F. W. HIGGINS.

MAIL BAG DELIVERING APPARATUS.

APPLICATION FILED JULY 13, 1914.

1,166,587.

Patented Jan. 4, 1916.

2 SHEETS—SHEET 1.

Fig. 1.

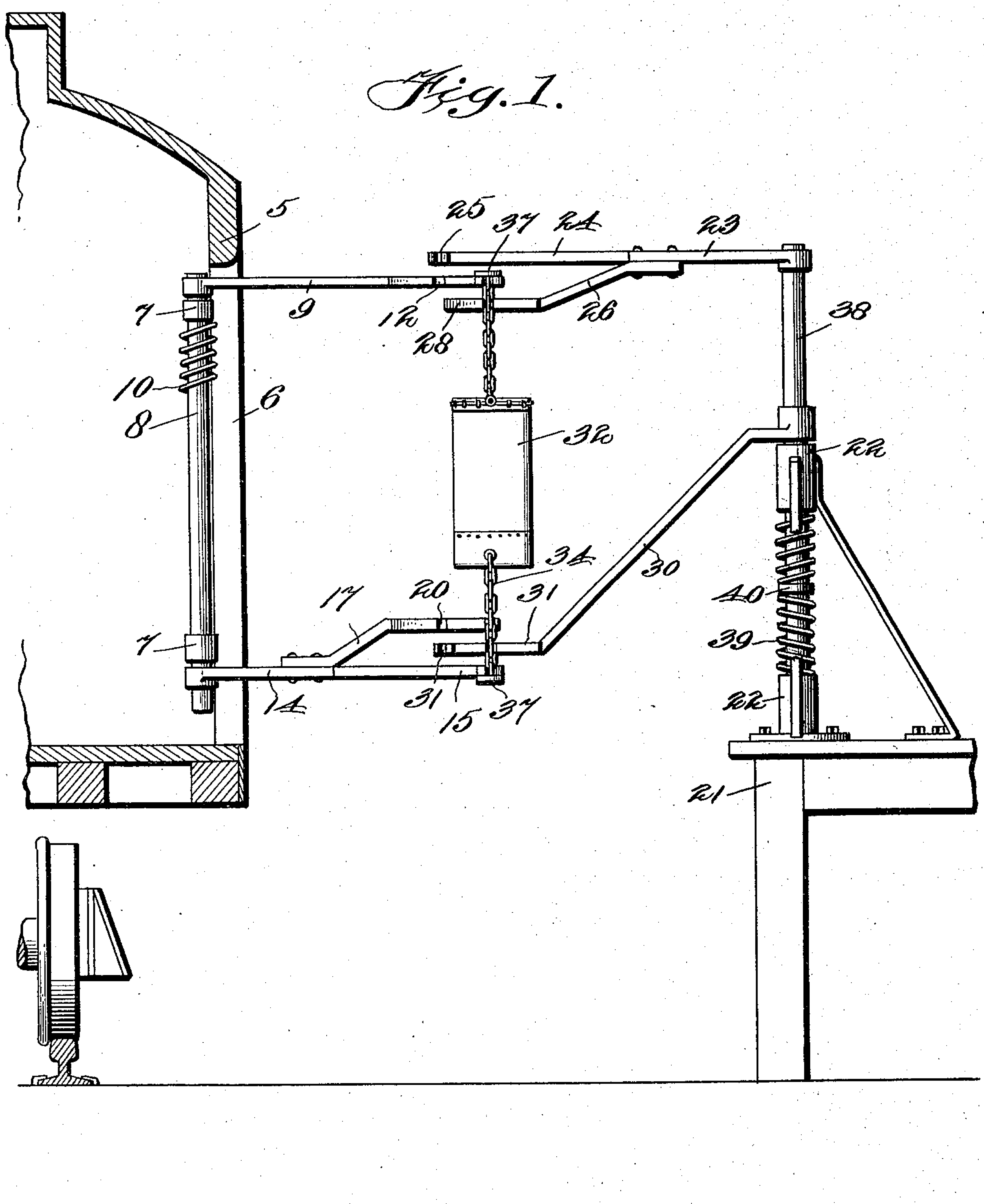

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Fig. 2.

