(No Model.)

T. H. JOYCE.

SIDE APRON FOR VEHICLES.

No. 467,032. Patented Jan. 12, 1892.

Fig. 2

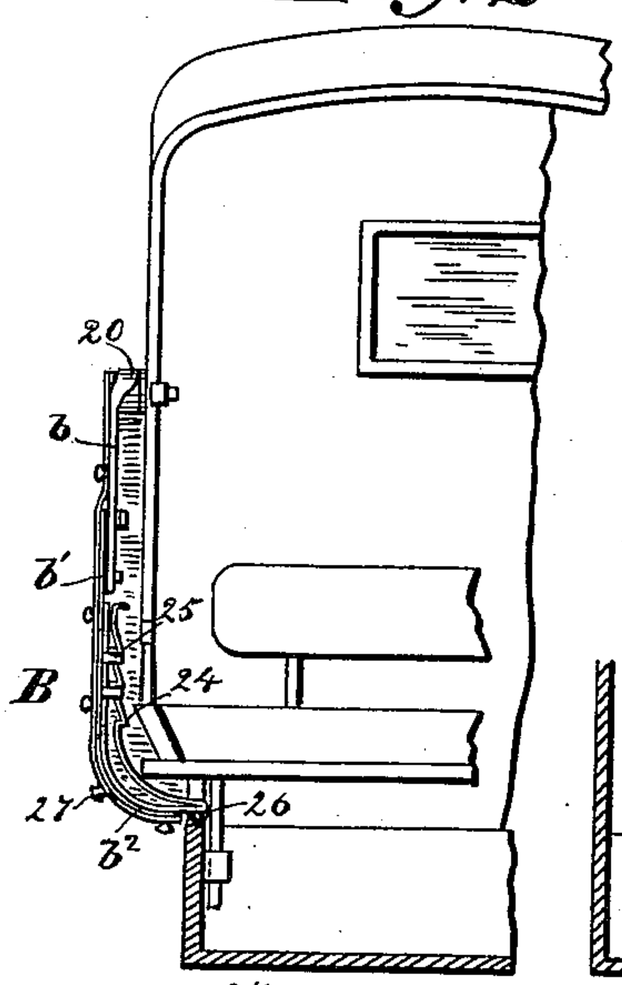
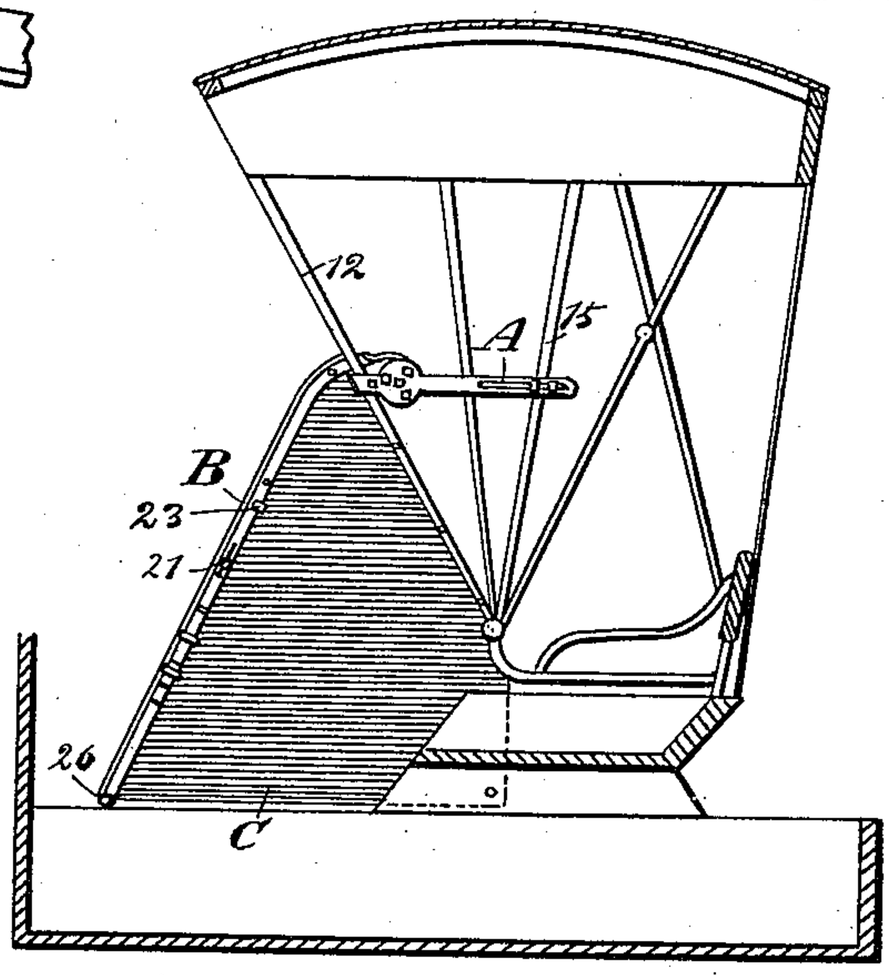


