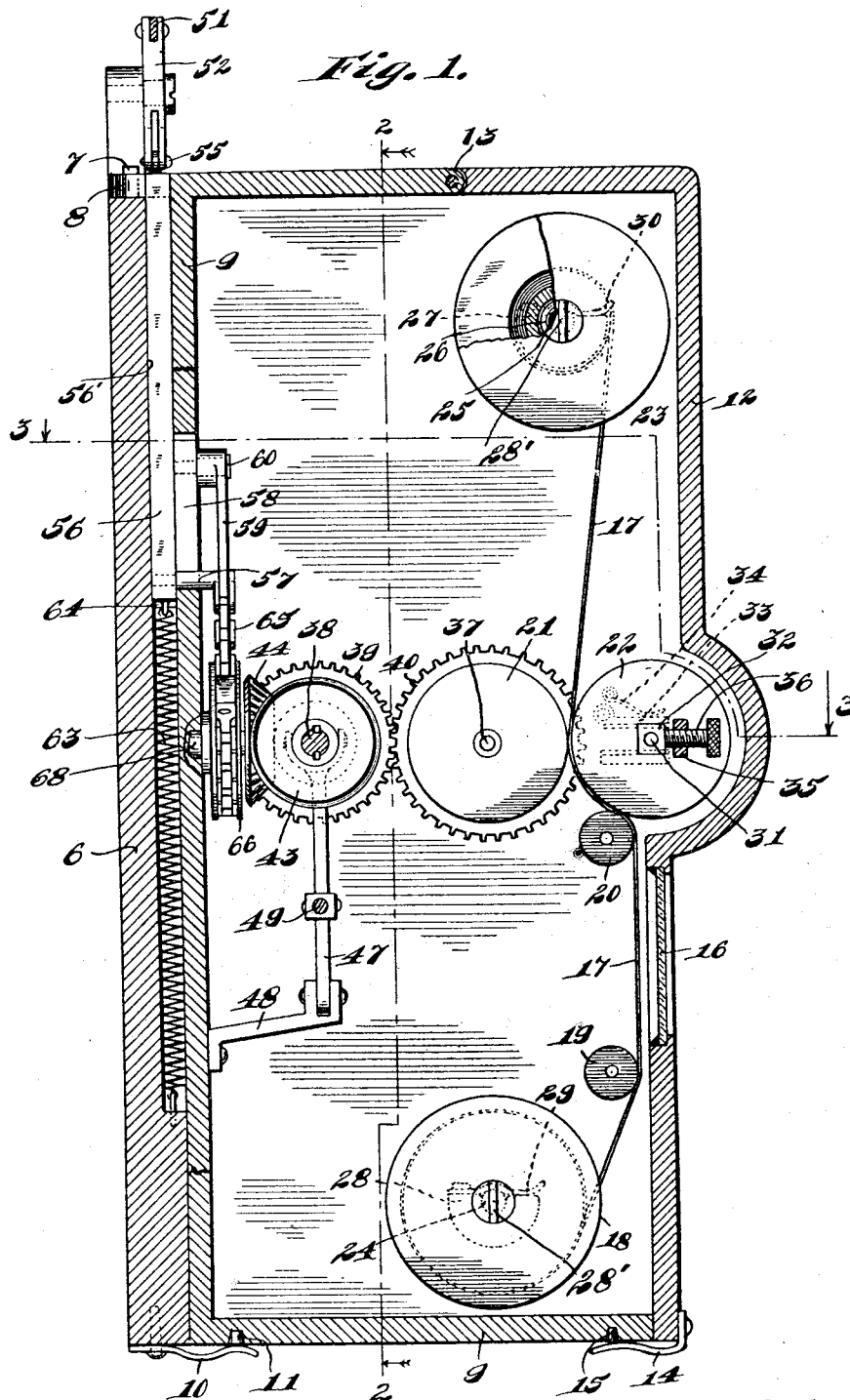


B. A. OLSON.
STATION INDICATOR.
APPLICATION FILED APR. 24, 1912.

1,052,509.

