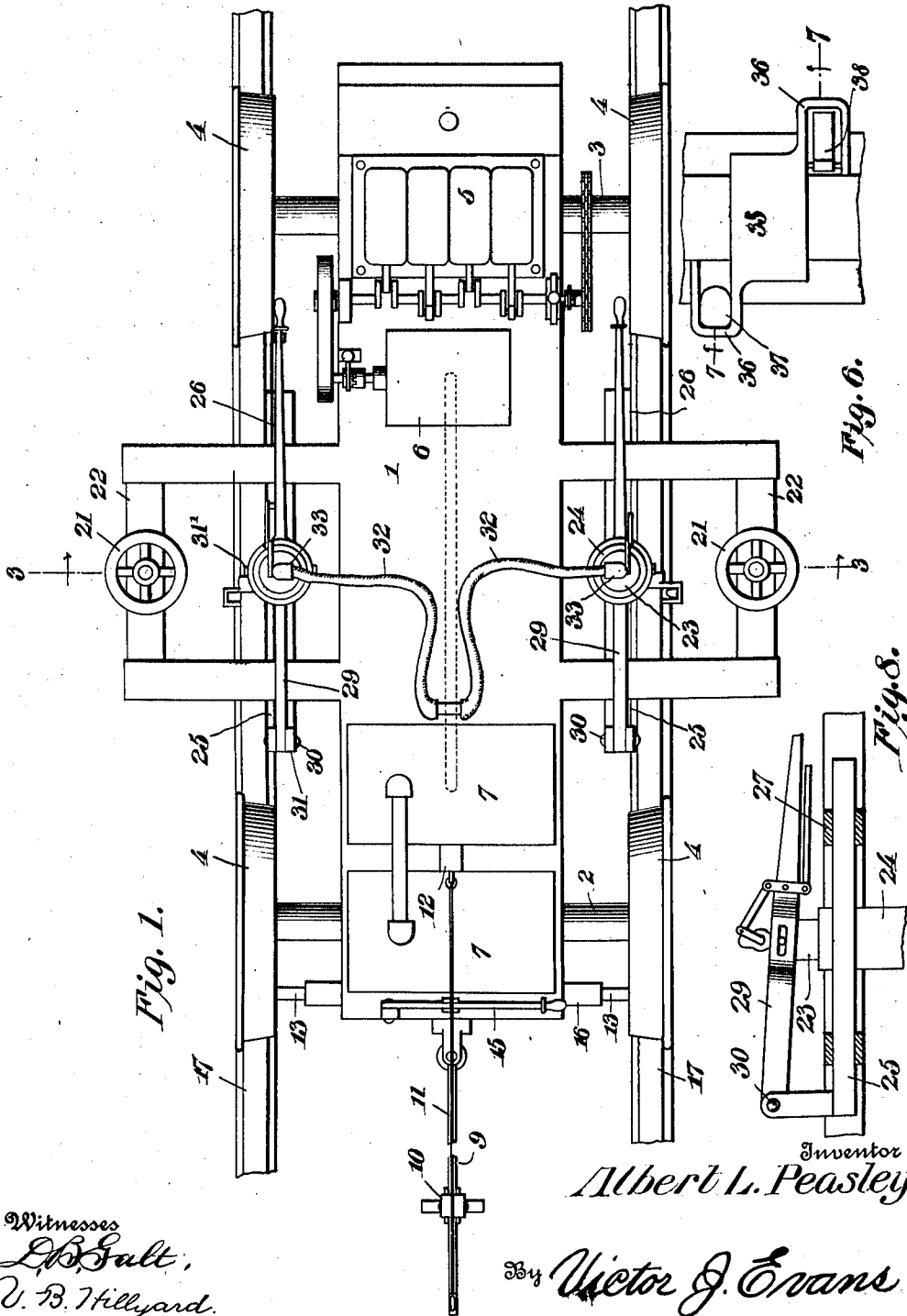


A. L. PEASLEY.
 TRACK LAYING MACHINE.
 APPLICATION FILED JAN. 17, 1911.

993,869.

