

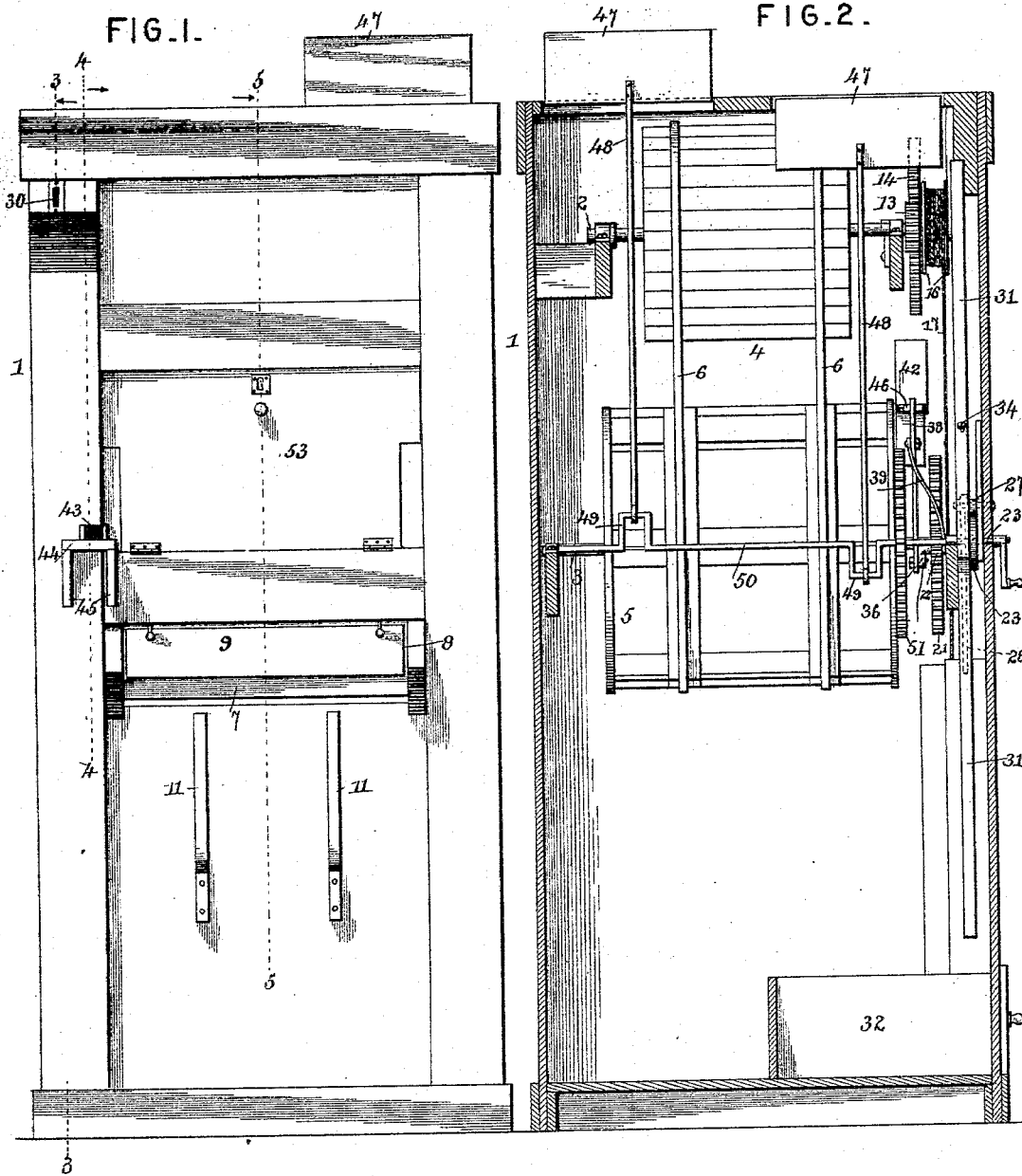
(No Model.)

3 Sheets—Sheet 1.

H. E. HAWK & A. J. HAZLETT.
VENDING APPARATUS.

No. 490,019.

Patented Jan. 17, 1893.



