F. M. TURCK.

NUMBERING DEVICE FOR PRINTING PRESSES.

APPLICATION FILED FEB. 29, 1908.

910,611.

Patented Jan. 26, 1909.

Fig. 2.

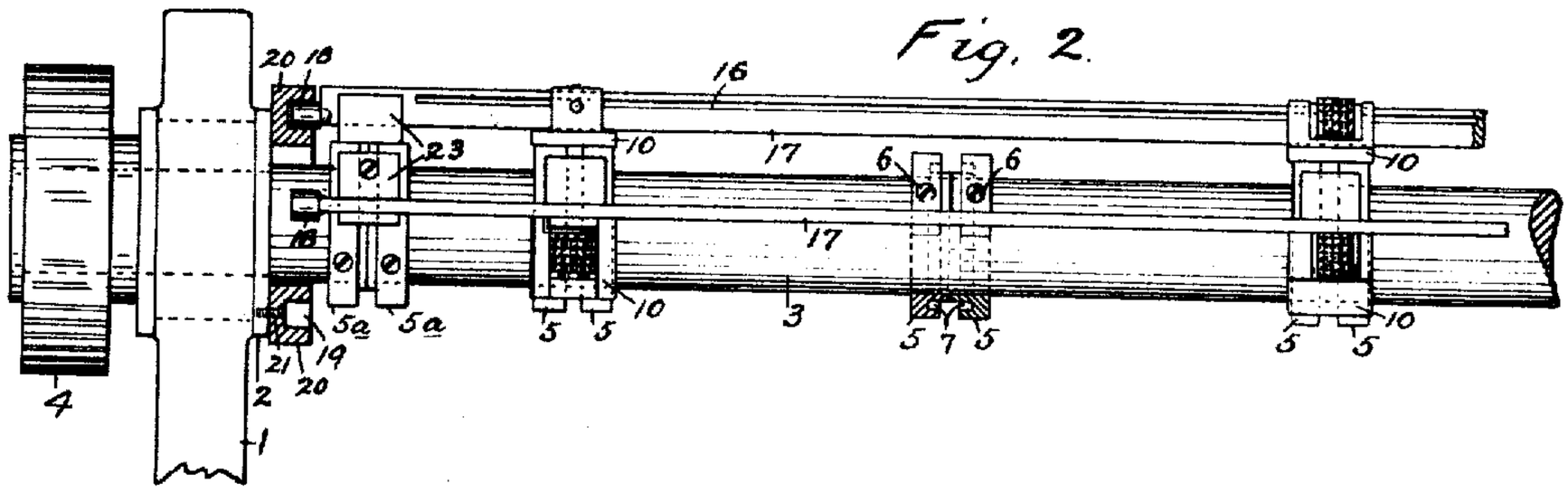


Fig. 1

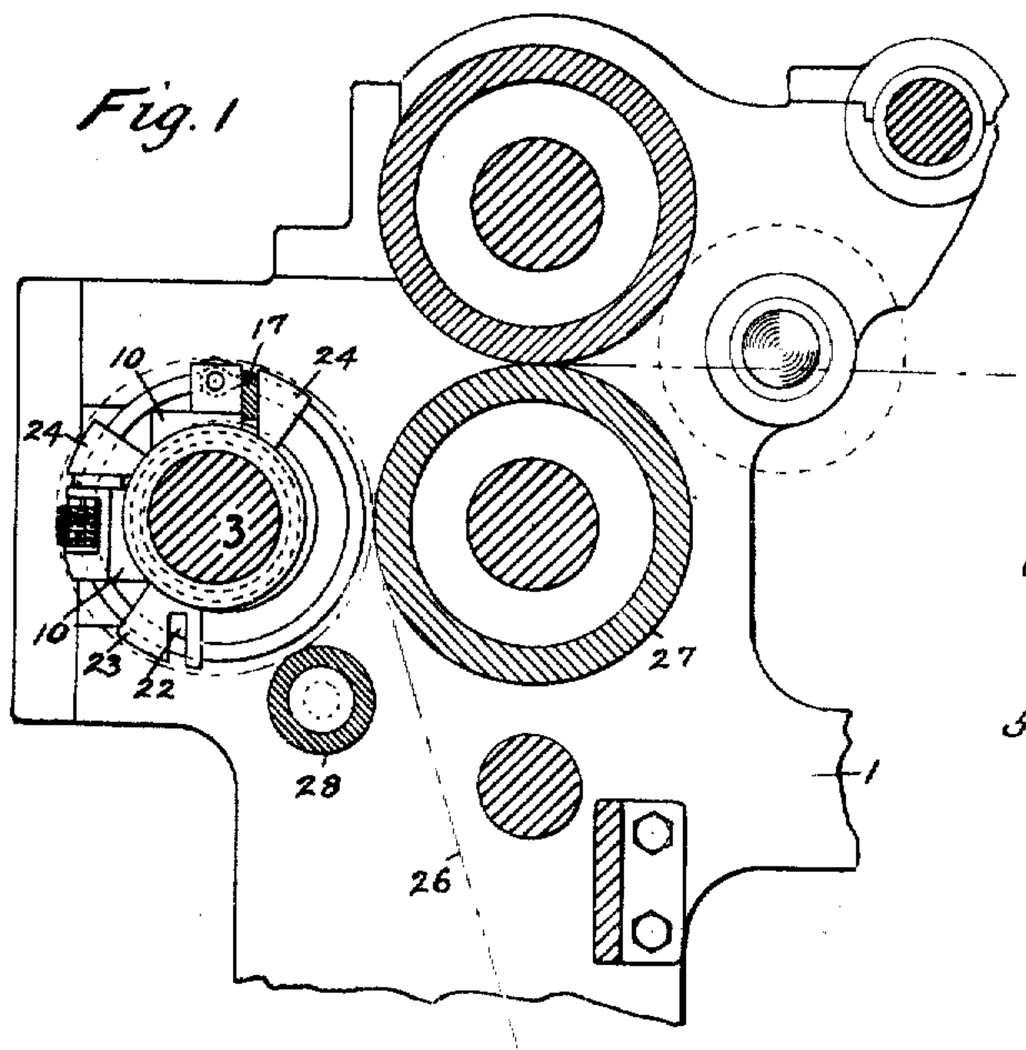


Fig. 3

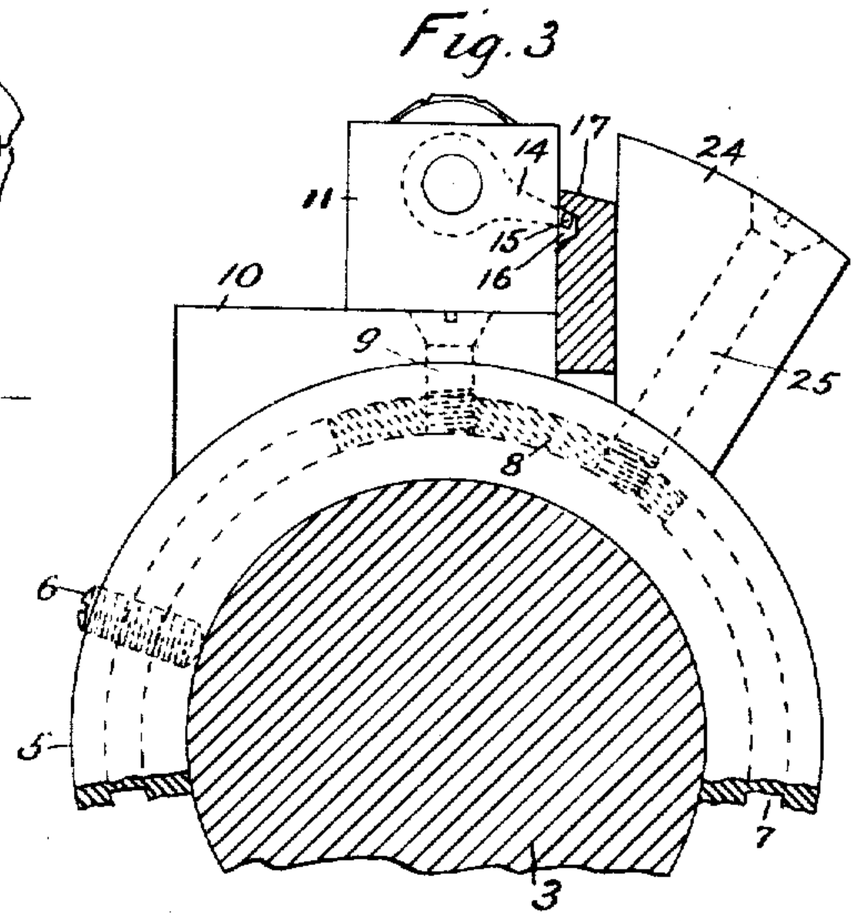


Fig. 4.

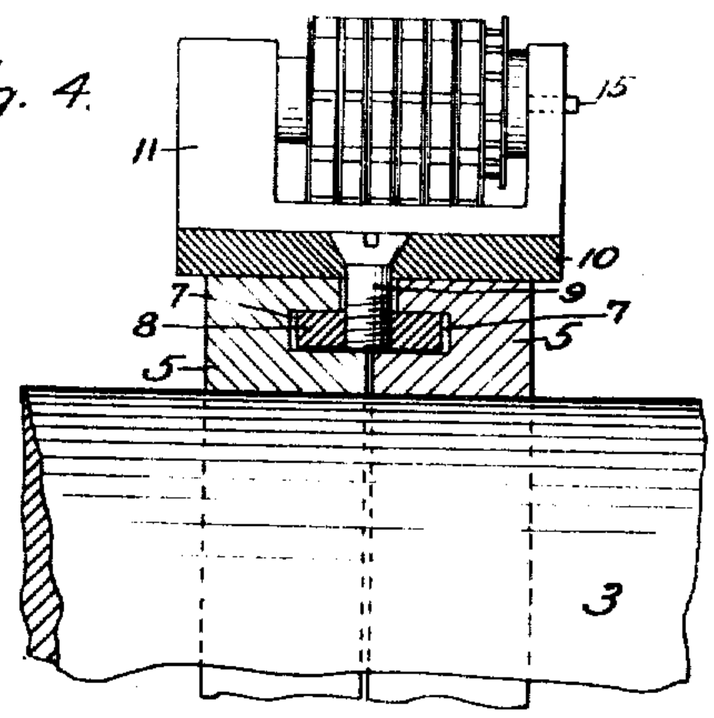
