Feb. 10, 1948. C. H. SCHIMPFF 2,435,755

DISPLAYING AND DISPENSING APPARATUS

Filed Feb. 20, 1946 4 Sheets-Sheet 1

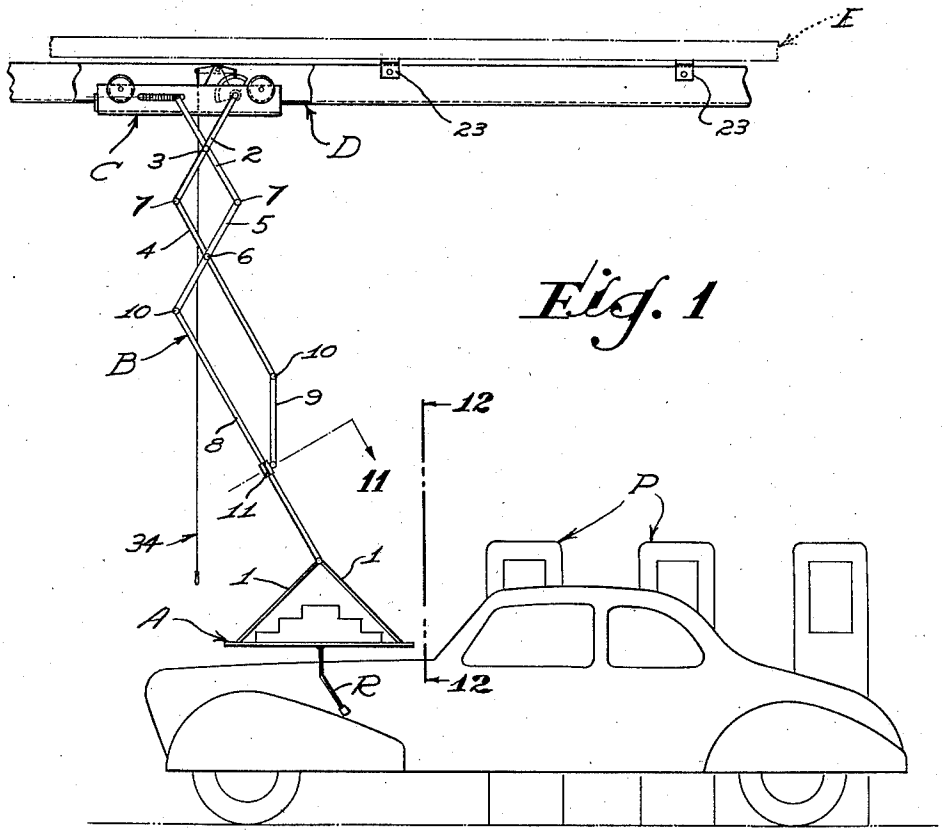


Fig. 1

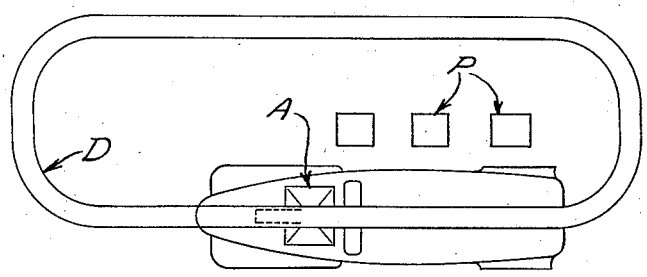


Fig. 2

Inventor
CHARLES H. SCHIMPFF

By R. S. Berry

Attorney

Feb. 10, 1948. C. H. SCHIMPFF 2,435,755

DISPLAYING AND DISPENSING APPARATUS

Filed Feb. 20, 1946 4 Sheets-Sheet 2

