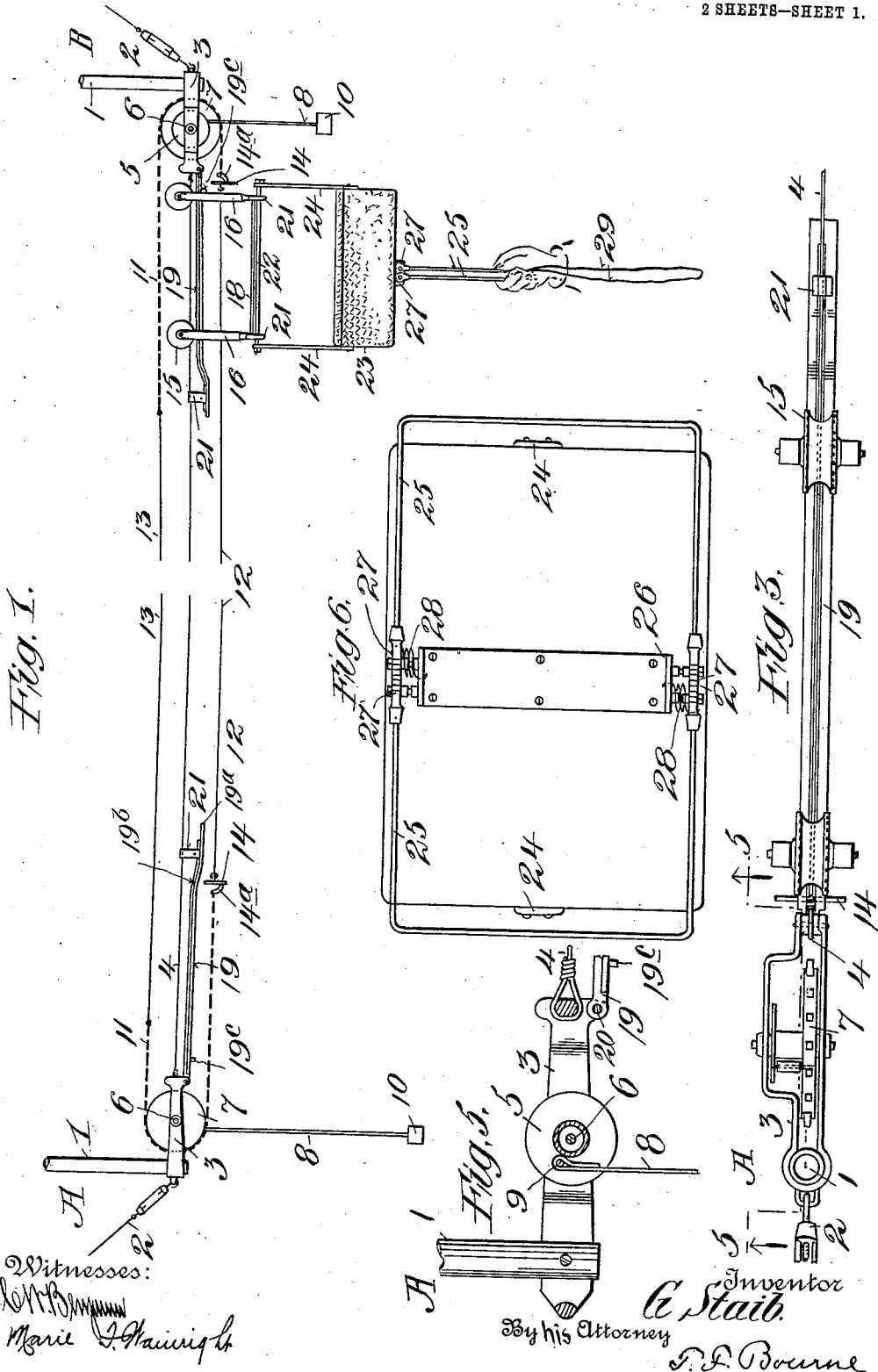


G. STAIB.
STORE SERVICE APPARATUS.
APPLICATION FILED MAR. 7, 1908.

936,052.

