

C. C. CAWLEY.
VENDING MACHINE.

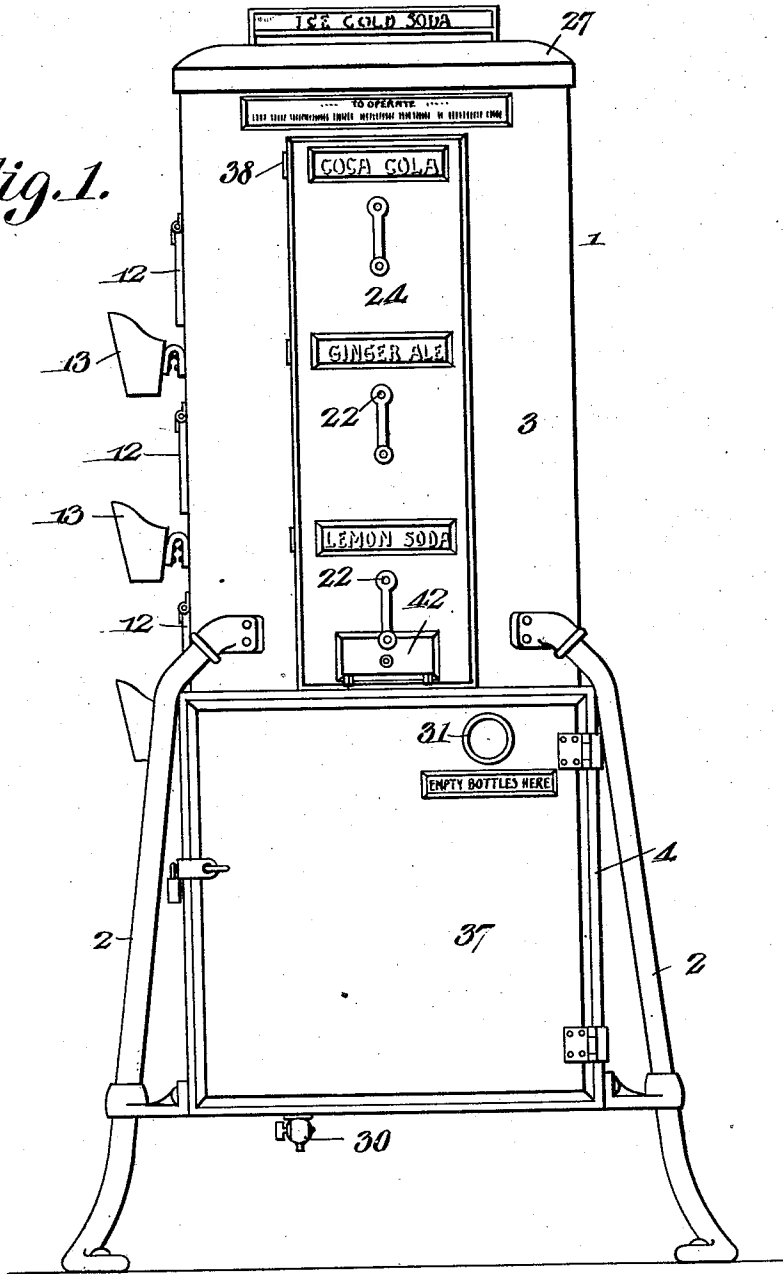
APPLICATION FILED NOV. 26, 1910.

Patented July 16, 1912.

4 SHEETS—SHEET 1.

1,032,989.

Fig. 1.