Patented Feb. 11, 1913.

3 SHEETS—SHEET 1.



Witnesses:

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Thomas Colson

Inventor:

Bert A. Olson,
By Joshua H. Harris
his Attorney.

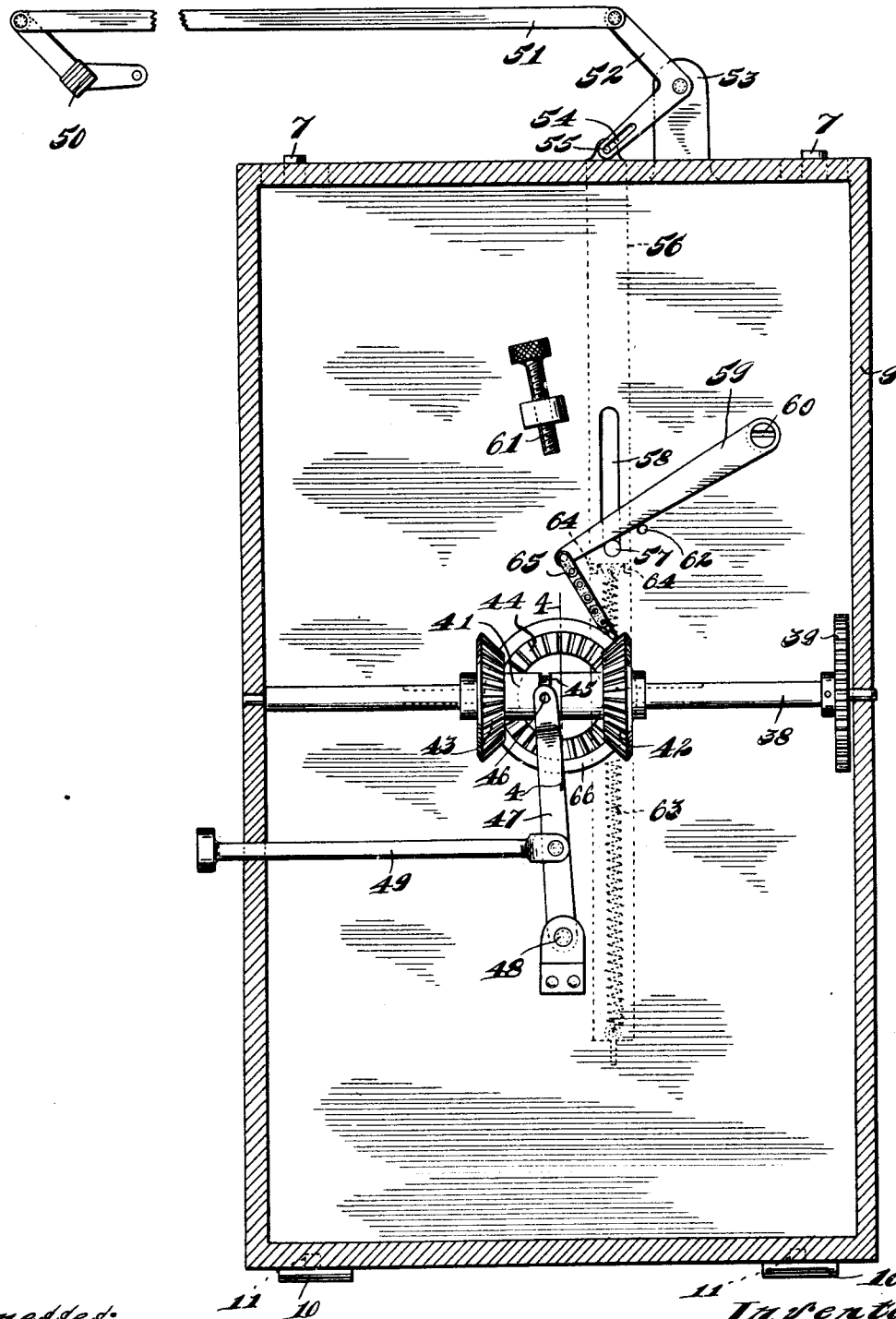
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3 SHEETS-SHEET 2.

