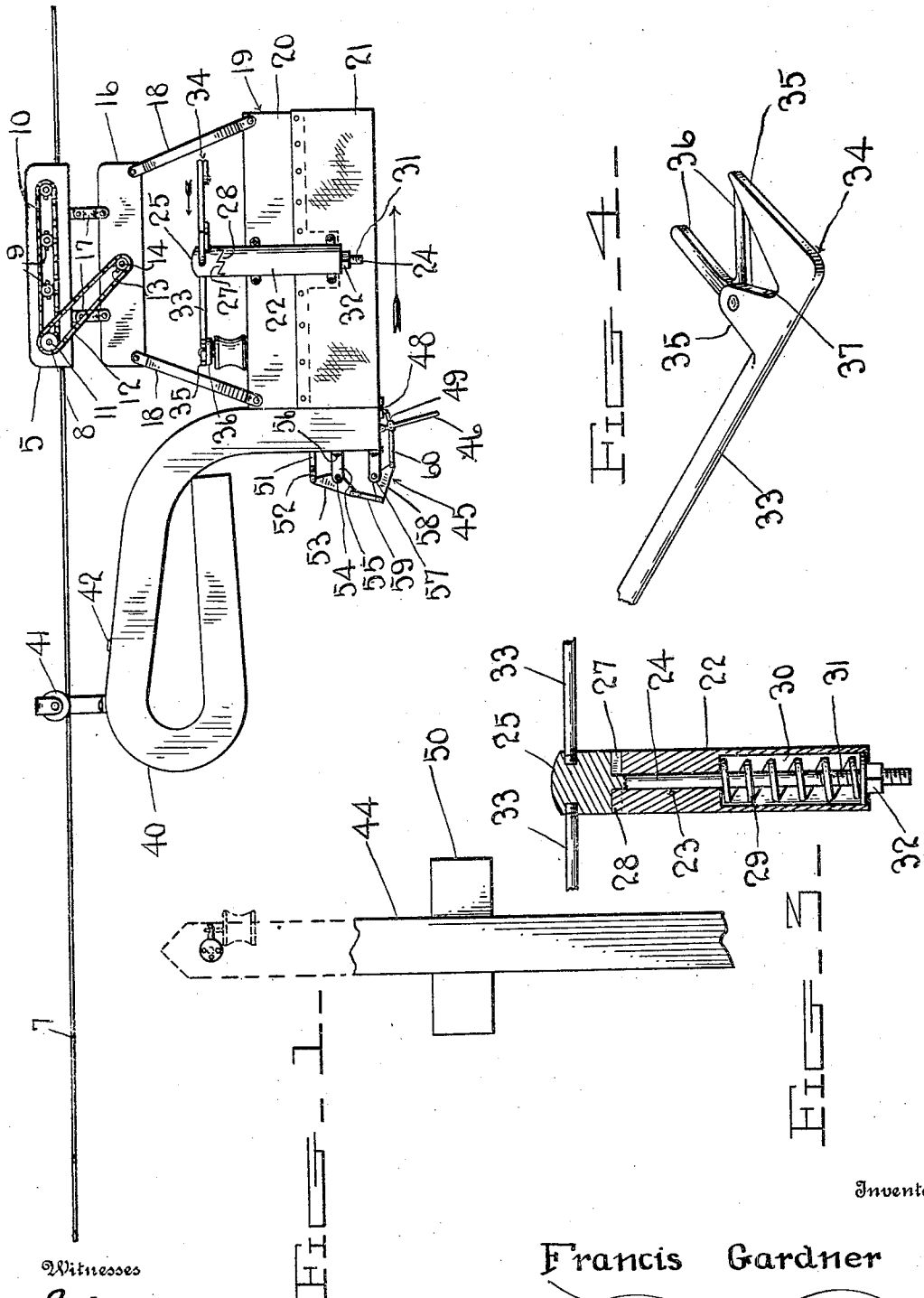


F. GARDNER.
MAIL RECEIVING AND DELIVERING APPARATUS.
APPLICATION FILED AUG. 11, 1909.

954,952.

Patented Apr. 12, 1910.