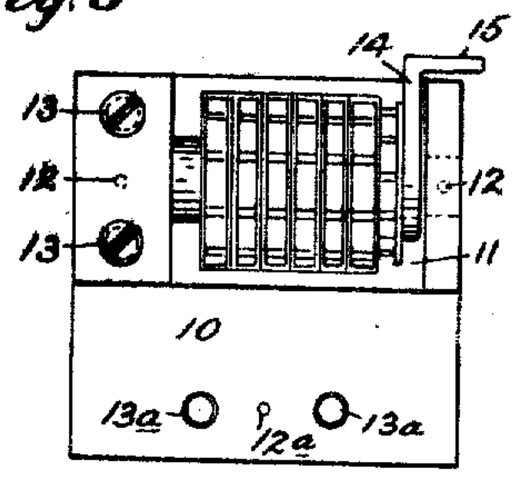


Fig. 5



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UNITED STATES PATENT OFFICE.

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NUMBERING DEVICE FOR PRINTING-PRESSES.

No. 910,611. Specification of Letters Patent. Patented Jan. 26, 1909.

Application filed February 29, 1908. Serial No. 418,487.

To all whom it may concern:

Be it known that I, FREDERICK M. TURCK, citizen of the United States, and resident of Rosebank, in the county of Richmond and State of New York, have invented certain new and useful Improvements in Numbering Devices for Printing-Presses, of which the following is a specification.

