

No. 808,344.

PATENTED DEC. 26, 1905.

C. P. COTTRELL.

INKING APPARATUS FOR PRINTING PRESSES.

APPLICATION FILED JAN. 28, 1905.

3 SHEETS—SHEET 1.

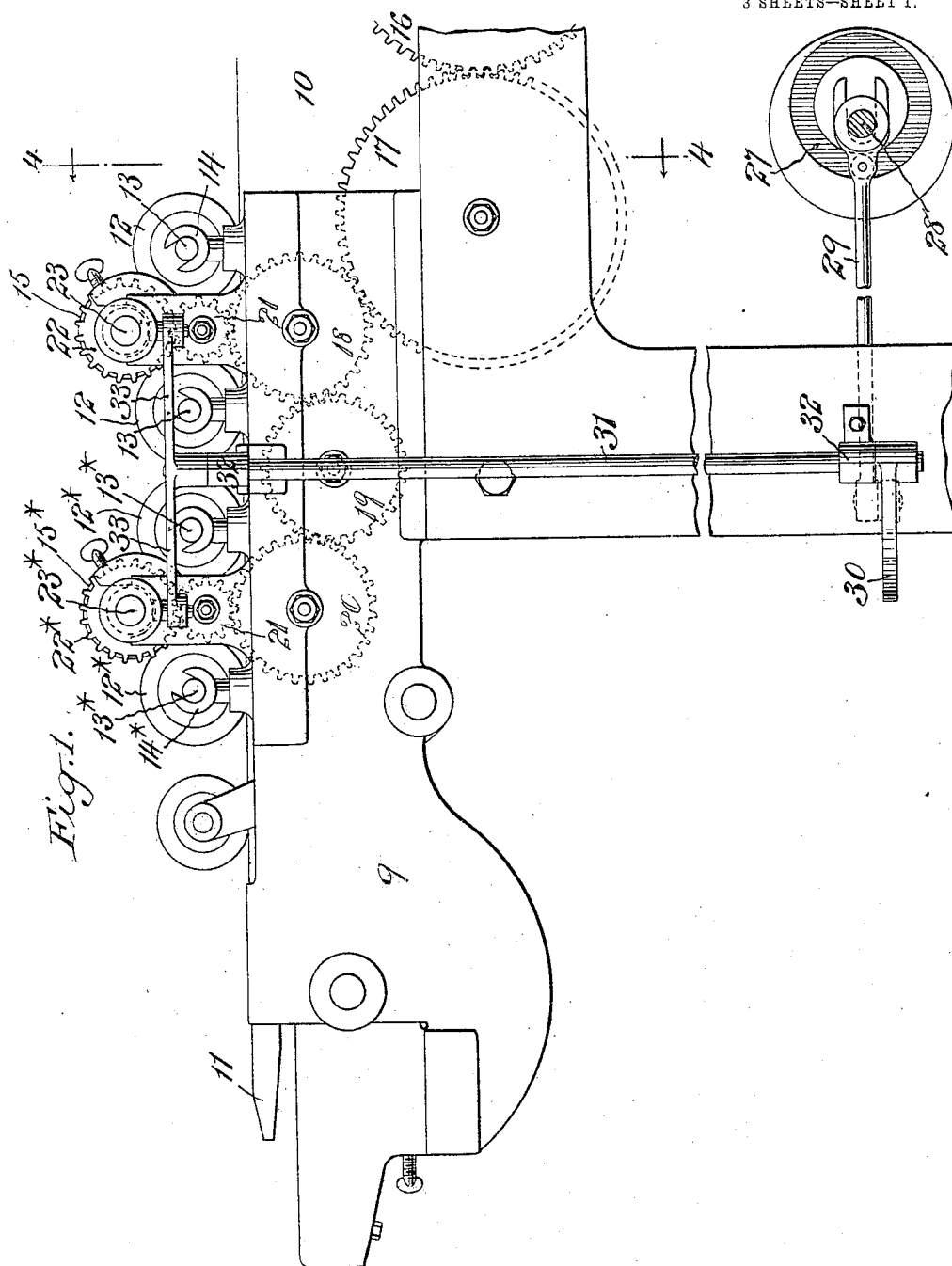


Fig. 1.

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Inventor
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3 SHEETS—SHEET 2.