Witnesses

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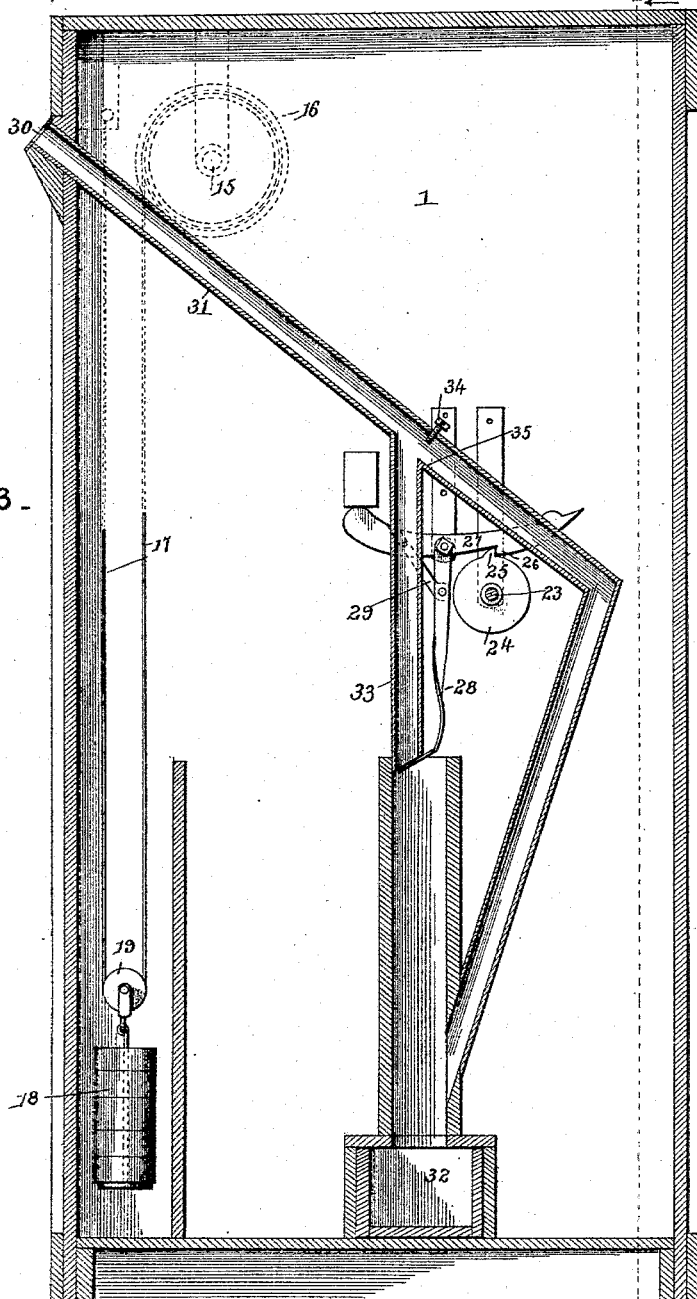
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FIG. 3.



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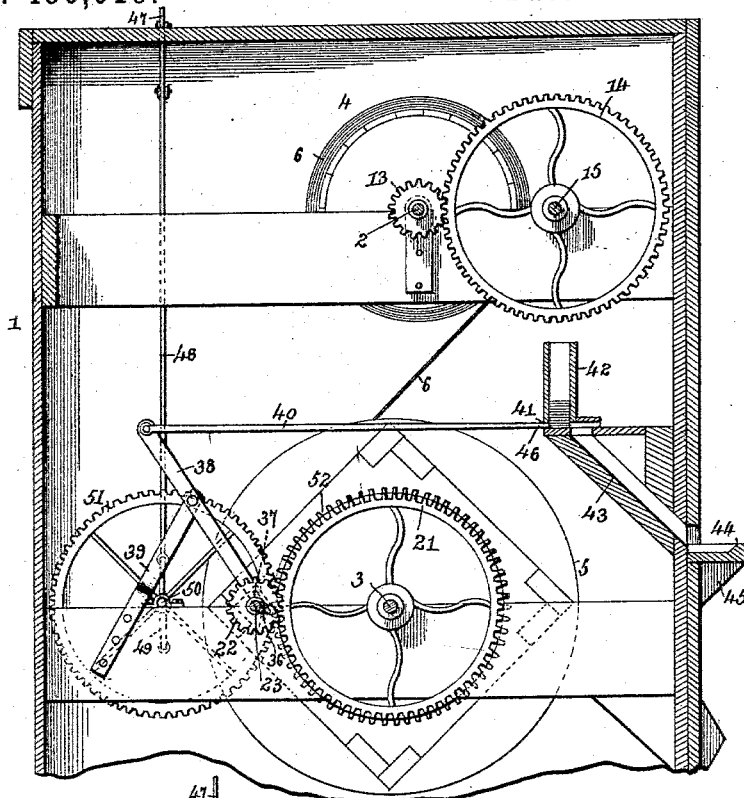


FIG. 4.