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Witnesses

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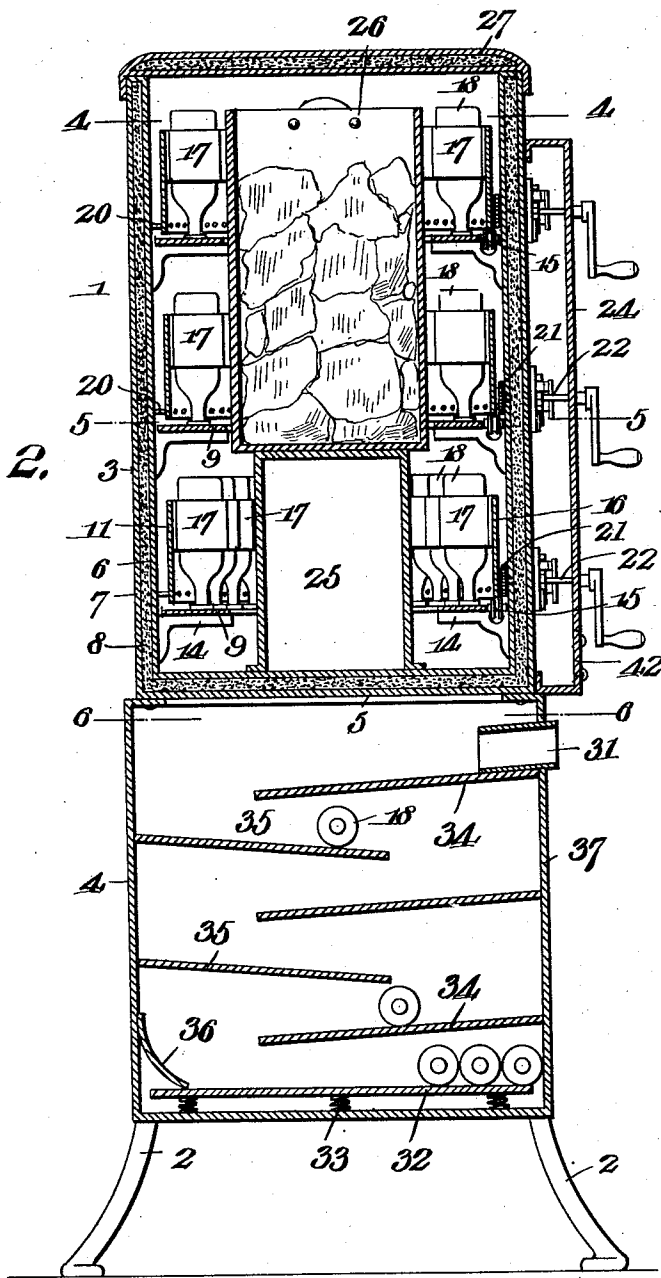
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4 SHEETS—SHEET 2.

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Fig. 2.



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4 SHEETS-SHEET 3.

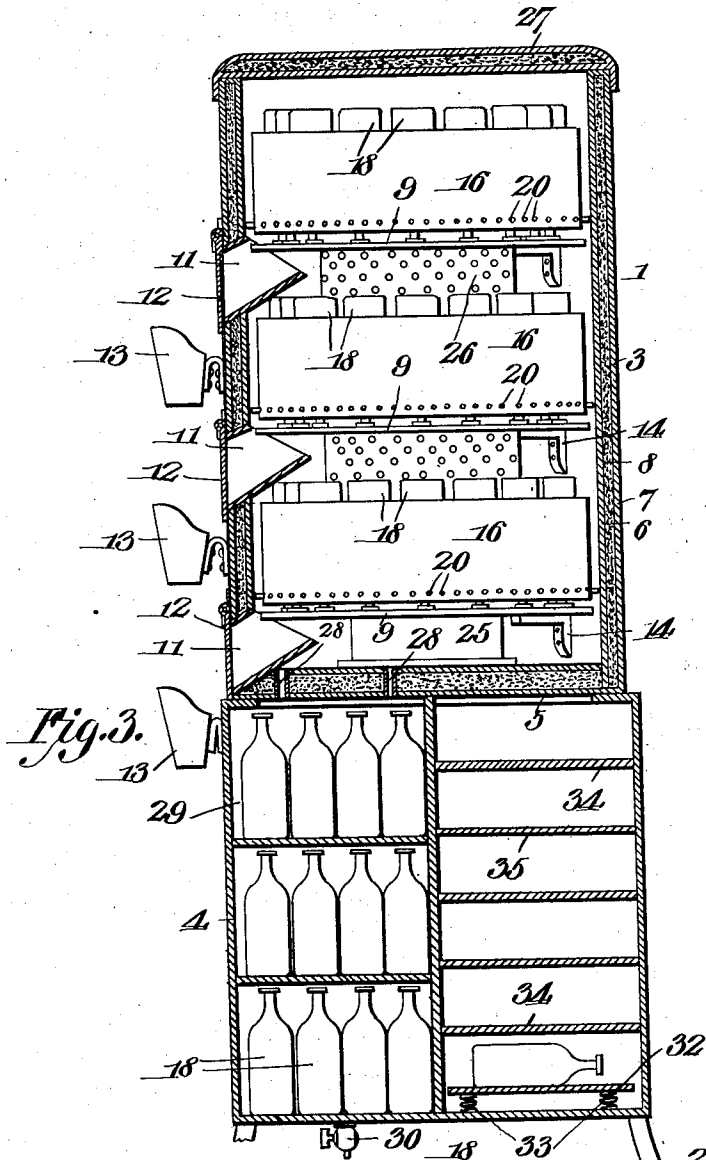
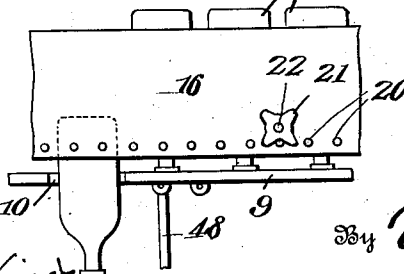


