

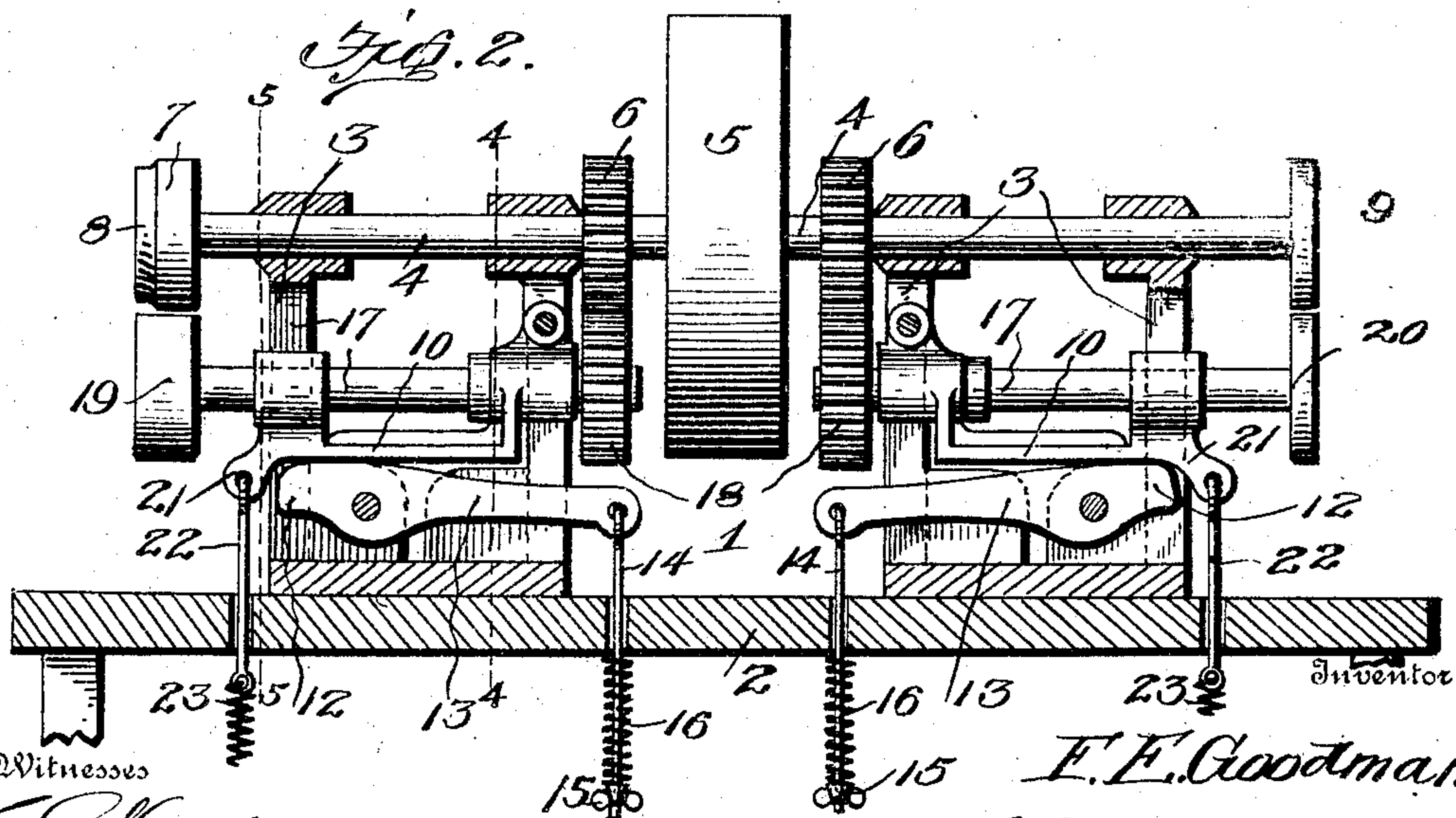