3 SHEETS—SHEET 1.



Witnesses

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V. O. Parker

Inventor

Francis Gardner

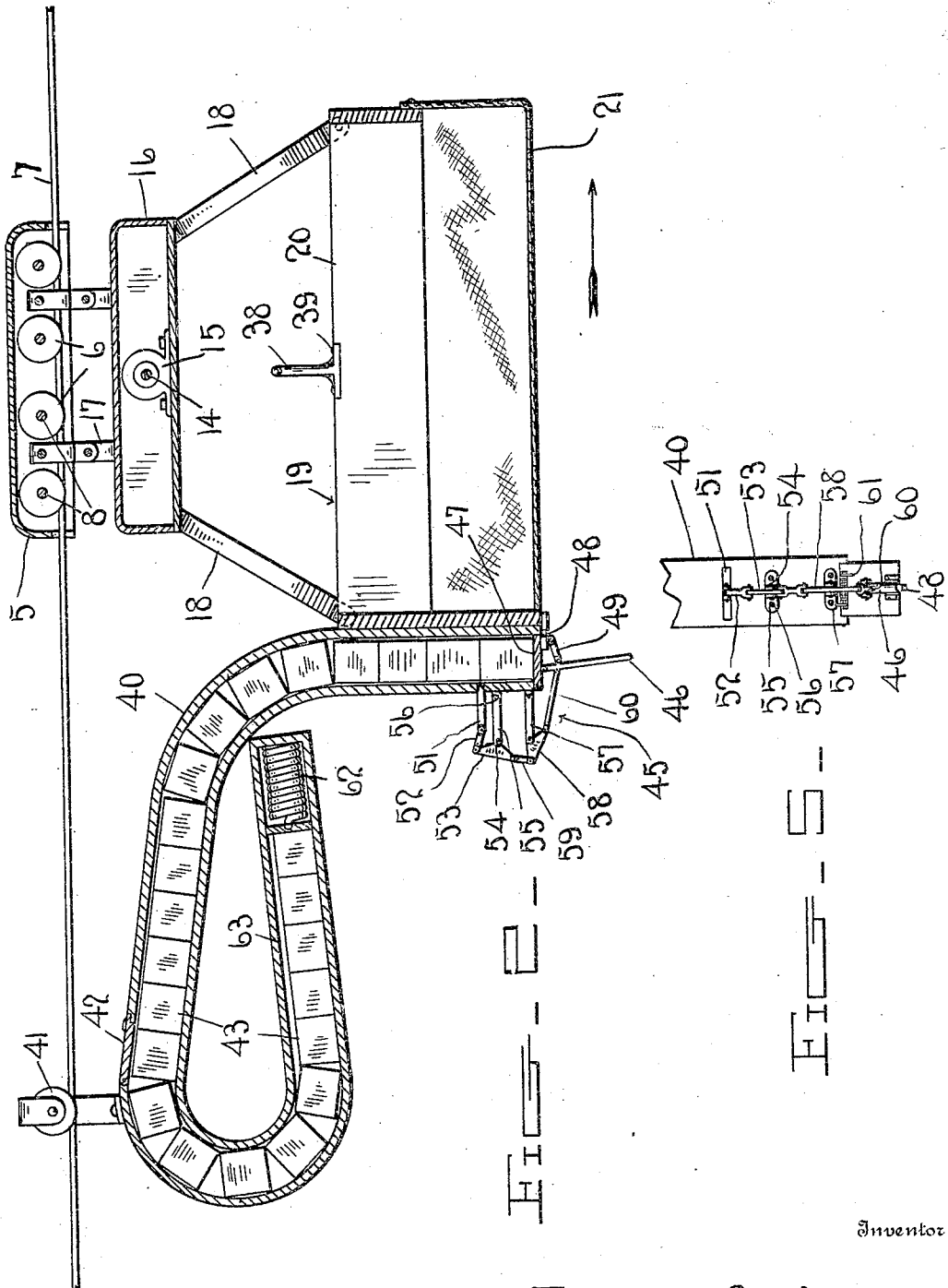
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3 SHEETS—SHEET 2.