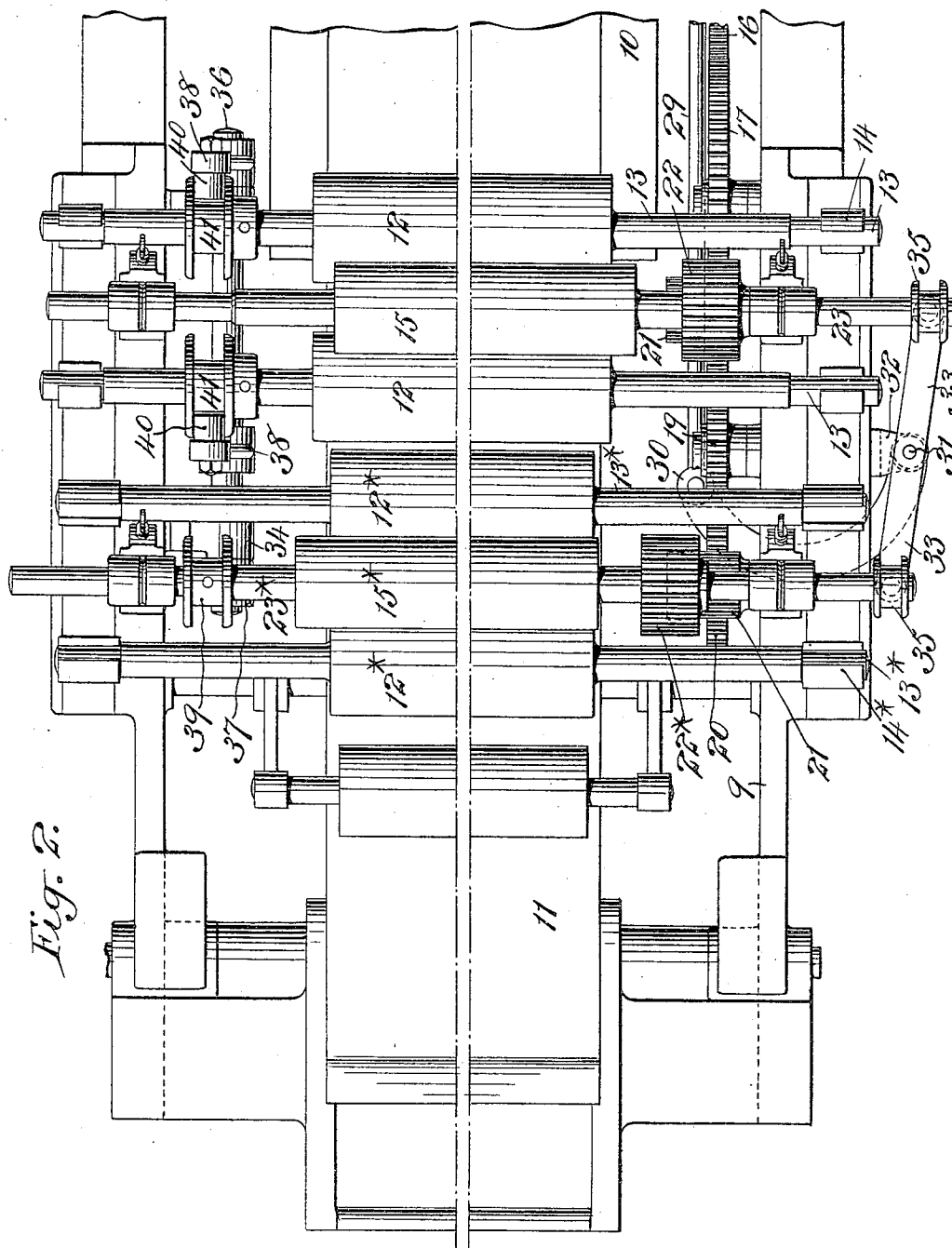


Fig. 2.

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3 SHEETS—SHEET 3.

