

Jan. 7, 1930.

A. R. KIPP

1,742,771

CAR HANDLING AND PAINTING APPARATUS

Filed April 11, 1929

3 Sheets-Sheet 1

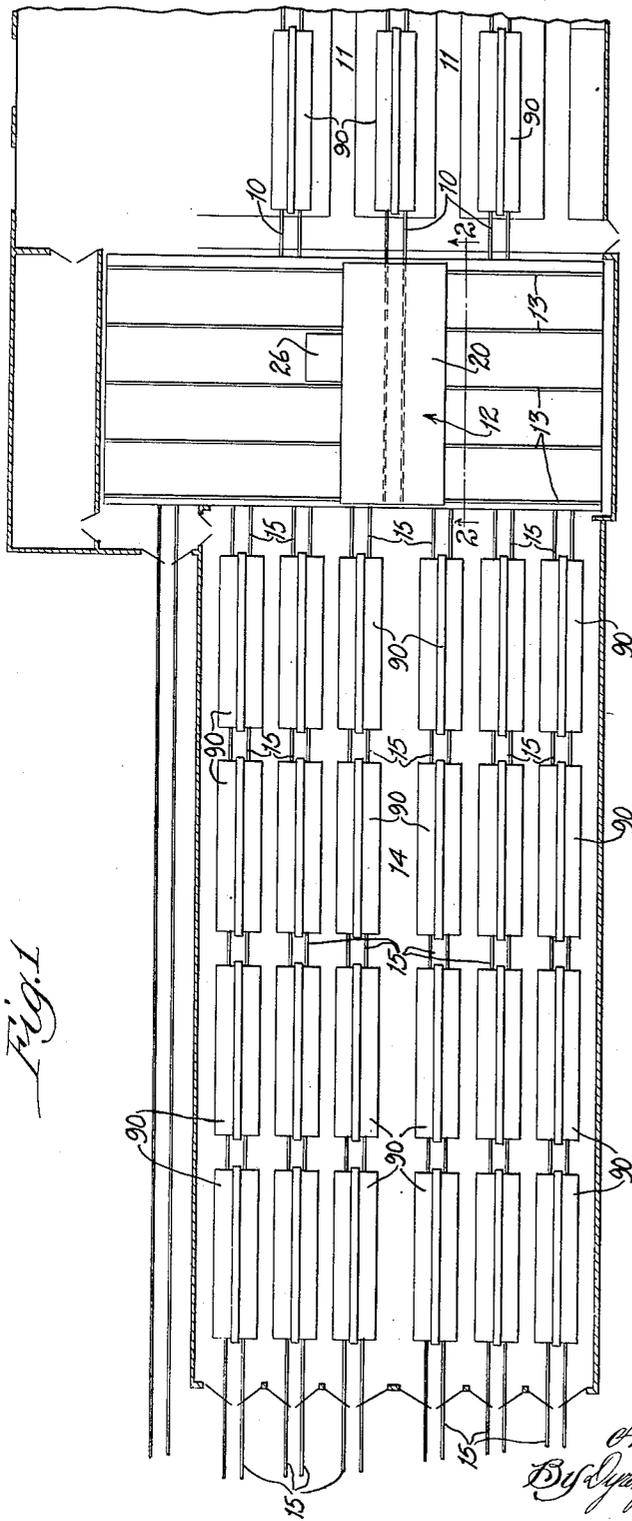


Fig. 1