Witnesses

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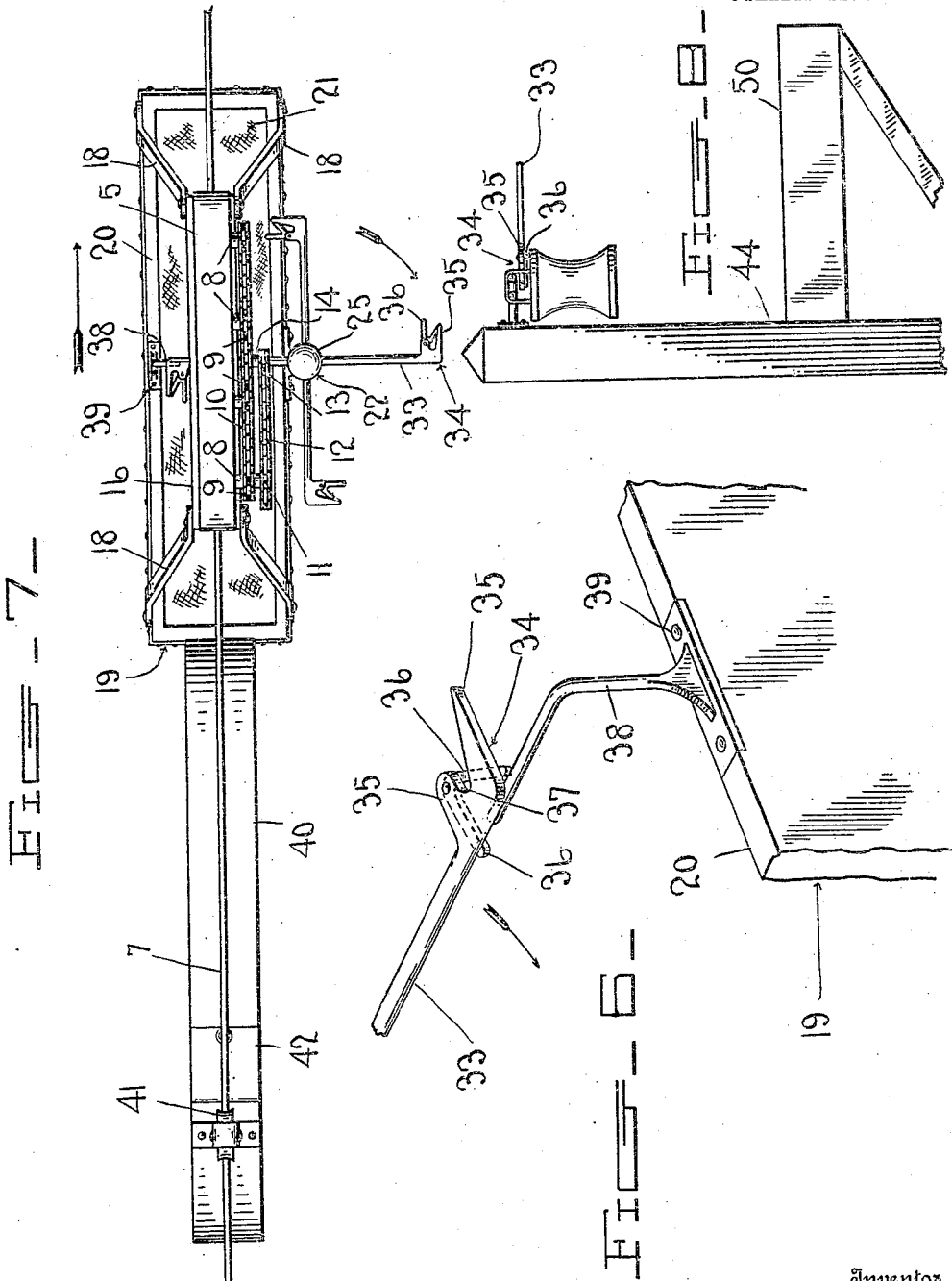
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3 SHEETS—SHEET 3.



Witnesses

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UNITED STATES PATENT OFFICE.