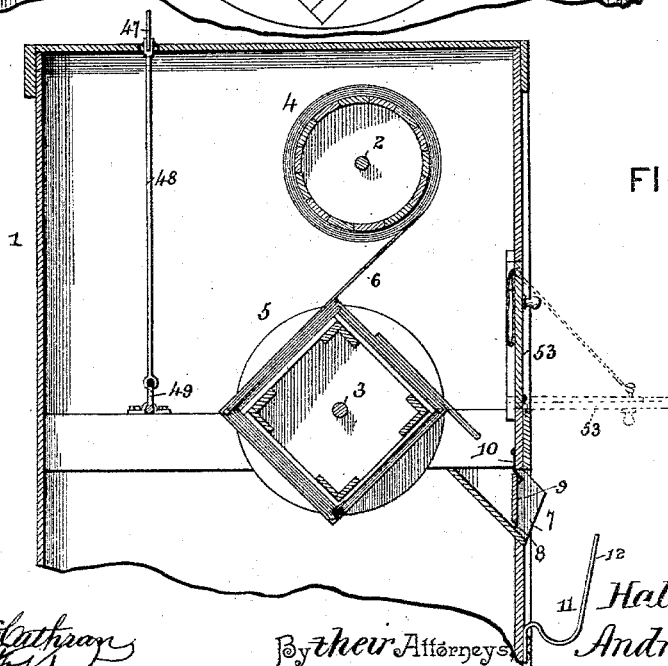


FIG. 5.

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UNITED STATES PATENT OFFICE.

HALE E. HAWK AND ANDREW J. HAZLETT, OF BUCYRUS, ASSIGNORS TO
THE AUTOMATIC MACHINE COMPANY, OF ALLIANCE, OHIO.

VENDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 490,019, dated January 17, 1893.

Application filed May 23, 1892. Serial No. 434,072. (No model.)

To all whom it may concern:

Be it known that we, HALE E. HAWK and ANDREW J. HAZLETT, citizens of the United States, residing at Bucyrus, in the county of Crawford and State of Ohio, have invented a new and useful Vending Apparatus, of which the following is a specification.

The invention relates to improvements in automatic apparatus for the sale of newspapers and the like.

The object of the present invention is to provide for the sale of newspapers or other articles an automatic device which will be operated by a deposited coin, and which will deliver a newspaper to the purchaser and the proper change.

A further object of the invention is to provide a device which will be only operated by the proper coin, and which may be readily adjusted so as to be operated by a particular coin.

The invention consists in the construction and novel combination and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings and pointed out in the claims hereto appended.

In the drawings—Figure 1 is an elevation of a newspaper vending apparatus constructed in accordance with this invention. Fig. 2 is a vertical sectional view on line 2, 2 of Fig. 3. Fig. 3 is a similar view on line 3, 3 of Fig. 1. Fig. 4 is a vertical sectional view on the line 4, 4 of Fig. 1. Fig. 5 is a vertical sectional view on the line 5, 5 of Fig. 1.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a casing preferably rectangular in cross section having journaled in it upper and lower shafts 2 and 3, which carry an actuating reel 4 mounted on the upper shaft, and a polygonal reel 5 mounted on the lower shaft and carrying the newspapers to be delivered to the purchaser. The upper reel 4 is connected with a suitable motor by which it is rotated, and it transmits its motion to the polygonal paper carrying reel 5 by cords, bands, or ribbons, 6 or the like, arranged near the ends of the reels and unwinding from one to the other and securing the newspapers on the faces of the polygonal reel 5 by being wrapped around them. The cords,

bands or ribbons 6 are wound around the upper reel, and the papers are successively placed on the polygonal faces of the lower reel, as the latter is rotated in winding up the device, the bands 6 being wound around the lower reel when the device is wound up, and being unwound therefrom to the upper reel as the device is operated; and the bands extend from the front of the upper reel to the rear of the polygonal reel, and the latter rotates toward the front of the device and delivers the newspapers to an inclined paper chute 7. The papers are ejected from the casing by the paper chute 7 which consists of an inclined board; and the front of the casing is provided with a paper discharge opening 8 which is closed, normally, by an oscillating door 9 suspended from the casing by cords 10 which are secured within the casing at points above the paper discharge opening. It will also be seen that the tension of the band 6 serves to retain the newspapers compactly on the polygonal reel.