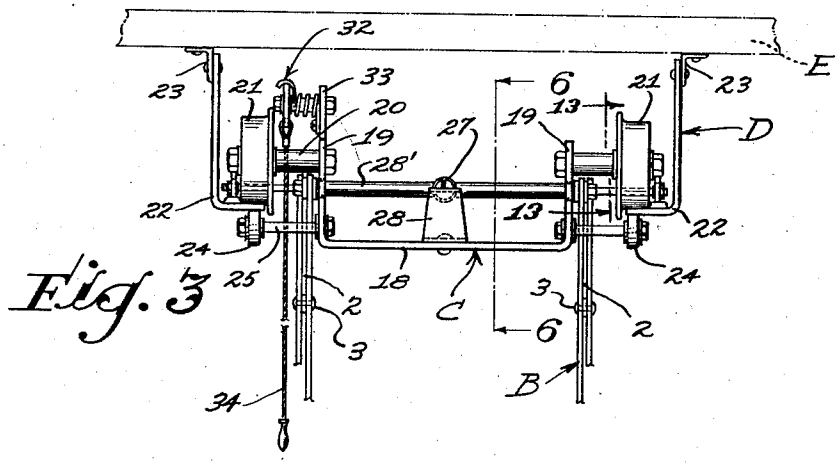


Fig. 3

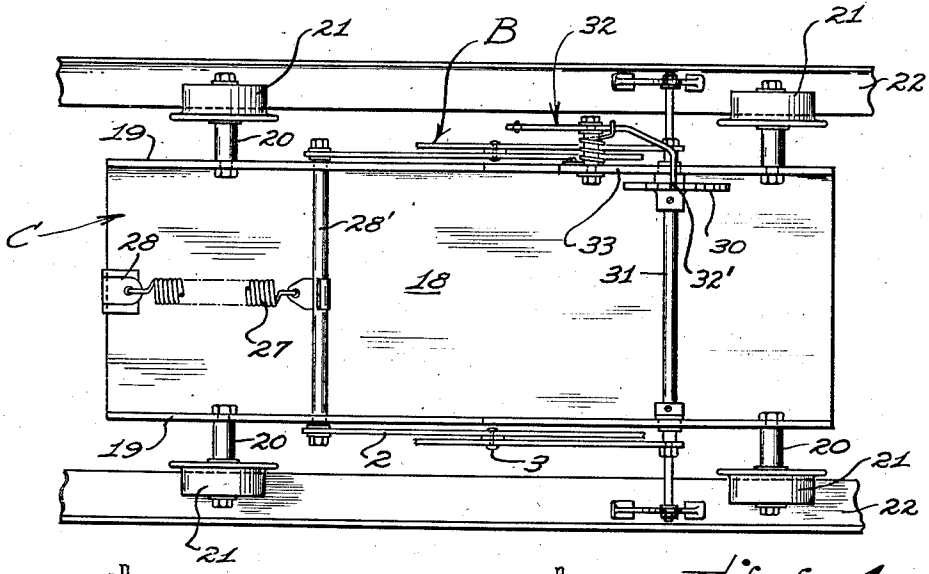


Fig. 4

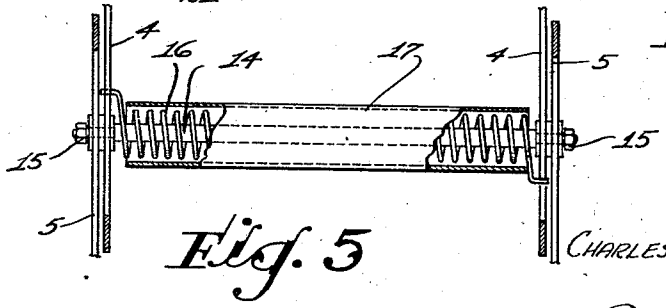


Fig. 5

Inventor
CHARLES H. SCHIMPFF

By R. S. Berry

Attorney

Feb. 10, 1948. C. H. SCHIMPFF 2,435,755

DISPLAYING AND DISPENSING APPARATUS

Filed Feb. 20, 1946 4 Sheets-Sheet 3

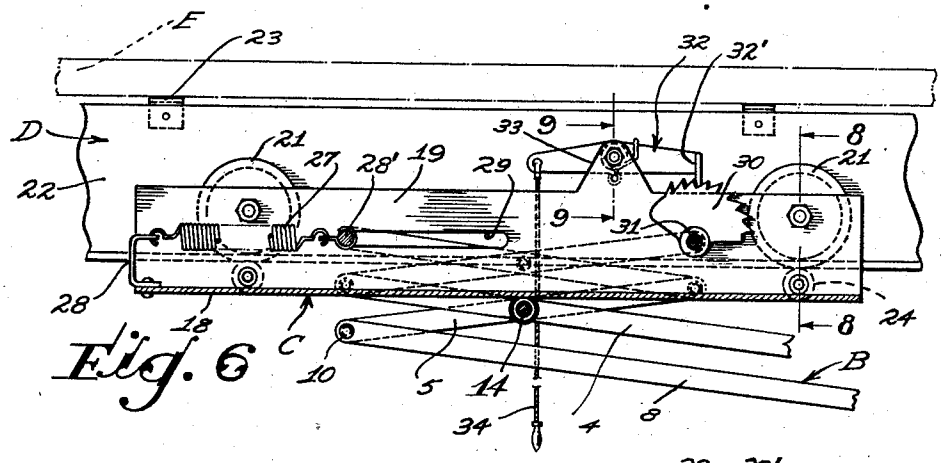


Fig. 6

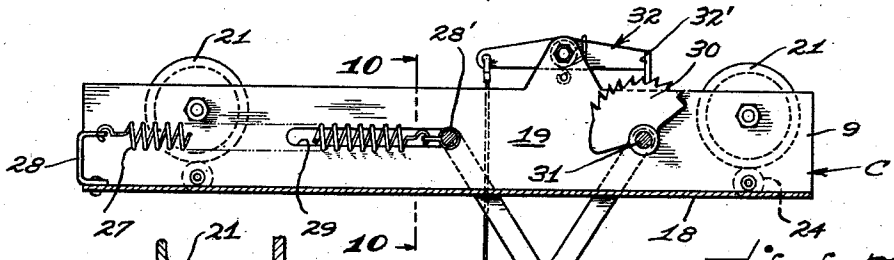