Fig. 1.



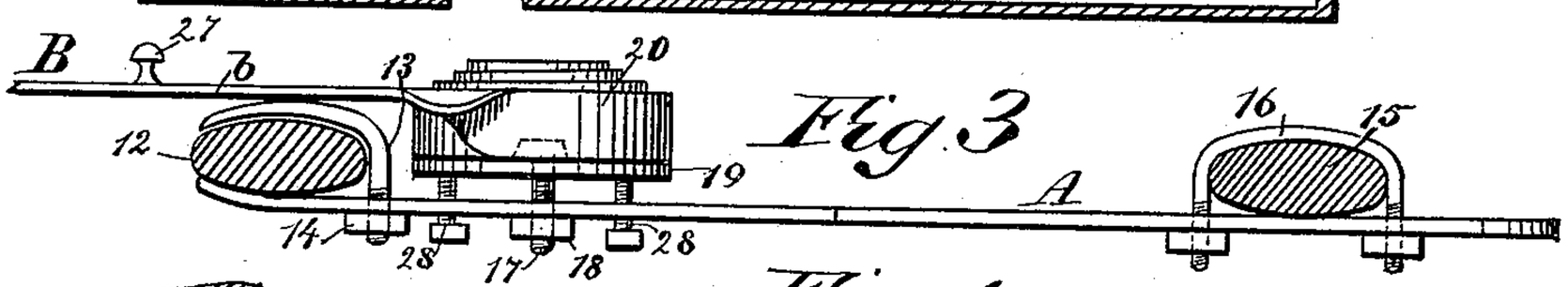


Fig 3

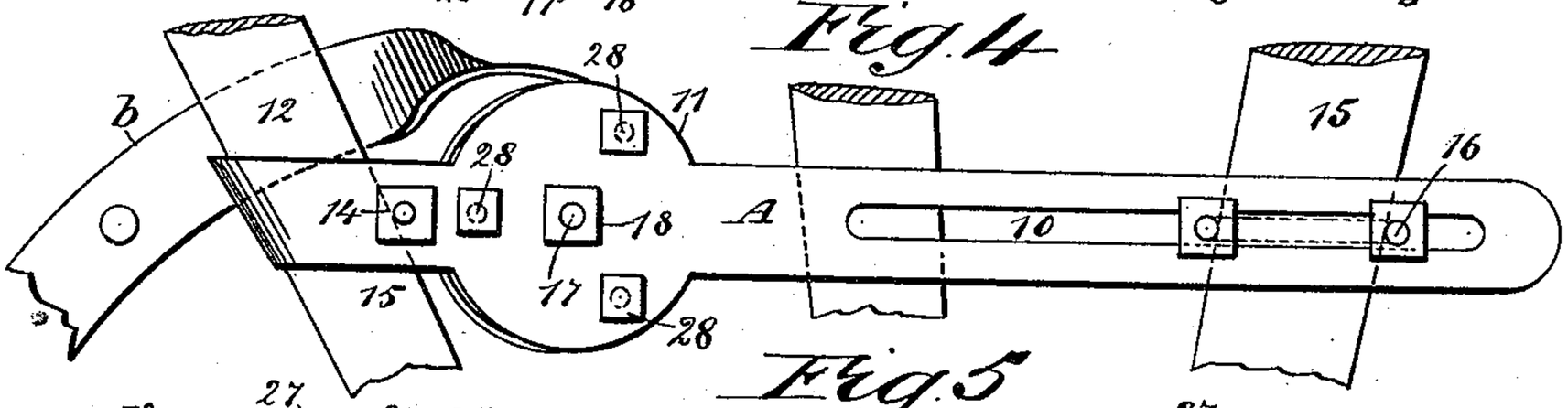


Fig 4

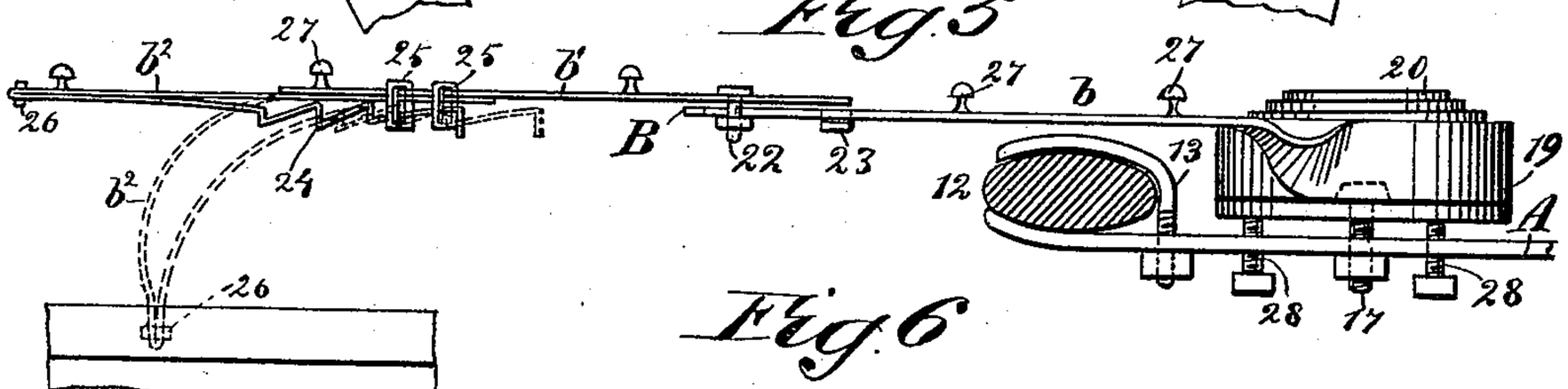


Fig 5

Fig 6

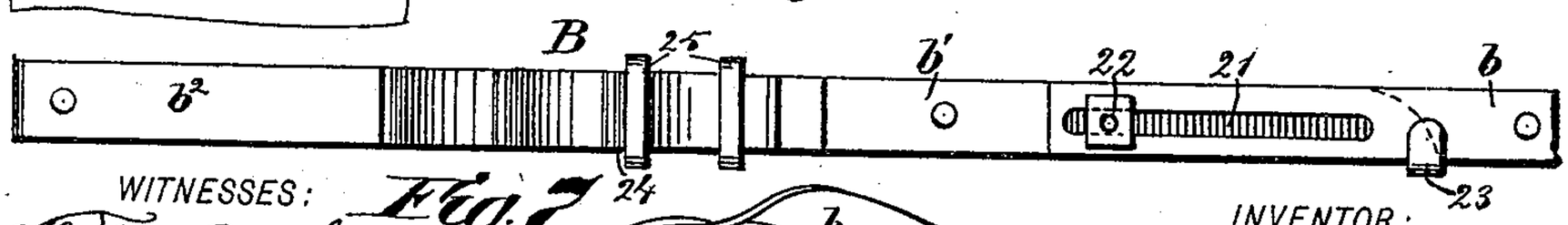
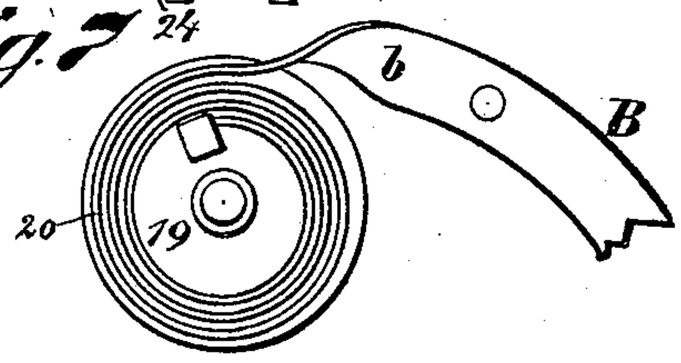


Fig 7



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INVENTOR:

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UNITED STATES PATENT OFFICE.