Fig. 7.

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4 SHEETS—SHEET 4.

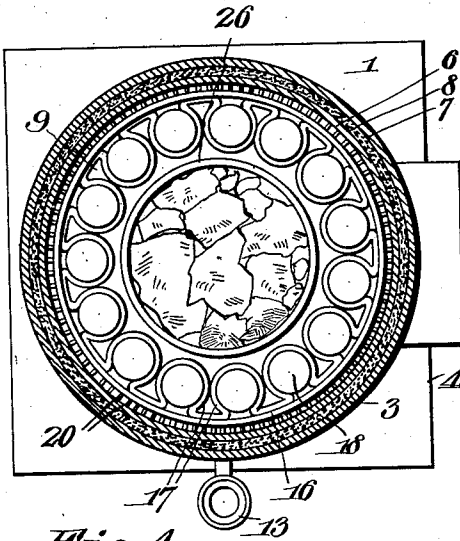


Fig. 4.

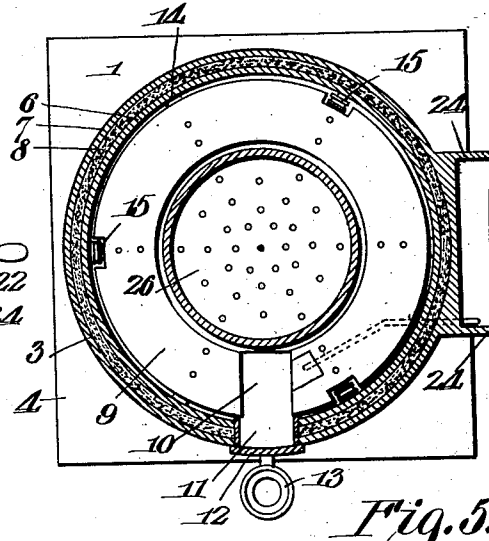


Fig. 5.

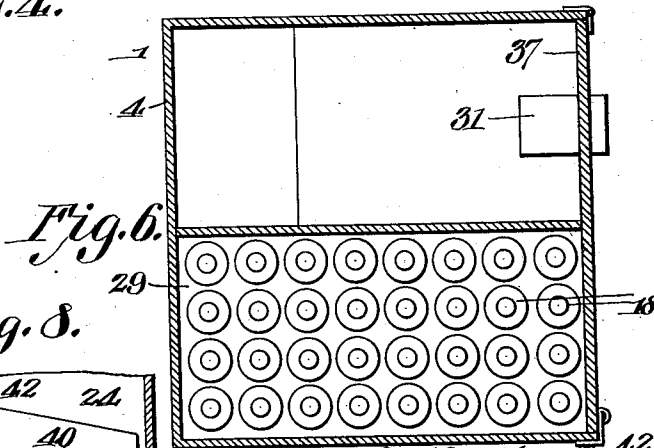


Fig. 6.