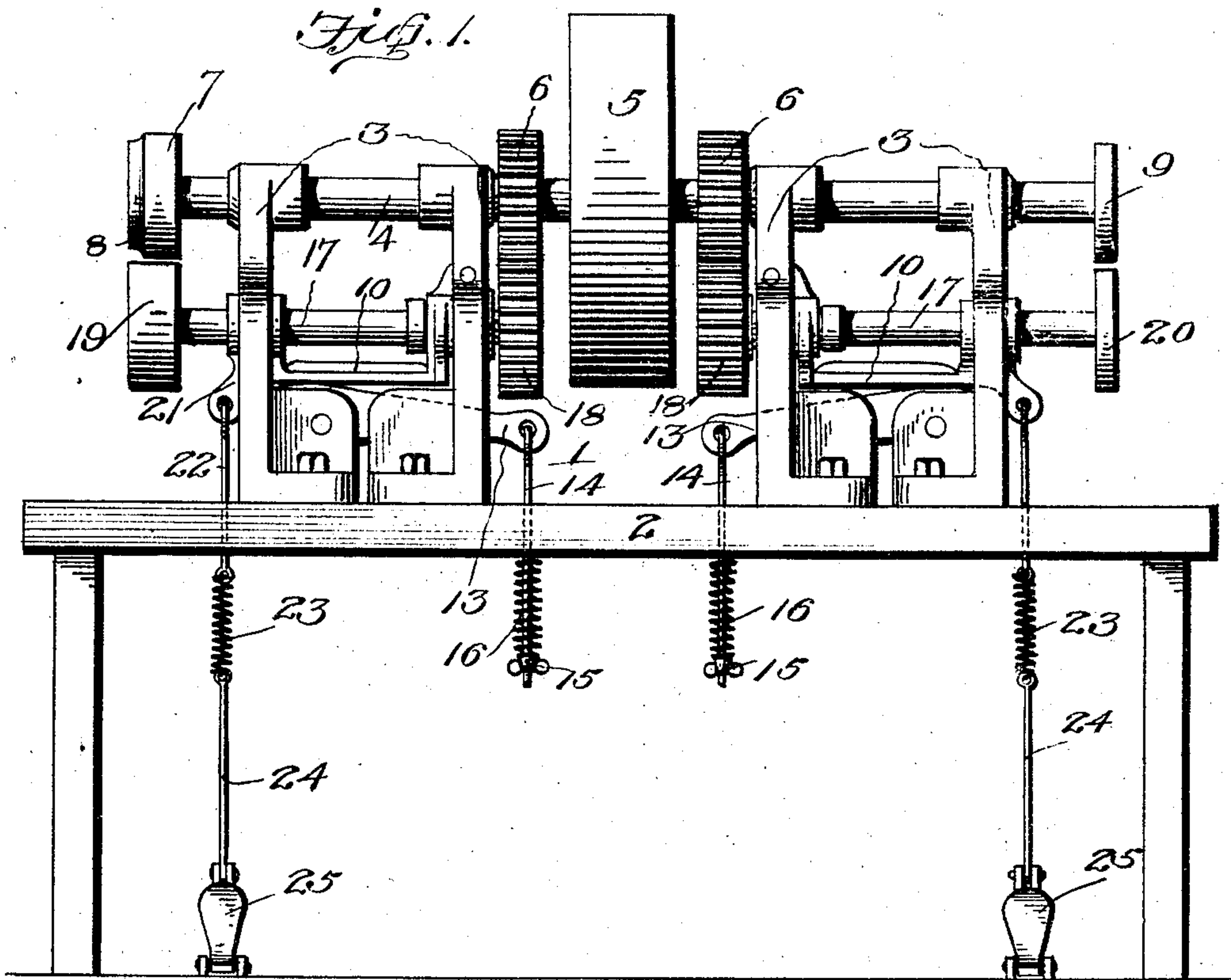
No. 785,608.