THOMAS H. JOYCE, OF UNIONVILLE, NEW YORK.

SIDE APRON FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 467,032, dated January 12, 1892.

Application filed March 18, 1891. Serial No. 385,468. (No model.)

To all whom it may concern:

Be it known that I, THOMAS H. JOYCE, of Unionville, (Bath Beach P. O.,) in the county of Kings and State of New York, have invented a new and useful Improvement in Side Aprons for Vehicles, of which the following is a full, clear, and exact description.

My invention relates to side aprons for buggies and like vehicles and supports for said aprons.

The object of the invention is to provide an apron at each side of the seat and extending to the body of the vehicle, shaped to protect the occupants from side drafts, and to so hang said aprons that they will be independent from the lap-robe or like covering and capable of being expeditiously and conveniently carried rearward, so as not to interfere with ingress to or egress from the vehicle.

A further object of the invention is to so construct the frames upon which the aprons are supported that they may be lengthened or shortened to accommodate vehicles of different designs, and whereby, also, when the frame is carried rearward it will automatically return to its normal position when released.

The invention consists in the novel construction and combination of the several parts, as will be fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a longitudinal vertical section through a buggy-body, illustrating the application of the invention, the apron and its frame appearing in side elevation. Fig. 2 is a partial front view of a buggy-body, illustrating the device in front elevation. Fig. 3 is a plan view of the attaching-bar and of a portion of the apron-supporting bar. Fig. 4 is a side elevation of the attaching-bar and a portion of the supporting-bar, illustrating the manner in which the attaching-bar engages with the vehicle-canopy. Fig. 5 is a plan view of the major portion of the device. Fig. 6 is a side elevation of the lower portion of the supporting-bar, and Fig. 7 is a detail view of the upper portion of the said bar.

The apron-frames are made right and left, and each preferably consists of a bar A, adapted for attachment to the bows of a vehicle-canopy, and a supporting-bar B, to which the apron C is adapted to be attached. The bar A is provided with a longitudinal slot 10 near its rear end, and near its forward end a disk-like contour is imparted to the bar, as illustrated in Fig. 4. The outer end of the bar A is slightly curved inward, and is adapted for engagement with the outer face of the front bow 12 of the vehicle-canopy, the bow being clamped to the bar through the medium of a curved arm 13, which arm is threaded where it passes through the bar and provided with a suitable nut 14, as is best shown in Fig. 3. The bar A is secured to one of the intermediate bows 15 of the canopy through the medium of a clip 16, which clip is adjustable in the slot 10. The bar A is horizontally located, as illustrated in Fig. 1.

Through the center of the disk section 11 of the bar A a bolt 17 is passed from the inside, the outer end of which bolt is provided with a suitable nut 18. The bolt 17 is also passed through a disk 19, located adjacent to the inner face of the disk-like portion 11 of the bar, as illustrated in Fig. 3. The disk 19 is provided with a rectangular or polygonal aperture, and that portion of the bolt passing through the aperture of the disk is shaped likewise in cross-section.

The apron-supporting bar B is made of spring metal and is preferably constructed in three sections—namely, an upper section *b*, an intermediate section *b'*, and a thinner lower section b^2, adapted to be given the form of a bow or to be more or less curved. The upper end of the upper section *b* is bent upon itself to form a spring-coil 20, the said coil being located upon the inner face of the disk 19, and the inner end of the coil is firmly secured to the disk in any suitable or approved manner.

From the disk the upper section *b* of the supporting-bar is curved downward and forward, so as to sustain a diagonal position with respect to the vehicle-body.

Near the lower end of the upper section *b* of the apron-supporting bar a longitudinal slot 21 is produced, and the section *b'* is adjustably and pivotally connected with the up-

per section by a bolt 22, provided with a suitable nut and passed through the slot 21. The intermediate section b' near its upper end is provided at one edge with a loop 23, engaging with one edge of the upper section b, whereby the sections may be folded in one direction only. The hook or loop 23 engages with the under edge of the section b, as shown in Fig. 1.

