the blanket arranged to be locked to the reel-rod, the reel-rod having a blanket-clamp locking socket extending transversely of the blanket and comprising a thrust shoulder and a detachable overhanging locking member, the locking socket being adapted to receive the blanket-clamp and lock it against relative movement longitudinally of the blanket under the tension of the blanket while permitting ready adjustment of the blanket-clamp transversely of the blanket.

7. The combination, with a transfer cylinder of a printing press having a recess in the

periphery thereof, the cylinder having a locking socket formed in the wall of the recess and extending transversely of the blanket, of a blanket-clamp for one end of the blanket adapted to fit in the locking socket and to move freely therein transversely of the blanket while being locked thereby against movement longitudinally of the blanket under the tension of the blanket, a reel-rod for placing the blanket under longitudinal tension, and a blanket-clamp for the opposite end of the blanket arranged to be locked to the reel-rod and comprising a bar and means for attaching the blanket to the bar, the reel-rod having a locking socket extending transversely of the blanket and adapted to receive the bar and permit relative movement of the blanket-clamp transversely of the blanket while locking the blanket-clamp against relative movement longitudinally of the blanket under the tension of the blanket.

8. The combination, with a transfer cylinder of a printing press having a recess in the periphery thereof, the cylinder having a locking socket formed in the wall of the recess and extending transversely of the blanket, of a reel-rod in the recess for placing the blanket under longitudinal tension, the reel-rod having a locking socket therein extending transversely of the blanket, and two blanket-clamps, one clamp for each end of the blanket, each clamp comprising two bars between which the blanket may be clamped, one inner clamp-bar being adapted to fit in the locking socket in the cylinder and the other inner clamp-bar being adapted to fit in the locking socket in the reel-rod, the clamps being free to slide in their sockets transversely of the blanket while being locked therein against movement longitudinally of the blanket under the tension of the blanket.

In testimony whereof I have affixed my signature in presence of two witnesses.

ALBERT J. FORD.

Witnesses:
GERTRUDE D. HYAMS,
HARRY C. LEWIS.