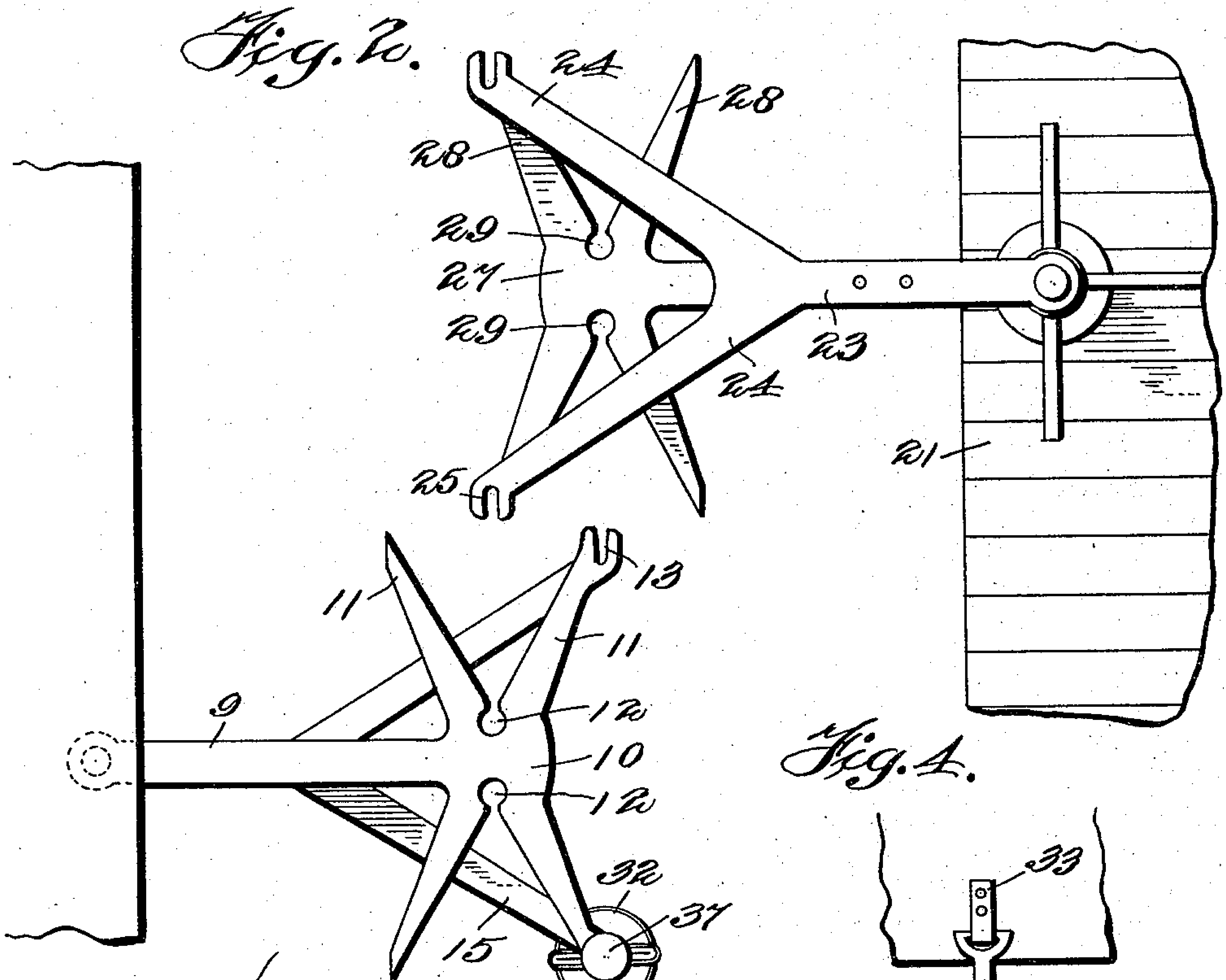