Patented Oct. 5, 1909.
2 SHEETS—SHEET 1.



Witnesses:
Marie J. Haining

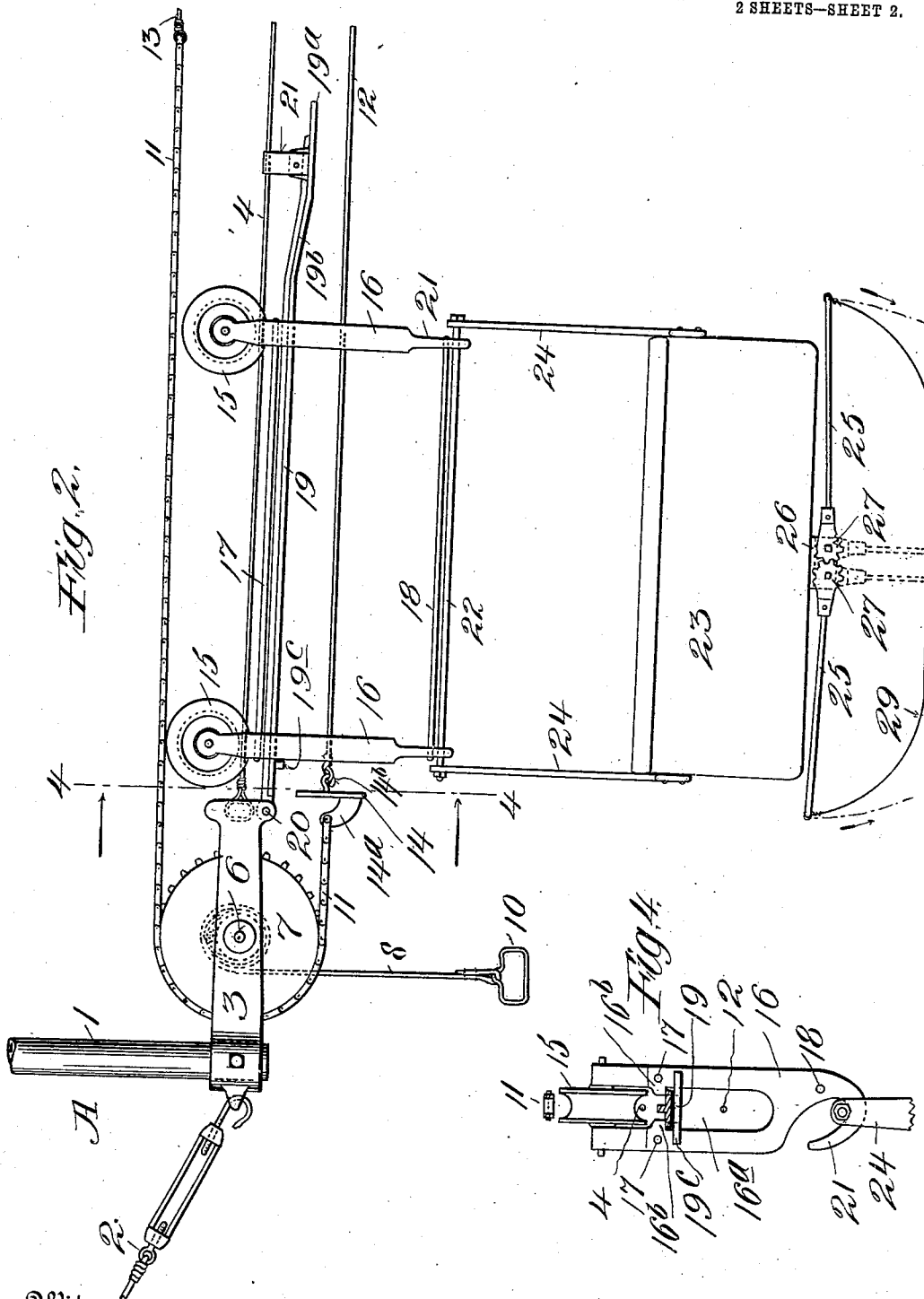
Inventor
G. Staib.
By his Attorney
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Witnesses:
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UNITED STATES PATENT OFFICE.