PATENTED MAR. 21, 1905.

F. E. GOODMAN.  
HORSE COLLAR ROLLING MACHINE.

APPLICATION FILED SEPT. 1, 1904.

2 SHEETS—SHEET 1.



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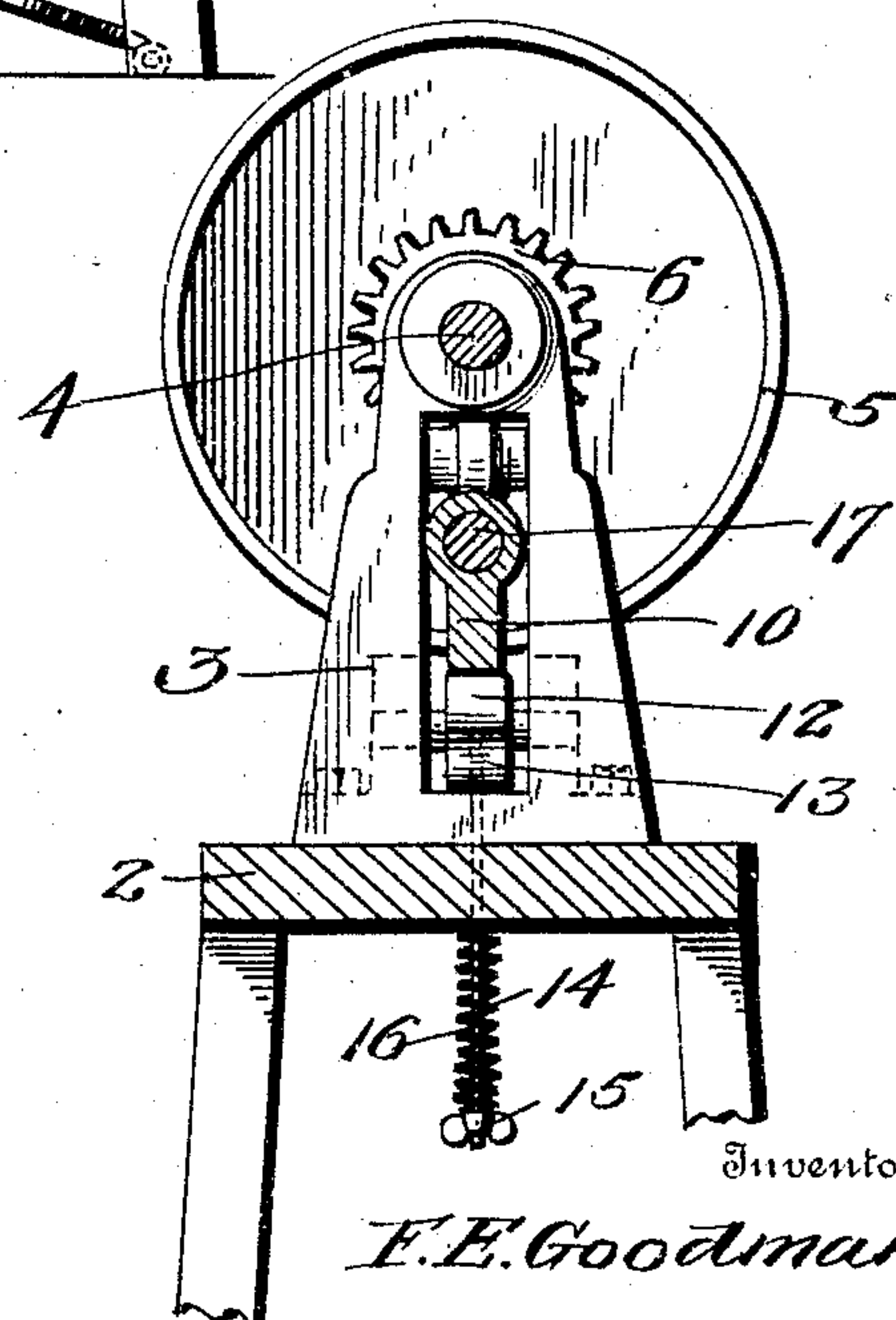
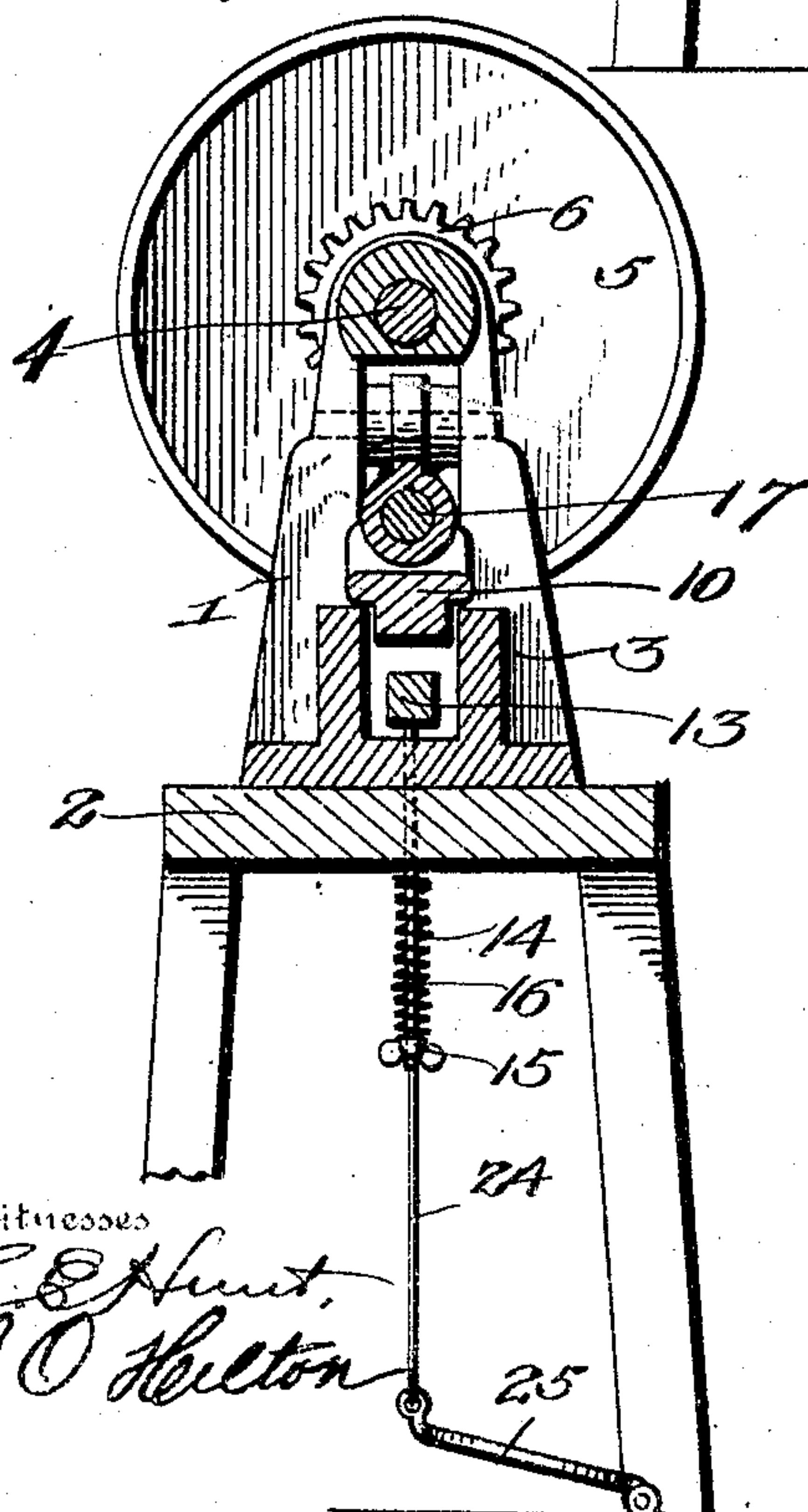
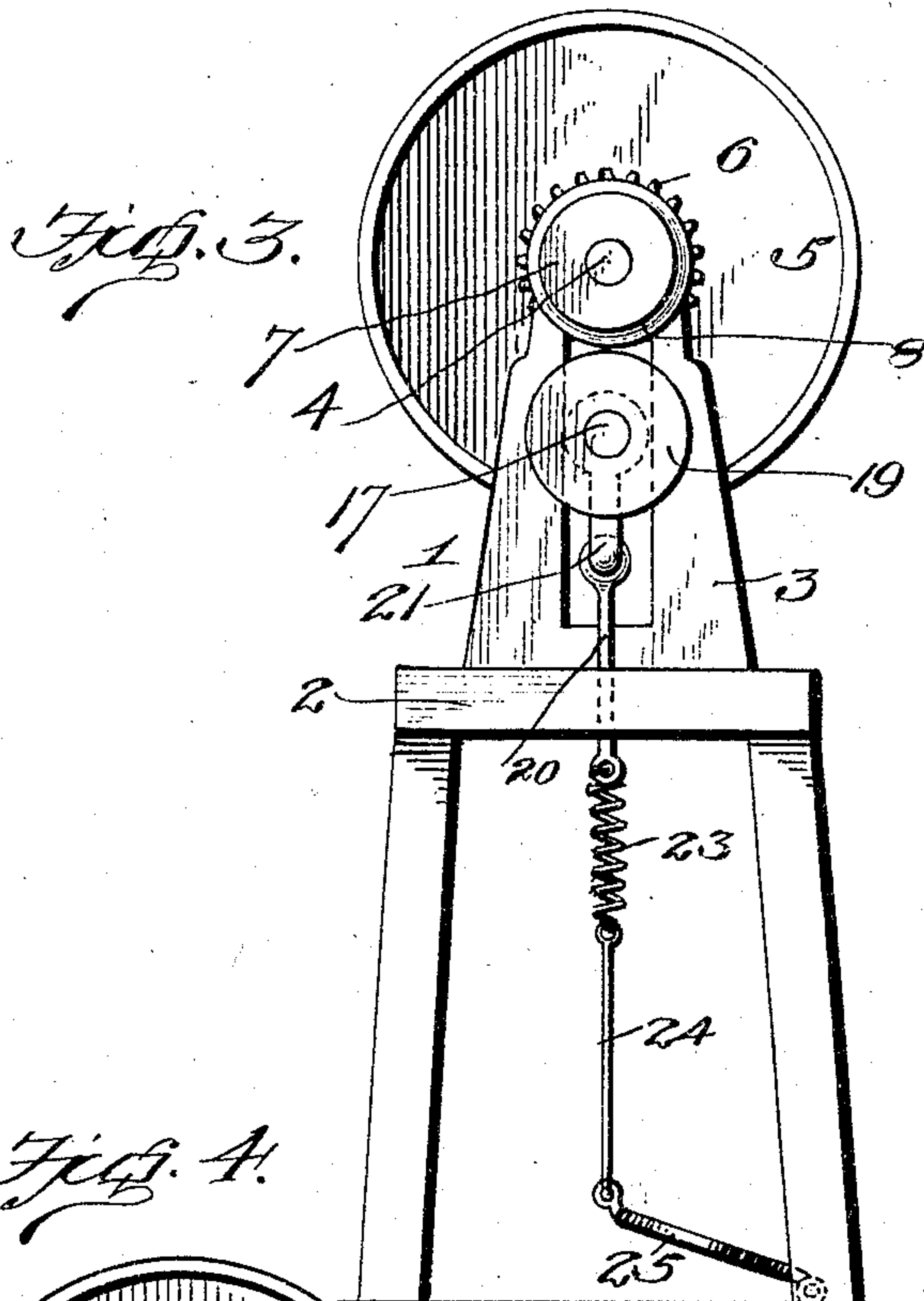
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2 SHEETS—SHEET 2.