The papers discharged from the casing fall from the discharge opening and are caught by a basket bracket composed of bars 11 having their lower ends secured to the casing and provided with outward depressed curved bends 12 and extended upward from the bends.

The actuating reel 4 may itself be actuated by any suitable motor, either weight or spring, the former character of motor being illustrated in the accompanying drawings. A pinion 13 is secured on the upper shaft 2 at one end thereof, and meshes with a cog wheel 14 mounted on a shaft 15 and having rigidly secured to it a drum 16. A weight suspending cord 17 has one end wound around the drum, and its other end secured to the casing, and it supports an adjustable weight 18 which is connected with a pulley 19 around which passes the weight suspending cord. The falling of the weight unwinds the weight suspending cord from the drum and rotates the latter, thereby causing a rotation of the actuating reel 4. The lower shaft, upon which the polygonal reel is mounted carries a cog wheel 21 which meshes with a pinion 22, and the latter is mounted on a shaft 23 which carries escapement mechanism for regulating the rotation of the polygonal paper carrying reel in order to discharge a paper each time a

proper coin is deposited. The gear wheels 21 and 22 are proportioned to the polygonal reel in order that an escapement wheel 24 may make one revolution in the time required to deposit a paper.

In the accompanying drawings the polygonal reel is shown with four sides, and the escapement wheel 24 makes one revolution at each quarter revolution of the cog wheel 21. The escapement wheel 24 is provided with a tooth 25 which is shouldered at one side and beveled at the other, and which is adapted to be engaged by a similar tooth 26 of a lever 27; and the latter is fulcrumed intermediate its ends, and is connected with an oscillating trip bar 28 which is adapted to be operated by a coin, and which raises the rear portion of the lever 27 to lift the tooth 26 out of engagement with the tooth 25 of the escapement wheel to permit the latter to make one revolution, the lever 27 dropping in time to arrest the motion of the escapement wheel at the end of the revolution of the latter. The rear portion of the lever 27 is sufficiently weighted to hold the tooth 26 in engagement with the tooth 25 of the escapement wheel. The upper end of the trip bar 28 is connected with the lever 27 at the fulcrum point, and is held rigid with the lever by an inclined brace 29 connecting the front portion of the lever with the trip bar.

The apparatus as illustrated in the accompanying drawings is arranged to be operated by a five cent piece or nickel and is designed for selling three cent newspapers and each time a nickel is deposited to deliver a newspaper and two cents change. The coin is deposited in a slot 30 which forms a mouth or entrance to an inclined coin chute 31 which allows a coin to roll on the edge and which communicates with a cash drawer or receptacle 32, and which is provided with an extension 33 at the lower end or terminus of which is located the trip bar 28. The coin chute is adjusted to suit the desired coin by a screw 34 arranged at the lower side of the extension 33, and depending from the top of the main branch 31 of the coin chute. The screw 34 is adjusted to constrict partially the passage of the main branch of the coin chute, whereby a nickel in passing down the coin chute will strike the screw 34 and will be thrown by the recoil into the mouth of the depending extension 33; but, a smaller coin will pass by the mouth of the extension without being impeded by the adjusting screw, and will not come in contact with the trip bar, and therefore not operate the apparatus. The bottom of the main branch of the coin chute is slightly cut away at 35 to facilitate the jumping of the extension chute by a smaller coin than a nickel or five cent piece. A nickel or five cent piece after operating the trip bar falls into the cash receptacle 32.

The shaft 23 has its outer end squared to receive a crank handle by means of which the

apparatus is wound up and the inner end of the shaft 23 is provided with a crank 36 arranged in a slot 37 of an oscillating lever 38 which is fulcrumed intermediate its ends on a bracket arm 39. The slot is arranged at the lower end of the oscillating lever, and the upper end of the lever which is connected with a horizontally disposed change ejecting bar 40 is moved forward and backward at each revolution of the shaft 23. The front end of the change ejecting bar is arranged in a horizontal groove or slot 41 at the bottom of a vertically disposed change hopper 42 which is adapted to contain coppers or cents. The slot or opening 41 extends through the lower end of the hopper, and the front end of the opening 41 communicates with an inclined change chute 43 which is arranged above a shelf 44 of a bracket 45 upon which the change is deposited. The bracket is arranged on the outer face of the casing below the discharge end of the change chute and its shelf is depressed or dished to receive the change. The cents are arranged in a pile and the number ejected by the bar 40 is determined by the thickness of the front end 46 of the bar. The front end 46 is made sufficiently thick to carry two of the cents from beneath the pile in the hopper, and it delivers them to the inclined change tube. This operation is performed by the first half of the revolution of the escapement wheel the second half of the revolution returning the change ejecting bar to its normal position, and allowing two more of the cents to drop in front of the change ejecting bar to be delivered to the next purchaser.