GUSTAV STAIB, OF NEW YORK, N. Y.

STORE-SERVICE APPARATUS.

936,052.

Specification of Letters Patent.

Patented Oct. 5, 1909.

Application filed March 7, 1908. Serial No. 419,798.

To all whom it may concern:

Be it known that I, GUSTAV STAIB, a citizen of the United States, and resident of New York city, borough of Richmond, in the county of Richmond and State of New York, have invented certain new and useful Improvements in Store-Service Apparatus, of which the following is a specification.

The object of my invention is to provide simplified means for propelling a carrier along an elevated track or wire from one station to another, also to provide simple and efficient means to stop the carrier at the station it approaches, and further to provide improved means to permit the removal of the receptacle from the carrier and its replacement in connection therewith.

My invention comprises the novel details of improvement and combinations of parts that will be more fully hereinafter set forth and then pointed out in the claims.

Reference is to be had to the accompanying drawings forming part hereof, wherein,

Figure 1 is a side elevation of a store service apparatus embodying my improvements; Fig. 2 is an enlarged detail side view thereof at a station; Fig. 3 is a plan view, the operating chain being removed on the upper run; Fig. 4 is a cross section on the line 4, 4, in Fig. 2, looking in the direction of the arrows; Fig. 5 is a detail section substantially on the line 5, 5, in Fig. 3, and Fig. 6 is an underside view of the carrier.

Similar characters of reference indicate corresponding parts in the several views.

The stations at opposite ends of the track are indicated generally at A, B, at each of which stations is a suitable support 1, which may be in the form of a post suspended from the ceiling and braced by suitable connections 2, all of which may be arranged in any suitable manner. To each support 1 is attached a suitable frame 3 which frames are connected by the track or wire 4. In each frame is journaled a pulley 5, which may be mounted upon a shaft or rod 6 secured in the corresponding frame 3.

At 7 is a sprocket wheel secured to each pulley 5, and a strap or cord 8 is connected to each pulley to be wound thereon, as by a cross pin 9, the straps or cords having suitable hand grips 10. The straps or cords 8 are so arranged that when one is wound properly upon its pulley 5 the other will be substantially unwound from its pulley.

At 11 are suitable chains passing over the

sprockets 7 and connected together by wires 12, 13, and drawn quite taut.

At 14 are propelling members shown in the form of plates or cross bars, connected respectively with chain 11 and wire 12, said propelling members being shown provided with arms 14^a connected with chain 11 and with hooks 14^b connected with wire 12. The carrier I have shown comprises wheels 15 from which depend arms 16 secured firmly together by brace rods 17, 18, the wheels 15 being alined and adapted to travel on track or wire 4. The arms 16 are shown provided with opening 16^a through which the wire 12 passes and the propelling members 14 are of such width as to bear against the adjacent arm 16 to propel the carrier.

At each station is a brake shoe 19, each shown pivotally secured at one end, as at 20, to the adjacent frame 3 and at the opposite end attached to the track or wire 4 as by a suitable clip 21 attached to lug 21^a on the shoe, whereby the shoe is suspended beneath track 4 and partakes of any up and down movement of the track caused by the weight of the traveling carrier. The openings 16^a of arms 16 are of such dimensions as to receive the shoes 19, as illustrated in Fig. 4, and said arms have lugs or projections 16^b extending inwardly adapted to slide on shoe 19, (see Fig. 4). The outer or forward end of each shoe 19 is depressed as at 19^a, so that the lugs 16^b may ride freely over the same, and at 19^b the shoe inclines upwardly toward the corresponding station, whereby the lugs 16^b will slide up the inclined parts 19^b and along the main part of the shoe toward the station, thereby also raising wheels 15 from track 4, the frictional resistance of lugs 16^b sliding upon the shoe checking the travel of the carrier. The shoes are also shown provided with stops 19^c near their inner ends in the path of the carrier to stop the latter as it slides along the shoe.