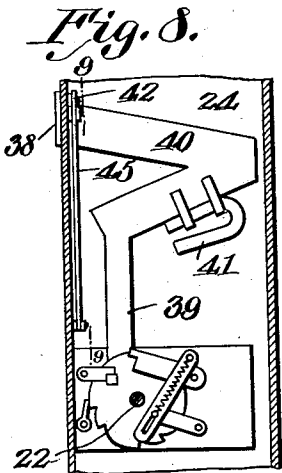


Fig. 8.

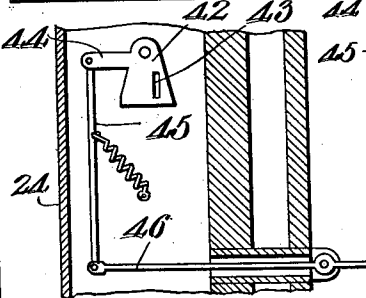


Fig. 9.

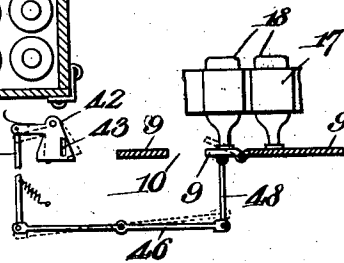


Fig. 10.

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UNITED STATES PATENT OFFICE.

CLYDE C. CAWLEY, OF THOMSON, GEORGIA, ASSIGNOR TO TURNER-HARRIS VENDING MACHINE COMPANY, OF THOMSON, GEORGIA, A CORPORATION OF GEORGIA.

VENDING-MACHINE.

1,032,989.

Specification of Letters Patent.

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Application filed November 26, 1910. Serial No. 594,328.

To all whom it may concern:

Be it known that I, CLYDE C. CAWLEY, a citizen of the United States, residing at Thomson, in the county of McDuffie and State of Georgia, have invented new and useful Improvements in Vending-Machines, of which the following is a specification.

This invention relates to improvements in vending machines of the kind particularly designed for vending packaged goods, the object of the invention being to provide a simple, reliable and efficient machine for vending packaged liquids.

The invention consists of the features of construction, combination and arrangement of parts, hereinafter fully described and claimed, reference being had to the accompanying drawings, in which:—

Figure 1 is a front elevation of a vending machine embodying my invention. Fig. 2 is a central, vertical front-to-rear section through the machine. Fig. 3 is a central, vertical transverse section through the machine. Figs. 4, 5 and 6 are horizontal transverse sections on the lines 4—4, 5—5 and 6—6 of Fig. 2. Fig. 7 is a fragmentary sectional elevation of one of the carriers and its supporting track, showing one of the bottles released for discharge. Fig. 8 is a vertical transverse section through the casing of the coin-controlled operating mechanism and shutter-controlling means. Fig. 9 is a section on the line 9—9 of Fig. 8. Fig. 10 is a diagrammatic elevation of a portion of a carrier and track and the shutter-controlling means, illustrating in full and dotted lines the normal and shutter-closing position of the latter.

Referring to the drawings, 1 designates the casing of the machine provided with suitable supporting legs 2 and having upper and lower dispensing and storage compartments 3 and 4 separated by a horizontal partition 5, which forms the bottom of the compartment 3 and top of the compartment 4, each of said compartments and the horizontal partition comprising spaced walls 6 and 7 and an interposed filling 8 of non-conducting material.

The compartment 3 incloses one or more sets of dispensing devices, each including a nearly annular horizontal track 9 provided at one point with a discharge slot or gap 10 arranged above an inclined discharge chute 11 leading to the exterior at one side

of the compartment 3, said chute being normally covered at its outer end by a pivoted, outwardly opening spring-closed door or flap 12. Each package released by the dispensing device drops by gravity into the chute 11, forces open the door 12 and drops into a suitable receptacle 13, from which it may be conveniently removed by the purchaser, the door automatically closing by gravity and the action of its closing spring after the passage of the package.