FRANCIS GARDNER, OF ROGERS, MONTANA.

MAIL RECEIVING AND DELIVERING APPARATUS.

954,952.

Specification of Letters Patent.

Patented Apr. 12, 1910.

Application filed August 11, 1909. Serial No. 512,366.

To all whom it may concern:

Be it known that I, FRANCIS GARDNER, a citizen of the United States, residing at Rogers, in the county of Fergus, State of Montana, have invented certain new and useful Improvements in Mail Receiving and 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.

The invention relates to conveyers and more particularly to an automatically operated mail or package conveyer.

One of the primary objects of this invention resides in the combination and arrangement of certain parts whereby the mail or packages to be delivered and caught will be deposited safely at their destination.

Another object of this invention resides in the particular arrangement of the catcher arms and their coöperative parts.

A still further object of the invention lies in the manner in which the delivery receptacles are discharged at certain predetermined points along the route.

A still further object of this invention resides in the means which releases the mail bag that has been caught.

I attain these and other objects of the invention by the mechanism illustrated in the accompanying drawings, in which:—

Figure 1 is a side elevation of the mail conveyer showing the same just after it has caught a mail bag. Fig. 2 is a longitudinal section of the conveyer. Fig. 3 is a central detail section through the mail catcher support. Fig. 4 is a detail perspective view illustrating the position in which the locking fingers of one of the catcher arms are positioned before they have caught a bag. Fig. 5 is an enlarged detail rear elevation of the automatic releasing and delivering mechanism as it appears when open. Fig. 6 is a detail perspective view illustrating the parts which coöperate with each other to release the mail bag that has been caught. Fig. 7 is a plan view of the conveyer. Fig. 8 is a fragmentary side elevation of the receiving and delivering station post and a bag suspended thereby with the catcher arm

of the conveyer ready to take the said bag from the post.

Similar letters of reference will denote like parts throughout the several views.

In this invention the numeral 5 designates a casing in which are journaled a plurality of trolley wheels 6, that are sufficiently grooved to allow them to travel on a wire 7, without the possibility of their jumping off while in motion. These trolley wheels are secured to shafts 8, which extend to the outer side of said casing and have secured thereon a plurality of alining sprocket driving wheels 9, over which is trained a sprocket chain 10 of any suitable construction. On one of these shafts is secured a sprocket 11, which is driven by a chain 12, that imparts sufficient power through a sprocket 13 mounted on a shaft 14, of a motor 15, which is placed within a suitable housing 16, which is suspended from the trolley wheel casing by suitable suspending straps 17.

Diagonally extending from the corners of the housing 16 is a second set of suspension straps 18, which hold suspended therefrom a mail receptacle 19, the upper section 20 of which is made of any suitable material to which can be secured a bottom 21 made of canvas or any other suitable material. With a mail receptacle of this construction any glass or other breakable article can be deposited therein without the least possibility of breaking or destroying it.

Secured to the upper section 20 of the mail receptacle 19 is a standard 22 through substantially one-half of which is formed a bore 23 adapted to accommodate a shaft 24 upon the upper end of which is formed an enlarged head 25 on the lower side of which is formed a plurality of ratchet teeth 27, which are yieldably held in engagement with a like number of teeth 28, formed on the upper edge of the standard 22, by a retractile coiled spring 29 secured within an enlarged bore 30 formed in the lower end of the said standard. On the lower end of said shaft 24, is formed a plurality of threads 31 on which is screwed a nut 32 of any suitable design which is adapted to increase or decrease the tension of said coiled

spring thereby allowing the teeth 27 and 28 to have the proper friction. Radially extending from the said enlarged head are a plurality of mail bag catchers 33 the outer ends 34 of which are formed with stationary fingers 35. Pivottally secured to one of the fingers 35 of the arm 33 is a second set of fingers 36 one of which projects diagonally across the space formed by the stationary fingers 35 and the other substantially in a straight line ahead. This diagonally projecting finger is the first obstacle on the conveyer to come in contact with the bags to be caught. When the bag is struck by this finger it will be forced around into the corner 37 of the stationary fingers 35 and frictionally locked therein by the pivoted set of fingers 36. When the arms 33, contact with a mail bag the jar received thereby is sufficiently strong to rotate the shaft 24 until the next arm has been forced into position which position depends upon the proper numbering of said teeth 27 and 28. These arms are adapted to hold the bags that have been caught until a sufficient number has been struck to force the fingers 36 against a stationary releasing rod 38 which is stationed in the path of movement of the said arms. This stationary rod 38 is secured to one side of the section 20, as shown at 39 and is adapted to push the said locking fingers back to the original position and at the same time causing the bag to be dropped into the bag receptacle.