Fig. 7

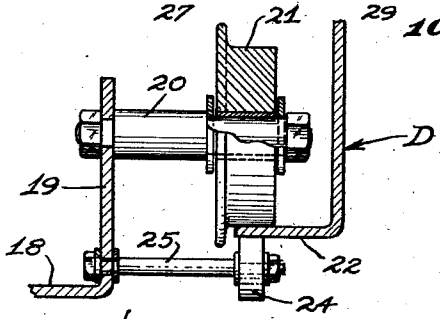


Fig. 8.

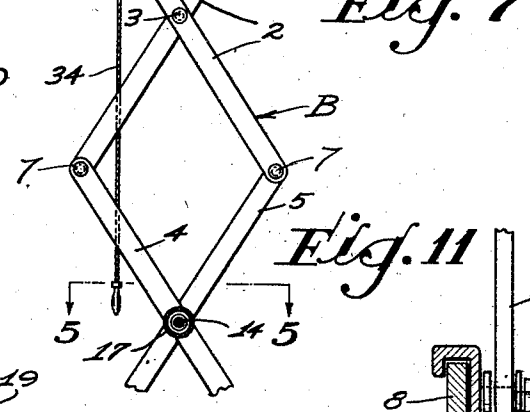


Fig. 11

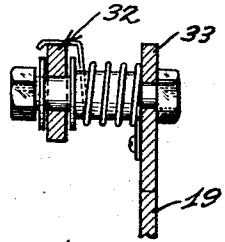


Fig. 9

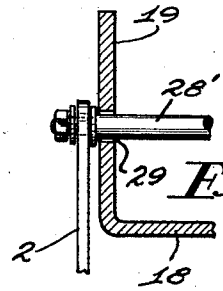


Fig. 10

Inventor
CHARLES H. SCHIMPFF

By R. S. Berry

Attorney

Feb. 10, 1948. C. H. SCHIMPFF 2,435,755

DISPLAYING AND DISPENSING APPARATUS

Filed Feb. 20, 1946 4 Sheets-Sheet 4

Fig. 12.