The invention relates to improvements in numbering devices for rotary printing-presses, of the class described in my Patent, No. 830,751, dated September 11th, 1906; and it comprises a plurality of numbering units arranged upon a rotatable shaft to form a numbering-cylinder adapted to coöperate with an impression cylinder to print upon a web of paper of varying widths, a series of numerals, disposed longitudinally or transversely therewith.

The invention further comprises means for adjustably supporting, and actuating the numbering units.

In describing the invention in detail, reference is had to the accompanying drawings, forming a part of this specification, and wherein like characters of reference are used to designate like parts throughout the several views, and in which:

Figure 1 is a sectional side elevation of a portion of a printing press pertaining to the present invention. Fig. 2 is a longitudinal view of a shaft upon which are mounted a plurality of numbering units and the actuating means therefor. Fig. 3 is an enlarged transverse section of the shaft with one of the numbering units mounted thereon. Fig. 4 is an enlarged side view of one of the numbering units, with its adjustable supporting means shown in section. Fig. 5 is a plan view of one of the numbering units shown in connection with its carrier-plate.

Referring to the drawings, 1 designates the side frame of a press in which is mounted the box or bearing 2, for receiving one end of the rotatable numbering-shaft 3, the opposite end of the shaft being in a like manner supported by a corresponding box, not shown. Secured upon the shaft, exterior of bearing 2, is a driving-gear 4, and disposed between the bearings are a series of rings 5, arranged in pairs and adjustably secured to the shaft by set-screws 6, which permits of both rotatable and longitudinal adjustment therewith. An annular recess 7, is formed in each of said rings, in which are disposed segmental clamping-nuts 8, adapted to receive the threaded end of screws 9, for securing carrier plates 10. Upon the carrier-plates 10 are mounted the numbering-units 11, the bodies of which are provided with positioning dowel-pins 12 and screws 13.

The numbering-units may be of the usual construction each comprising a plurality of disks arranged with peripheral printing-numerals and actuated by an oscillatory arm 14 to present the desired numbers consecutively. The arm is provided with a right angle projection 15, extending exteriorly of the body of the numbering unit equally on two sides, and adapted to receive its motion by its engagement with an extended slot 16, formed in the cross-bars 17, the latter having their ends provided with rollers 18, engaging the groove 19, in the eccentric 20, which latter is fixedly secured to box 2, by the screw 21, a corresponding eccentric, not shown, being similarly affixed to the opposite box to uniformly actuate the opposite ends of cross-bars 17.

The numbering-units are arranged about the shaft in radial groups, each group having a common actuating cross-bar, the extended slot therein permitting the independent adjustment of the several numbering-units longitudinally therewith. The cross-bars 17 are operatively sustained, adjacent the eccentrics, in slots 22, formed in guide-blocks 23, which latter are adjustably secured upon rings 5^a, with segmental clamping-nuts and screws interengaging with recesses therein, in a similar manner to rings 5. The cross-bars are further laterally sustained upon ring 5, in a sliding manner, between the surfaces formed by the bodies of the numbering-units 11 and their carrier-plates 10 on one side and upon the opposite side by the guide-blocks 24, the latter being secured to the rings by the screws 25, engaging the clamping-nuts 8. By means of the several clamp-screws the groups of numbering units

may be independently adjusted about the axis of the shaft for the proper alinement thereof.

The carrier-plates 10 are provided with screw-holes 13^a and dowel-holes 12^a, adapted to be engaged respectively by the screws 13 and dowels 12 for securing the numbering-units upon the plates transversely of the numbering-shaft 3, in which position the web of paper, indicated by the broken line 26, is adapted to receive an impression of the numbers running longitudinally therewith, the web passing between the impression cylinder 27 and the characters formed on the numbering-units, the latter being inked in a well-known manner by a roller 28, supplied from a convenient ink-fountain. The position of the numbering-unit in respect to its carrier-plate 10, as shown in Fig. 5, is longitudinally disposed in relation with shaft 3, in which position it is adapted to impress its characters transversely of the web of paper. In this latter position of the numbering-units the actuation is effected by the engagement of the slot formed in cross-bar 17 with the extended length of projection 15, formed on the oscillatory arm 14, and upon reversing the position of said numbering-units upon the carrier-plates, the actuation is effected by the terminal of projection 15 correspondingly engaging said recess.

