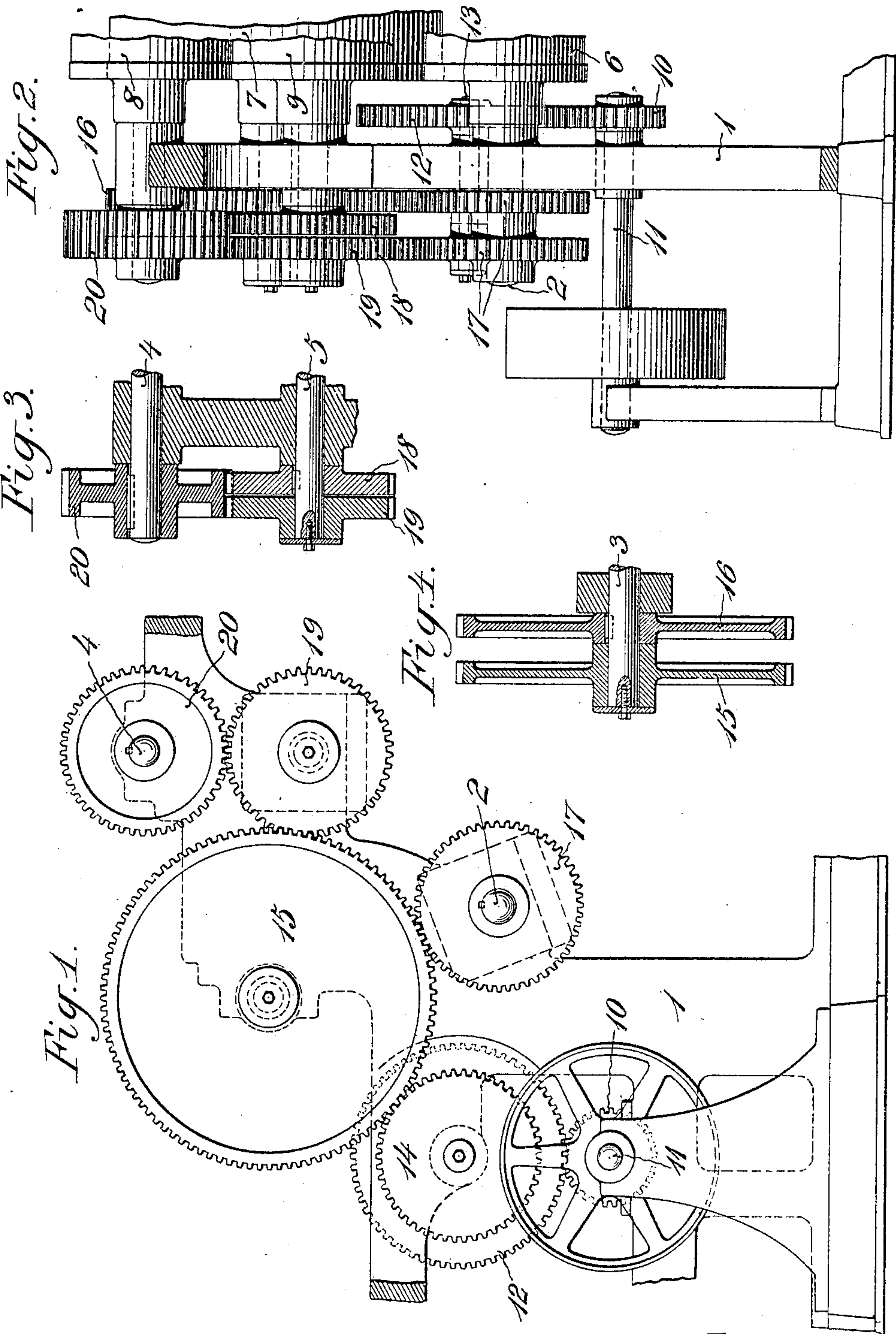


E. E. BABCOCK.  
DRIVING MECHANISM FOR PRINTING PRESSES.  
APPLICATION FILED SEPT. 29, 1908.

944,068.

Patented Dec. 21, 1909.



Witnesses:  
W. G. Fisher  
Henry Thieme

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# UNITED STATES PATENT OFFICE.

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## DRIVING MECHANISM FOR PRINTING-PRESSES.

944,068.

Specification of Letters Patent.

Patented Dec. 21, 1909.

Application filed September 29, 1908. Serial No. 455,240.