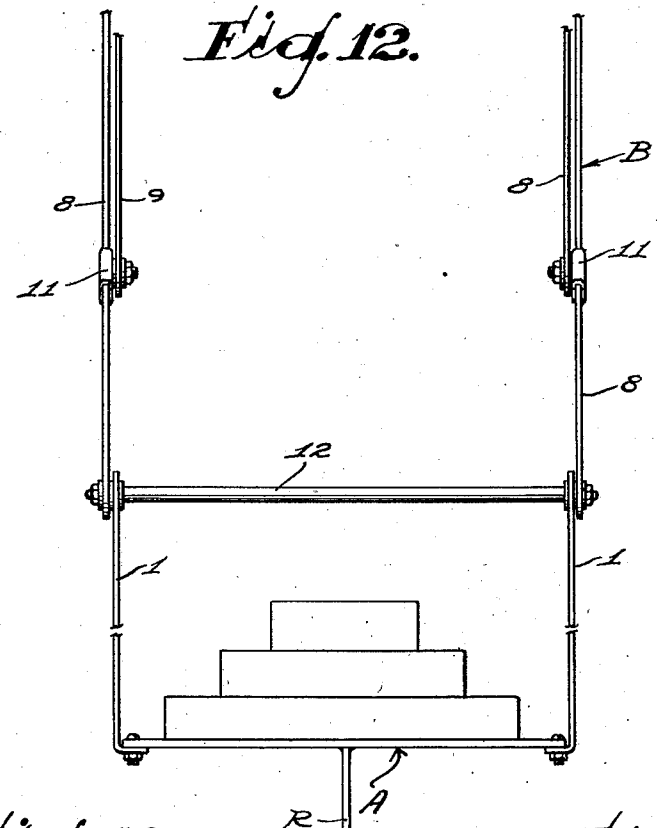


Fig. 13.

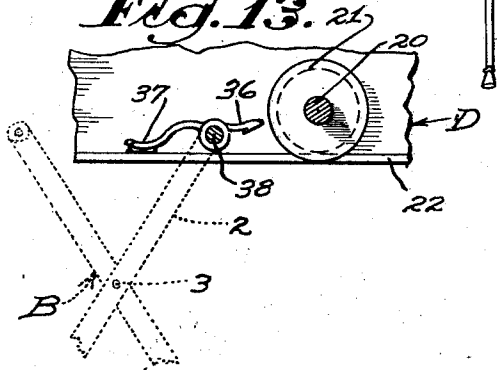


Fig. 14.

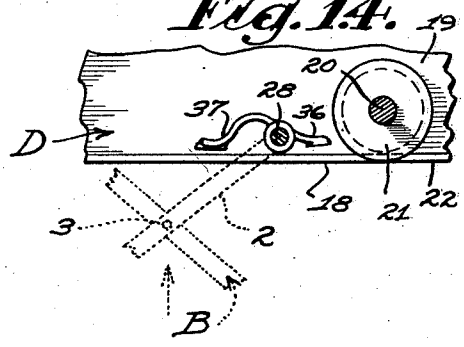
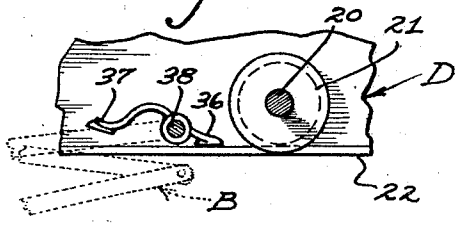


Fig. 15.