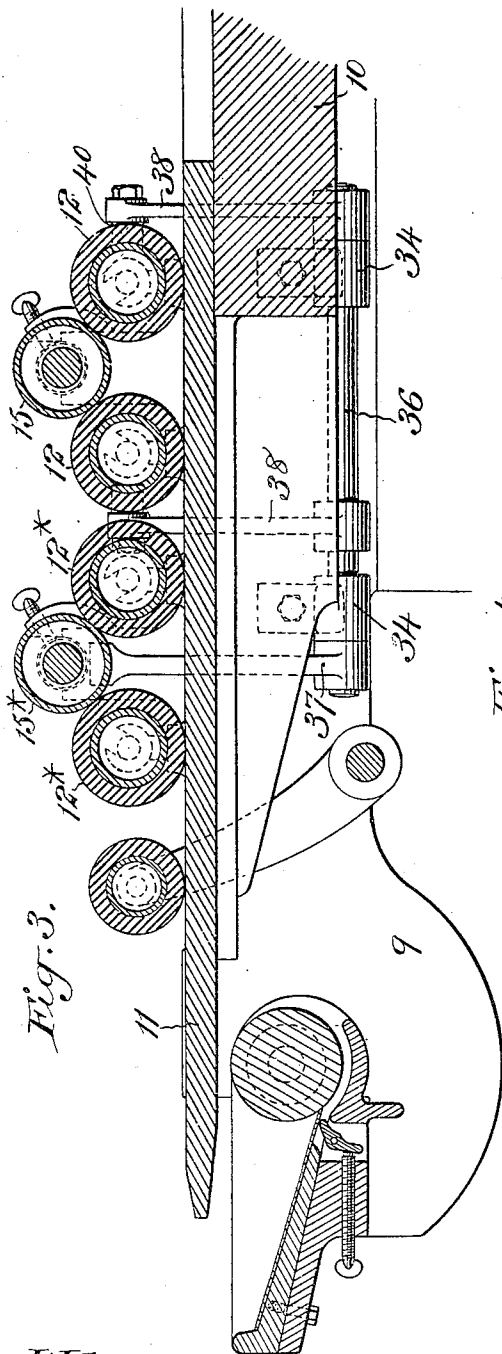


Fig. 3.

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George Barry
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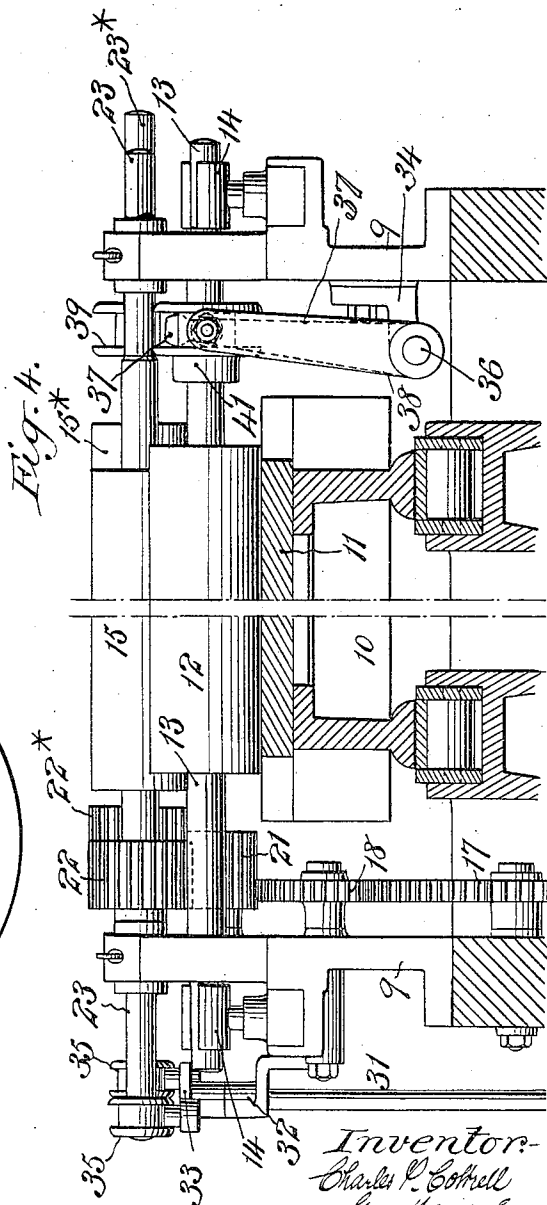


Fig. 4.

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UNITED STATES PATENT OFFICE.

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INKING APPARATUS FOR PRINTING-PRESSES.

No. 808,344.

Specification of Letters Patent.

Patented Dec. 26, 1905.

Application filed January 28, 1905. Serial No. 242,995.

To all whom it may concern:

Be it known that I, CHARLES P. COTTRELL, a citizen of the United States, and a resident of Westerly, in the county of Washington and State of Rhode Island, have invented a new and useful Improvement in Inking Apparatus for Printing-Presses, of which the following is a specification.

This invention relates to that class of inking apparatus for printing-presses in which the composition-rollers, known as "table-rollers," which run in contact with the ink-distributing table for distributing the ink thereon preparatory to its being transferred to the form-rollers and thence to the form, are arranged with their length directly across the press and rotated by the contact with and above them of metal driving-rollers, which also serve to distribute the ink upon them. In such inking apparatus heretofore used the metal driving-rollers, which are also known as "vibrators," have had not only a rotary motion, but also a longitudinal reciprocating motion; but the table-rollers have had a rotary motion only. The consequence has been that if a spot of ink got onto the ductor-roller or ink-table it was apt to be carried in a heavy zigzag streak across the table, but not evenly distributed thereon.

The object of the present invention is to obviate the defect above explained, and to this end I give the table-rollers, as well as the driving and distributing rollers, the reciprocating longitudinal or vibratory movements, such movements of the table-rollers being preferably such that the latter and the driving roller or rollers above and in contact with them move, respectively, in opposite directions at the same time; and the invention consists in certain combinations, hereinafter described and claimed, in which the longitudinally reciprocating or vibratory table-rollers constitute elements.