The arms 16 are shown provided with hooks 21^a adapted to receive a bar 22 that is supported above receptacle 23 by arms 24 secured centrally to opposite ends of said receptacle, arms 24 being braced by bar or rod 22, whereby the receptacle may be readily hung upon said hooks and removed therefrom as required. At the bottom of the receptacle arms 25, shown in the form of balls, are pivotally supported, as upon a bracket 26 secured to the bottom of the receptacle, said arms having toothed segments 27 in

mesh, suitably arranged springs 28 connecting said arms with the receptacle, or with its bracket 26, serving to normally maintain said arms substantially flat against the bottom of the receptacle, as illustrated in Fig. 2, and whereby said arms may be drawn down and held together for lifting the receptacle to remove it from hooks 21 or to apply it thereto. A cord 29 connected with the outer end of arms 25 and suitably depending permits a person of short stature to draw down the arms to enable the same to be handled, as shown in Fig. 1, and the arms by being normally held upwardly along the bottom of the receptacle are out of the way as the carrier travels so as not to engage a person's head.

When the carrier is at one station, as at B, with the lugs 16^b resting upon shoe 19 and wheels 15 raised from track 4, the corresponding propelling member 14 will be adjacent the pulley 5 and the strap or cord 8 wound around said pulley, while at the opposite station the propelling member 14 will be in position advanced outwardly from the station, and the strap or cord 8 substantially unwound from its pulley, as illustrated in Fig. 1. When the strap or cord 8 at station B is next pulled down it will cause the wire 12 to advance toward station A, and the corresponding propelling member at B will engage the carrier and push it so that when the carrier is free from the shoe 19 wheels 15 will travel along track or wire 4, under the propelling influence of member 14, the member 14 at station A being correspondingly moved inward or toward the station. When the carrier reaches station A its lugs 16^b will engage shoe 19 at said station, the progress of the carrier will be checked by said lugs sliding upon shoe 19, and the stop 19^c will prevent the carrier from passing too far along the shoe. It will thus be seen that the propelling members 14 are moved back and forth conjointly by the action of chains 11 and wires 12, 13 in position behind the carrier to propel the latter forward as required each time that a strap or cord 8 is pulled down, whereby the member 14 at the opposite station is set in position for operation upon the carrier being projected toward such station.

Having now described my invention what I claim is:

1. A store service apparatus comprising a track, means for suspending the same between stations, a brake shoe at each station pivotally supported at one end and attached to the track at its other end, and a carrier having openings to receive said shoes and

provided with inwardly extending lugs to slide on said shoes to check the carrier.

2. A store service apparatus comprising a track, means for suspending the same between stations, a brake shoe at each station pivotally supported at one end and attached to the track at its other end, and a carrier provided with means to slide on said shoes to check the carrier by frictional engagement with the shoes.

3. A store service apparatus comprising a track, means for suspending the same between stations, a brake shoe at each station pivotally supported at one end and attached to the track at its other end, and a carrier provided with stationary projecting portions to slide on said shoes to check the carrier by frictional engagement with the shoes.

4. A store service apparatus comprising a track, means for suspending the same between stations, a carrier adapted to travel on said track, a receptacle suspended from said carrier, a plurality of arms movably connected with the receptacle and operatively connected together, and a spring to maintain said arms normally elevated.

5. A store service apparatus comprising a track, means for suspending the same between stations, a carrier adapted to travel on said track, a receptacle suspended from said carrier, a plurality of arms movably carried by the receptacle, gears operatively uniting said arms, and a spring to hold said arms normally elevated.

6. A store service apparatus comprising a track, means for suspending the same between stations, a carrier adapted to travel on said track, a receptacle suspended from said carrier, a plurality of arms movably carried by the receptacle, means operatively uniting said arms, means to hold said arms normally elevated, and a flexible connection connected with said arms and depending therefrom.

7. A store service apparatus comprising a track, means for suspending the same between stations, a brake shoe at each station pivotally supported at one end and attached to the track at its other end, a carrier provided with inwardly projecting lugs to slide on said shoes to check the carrier by frictional engagement with the shoes, and stops on said shoes to engage the carrier.

Signed at New York city, in the county of New York, and State of New York, this 6th day of March, A. D. 1908.

GUSTAV STAIB.

Witnesses:

RALPH H. RAPHAEL,
T. F. BOURNE.