Brackets 14 are provided at intervals around the wall of the compartment 3 to support the track 9, on which are journaled an annular series of equidistantly spaced grooved wheels or rollers 15, which turn within suitable slots in the track and underlying grooves in the adjacent brackets. An annular rotary carrier 16 is supported at its lower edge by the grooved rollers and provided upon its inner side with an annular series of open-ended holders or receivers 17 in which the packages 18 to be dispensed are held. The packages fit loosely in inverted position in the holders and rest upon the track 9 by which they are normally retained in position, the arrangement being such that by partial rotary or intermittent movements of the carrier the packages will be successively brought into alinement with the gap 10 and released for discharge through the outlet 11. A band 19 is fixed to the lower edge of the carrier and provided with an annular series of outwardly extending pins or teeth 20, forming a gear ring meshing with a pinion 21 on the inner end of a shaft 22 having an actuating handle or crank 23 by which it may be turned to impart motion to the carrier.

The shaft 22 is journaled in suitable bearings in the front walls of the casing 1 and an auxiliary casing 24 secured thereto, which auxiliary casing serves as an inclosure for the parts of the coin-controlled releasing mechanism and the shutter-operating mechanism, hereinafter described. The pinion 21 has its teeth corresponding in number to the number of pins or teeth projecting from the gear ring between any two adjacent holders 17, so that upon each complete revolution of said pinion the gear ring will be moved the proper distance to bring a holder into alinement with the gap 10 for the discharge of the package therefrom.

Arranged within the base of the compart-

ment 3 and resting upon the partition 5 is a support 25 for a superposed perforated ice tank 26, which support and tank are disposed within the annular space formed and bounded by a plurality of dispensing devices of the construction described, which devices are disposed in superimposed relation. The tank is adapted to be applied and removed and refilled with ice as occasion demands through the top of the casing 1, which is closed by a suitable cover 27, composed like the body of the casing of spaced walls and a filling of non-conducting material, which cover may be locked in closed position against unauthorized removal by any suitable type of locking means, (not shown).

In practice, the bottles supported by the several dispensing carriers may contain liquids of different kinds, brands or flavors, in which event suitable signs indicating the nature of the liquids carried by each dispensing device will be disposed upon the casing 24 in proper proximity to the actuating cranks and coin insertion slots associated therewith, for the information and guidance of prospective purchasers. These bottles of liquids will be cooled to the desired temperature for dispensation by the ice contained in the tank 26, the cold water dripping from which will flow down into the base of the compartment over the support 25 and onto the partition 5 to maintain a substantially equal temperature throughout said compartment. It will be apparent that upon the removal of the ice tank access to the holders of the respective dispensing devices may be conveniently obtained to replenish the same whenever necessary.

The partition 5 is provided with perforations 28 for the discharge of the drip water from the compartment 3 to the compartment 4, which latter is provided with a space or chamber 29 in which a store of filled bottles may be kept to replenish the holders of the dispensing devices as occasion demands, the contents of such bottles being kept cool by the drip water, a valve or cock 30 being provided at the base of the compartment for the drainage off of the water at intervals.

An inlet 31 is arranged at the front of the compartment 4 for the introduction of the empty bottles thereinto, a suitable sign or instructions being arranged adjacent to said inlet to indicate to the purchasers of the goods the purpose of said inlet. In the base of the compartment is a loose false bottom 32 supported by suitable cushioning devices 33 on which the inserted emptied bottles rest and to which they roll by gravity through a serpentine passage formed by a series of inclined shelves 34 and 35, which are arranged in staggered relation or alternately extend back and forth to provide a zigzag channel, whereby the bottles are caused to roll easily

and gently to the bottom 32. As shown in the present instance, the lower shelf 34 projects rearwardly from the front wall, and a guard or stop 36 is disposed upon the rear wall adjacent the bottom 32 to check the fall of the bottles and cause them to roll into the space between said lower shelf and said false bottom, which latter is permitted to have yielding motion by the cushioning members 33 to prevent injury to the bottles falling thereon. A door 37 is provided at one side of the compartment 4 to admit access to both the space 29 in which the filled bottles are stored and the space reserved for the reception of the empty bottles to enable the bottles to be inserted and removed and the compartment to be cleaned whenever necessary.