Patented May 30, 1911.

3 SHEETS—SHEET 1.



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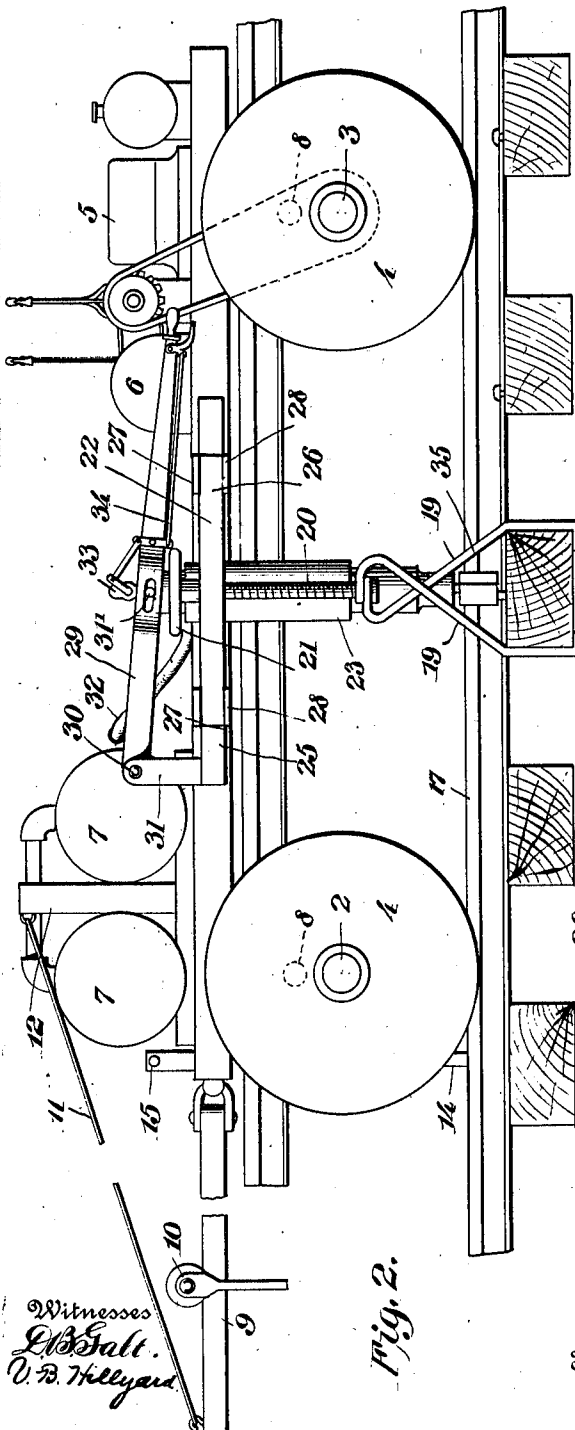


Fig. 2.