*To all whom it may concern:*

Be it known that I, ELMER E. BABCOCK, a citizen of the United States, and resident of Stonington, in the county of New London and State of Connecticut, have invented a new and useful Improvement in Driving Mechanism for Printing-Presses, of which the following is a specification.

The object of my invention is to provide certain improvements in the construction, form and arrangement of the gearing of the driving mechanism of a web printing press whereby a smooth and even movement of the plate and impression cylinders is produced, thus obtaining superior results in the finished product of the press owing to the absolute elimination of any drag of the cylinders.

A further object is to provide a driving mechanism for a web perfecting printing press in which the gearing is so arranged that the impression cylinder gears are driven directly from the plate cylinder gears.

A practical embodiment of my invention is represented in the accompanying drawings in which—

Figure 1 is a view in side elevation of so much of a printing press as will give a clear understanding of the application of my invention thereto. Fig. 2 is a transverse vertical section of the same at one side of the press. Fig. 3 is a detail section showing the wide faced gear fixed to the second plate cylinder shaft and the fast and loose gears on the second impression cylinder shaft which intermesh therewith, and Fig. 4 is a detail section showing the fast and loose gears on the first impression cylinder shaft.

The side frame of the printing press is denoted by 1. In this side frame the corresponding ends of the shafts 2, 3, 4 and 5 of the first plate cylinder 6, its impression cylinder 7 and the second plate cylinder 8 and its impression cylinder 9 respectively, are mounted. The main driving pinion is denoted by 10 and it is fast on a shaft 11 suitably mounted in the side frame 1. This pinion 10 meshes with a gear 12 fast on a rotary stud shaft 13 mounted in the side frame 1. A second gear 14 fast on the rotary stud shaft 13, meshes with a gear 15 loosely mounted on the shaft 3 of the first impression cylinder 7. A gear 16 corre-

sponding in size to the gear 15, is fast on the shaft 3.

The shaft 2 of the first plate cylinder 6 is provided with a double gear 17 fast thereon, the outer and inner portions of which gear form substantially a wide faced gear. This double or wide faced gear 17 meshes with both the loose and fast gears 15, 16, on the first impression cylinder shaft 3. The shaft 5 of the second impression cylinder 9 is provided with fast and loose gears 18, 19, of equal size, the gear 19 meshing with the loose gear 15 on the first impression cylinder shaft 3. The second plate cylinder shaft 4 is provided with a wide faced gear 20 fast thereon, which gear meshes with both the fast and loose gears 18, 19, on the second impression cylinder shaft 5.

The first plate cylinder gear 17 is rotated from the driving pinion 10 through the gears 12, 14 and loose gear 15, while the second plate cylinder gear is driven from the pinion 10 through the gears 12, 14, loose gear 15 and loose gear 19. The first impression cylinder gear 16 is driven directly from the first plate cylinder gear 17 and the second impression cylinder gear 18 is driven directly from the second plate cylinder gear 20.

It will thus be seen that the plate cylinder gears are driven directly from their source of power without the interposition of the impression cylinder gears and also that the impression cylinder gears are driven directly from their corresponding plate cylinder gears. This arrangement of the gears absolutely eliminates all tendency of the several cylinders to drag or to drive unevenly when the press is in operation.

What I claim is:

1. A driving mechanism for printing presses comprising intermeshing loose gears, means for driving one of them, plate cylinder gears respectively driven directly from said loose gears and impression cylinder gears driven directly from their respective plate cylinder gears.

2. A driving mechanism for printing presses comprising a first impression cylinder shaft, fast and loose gears thereon, a second impression cylinder shaft, fast and loose gears thereon, means for driving the loose gears, a first plate cylinder gear meshing

with the fast and loose gears on the first impression cylinder shaft and a second plate cylinder gear meshing with the fast and loose gears on the second impression cylinder shaft.

5 3. A driving mechanism for printing presses comprising a first impression cylinder shaft, fast and loose gears thereon, means for driving the loose gear, a second impression cylinder shaft, fast and loose gears  
10 thereon, the said loose gear meshing with the loose gear on the first impression cylinder shaft, a first plate cylinder gear meshing

with the fast and loose gears on the first impression cylinder shaft and a second plate cylinder gear meshing with the fast and loose gears on the second impression cylinder shaft. 15

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two witnesses, this twenty-fifth day of September A. D. 1908. 20

ELMER E. BABCOCK.

Witnesses:

A. R. STILLMAN,  
G. BURDICH.