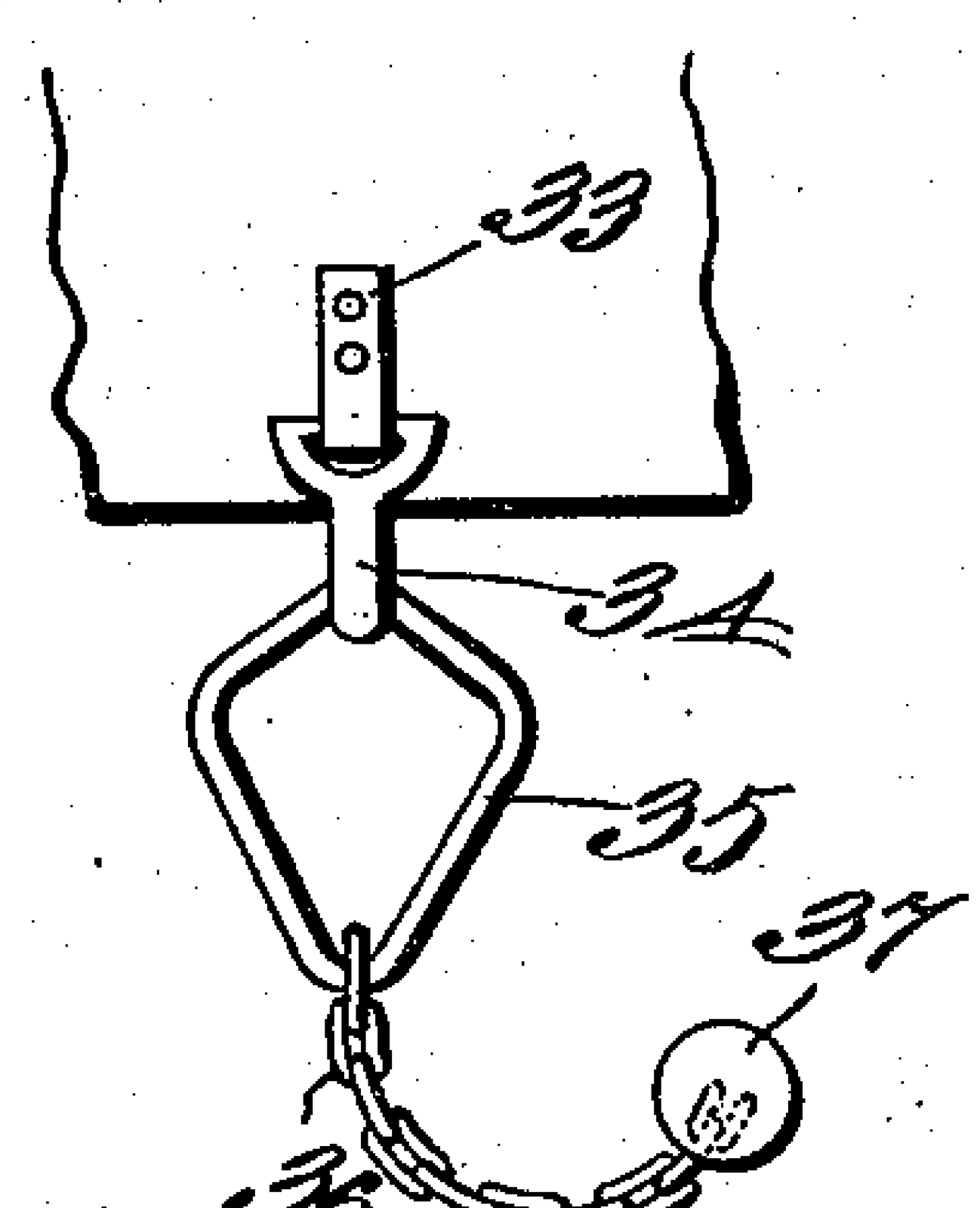