At one end of the mail bag receptacle is secured a magazine 40 on the upper face of which is secured a trolley wheel 41 that keeps the same from overbalancing the mail bag receptacle. This magazine has a door 42 in one face thereof through which is placed a plurality of boxes 43 or any suitable receptacles. As each station 44, is reached a box is deposited by an automatically releasing mechanism 45 which consists of a downwardly projecting rod 46 pivottally attached to a spring closed door 47 on which is secured a spring pressed latch 48. Between this latch and rod is a link 49 which is also pivoted. When the conveyer approaches one of the stations 44, the rod 46 strikes a receiving receptacle 50 mounted thereon which forces the same backward thereby releasing the latter and causing the door to drop to deposit a box within the receiving receptacle.

In order to allow only one box dropping at a time a sliding partition 51 is adapted to cross between the box to be dropped and the next one thereto. This partition is actuated by a link 52 pivottally secured to one end of a lever 53 which is pivoted as at 54 to a stationary bracket 55 secured as at 56 to one side of the magazine. Adjacent the bracket

55 is a second bracket 57 to which is pivottally secured a lever 58 one end of which is pivottally engaged by a link 59 connecting it with the lever 53 while the other end is pivottally engaged by a link 60 connecting the same with the rod 46. With this mechanism the magazine will only discharge a single box at one station. When the box has been discharged the door is automatically closed by a spring 61 and the next box released by the sliding partition. As the boxes are released they are kept in a compact relation to each other by an expansible coiled spring 62 which forces the boxes along the passage 63 provided within the magazine.

As this invention has been fully described, a further description of the same is deemed unnecessary.

It is understood that minor changes and variations can be made as come within the scope of the appended claims hereunto annexed.

What is claimed is:—

1. In a conveyer comprising a mail conveying receptacle, provided with means to prevent the breaking of any breakable matter that may be deposited therein, a rotatable catching and depositing means adapted to rotate across the upper side of said receptacle and a releasing means projecting substantially half way across said receptacle to automatically release said catcher means.

2. In a conveyer comprising a mail conveying receptacle, a frame structure provided with a yieldable bottom, a standard secured to one side of said frame structure, a rotatable spring pressed shaft secured within said standard, a means for adjusting the tension of said spring, a plurality of radially extending arms projecting from said rotatable shaft, a set of stationary fingers projecting forwardly from said arms, a second set of fingers pivottally mounted upon said first set of fingers and adapted to be actuated by the jar received from the mail bag as it is struck.

3. In a conveyer comprising a mail conveying receptacle having a frame structure, a standard rigidly secured thereto, a rotatable shaft secured to said standard, an upper toothed face meshing with a lower toothed face formed on an enlarged head on said rotatable shaft, an expansible coiled spring adapted to force said toothed faces in contact with each other and adjustable means on said rotatable shaft to adjust the tension of said spring and means projecting radially from said enlarged head on said rotatable shaft to force the teeth on said oppositely disposed faces from one position to the other.

4. In a conveyer comprising a magazine, a plurality of mail delivering receptacles

slidably secured thereon, a means therein to
force said receptacles along the path of
movement, a door at the opposite terminal
with respect to said forcing means, a slid-
5 able partition secured adjacent said door, a
means on said door to actuate said partition
through the medium of said system of levers,
and a means for holding said door closed

actuated by the same means that actuates the
sliding partition.

In testimony whereof, I affix my signa-
ture, in presence of two witnesses.

10

FRANCIS GARDNER.

Witnesses:

HOWARD DE KALB,
WILLIAM MUNGER.