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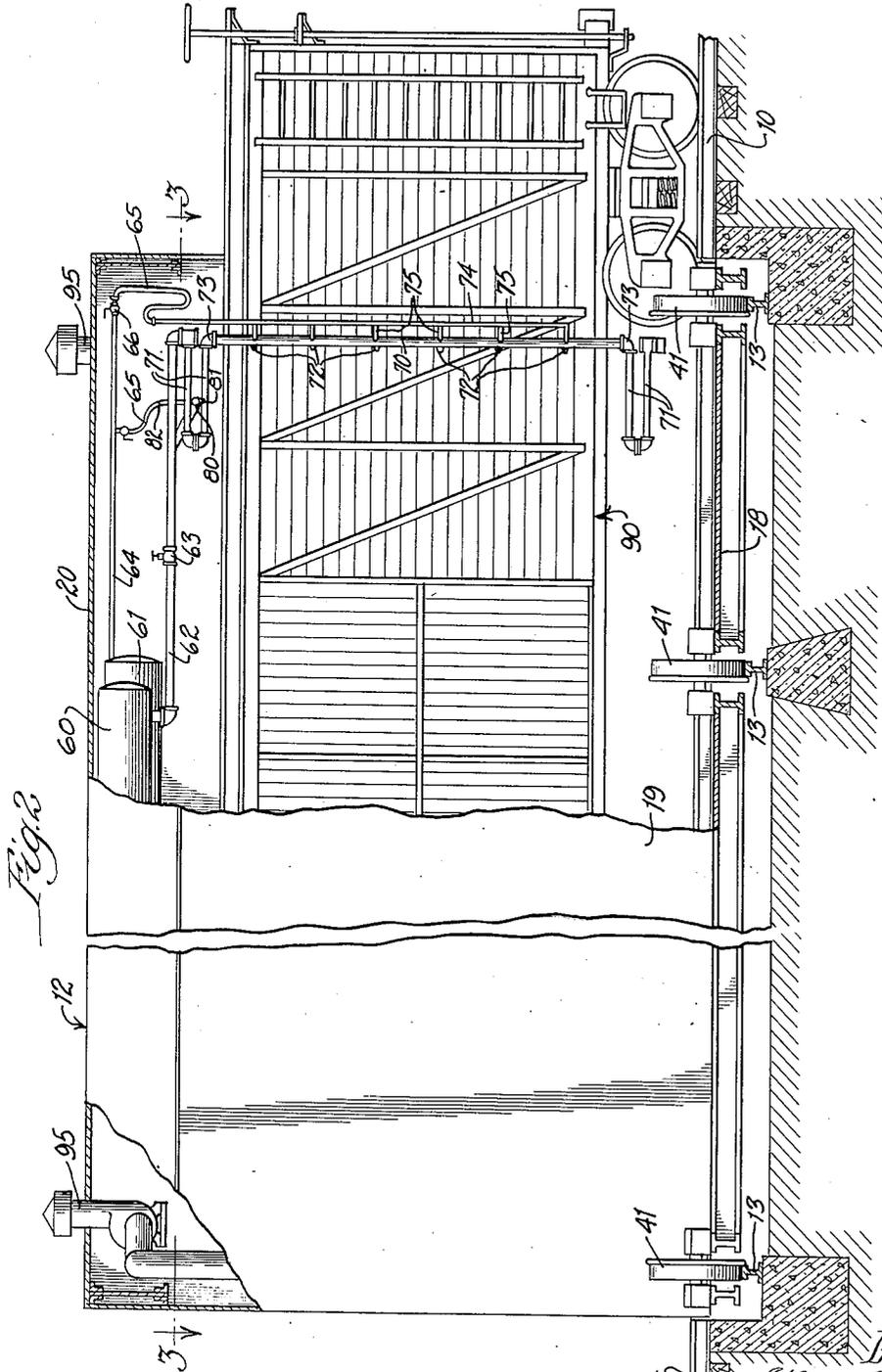
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3 Sheets-Sheet 2