Fig. 4.



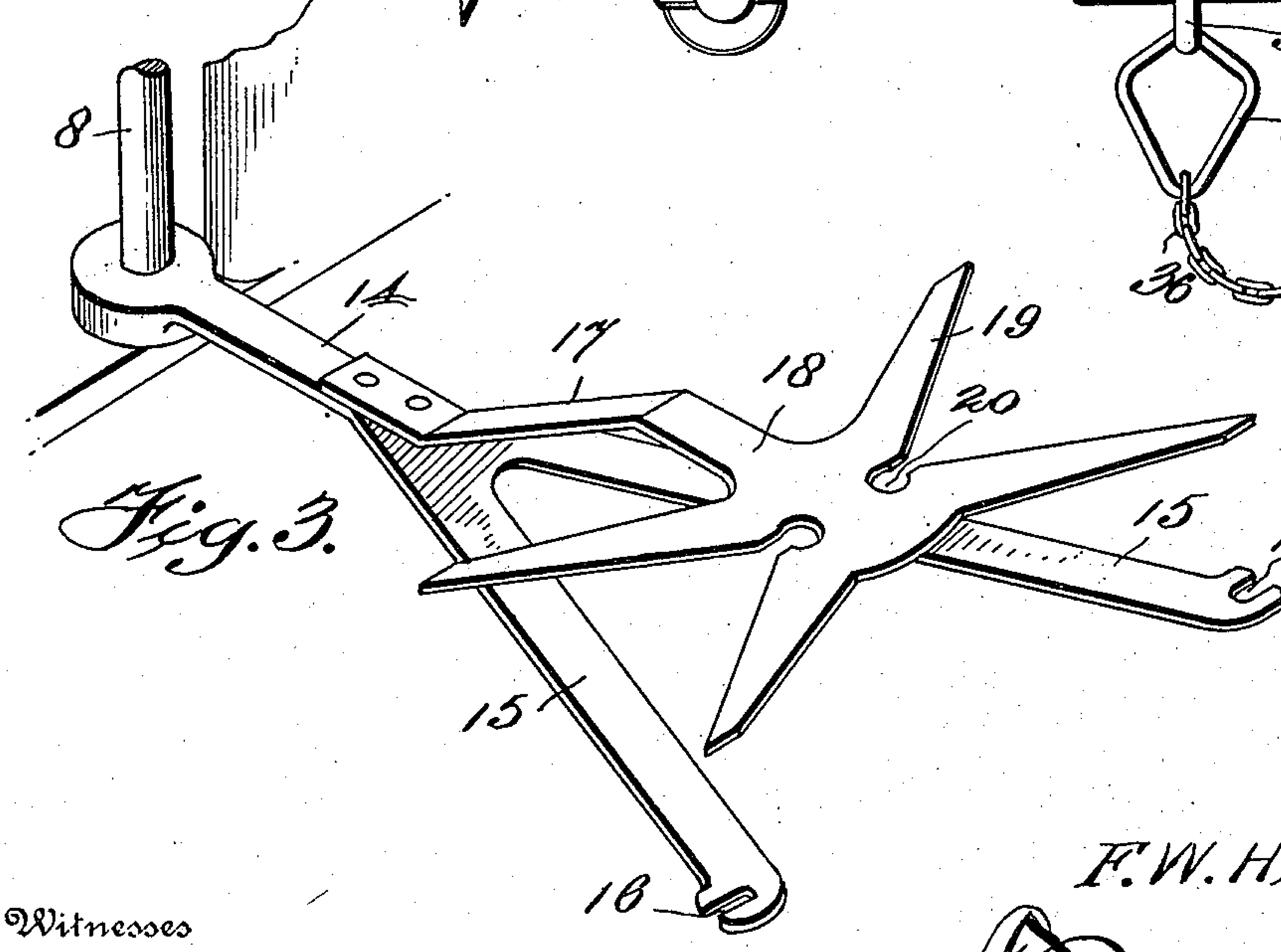


Fig. 3.