Inventor
CHARLES H. SCHIMPFF

By R. S. Brum

Attorney

Patented Feb. 10, 1948

2,435,755

UNITED STATES PATENT OFFICE

2,435,755

DISPLAYING AND DISPENSING APPARATUS

Charles H. Schimpff, Pasadena, Calif.

Application February 20, 1946, Serial No. 649,070

6 Claims. (Cl. 186—1)

1

This invention relates to apparatus for displaying at motor vehicle service stations, garages and the like those accessories and articles, for example, polish, packaged lubricants, windshield wipers, tires, etc., which are usually sold at such servicing places.

One of the objects of this invention is to provide an apparatus of the character next above described which can be readily and easily installed in service stations and the like and quickly operated by an attendant to dispose adjacent an automobile or other vehicle which has stopped for service at a servicing zone of such a station, a prominent and attractive display of merchandise, with such display preferably presented in the path of the vehicle, for example, over the hood and close to the windshield where it will command the attention of the patrons during the servicing operation and require that the attendant move it out of the way in order that the vehicle may be driven away.

Another object of this invention is to provide apparatus such as described which may be conveniently installed on an overhead track for movement into different servicing zones around the service station and may be readily extended from an out-of-the-way position above the path of the vehicle into display positions directly in the path of the vehicles and vice versa with provision for presenting the display at different heights best to suit different types of motor vehicles and the particular articles on display.

A further object is to provide an apparatus such as described which includes a carriage movable on an overhead track, a display tray or rack, a support for the tray arranged so as to be extensible and retractible from the carriage and provision for automatically applying a braking force to the carriage to prevent unintentional movement thereof on the track incident to disposing the tray at various display levels as well as when the tray is disposed in retracted or out-of-the-way position, and with provision for releasing the carriage for movement incident to movement of the tray into positions intermediate its display positions and out-of-the-way position.

Another object of this invention is to provide apparatus such as described wherein merchandise may be dispensed from the tray or the tray may be employed to display samples of the merchandise and in both cases will present the display for close scrutiny of the patrons.

A further object of this invention is to provide an apparatus such as described in which the display tray is latched and held in all extended positions and is subject to quick release by the attendant with incident automatic retraction into out-of-the-way position.

2

With the foregoing objects in view, together with such other objects and advantages as may subsequently appear, the invention resides in the parts and in the combination, construction and arrangement of parts hereinafter described and claimed, and illustrated by way of example in the accompanying drawing, in which:

Fig. 1 is a fragmentary semi-schematic side elevation of the apparatus embodying my invention shown in display position in full lines;

Fig. 2 is a schematic top plan view of a typical installation of the apparatus hereof in a service station, indicating one way in which the apparatus may be moved from place to place on an oval overhead track;

Fig. 3 is a fragmentary end elevation of the track, carriage and part of the tray supporting means, looking toward the left end of Fig. 4;

Fig. 4 is a top plan view of the apparatus shown in Fig. 3 with the supports for the track omitted;

Fig. 5 is a fragmentary sectional view taken on the line 5—5 of Fig. 7;

Fig. 6 is a sectional view taken on the line 6—6 of Fig. 3 showing the tray supported in retracted position;

Fig. 7 is a sectional view similar to Fig. 6 showing the tray support extended;

Figs. 8 and 9 are fragmentary sectional views of one side only of the carriage taken respectively on the lines 8—8 and 9—9 of Fig. 6;

Fig. 10 is a fragmentary sectional view of one side of the carriage taken on the line 10—10 of Fig. 7;

Fig. 11 is a sectional view of one side of the tray support taken on the line 11—11 of Fig. 1;

Fig. 12 is a fragmentary front elevation of the tray and the tray support;

Figs. 13, 14 and 15 are detail sectional views of the carriage braking means respectively showing how the brake shoes are disposed in applied position as when the tray support is extended to display position in neutral position and in the other applied position as when the support is fully retracted.