The character of the apparatus is indicated by signs 47 designed to be alternately displayed and mounted on the upper ends of vertically reciprocating bars 48 which have their lower ends connected with diametrically oppositely disposed crank bends 49 of a cranked shaft 50, the latter receiving its motion from the lower shaft by means of gears 51 and 52 meshing with each other and mounted on the cranked shaft 50 and the lower shaft 3. One of the bulletins or signs is exposed during one half of a revolution of the lower shaft, and is then withdrawn and the other one is exposed during the other half of the revolution of the other shaft.

The front of the casing is provided with a door 53 which is preferably hinged at the lower edge and affords access to the interior to enable the polygonal reel to be supplied when exhausted, and the said door is adapted when let down to form a shelf.

Any suitable means may be provided for indicating when the contents of the polygonal reel are exhausted.

What we claim is—

1. In a vending apparatus, the combination of a casing, an actuating reel, a polygonal reel, a band having its ends secured to the reels, and adapted to be unwound from one reel and wound upon the other and securing

the articles on the faces of the polygonal reel, and means for regulating the rotation of the reels, substantially as described.

2. In a vending apparatus, the combination
5 of a casing, an actuating reel, a polygonal reel arranged below the actuating reel and adapted to hold papers, a band wound around the reels and extending from the front of the actuating reel to the back of the polygonal
10 reel, and coin operative mechanism for regulating the rotation of the reels, substantially as described.

3. In a vending apparatus, the combination
15 of a casing, an upper actuating reel, a lower polygonal paper carrying reel, bands wound around the reels and unwinding from one to the other and adapted to hold papers on the polygonal reel, a weight motor connected with the actuating reel, a shaft, gearing connect-
20 ing the shaft with the polygonal reel, and escapement mechanism connected to the shaft and adapted to be operated by a coin, substantially as described.

4. In a vending apparatus, the combination
25 of a casing, an actuating reel, a polygonal reel, a band wound around the reel, a shaft, gearing connecting the shaft with the polygonal reel, an escapement wheel mounted on the shaft and provided with a tooth, a lever
30 provided with a tooth engaging the tooth of the escapement wheel and arresting the motion of the latter, and a trip bar connected with the lever and adapted to be operated by a coin to lift the tooth of the lever out of en-
35 gagement with that of the escapement wheel, substantially as described.

5. In a vending apparatus, the combination
of a casing, an actuating reel, a polygonal
40 reel, a band wound around the reel, a shaft, gearing connecting the shaft with the polygonal reel, an escapement wheel mounted on the shaft and provided with a tooth, a horizontally disposed lever having one end weight-

ed and provided with a tooth engaging that
of the escapement wheel, a trip bar connected 45
to the lever, and a coin chute having a terminus arranged at the trip bar, substantially as described.

6. In a vending apparatus, the combination
of a casing, an actuating reel, a polygonal 50
paper carrying reel, a band having its ends wound around the reels and unwinding from one to the other, a shaft having a crank, gear-
ing connecting the shaft with the polygonal reel, an escapement wheel mounted on the 55
shaft and provided with a tooth, a horizontally disposed lever engaging the escapement wheel, a trip bar depending from the lever and adapted to lift the same out of engage-
ment with the escapement wheel, an oscillat- 60
ing lever fulcrumed intermediate its ends and provided with a slot at its lower end receiving said crank, and a horizontally disposed
change ejecting bar connected with the upper 65
end of the oscillating lever and being reciprocated by the same, substantially as described.

7. In a vending apparatus, the combination
of a casing, an actuating reel, a polygonal
70 paper carrying reel, a band connecting the reels, an inclined paper discharger chute arranged to receive the papers and a basket
bracket arranged below the paper chute to catch the papers and comprising the two bars
having their lower ends secured to the casing 75
and bent outward and extended vertically, substantially as described.

In testimony that we claim the foregoing as
our own we have hereto affixed our signatures
in the presence of two witnesses.

HALE E. HAWK.
ANDREW J. HAZLETT.

Witnesses:

R. V. SEARS,
IDA STEWART.