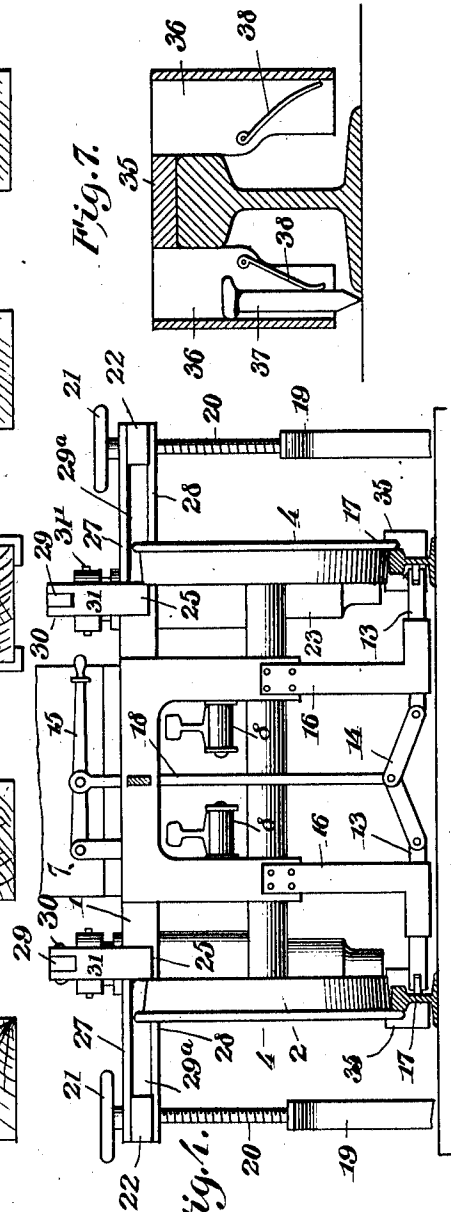


Fig. 1.

Fig. 7.

Witnesses
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Inventor
 Albert L. Peasley.

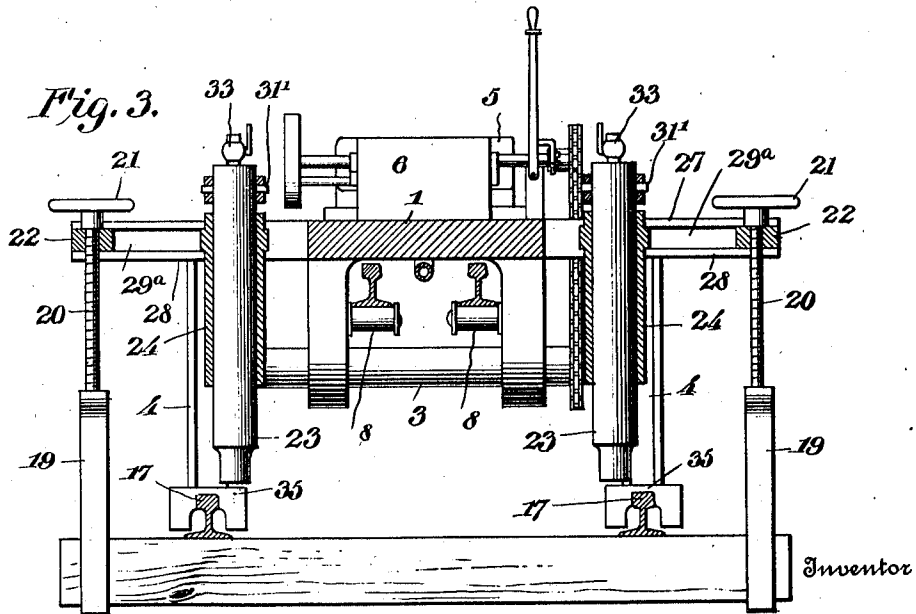
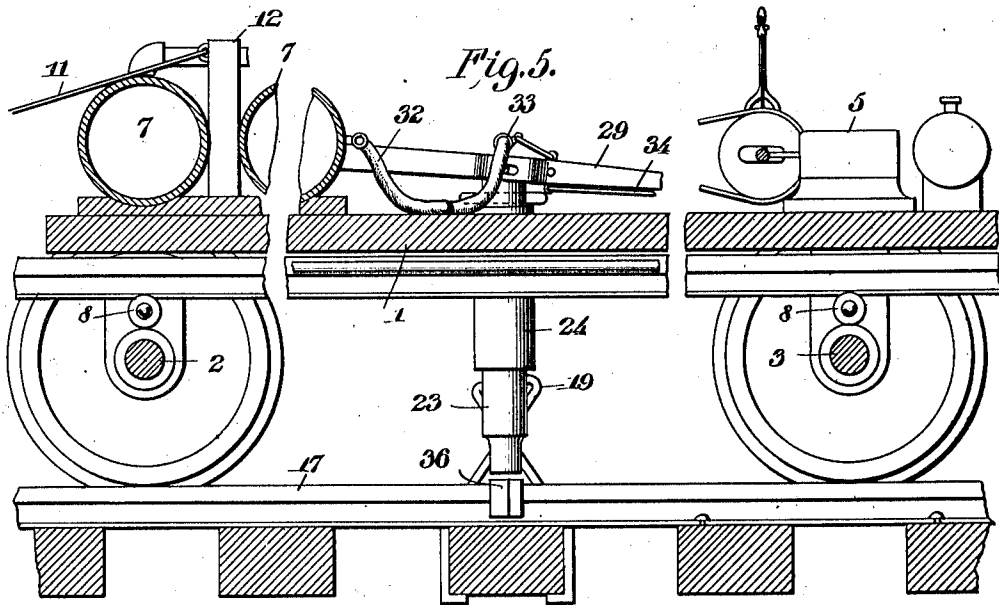
By Victor J. Evans.
 Attorney.