Fig. 2.



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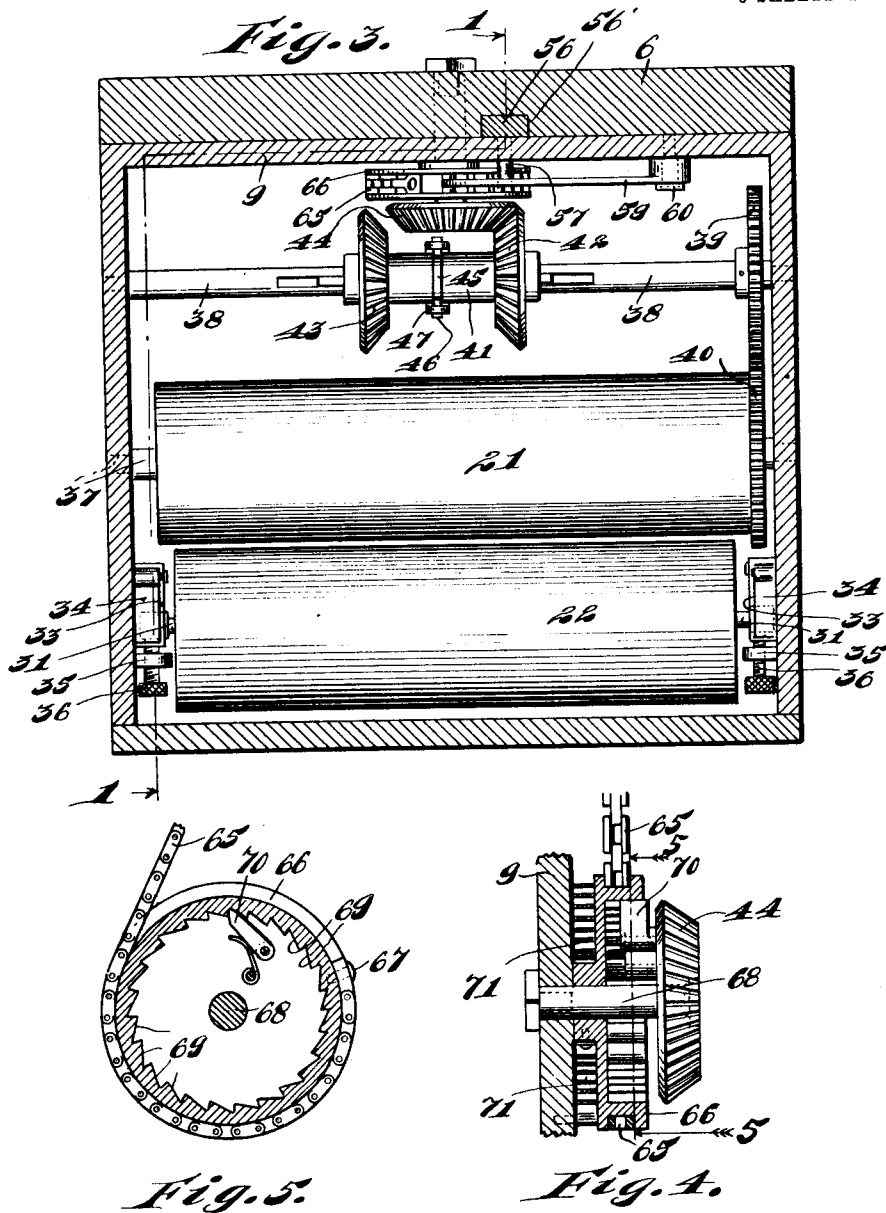
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UNITED STATES PATENT OFFICE.