In the accompanying drawings, which illustrate the application of the invention to a reciprocating-bed printing-press, Figure 1 is a side elevation of parts of the framing, the ink-distributing table, and the inking-rollers of the press. Fig. 2 is a plan of the same; Fig. 3, a longitudinal vertical section of the same; Fig. 4, a transverse vertical section of the same on the line 4 4 of Fig. 1.

9 designates the framing, 10 the bed, and 11 the ink-distributing table.

12 and 12* are the table-rollers, the shafts 13 13* of which are mounted in fixed bearings 14 14* on the framing, in which they are capable of longitudinal movement. These bearings are vertically adjustable in the usual way, not necessary to be herein represented or described.

15 15* are the distributing-rollers, which are also driving-rollers to give the necessary rotary motion to the table-rollers by their contact therewith in the usual manner. These distributing and driving rollers may be driven in the usual way or any convenient way from the main shaft of the press—as, for example, through the train of gearing 16 17 18 19 20 21 22 22*, of which 22 22* are fast on the shafts 23 23* of their respective rollers 15 15*.

The distributing and driving rollers 15 15* are represented as deriving their longitudinal reciprocating or vibratory motion from a rotary cam 27, Fig. 1, on the cam-shaft 28 of the press, the said cam acting through a rod 29, connected with the arm 30 of an upright rock-shaft 31, working in fixed bearings in brackets 32 on the framing, and the said rock-shaft having on its upper end two arms 33, the ends of which engage collars 35 on the roller-shafts 23 23*. The form-rollers 12 are represented as deriving their longitudinal reciprocating or vibratory motion through a horizontal rock-shaft 36, arranged in fixed bearings in brackets 34 on the framing and furnished with three arms 37 and 38, the said arm 37 entering a circumferential groove in a collar 39 on the shaft 23* of the driving and distributing roller 15* and the arms 38 being provided with rollers 40, engaging in circumferential grooves in collars 41, provided on the shafts of the table-rollers.

By the connections above described between the shafts of the driving and distributing rollers and of the table-rollers the table-rollers 12 are given a longitudinal reciprocating or vibratory movement corresponding with that of the driving and distributing roller 15 in contact with them, but always in the opposite direction to that of the distributing-roller, and by this movement the table-rollers 12 also are made ink-distributing rollers, and a more perfect distribution of ink on the ink-table is

obtained. In this operation, which takes place between the rollers 15 and 12, the distributing-roller 15* merely forms a connection between the two rock-shafts for transmitting motion 5 from the upright one to the horizontal one.

It may be here mentioned that the vibratory movement of the table-rollers is only herein represented and described as applied to two of them, 12 12, which may be sufficient; 10 but it is obvious that if found necessary the same movement may be given to others, 12* 12*, by similar means.

What I claim as my invention is—

1. The combination with the ink-distributing table of a printing-press, of a table-roller 15 arranged across said table to run in contact therewith, a distributing-roller in contact with said table-roller, and means for giving said table-roller and distributing-roller reciprocating longitudinal movements in relatively opposite 20 directions.

2. The combination with the ink-distributing table of a printing-press, of a table-roller arranged across said table to run in contact 25 therewith, a distributing-roller in contact with said table-roller, means for giving the distributing-roller a longitudinal reciprocating movement, and connections between said rollers for transmitting from said ink-distributing 30 roller a reciprocating longitudinal movement to said table-roller.

3. The combination with a table-roller and an ink-distributing roller in a printing-press, of an upright rock-shaft located on one side 35 of the press, and means for producing the movement of said rock-shaft, a horizontal

rock-shaft on the other side of the press, a connection between said upright rock-shaft and said ink-distributing roller for producing a reciprocating longitudinal movement of said 40 roller, a connection between said ink-distributing roller and said horizontal rock-shaft for transmitting motion from said roller to said rock-shaft, and a connection between said horizontal rock-shaft and the table-roller for producing a reciprocating longitudinal movement 45 of the latter.

4. In a printing-press, the combination with a table-roller and an ink-distributing roller in contact therewith, of an upright rock-shaft 50 located on one side of the press and means for producing the movement of said rock-shaft, a horizontal rock-shaft located on the opposite side of the press, an arm on said upright rock-shaft and a connection between said arm and 55 the distributing-roller for producing a longitudinal reciprocating movement of the latter, an arm on said horizontal rock-shaft and a connection between said arm and the table-roller, and a connection extending across the 60 press between said rock-shafts for transmitting motion from the upright one to the horizontal one for giving a longitudinal reciprocating movement to the table-roller.

In testimony that I claim the foregoing as 65 my invention I have signed my name, in presence of two witnesses, this 24th day of January, 1905.

CHARLES P. COTTRELL.

Witnesses:

A. R. STILLMAN,
G. BURDICK.