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3 Sheets-Sheet 3

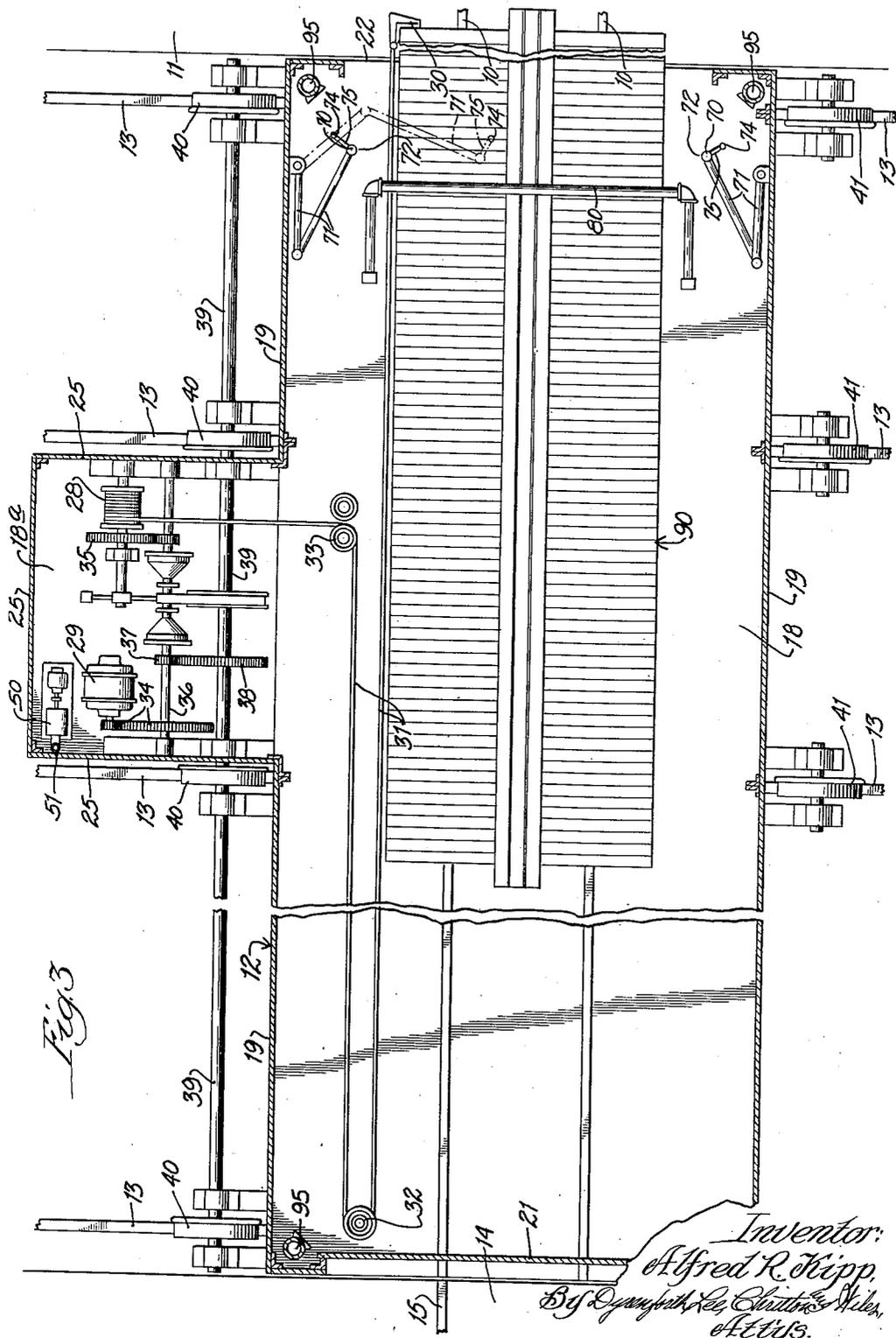


Fig. 3

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UNITED STATES PATENT OFFICE

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CAR HANDLING AND PAINTING APPARATUS

Application filed April 11, 1929. Serial No. 354,341.

This invention relates to car handling and painting apparatus and, more especially, such apparatus adapted for use in connection with a freight car repair system. My improved apparatus may be used in connection with any car repair shop, regardless of its arrangement; and is here shown, for example, as it would be embodied in such a shop laid out on the cross shop plan for the repair of box cars.

Among the features of my invention is the provision of such apparatus designed to paint cars automatically or permit them to be painted by hand while moving them from one position in the shop to another, thus effecting a saving in both time and space.

In general, it might be stated that my invention comprises the combination of a transfer table and paint-spraying booth with details that will be explained hereinafter.

The combination paint-spraying booth and transfer table may be located in any desired part of the shop and is here shown, for illustration, as located between the last shop position and the drying room.

Other features and advantages of my invention will appear more fully as I proceed with my specification.

In that form of apparatus embodying the features of my invention shown in the accompanying drawings—

Figure 1 is a plan view; Fig. 2 is a view taken as indicated by the line 2 of Fig. 1; and Fig. 3 is a view taken as indicated by the line 3 of Fig. 2.

As shown in the drawings, 10, 10 indicate tracks leading from the last shop position, indicated in general by 11, which, for example, may be the position where the doors are installed, and the door hardware, brake, rigging, safety appliances, and so forth, applied.

Numeral 12 indicates, in general, a combination paint-spray booth and transfer table operating on the transverse rails 13 lying across the ends of the tracks 10, 10.

Numeral 14 indicates, in general, a paint-drying room with the tracks 15 adapted to receive freshly painted cars from the paint-spray booth.