BERT A. OLSON, OF CHICAGO, ILLINOIS.

STATION-INDICATOR.

1,052,509.

Specification of Letters Patent.

Patented Feb. 11, 1913.

Application filed April 24, 1912. Serial No. 692,832.

To all whom it may concern:

Be it known that I, BERT A. OLSON, a subject of the King of Sweden, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Station-Indicators, of which the following is a specification.

My invention relates to station indicators, and the object of my improvement is to provide a device of the character mentioned which will be simple of construction and efficient in operation.

The invention consists in the combinations and arrangements of parts herein-after described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which—

Figure 1 is a vertical section of my device, Fig. 2 is a similar view taken on line 2—2 of Fig. 1, Fig. 3 is a horizontal section of the same taken on line 3—3 in Fig. 1, Fig. 4 is a fragmental vertical section taken on line 4—4 in Fig. 2, and Fig. 5 is a similar view taken on line 5—5 in Fig. 4.

The preferred form of construction, as illustrated in the drawings, comprises a base 6 which is secured to the car or other vehicle in any suitable manner, such as by bolts or screws (not shown). Said base 6 is provided with pins 7 upon which are removably mounted ears 8 of the casing 9. A flexible locking member 10 is also secured to the base 6 and provided with a detent to engage a recess 11 formed in the casing 9 to lock such casing against such base. The casing 9 is provided with a swinging door 12 mounted on hinges, as at 13, and provided with a spring catch 14 having a detent 15 engaging a suitable slot in the casing 9 to lock such door in normally closed position. Said door 12 is provided with a glazed aperture 16 through which the names of the stations are visible. The names of the stations are printed or otherwise formed on a ribbon 17 which is wound on a spool 18 and passed under rollers 19 and 20 in a manner to expose the name of a station through the glazed aperture 16 to view. Such ribbon is then passed through feed rollers 21 and 22 and wound on a spool 23. The spools 18 and 23 are mounted on shafts 24 and 25 and such shafts are mounted in bearings 27 and 28 in a manner to

be non-rotative in such bearings by means of tongues, as indicated at 28' in Fig. 1. Said spools are connected with their respective shafts by means of tensioned helical springs 26 in a manner so that the ribbon 17 will be taken up by the spool toward which it passes after having been exposed through the aperture 16. The bearings 27 and 28 are formed in a manner to allow the shafts 24 and 25 to be removably secured therein and provided with the locking members 29 and 30 which lock said shafts in said bearings.

The feed roller 22 is mounted on a shaft 31 which is journaled in bearings 32 which are slidably mounted in the casing 9 and provided with a locking means 33 which is maintained in resilient normal position by means of the spring 34 in a manner so that such bearings may be removed from such slidable mountings. An ear 35 is provided near each of the slidable mountings of such bearings and a screw 36 threaded therein for adjustably securing such bearings 32 in their slidable mountings to produce proper tension on said ribbon. The feed roller 21 is mounted on a shaft 37 journaled in suitable fixed bearings in said casing 9 to co-operate with the roller 22. A rotative shaft 38 is also journaled in the casing 9 and provided with a gear 39 secured thereon, in mesh with a gear 40 secured on the shaft 37 to transmit motion from said shaft 38 to the feed rollers. On said rotative shaft 38 is splined the sleeve 41 on which are secured bevel gears 42 and 43 which are adapted to be alternatively meshed with a bevel gear 44. An annular groove 45 is formed in the periphery of said sleeve 41 and the bifurcated end 46 of the lever 47 engaged in such annular groove 45 in a manner to move such sleeve longitudinally on the shaft 38. The lever 47 is pivotally secured on the casing 9, as at 48, and a manually operative plunger 49 passed through the casing 9 and secured to such lever for manually operating it.