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3 SHEETS-SHEET 3.



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UNITED STATES PATENT OFFICE.

ALBERT L. PEASLEY, OF INDIANAPOLIS, INDIANA.

TRACK-LAYING MACHINE.

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Specification of Letters Patent. Patented May 30, 1911.

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To all whom it may concern:

Be it known that I, ALBERT L. PEASLEY, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented new and useful Improvements in Track-Laying Machines, of which the following is a specification.

The present invention provides a machine specially designed to facilitate the construction of railroads and to materially reduce the cost, said machine embodying means whereby the rails may be handled with ease, placed in position, properly spaced and secured to the ties in a rapid and effective manner, the machine embodying pneumatic drivers for forcing the spikes home into the ties, said pneumatic drivers being adjustable longitudinally and transversely of the machine so that the spikes may be driven or forced into the ties upon opposite sides of the rails without requiring movement of the truck or machine as a whole except when it is required to advance the machine from one tie to the other.

The invention consists of the novel features, details of construction and combination of parts, which hereinafter will be more particularly set forth, illustrated in the accompanying drawings, and pointed out in the appended claims.

Referring to the drawings, forming a part of the application, Figure 1 is a top plan view of a machine embodying the invention. Fig. 2 is a side view of the machine. Fig. 3 is a cross section on the line 3—3 of Fig. 1. Fig. 4 is an end view. Fig. 5 is a vertical central longitudinal section of the machine, parts being broken away. Fig. 6 is a top plan view of the spike holder and guide, showing the same in position. Fig. 7 is a sectional view on the line 7—7 of Fig. 6. Fig. 8 is a detail view of a portion of the frame, the spike driver, the carrier therefor, and the operating lever.

Corresponding and like parts are referred to in the following description, and indicated in all the views of the drawings, by the same reference characters.

The machine is in the nature of a truck, which is constructed to operate upon the rails of a track or railroad which is in course of construction. The truck consists of a platform 1, front and rear axles 2 and 3 and supporting wheels 4 at the ends of the axles, the latter being mounted in hang-

ers forming a part of the framework of the truck. An engine 5 of any variety, preferably of the explosive type, is mounted upon the truck for driving the latter and operating an air compressor 6. Air tanks 7 are mounted upon the truck and contain air under pressure and are preferably charged by means of the air compressor 6. The several parts are arranged upon the platform so as to distribute the weight. Rollers 8 are mounted upon parts of the truck below the platform 1 and are intended to support rails when passing the same from in rear of the machine to a point in front thereof. A crane 9 located in front of the machine and connected thereto so as to swing laterally is provided with a carrier 10, which receives the rail and holds the same during the operation of positioning the rail upon the ties preliminary to fastening it to the ties. The carrier 10 may be of any construction and is mounted to move upon the crane 9, the latter being supported by means of a brace 11, which is attached to the forward end of the crane and secured at its rear end to a standard 12 rising from the front portion of the truck.

The machine embodies means for properly spacing the rails, said means consisting of bars 13, toggle levers 14, an operating lever 15 and guides 16. The bars 13 are mounted to slide horizontally in sleeves formed at the lower ends of the guides 16 and their outer ends are adapted to engage the inner sides of the webs of the rails 17. The operating lever 15 is connected by means of a bar 18 with the toggle levers 14 so that movement of the lever 15 will cause the bars 13 to slide outwardly or inwardly. When the outer end of the lever 15 is moved downward and the toggle levers are caused to align with the bars 13, the latter are pressed outward to the limit of their movement and engage with the webs of the rails 17 and properly space the latter.