In practice, any suitable construction of coin-controlled mechanism for holding the operating devices from movement and permitting actuation thereof upon the deposit of a prescribed coin may be employed, and any suitable type of motor-actuated means governed by the coin-controlled mechanism may be adopted to operate each dispensing device in lieu of the manually-operable device herein disclosed. In the present instance I have simply shown the casing 24 provided with a coin inlet slot 38 associated with each set of dispensing devices, from which slot the coin is conducted into a receptacle 39 through a passage-way or chute 40, provided with a magnet 41 or other suitable means for rejecting spurious coins, said casing having a suitably-locked door 42 through which access may be obtained to the receptacle by an authorized person for the removal of the coin. The machine may also be provided with means, which may form a part of the coin-controlled mechanism, whereby the purchaser of a package will be forced to return the empty package to the machine or else pay for it. In such event two coins may be required to operate the machine, one being discharged into the coin receptacle and other into a cup or holder on the outside of the machine upon the return of the empty package, but not otherwise, the insertion of the package effecting the release for discharge of the second-named coin.

Pivotal mounted within the casing 24 for coöperation with each coin inlet 38 is a laterally swinging guard or indicator 42 having an opening 43 registering with the inlet to permit of the insertion of a coin under normal conditions, that is, while a package remains in the carrier to be dispensed. Said guard is also provided with a lateral arm 44 connected by a link 45 with one arm of an intermediately pivoted lever 46, on which link acts a spring 47 whereby the guard is adapted to be swung to closed position when the last package in the carrier is discharged. The other arm of the

lever 46 is connected by a link 48 with a trip device 49 pivoted to the track 9 in such position as to be held depressed from a normally inclined position by the bottle or package next adjacent the gap 10 in the path of movement of the rotary carrier. The link 48 moves through an opening in the track and upon the depression of the trip transfers motion to the lever and link 45 to maintain the guard in its normal position against the pull of the spring 47. As each bottle moves to discharging position over the gap 10, the following bottle passes onto and depresses the trip, thus maintaining the guard in normal position as long as any bottles remain upon the carrier. As soon as the last bottle is discharged, however, and the trip is relieved from pressure, the spring 47 shifts the guard to its coin slot-closing position, thus preventing the insertion of another coin until the carrier is replenished.

From the foregoing description, taken in connection with the accompanying drawings, it will be apparent that my invention provides a machine which is admirably adapted for vending packaged liquids, such as root-beer, ginger-ale and the like.

While I have described the method of operation of the invention, together with the apparatus which I now consider to be the best embodiment thereof, I desire to have it understood that the apparatus shown is merely illustrative and that such changes may be made when desired as are within the scope of the claims.

I claim:

1. A vending apparatus including a casing having an outlet, a horizontal track disposed within the casing above the outlet, rollers supported by said track, a rotary carrier comprising a band or ring arranged above the track and resting upon said rollers, said carrier being provided with external gear teeth and having receptacles arranged upon the interior thereof to loosely support packages to be vended, said receptacles being arranged above the track, whereby the latter is adapted to support

said packages, said track being provided with an opening in line with the outlet for the successive discharge of the packages in the rotation of the carrier, and means including a gear meshing with the gear teeth on the carrier for imparting rotary movement to said carrier.

2. In a vending apparatus, the combination of a casing having an upper dispensing compartment and a lower storage compartment, a partition wall separating said compartments and provided with perforations opening communication therebetween, a support rising from said partition within the base of the dispensing compartment, a perforated ice tank in the upper portion of said compartment and of greater diameter than and resting on said support, annular tracks surrounding the support and tank, rotary carriers surrounding the support and tank and arranged to travel on said tracks, and means for rotating each carrier independently and successively discharging articles therefrom.

3. A vending apparatus including a casing having an outlet, a horizontal track disposed within the casing above the outlet, grooved rollers supported by said track, a rotary carrier comprising a band or ring arranged above the track and having its lower edge resting in the grooves of said rollers, said carrier being provided with external gear teeth and having receptacles arranged upon the interior thereof to loosely support packages to be vended, said receptacles being arranged above the track, whereby the latter is adapted to support said packages, said track being provided with an opening in line with the outlet for the successive discharge of the packages in the rotation of the carrier, and means including a gear meshing with the gear teeth on the carrier for imparting rotary movement to said carrier.

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

CLYDE C. CAWLEY.

Witnesses:

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A. L. McLEAN.