A lever 50 is pivoted at a suitable point in the car or other vehicle in suitable position for the operator and connected by means of a connecting rod 51 to a bell crank lever 52 which is pivoted to the base 6, as at 53. The other end of said bell crank lever 52 is provided with a slot 54 into which is operatively secured a pin 55 provided on the top end of a sliding member 56 which is

mounted in a suitable longitudinal extending recess 56' in said base 6 and provided with a pin 57 near its bottom end. Said pin 57 is extended through a slot 58 formed in the casing 9 and engages the lower side of a lever 59 which is also pivotally mounted in said casing, as at 60. The upward throw of the lever 59 is limited by means of an adjustable stop screw 61 mounted on an ear 10 on the casing 9 and the downward throw of such lever is limited by means of a stop 62. The sliding member 56 is provided with a spring 63 for returning it to the normal position shown in Fig. 2, and stops 64 are 15 formed in suitable positions in the recesses 56' in base 6 to limit the downward movement of such member.

A chain 65 is secured to the free end of the lever 59 and wound around a drum 66 and secured thereto by means of a screw 67. Such drum is also provided with ratchets 69 to cooperate with a pawl 70 pivotally secured on the bevel gear 44 and resiliently maintained in contact with said ratchet 25 teeth. The drum 66 and the bevel gear 44 are rotatively mounted on a stud 68 which is secured in the casing 9. Such drum 66 is returned to its normal position by means of a spiral spring 71 after it has been manually rotated by means of operating the device.

In operation, the conductor or other operator moves the lever 50 which swings the bell crank lever 52 thereby raising the member 56 and lever 59, which unwraps the chain on the drum 66 thereby imparting motion to the bevel gear 44 by means of the ratchet-and-pawl connection, and this motion is transmitted through the bevel gear 42 or 43 40 which are in mesh therewith, through the gears 39 and 40 to rotate the feed rolls 21 and 22, thereby moving the ribbon 17, bringing the name of a new station to view in the glazed aperture 16. By moving the plunger 49 in one direction, the bevel gear 42 is meshed with the bevel gear 41 to draw the ribbon 17 in one direction, and by moving such plunger in the opposite direction, the bevel gear 43 is meshed with the bevel 45 gear 41 to reverse the movement of such ribbon.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable 50 of variation and modification without de-

parting from the spirit of the invention. I, therefore, do not wish to be limited to the exact details of construction set forth, but desire to avail myself of such variations and modifications as come within the 60 scope of the appended claims.

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

1. In a station indicator comprising a casing, supports each having a fixed portion 65 carried by the wall of said casing and a flexible portion coacting with said fixed portion; two spool shafts removably secured in two pairs of said supports; a web spool 70 journaled on each of said spool shafts; a pair of bearings removably and slidably mounted in a third pair of said supports; a feed roller journaled in said pair of bearings; a second feed roller journaled in the 75 walls of said casing; and a web between said feed rollers with its ends secured to said web spools, substantially as described.

2. In a station indicator a casing having a recess in one of its walls and a slot in such 80 wall opening into said recess; a spring returned member slidably mounted in said recess; a detent on said spring returned member extending through said slot; an oscillatory arm mounted on a wall of said casing 85 in operative engagement with said detent; and adjustable means for limiting the length of the oscillating movement of said arm, substantially as described.

3. In a station indicator a casing having a 90 recess in one of its walls and a slot in such wall opening into said recess; a spring returned member slidably mounted in said recess, stops in said recess limiting the downward movement of said spring returned slid- 95 ing member, a detent on said spring returned member extending through said slot; an oscillatory arm mounted on a wall of said casing in operative engagement with said detent; a stop limiting the downward move- 100 ment of said arm; an adjustable stop limiting the upward movement of said arm, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of 105 two subscribing witnesses.

BERT A. OLSON.

Witnesses:

ARTHUR A. OLSON,
JOSHUA R. H. PORTS.