The section b^2 is made of flexible spring metal, and said section is doubled, being bent upon itself to form two parallel members, as illustrated in Fig. 5. The upper end of the outer member is rigidly attached to the inner side face of the intermediate section b', and the inner member is provided with a series of steps or shoulders 24, adapted to pass through keepers 25, secured to the intermediate section b', as is likewise illustrated in Fig. 5.

At the extremity of the flexible section b^2 a friction-roller 26 is journaled, preferably covered with a soft material, such as felt or the equivalent thereof. Upon the outer side face of each of the sections a series of studs or buttons 27 is located, and the outer or forward edges of the side apron C are adapted to be attached to the supporting-bar B by producing the apron button-holes to receive the buttons 27. The inner or rear edges of the aprons are buttoned to suitable studs located upon the forward bow 12 of the canopy and upon the outer end faces of the vehicle-seat.

As the seat of the buggy extends some distance beyond the sides of the body, as shown in Fig. 2, it is necessary that the supporting-bars B should be bent inward at their lower ends to engage with the upper edge of the vehicle-body, in order to completely protect the occupant of the vehicle. This is accomplished by drawing upward the inner members of the flexible sections of the supporting-bars until their lower ends are bowed sufficiently to locate the friction-rollers 26 upon the upper edges of the side boards of the vehicle-body. When this adjustment is effected, it is maintained by one of the shoulders or steps 24 engaging with one of the keepers 25. This position of the supporting-bars is plainly illustrated in Fig. 2. It is evident that when the aprons are so attached at the sides of the vehicle the knees and the lower portion of the person of the occupant will be fully protected from side drafts, and as the lower end of the supporting-bars are curved outward the lap-robe or apron may be tucked neatly around the occupant without in the least interfering with the side aprons.

When it is desired to enter the vehicle or to dismount therefrom, the supporting-bar B at one side is pressed rearward against the tension of the coil-spring at its upper end, and when the apron has been sufficiently folded the supporting-bar at its lower end will be nearly back of the front edge of the seat, or the bar may be carried back parallel with the front bow. The friction-rollers 26 facilitate the rearward movement of the supporting-bars.

In order that more or less outward inclination may be given to the supporting-bars to adapt them to the overhanging portions of vehicle-seats, adjusting-screws 28 are passed through the disk portion of the attaching-bar A of the device to an engagement with the outer face of the disk 19, and by the manipulation of the adjusting-screws the disk 19 may be canted either outward at the bottom or inward, carrying the lower end of the supporting-bar B, connected therewith, either farther from or nearer to the body, as may be desirable.

When the device is not needed, it may be neatly and compactly folded up and placed beneath the seat or in any other convenient place.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. As an improved article of manufacture, a frame for attaching side aprons to vehicles, consisting of an attaching-bar and a supporting-bar having a lower flexible end and a spring-controlled upper end, as and for the purpose specified.

2. A frame for attaching side aprons to vehicle-canopies, consisting of an attaching-bar, a disk adjustably secured to said bar, and a supporting-bar adapted to receive the apron and constructed in sections, said sections being provided with stops limiting their movement in one direction, the upper section having a coiled spring formed integral therewith and attached to the disk, the lower section being double and flexible and provided with a series of steps or shoulders adapted to engage with fixed keepers, as and for the purpose specified.

3. The combination, with the bows of a vehicle-canopy, of a bar attached to said bows, a disk adjustably secured to the bar, a supporting-bar provided with a series of buttons and constructed in sections, the upper section being formed in a coil-spring and attached to the disk and the lower section being flexible and comprising two members, the inner member whereof is free and provided with a series of steps or shoulders, fixed keepers engaging with the steps or shoulders, whereby the lower end of the supporting-bar may be curved inward, a friction-roller located at the lower end of the bar and adapted to engage with the vehicle-body, and an apron attached to the supporting-bar and to one of the bows of the vehicle-canopy, as and for the purpose specified.

THOMAS H. JOYCE.

Witnesses:
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THOMAS M. HINEY.