The paint-spray booth and transfer table

comprise a base or platform 18, side walls 19, 19 and roof 20. The rear end is provided with a suitable door 21 and the front end is here shown with an open door-way, indicated by 22.

The platform 18 is provided at one side with an extension 18^a enclosed by suitable side walls 25, 25 and a roof 26, forming a small room for the housing of suitable car hauling machinery 28 adapted to be driven by the motor 29 which also is designed to move the transfer table. Numeral 30 indicates a car hauling hook attached to the end of a cable 31 passing over the pulley 32 mounted at one end of the transfer table. From the pulley 32, the cable runs over another pulley 33 and then to the winch or drum 28, adapted to be driven by the motor 29, through the gears 34 and 35. The gears 34 drive the shaft 36 which also carries a gear 37 meshing with a gear 38 on the shaft 39 which carries the wheels 40 supporting one side of the transfer table. The other side has similar supporting wheels 41, the wheels 40 and 41 operating on the transverse rails 13. Through the mechanism just described, cross movement of the transfer table on the rails 13 can be effected by the motor 29.

The small room just described also houses a suitable air compressor for spraying paint, such air compressor being indicated, in general, by 50; 51 indicating the compressed air hose leading therefrom.

In the paint-spraying booth near the roof is located a paint reservoir 60 and a compressed air tank 61, the latter adapted to receive compressed air from the compressor 50. Numeral 62 indicates a main paint supply pipe leading from the reservoir to the paint-spray nozzles and controlled by a valve 63. Numeral 64 indicates an air pipe leading from the tank 61 to flexible branch tubes 65 leading to the nozzles. The tubes 65 are controlled by suitable valves 66. The construction of the paint-spray nozzles themselves forms no part of the present invention and, consequently, the same need not be described in detail. These are well known in the art and it will suffice to say that each includes any well-known arrangement of paint and air

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outlets or jets whereby compressed air will cause a spray of paint to issue from the nozzle.

The numerals 70, 70 indicate two vertical paint pipes at the front end of the booth, one at each side of the door-way 22. These pipes are carried by their ends on pivotally joined pipe sections or links 71 so that they can be moved across the end of the paint booth, as shown by the solid and broken line positions in Fig. 3. Each of these pipes is provided throughout its length with a plurality of paint spray nozzles or jets 72, 72 and each pipe may be rotated in the elbows 73, 73 carried on its ends. Numeral 74 indicates the air pipe to supply air to the nozzles through the connecting air pipes 75, 75. Each pipe 74 is supplied with compressed air from one of the air tubes 65. Paint is supplied to each pipe 70 from the pipe 62 through the connecting pipes 71 at the top. The pipes 70 may be moved and rotated to paint the ends and sides of the car. For example, the front end of the car may be painted as it enters the paint room. The sides may be sprayed as it is being slowly drawn into the room by the car haul 30 and the rear end may be sprayed after it is in position on the transfer table and while the table is being moved.

Apparatus is also provided for spraying the roof as the car enters. This includes a transverse paint pipe 80 with downwardly directed nozzles 81 and an air pipe 82 for conducting compressed air to the nozzles.

After a car, indicated, in general, by 90, has been painted and moved to the desired position, it may be removed from the transfer table by the car hauling hook 30 and placed on any desired track 15 in the paint-drying room 14.

The numerals 95, 95 indicate ventilators in the painting booth.

While I have shown and described certain embodiments of my invention, it is to be understood that it is capable of many modifications. Changes, therefore, in the construction and arrangement may be made without departing from the spirit and scope of my invention as disclosed in the appended claims, in which it is my intention to claim all novelty inherent in my invention as broadly as possible, in view of the prior art.

What I regard as new, and desire to secure by Letters Patent, is:

1. In apparatus of the character described, a combination paint-spraying booth and transfer table.

2. In apparatus of the character described, a combination paint-spraying booth and transfer table, with mechanism thereon for hauling a car onto or off of said transfer table.

3. In apparatus of the character described, a plurality of tracks leading from one position in a car repair shop, a transfer track arranged across the ends of said first-men-

tioned tracks, a transfer table adapted to operate on the transfer track, and paint-spraying mechanism on said transfer table adapted to spray a car thereon.

4. Apparatus as claimed in claim 3, with mechanism on the transfer table for hauling a car onto or off of said transfer table.

In witness whereof, I have hereunto set my hand this 8th day of April, 1929.

ALFRED R. KIPP.

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