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## UNITED STATES PATENT OFFICE.

FOREST EDUARD GOODMAN, OF WACO, TEXAS.

## HORSE-COLLAR-ROLLING MACHINE.

SPECIFICATION forming part of Letters Patent No. 785,608, dated March 21, 1905.

Application filed September 1, 1904. Serial No. 223,036.

*To all whom it may concern:*

Be it known that I, FOREST EDUARD GOODMAN, a citizen of the United States, residing at Waco, in the county of McLennan and State of Texas, have invented certain new and useful Improvements in Horse-Collar-Rolling Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in machines for rolling horse-collars.

The object of the invention is to provide a machine of this character by which the flange or outer edge of the collar may be rolled and set out simultaneously with the rolling, smoothing, and leveling of the outseam of the collar, means being provided whereby the pressure will be equally applied to both the seam and the flange or edge of the collar.

Another object is to provide means whereby the middle seam may be rolled down and smoothed out, means being also provided whereby the pressure of the smoothing-rolls may be regulated.

A further object is to provide a machine of this character which will be simple, strong, and durable in construction and efficient in operation, means being provided whereby the pressing-rolls may be separated to permit the insertion and removal of the collar between the same.

With these and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be more fully described, and particularly pointed out in the appended claim.

In the accompanying drawings, Figure 1 is a side elevation of a collar-rolling machine constructed in accordance with the invention. Fig. 2 is a central vertical longitudinal sectional view. Fig. 3 is an end elevation of the machine. Fig. 4 is a vertical transverse sectional view on the line 4 4 of Fig. 2, and Fig. 5 is a similar view on the line 5 5 of Fig. 2.