Referring to the drawings more specifically, it will be seen that one embodiment of my invention generally includes a display tray A for supporting the merchandise to be exhibited, an extensible and retractible support B for the tray, a carriage C on which the support B is mounted, a track D on which the carriage is movable and a supporting structure E such as the roof of a

service station on which the track is mounted. Fig. 1 shows the track as extended over zones of service alongside the fuel pumps P of a service station. Fig. 2 shows a circuitous arrangement of the track D as one example of an installation of the apparatus affording movement of the apparatus into different zones of service, for example, on opposite sides of a row of the pumps. However, this invention contemplates any desired arrangement of overhead supporting means for the adjustable tray support B whether stationary or movable, provided the tray may be quickly and easily moved from out-of-the-way position into display position close to the automobile or vehicle being serviced and may be as readily moved into an out-of-the-way position. Likewise, any tray-supporting means which will permit of the quick and easy movement of the tray into and out of the display position as herein provided for is deemed within the scope of this invention.

The tray A may be constructed in any suitable manner so that merchandise may be effectively displayed thereon subject if desired to being dispensed from the tray, and as here shown is suspended from the support B by means of links 1.

The support B as here shown consists of a lazy-tongs structure having two like sides each of which includes a pair of like crossed upper bars 2 connected with the carriage C and pivoted at 3 where crossed, a pair of bars 4 and 5 pivoted to one another at 6 and to the ends of bars 2 at 7; and a pair of lower bars 8 and 9 of differential lengths pivoted as at 10 to the lower ends of the bars 4 and 5. The shorter lower bar 9 of each side of this structure is pivoted on a slide member 11 which is mounted to slide on the longer bar 8 as shown in Fig. 11.

As shown in Fig. 12 the tray-supporting links 1 are pivoted on a cross rod 12 between the long bars 8 so that the tray will swing and remain horizontal regardless of the angle taken by the long bars.

As shown in Fig. 5, the lazy-tongs support B may be reinforced by means of a cross rod 14 extending between the like sides of the support where the intermediate bars 4 and 5 are pivoted, and providing the pivotal connection of said bars with one another. Nuts 15 hold the rod 14 in place.

As a means here employed to provide a spring load on the lazy-tongs support B so that it normally tends to move into retracted position, a torsion spring 16 is mounted on the rod 14 as shown in Fig. 5 with its ends engaged with bars 4 and 5 in such manner as to achieve the lifting action required to retract the support B. A sleeve 17 encloses the spring 16.

As here shown the carriage C is made of a rectangular body 18 having upstanding side walls 19 from which stub axles 20 extend so that wheels 21 thereon may ride upon the angle rails 22 which form the track D. These rails are suspended from the roof or other support E by means of brackets 23.

As a means for preventing the carriage from tilting, rollers 24 are mounted on axles 25 on the carriage C and disposed to contact the underside of the rails 22 as shown in Fig. 6.

As additional means for retracting the lazy-tongs support B, a retractile spring 27 is fastened at one end to a bracket 28 on the body 18 of the carriage with its other end fixed to a slide bar 28' slidable in slots 29 in the sides 19 of the carriage. This slide bar extends between and is secured to the upper ends of one pair of

the upper bars 2 of the lazy-tongs support B, so that the force of the spring 27 together with the force of the torsion spring 16 will retract the support B causing it to fold up as shown in dotted lines in Fig. 1 and as shown in Fig. 6 whereby the tray will be disposed in out-of-the-way position.

A means is provided for latching and releasably holding the lazy-tongs support in all extended positions and as here shown includes a ratchet quadrant or plate 30 fixed for rotation with a transverse shaft 31 supported by the sides 19 of the carriage C and projecting outwardly therefrom. This shaft is secured to ends of the other set of uppermost bars 2 of the support B so that it will turn when the support is extended or retracted. A spring urged pawl 32 is fulcrumed on an upwardly projecting ear 33 on one of the sides 19 and has an offset end 32' normally engaging the ratchet member 30 so that it will prevent movement thereof in one direction and lock the support B against movement in the opposite direction, that is, against retraction. A flexible latch releasing element 34 depends from the pawl 32 so that an attendant may pull on it to release the pawl and permit the support B to be retracted by the action of the springs 16 and 27.