The diameter of the impression cylinder corresponds with that of the numbering cylinder, and it will be readily seen that by suitably adjusting the several numbering-units arranged on the latter, provision is made for consecutively numbering various widths of paper webs, longitudinally or transversely therewith.

It is to be understood that in the reversal of the several numbering-units the cylindrical variation of the characters thereon is provided for by suitable packing or "make-ready" disposed below the blanket covering the impression cylinder, in the usual manner, for securing a true impression. In situations requiring numbering-units containing a considerable number of disks and having characters thereon of considerable size, the disks are preferably varied in their diameters to present a group having a substantially cylindrical impression surface when adjusted to print longitudinally of the web, such arrangement necessitating a minimum amount of packing when the numbering-units or heads are reversed for transverse printing

As the operation of the various parts of the device has been set out in detail and in the connection wherein they coöperate with each other it is believed a recapitulation of the entire operation is unnecessary.

It is apparent, of course, while I illustrate and describe the preferred embodiment of the invention it is susceptible of various changes as regards its form, proportion, detail construction and arrangement of parts without departing from the essential spirit and scope or sacrificing any of the advantages of the invention.

What I claim as my invention and desire to secure by Letters Patent, is:—

1. In a numbering-cylinder for a rotary printing press, the combination with a rotatable shaft having a plurality of numbering-units mounted thereon, said numbering-units being adapted for longitudinal or transverse support on said shaft and provided with a projecting actuating-arm, of a cross-bar slidably mounted on said shaft adjacent said numbering-units and provided with an extended slot adapted to engage the projecting arm of the numbering-units in the several positions of the latter, and means for actuating said cross-bar.

2. In a rotary printing press, a numbering cylinder comprising a rotatable shaft provided with supports adjustably mounted thereon, a plurality of numbering-units carried by said supports and common means adapted to secure said numbering-units either longitudinally or transversely to said rotatable shaft, and means mounted on the shaft for actuating said numbering-units.

3. In a numbering-cylinder for a rotary printing press, the combination with the rotatable shaft having a plurality of numbering-units mounted thereon, of a plurality of supporting-rings adjustably mounted on said shaft, said rings being arranged in pairs and provided with oppositely-disposed recesses, clamping-nuts engaging the recesses, guide-blocks rotatively adjustable on said rings and provided with clamping-screws engaging the nuts, a cross-bar slidable in said guide-blocks, means for actuating said cross-bar, and connecting means between the cross-bar and the numbering-units for actuating the latter.

4. In a numbering-cylinder for a rotary printing press, the combination with the rotatable shaft, of a plurality of supporting-rings adjustably mounted on said shaft, said rings being arranged in pairs and provided with oppositely-disposed concentric recesses, clamping-nuts engaging the recesses, carrier-plates rotatively adjustable on said rings and provided with clamping-screws engaging the nuts, and common means connected to the carrier-plates for securing the numbering-units longitudinally or transversely with said shaft.

5. In a numbering-cylinder for a rotary printing press, the combination with the rotatable shaft, of a plurality of supporting-rings adjustably mounted on said shaft, said

rings being arranged in pairs and provided with oppositely disposed concentric recesses, clamping-nuts engaging the recesses, carrier-plates adjustably mounted on said rings and provided with clamping-screws for engagement with the nuts, and means connected to the carrier-plates for securing the numbering-units.

Signed at New York in the county of New York and State of New York this twenty-fifth day of February A. D. 1908.

FREDERICK M. TURCK.

Witnesses:
A. H. TYLER,
JOHN G. MUELLER.