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UNITED STATES PATENT OFFICE.

FRANK WILLIAM HIGGINS, OF SPOKANE, WASHINGTON.

MAIL-BAG-DELIVERING APPARATUS.

1,166,587. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed July 13, 1914. Serial No. 850,718.

To all whom it may concern:

Be it known that I, FRANK WILLIAM HIGGINS, a citizen of the United States, residing at Spokane, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in Mail-Bag-Delivering Apparatus; and I do hereby 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 mail bag delivering apparatus, and has for its object to provide improved and simplified devices for supporting and catching mail bags.

With this and other objects in view, the invention consists in the novel construction, arrangement and formation of parts as will be hereinafter specifically described, claimed and illustrated in the accompanying drawings, in which:

Figure 1 represents a side elevation of the delivering appliance applied to use, showing a fragmental sectional view of a railway mail car carrying a part of the apparatus, and also showing an end view of the platform at station carrying a part of the apparatus. Fig. 2 represents a top plan view of the apparatus. Fig. 3 represents a perspective view of the lower portion of the train carried device; the same, inverted, represents the upper portion of the station device. Fig. 4 represents a side elevation of a mail bag, partly broken away, showing the securing device therefor.

Referring to the drawing in detail, wherein similar reference numerals designate corresponding parts throughout the several views, the numeral 5 indicates the body of a railway car of ordinary construction provided with the usual doorway 6, adjacent the edge of which is secured a pair of spaced bearing members 7 rotatably supporting a vertically disposed shaft 8. An arm 9 is secured adjacent the upper end of the shaft 8 and is normally retained in extended position or outwardly of the doorway 6 by the tension of a spring 10^a secured at one end to the shaft 8 and at the opposite end to the body of the car 5. The arm 9 is provided with a head 10 having laterally projecting and outwardly diverging forks 11 arranged on opposite sides thereof. The head 10 is formed with recesses 12 at the inner ends of the forks 11 of each pair, and the outer forks of the pairs are formed in their free extremities with notches 13.

An arm 14 is secured adjacent the lower end of the shaft 8 and is formed with integral forks or arms 15 terminating in the vertical plane of the outer forks 11 and having notches 16 in the free extremities 15 thereof similar to the notches 13 in the forks 11. An arm or bar 17 is secured to the arm 14 and is suitably offset to space the head 18 thereof a distance above the arms or forks 15. The head 18 is provided with pairs of forks 19, the forks of each pair being diverged similarly to the forks 11, and the head 18 is formed with the recesses 20 at the inner ends of said pairs of forks.

A platform 21 is provided at each railway mail station and two vertically spaced bearings 22 are secured to said platform, which rotatably support a vertically disposed shaft 38 provided adjacent its upper end with an arm 23 suitably secured thereto, and having the free extremities bifurcated to provide a pair of diverging forks or arms 24 having their free extremities notched, as indicated at 25. An arm 26 is secured to the under side of the arm 23 and is suitably offset to space the head 27 from the forks 24, and said head 27 is provided with oppositely extending pairs of forks 28, the forks of each pair being diverged and having notches 29 at their inner ends. The forks 24 and 28 are arranged in such relation to the rails of the track that, in passing, the train carried arm and forks 11 thereof pass between the forks 24 and 28, as will be understood. A second arm 30 is secured to shaft 38 above bearing 22 and is provided with pairs of laterally projecting forks 31, the outer forks of the pairs being formed with notches similar to the notches 25 in the forks 24 and arranged in the same vertical plane as the latter and adapted to coöperate therewith in supporting mail bags. The forks 31 of the arm 30 are arranged in such relation to the rails of the track over which the car 5 passes as to be received between the forks 19 and 15 supported by the lower arm 14 carried by the car.