Securing means are provided for holding the truck upon the track in the desired position, the securing means being the same upon opposite sides of the truck and adapted to engage the ends of a tie. The means for fastening the truck embody a grapple 19, a screw 20, and a hand nut 21, the screw 20 being supported in a cross piece 22 mounted upon the truck. It is to be understood that the securing means are duplicated upon opposite sides of the machine to

fasten the same to the road bed upon opposite sides of the track.

A spike driver is located upon each side of the machine and is of the pneumatic type. The spike driver is indicated at 23 and is mounted in a carrier 24, which is adjustable longitudinally and laterally of the machine to admit of properly positioning the driver so as to engage the head of the spike. The carrier 24 is hollow and consists of a vertically disposed sleeve having a front arm 25 and a rear arm 26, the two arms 25 and 26 being in longitudinal alinement and supporting the carrier in a manner to admit of lateral and vertical adjustment thereof. The cross piece 22 has its end portions cut away to provide spaced members 27 and 28 between which the carrier 24 is mounted. Each of the members 27 and 28 has a horizontal opening 29^a to receive the respective arms 25 and 26 of the carrier. The parts 27 and 28 constitute supports for the carrier to admit of its varying longitudinal and lateral movements. It should be remembered that the end portion of each tie receives two spikes which are located upon opposite sides of the rail, said spikes being located so as not to aline transversely of the rail, one spike being set in advance of the other. When the machine is set to drive the spikes into a tie it will be readily understood that the driver after forcing one spike home must be shifted laterally to the opposite side of the rail and longitudinally of said rail in order to bring it in position for driving the second spike into the same tie, hence the advantage of mounting the carrier 24 so as to move the same longitudinally and laterally. An operating lever 29 is pivotally supported at 30 to a standard 31 connected with the outer end of the arm 25 and said lever has a portion between its ends constructed to receive the spike driver 23, said portion being longitudinally slotted upon opposite sides to receive pins 31' projecting from opposite sides of the spike driver. Upward movement of the rear or free end of the lever 29 lifts the spike driver and lateral movement of said lever moves the driver and carrier transversely and longitudinal movement of the lever throws the driver and its carrier forwardly or rearwardly into the required position. Flexible tubing 32 connects the cylinder of the pneumatic spike driver with the air tanks 7 so as to convey air thereto. A valve 33 in the length of the connection admits air into the cylinder and is adapted to be controlled by means of a hand piece 34 mounted upon the outer end of the lever 29 and connected with a handle or arm of the valve 33 so as to open or close said valve as may be required.

A spike holder and guide is provided for receiving the two spikes to be driven into

the end portions of the ties. The spike holder and guide is formed to sit astraddle of the rail and has vertically disposed guide members arranged the one in advance of the other in which the spikes are placed. The combined spike guide and holder comprises a cross piece 35, which is adapted to rest upon the head of the rail 17 and vertical sleeves 36 at the ends of the cross piece and arranged the one in advance of the other. The spikes 37 are placed in the sleeves 36 and are held against the outer wall of said sleeves by means of springs 38, which are connected at one end to the inner walls of the sleeves and have their opposite ends pressing against the inner side of the spikes. The spike holders are placed in position so as to receive and hold the spikes in place.