A means is provided for releasably holding the carriage C against movement on the track D while the tray A is extended into display positions as well as when in fully retracted positions. This means is automatic and as here shown applies a braking force against the rails 22 of the track D at the times specified but automatically releases the carriage incident to movement of the tray into position between its display and retracted positions. For example, the tray may be disposed in display position within a small range say of several inches from its lowermost position and when raised beyond this range from said lowermost position, the brake means will be released and the carriage freed for movement on the track D into any desired position within the range of the track.

As here shown the aforesaid carriage holding or automatic brake means includes pairs of brake shoes 36 and 37 fixed to reduced ends 38 of the shaft 31 and constructed and arranged to frictionally contact the rails 22 when the support B is moved to dispose the tray A within its range of display position as well as when the support is fully retracted. When this support is between these "display" and retracted positions the brake shoes are moved out of contact with the rails and the carriage is therefore released for free movement.

As here shown the brake shoes are somewhat resilient and so shaped that they will provide the desired braking action in the manner hereinbefore noted. Due to the resiliency of shoes 37 they will yield when the shaft is turned as in vertically adjusting the tray for display at different heights within the predetermined small display range. The operator may forcibly move the tray up or down within this small range while the shoes frictionally contact and yield relative to the rails. The frictional engagement of the shoes with the rails will prevent unintentional rolling movement of the carriage C while the tray display adjustment is being made. For example, gravitational movement as might be caused by a slant of the track or due to an angular downward pull on the tray, is effectively resisted, inasmuch as the adjustment movement of the tray is more particularly vertical than angular and

the shoes will therefore resist movement of the carriage although they will yield with the turning of shaft 31, while the small vertical display adjustment of the tray is being made.

Operation

Assuming that the apparatus is normally in the condition shown in Fig. 6 and Fig. 15, with the lazy-tongs B retracted and the tray A in an elevated out-of-the-way position over or adjacent to a particular service zone, for example, on one side of the fuel pump P, the station attendant may readily lower the tray by grasping a flexible element R depending therefrom and pulling downwardly until the support is extended and the tray is disposed at the desired level preferably over the hood of a vehicle stopped in said zone for service. At this time the brake shoes 37 are moved into braking position as shown in Fig. 13. If it is necessary that the apparatus be moved as a whole, best to position the tray, this may be done while the operator is pulling the tray down and before it reaches display position inasmuch as the brake shoes 37 are disengaged from the rails 22 after but a short downward movement of the support B as shown in Fig. 14.

Upon disposing the tray close to the windshield and over the hood of the vehicle the display is brought forcibly to the attention of the occupant or occupants of the vehicle to suggest purchase of the article on the tray. When the servicing operation has been completed the operator pulls on the pawl-releasing flexible element 34 and the springs 16 and 27 then operate to retract the support B and lift the tray into out-of-the-way position at which time the brake shoes 36 are moved into braking position as shown in Fig. 15.

It will now be apparent that I have provided a novel and efficient displaying and dispensing apparatus which when combined with a service station having one or more motor vehicle servicing zones onto which such a vehicle is driven for service, may be quickly and easily operated to present a display of goods to be sold at a point close to the driver and occupants of the vehicle and preferably in the path of the vehicle so as to command attention to the display and suggest purchase of needed articles and accessories in a particularly effective manner with provision for quickly moving the display out of the path of the vehicle.

While I have shown and described a specific embodiment of my invention I do not limit myself to the exact details of construction set forth, and the invention embraces such changes, modifications and equivalents of the parts and their formation and arrangement as come within the purview of the appended claims.