The mail bags are provided adjacent their ends with longitudinally disposed looped straps 33 securing snap fasteners 34, in the looped ends of which are removably secured the rings or triangular members 35. Chains 36 are secured at their inner ends to the

rings or triangular members 35 and are provided at their outer ends with disks or buttons 37.

Between bearings 22 on shaft 38 is provided a pair of springs 39 (a right and a left), said springs 39 are fastened at one end to collar 40, which is fastened to shaft 38, and at the other ends to bearings 22, said springs 39 revolving shaft 38 in same direction as car 5 is moving, thus carrying arms 23 and 30 with bags 32 on shaft 38 over platform 21 and away from car 5.

In operation, the mail bag 32 to be transferred from the moving train or car 5 to the station at which the platform 21 is located, is supported in vertical position illustrated in Fig. 1 by engaging the outer extremities of the chains 36 in the notches or recesses 13 and 16 in the rear arms of forks 11 and 15. In passing, the chains 36 are guided between the upper and lower pairs of forks 24 and 28 respectively carried by shaft 38, and, when said chains strike the inner wall of the recesses 29 they are disengaged or slipped out of the notches 13 and 16 and reliably support the mail bags 32 in vertical position until removed by the mail clerk. A mail bag to be transferred from the platform 21 to the car 5 is supported in vertical position by engaging the chain 36 in the notch 25 in the arm or fork 24 of the arm 23 and in the notch of the outer arm 31 of the lower arm 30. The forward forks 11 and 19 in passing the mail bags to be collected guide chains 36 into the recesses 12 and 20 and thus disengage the bags from the supporting apparatus carried by the shaft 38.

Having thus described the invention what is claimed as new, is:

1. In combination, a railway car, a shaft secured in said car, a pair of spaced arms projecting radially from said shaft, pairs of outwardly diverging forks projecting laterally from the outer extremity of the upper arm, the outer forks of said pairs being notched at their free extremities, and a pair of outwardly diverging forks having notches in their free extremities projecting from the lower arm.

2. In combination, a railway car, a shaft rotatably supported in said car, spaced arms secured to said shaft, means carried by said shaft normally retaining said arms in extended position, pairs of outwardly diverging forks projecting laterally from the outer end of the upper arm, the outer forks of the pairs having notches in their free extremities, a pair of outwardly diverging forks carried by the lower arm and having notches in their free extremities, an arm secured to and extending above in spaced relation to said lower arm, and pairs of outwardly diverging forks projecting laterally from the outer extremity of said arm.

3. In combination, a railway car, a shaft supported in said car, spaced arms secured to said shaft, pairs of outwardly diverging arms projecting laterally from the outer extremity of the upper arm and having recesses formed at the intersection of the forks of the pairs, outwardly diverging forks on the lower arm, and an intermediate arm secured to said lower arm having pairs of outwardly diverging forks projecting laterally from the free ends thereof.

4. In combination, two stationary bearings, a vertical shaft, an arm secured adjacent the upper end of said shaft, outwardly diverging forks carried by said arm having the outer extremities notched, an intermediate arm secured to said arm and projecting parallel in spaced relation under said fork, pairs of forks projecting laterally from the outer extremity of said intermediate arm, a railway car, a shaft journaled in said car, an arm secured adjacent the upper end of said shaft, pairs of forks projecting laterally from the outer extremities of said arm adapted to pass between the upper and lower forks supported by said shaft, the outer forks of the pairs carried by said car being notched, an arm secured to said shaft adjacent the lower arm thereof, pairs of forks projecting laterally from the outer extremity of said arm and being diverged outwardly of the latter, a lower arm secured to said shaft, outwardly diverging forks having the outer ends notched adapted to pass under the lower arm, and an intermediate arm secured to the lower car carried arm and extending parallel in spaced relation thereto, and pairs of laterally projecting forks on said intermediate arm adapted to pass over the lower arm.

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

FRANK WILLIAM HIGGINS.

Witnesses:
REUBEN CRANDELL,
W. H. PURCELL.