Referring to the drawings by numeral, 1 denotes the main frame, which is suitably mounted upon a table or bench 2. The main frame

1 preferably consists of uprights or standards 3, which are spaced apart and arranged in pairs, as shown. In the upper ends of the standards 3 is journaled a horizontally-disposed main drive-shaft 4. On the shaft 4, midway between the pairs of standards 3, is fixed a drive wheel or pulley 5, on either side of which is fixed spur gear-wheels 6. On one end of the shaft 4 is fixed an outer seam and flange-roller 7, which is formed on its outer edge with an annular depression 8. On the opposite end of the main drive-shaft 4 is fixed a middle seam-roller 9, said roller being considerably narrower than the outer seam-roller 7.

In each of the inner standards 3 is pivotally mounted a bearing-frame 10, the outer ends of said frame extending through the outer standards 3, said bearing-frames being adjustably supported upon cam-shaped ends 12 of adjusting-levers 13, which are pivotally mounted in bearing-lugs formed on the outer standards 3. The inner ends of the levers 13 are adapted to project inwardly through the inner standards 3 and have connected thereto the upper ends of rods or bolts 14, which project through openings in the bench or table 2 and extend below the same. On the lower ends of said rods 14 are screwed adjusting-nuts 15, between which and the lower side of the bench are disposed coiled springs 16, the tension of which is only exerted to draw the inner ends of the levers downwardly, thereby causing the cam ends 12 thereof to raise the upper ends of the bearing-frames 10.

Journaled in the bearing-frames 10 are counter-shafts 17, on the inner ends of which are fixed spur gear-wheels, which are adapted to mesh with the gear-wheels 6 of the main drive-shaft 4. On the opposite end of one of the counter-shafts 17, adjacent to the roller 7, is fixed a roller 19, which is adapted to engage and coact with the roller 7 to press and roll the outer seams and flange of the collar. On the outer end of the other counter-shaft adjacent to the middle-seam roller 9 is fixed a roller 20, which is adapted to engage and coact with said roller 9 to roll and press the middle seams of the collar. The rollers 19 and 20 are normally held or pressed into engagement with the rollers 7 and 9 on the main



drive-shaft 4 by means of the coiled springs 16 on the rods 14, the pressure of said rolls 19 and 20 being regulated by adjusting the nut 15 upon the rods 14, thereby increasing or 5 diminishing the tension of the springs 16.

On the upper ends of the pivoted bearing-frames 10 are formed outwardly-projecting apertured lugs 21, with which are adapted to be connected the upper ends of rods 22, the 10 lower ends of which are connected to coiled springs 23 and to the opposite ends of which are connected upper ends of rods 24, which are in turn connected at their lower ends to foot-levers or treadles 25. By pressing upon 15 the treadle or foot-levers 25 the outer ends of the bearing-frames 10 will be drawn downwardly, thereby separating or disengaging the lower rolls 19 or 20 from the rollers on the main shaft, thereby permitting the collar 20 to be slipped in and adjusted between said rollers to bring the meshes and flanges of the collar in proper position to be rolled.

By forming the upper rollers 7 with an annular recess 8 the collar may be so adjusted 25 or arranged between said roller 7 and its coacting roller 19 that an equal pressure will be brought to bear upon both the flange and outer seam of the collar, the increased thickness of the seam portion being compensated 30 for by the recess of the roller 7, thus permitting the pressure of the rollers to be evenly distributed onto said seamed portion and the flange, thereby simultaneously smoothing, rolling, and leveling out the seam and setting 35 out the flange of the collar. The construction of the middle-seam rollers on the opposite ends of the shafts is such that the middle seam of the collar will be smoothed out and rolled down, thereby lowering the stitching in such 40 a way as to prevent the same from being ex-

posed and cut by the hame, thus prolonging the life and usefulness of the collar and requiring less repairing.

From the foregoing description, taken in connection with the accompanying drawings, 45 the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be 50 resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters 55 Patent, is—

In a collar-rolling machine, the combination of a drive-shaft, fixed bearings therefor, a counter-shaft, a pivoted bearing therefor, intermeshing gears on the said shafts, coacting 60 rollers also on the said shafts, a lever, a link including a spring connecting the pivoted bearings to the said lever, whereby the counter-shaft may be moved to cause its roller to move from that of the drive-shaft, a lever 65 having a cam-bearing under the free end of the pivoted bearing, a spring connected to the said lever, and means to vary the tension of the said spring, said spring-pressed cam-lever normally acting to close the roller of the coun- 70 ter-shaft against the roller of the drive-shaft, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FOREST EDUARD GOODMAN.

Witnesses:

CLINT PADGITT,  
ROY KOOS.