I claim:

1. In apparatus for displaying goods at a servicing zone of a motor vehicle service station, an overhead support adjacent said zone, of a display tray for exhibiting goods to be sold, tray supporting means mounted on said overhead support and operable for moving the tray from an elevated out-of-the-way position into a display position in the path of and close to a motor vehicle stopped in said zone, spring means normally holding said tray supporting means retracted to dispose the tray in said out-of-the-way position, latch means for holding the tray supporting means in displaying position, and means for releasing said latch means whereby said spring means will retract said tray supporting means and dispose the tray in out-of-the-way position.

2. In apparatus for displaying goods at a servicing zone of a motor vehicle service station, an overhead support adjacent said zone, of a tray for exhibiting goods to be sold, tray supporting means mounted on said overhead support and operable for moving the tray from an elevated out-of-the-way position into a display position in the path of and close to a motor vehicle stopped in said zone, and subsequently operable for retracting the tray into said out-of-the-way position, said overhead support including a carriage movable back and forth for disposing the tray supporting means and tray in different positions, and brake means operating to prevent movement of said carriage when the tray is in out-of-the-way and display positions and releasing said carriage when the tray is disposed between its out-of-the-way and display positions.

3. In apparatus for displaying goods to be sold at a motor vehicle service station, garage or the like where motor vehicles are driven onto and stopped in a servicing zone, an overhead support, a display tray on which are supported articles to be displayed and sold, and an extensible and retractible tray supporting means supported by said overhead support and operable for moving the tray from an out-of-the-way position into a display position adjacent a motor vehicle stopped in said service zone and with the tray disposed close to and in the line of vision of the occupant or occupants of the vehicle, said overhead support including a carriage movable back and forth for disposing the tray supporting means and tray in different positions.

4. In apparatus for displaying goods to be sold at a motor vehicle service station, garage or the like where motor vehicles are driven onto and stopped in a servicing zone, an overhead support, a display tray on which are supported articles to be displayed and sold, and an extensible and retractible tray supporting means depending from said support and operable for moving the tray from an out-of-the-way position into a display position in the path of a motor vehicle stopped in said service zone with the tray close to and in the line of vision of the occupant or occupants of the vehicle, spring means normally holding said tray supporting means in retracted position to dispose the tray in out of the way position, a latch means for holding said tray supporting means in extended positions, and latch releasing means operable from said zone for releasing the latch means whereby the spring means will retract said tray supporting means.

5. In apparatus for displaying goods to be sold at a motor vehicle service station, garage or the like where motor vehicles are driven onto and stopped in a servicing zone, an overhead support, a display tray on which are supported articles to be displayed and sold, an extensible and retractible tray supporting means operable for moving the tray from an out-of-the-way position into a display position in the path of a motor vehicle stopped in said service zone and with the tray close to the occupant or occupants of the vehicle and subsequently operable for retracting the tray into said out-of-the-way position, said overhead support including a carriage movable back and forth for disposing the tray supporting means and tray in different positions; and brake means operating to prevent movement of said carriage when the tray is in out-of-the-way and display positions and releasing said carriage when the tray is disposed between its out-of-the-way and display positions.

6. In apparatus for displaying goods to be sold at a motor vehicle service station, garage or the like where motor vehicles are driven onto and stopped in a servicing zone, an overhead support, a display tray on which are supported articles to be displayed and sold, an extensible and retractible tray supporting means operable for moving the tray from an out-of-the-way position into a display position in the path of a motor vehicle stopped in said service zone and with the tray close to the occupant or occupants of the vehicle, a carriage supporting said tray supporting means and movable on said overhead support for disposing the tray supporting means and tray in different locations, brake means operating to prevent movement of said carriage when the tray is in out-of-the-way and display positions and releasing said carriage when the tray is disposed between its out-of-the-way and display positions, latch means for holding said tray supporting means against retraction when in extended positions, latch releasing means, and means automatically retracting said tray supporting means incident to release of said latch means.

CHARLES H. SCHIMPFF.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
992,672	Killpatrick	May 16, 1911
1,677,267	Bristol	July 17, 1928
1,819,516	Kelly	Aug. 18, 1931