In the operation of the invention the machine is mounted upon the track in course of construction or to be repaired and is moved by means of the engine 5, which is connected with one of the axles to drive the wheels connected thereto. After the machine is moved to place it is fastened to the ties by means of the securing means herein described. The spike holders and guides are placed in position and spikes are inserted into the sleeves 36 thereof. The drivers are adjustable to bring the driving tools thereof in position to engage the heads of the spikes to be driven, this being accomplished by proper manipulation of the levers 29. After the drivers have been properly located the outer ends of the levers 29 are held depressed and the valves 33 opened to permit compressed air passing into the cylinders of the drivers to force the spikes home into the tie. After one of the spikes has been forced home the valve 33 is operated and the driver lifted and moved into position to engage the spike upon the opposite side of the rail when the operation just described is repeated. After the spikes have been driven into one tie the machine is released and moved forward into position to drive the spikes into the next tie. When constructing a railroad the rails are brought forward upon the track already constructed loaded upon a truck, the rails being moved to a position in front of the machine by passing the same beneath the truck thereof, said rails being supported upon the rollers 8 and after the rails have been moved to a position in front of the machine the crane 9 is brought into operation to move the rails into proper position upon the ties, after which the machine is advanced in the manner stated to secure the rails to the ties.

From the foregoing description, taken in connection with the accompanying drawings, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which

the invention appertains, and while I have described the principle of operation of the invention, together with the device which I now consider to be the embodiment thereof, I desire to have it understood that the device shown is merely illustrative, and that such changes may be made when desired as are within the scope of the claims appended hereto.

10 While the grapple 19 and screw 20 serve primarily to secure the truck in place they also operate to hold the tie close up against the under side of the rails when driving the spikes home. This is of advantage in cases
15 where the ties are spaced from the rails or where the bed is soft and the spikes could not ordinarily be driven home so as to secure the rails and ties.

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

1. In a track laying machine, the combination with a truck, of a spike driver mounted upon the truck, a mount for the spike driver movable upon the truck vertically, laterally
25 and longitudinally, and means for moving the mount in the several directions.

2. In a track laying machine, the combination of a supporting frame, a spike driver movable vertically, a carrier for the
30 spike driver mounted upon said supporting frame and adjustable longitudinally and transversely thereof, and means for moving the spike driver vertically, laterally and longitudinally of the supporting frame.

3. In a track laying machine, the combination of a supporting framework, a carrier mounted upon the supporting framework and movable longitudinally and transversely thereof, a spike driver movable vertically
40 upon the carrier, and means for moving the carrier and spike driver, whereby the latter is movable vertically, laterally and longitudinally.

4. In a track laying machine, the combination of a supporting framework embodying spaced members, and a spike driver arranged between said spaced members of the supporting framework and having front
45 and rear arms supported by said spaced members to move both longitudinally and laterally thereof.

5. In a track laying machine, the combination of a supporting framework, a vertically disposed spike driver mounted to move vertically and horizontally, an operating lever
55 having a portion embracing opposite sides

of the spike driver, and connecting means between the spike driver and spaced portions of the operating levers to admit of a limited relative play. 60

6. In a track laying machine, the combination of a supporting framework, a carrier mounted upon the framework and free to move longitudinally and laterally thereof, a spike driver mounted in said carrier to move
65 therewith and having an independent vertical movement, an operating lever mounted upon said carrier, and connecting means between the operating lever and spike driver to admit of the various adjustments of the
70 spike driver and carrier.

7. In a track laying machine, the combination of a supporting framework, a spike driver mounted upon the supporting framework and movable vertically and horizontally, an operating lever connected with
75 the spike driver for moving the same, a tubing connected with the spike driver for supplying motive medium thereto and having a valve in the length thereof, and a hand
80 piece mounted upon the operating lever and connected with said valve for operating the latter.

8. In a track laying machine, the combination of a supporting framework comprising
85 horizontally slotted spaced members, a carrier having front and rear arms mounted in the horizontal slots of said spaced members, a spike driver mounted in said carrier and movable vertically, and an operating lever
90 mounted upon one of the arms of the carrier and having loose connection with the spike driver.

9. In a track laying machine, the combination of a supporting framework embodying
95 a platform and provided with spike driving means, supporting rollers mounted upon the supporting framework below the platform for sustaining the rails when moving the same beneath the platform of the framework
100 into operative position, and a crane mounted upon the front part of the supporting framework and adapted to engage the rails to assist materially in placing the same in
105 proper position.

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

ALBERT L. PEASLEY.

Witnesses:

ASA M. NEW,
E. S. FOLKERTH.