

Improvement over

367-104

410 477

11

CANADA

NUMBER

478066

To all to whom these presents shall come

Whereas

Joseph Armand Bombardier,

of Valcourt,

Quebec,

Canada,

has petitioned the Commissioner of Patents, praying for the grant of a Patent for an alleged new and useful improvement in Traction Devices,

a description of which invention is contained in the specification of which a duplicate is herewith attached, and made an essential part hereof, and has complied with the requirements of the Patent Act,

Now Therefore the present Patent grants to the said

Joseph Armand Bombardier,

and his legal representatives for the period of Seventeen Years from the date of these presents, the exclusive right, privilege and liberty of making, constructing, using and vending to others to be used in Canada, the said invention subject to adjudication in respect thereof before any court of competent jurisdiction.

Provided that the grant hereby made is subject to the conditions contained in the Act aforesaid.

In Testimony Whereof, I have herewith set my hand, and caused the Seal of the Patents Office to be herewith affixed, at the City of Ottawa, in Canada, this Thirtieth day of October in the year of Our Lord, one thousand nine hundred and fifty one.

*[Signature]*  
Commissioner of Patents.





**REPRESENTATIVE IN CANADA.**  
**Entered under Section 30, of the**  
**Patent Act 1935.**

**Name**.....

**Address**.....

.....

100  
100  
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586343

**ALBERT FOURNIER**

**Patent Attorney**

934 ST. CATHERINE STREET EAST

MONTREAL

Canada

S P E C I F I C A T I O N

BE IT KNOWN that Joseph Armand BOMBARDIER,  
of Valcourt, County of Shefford, Province of Quebec,  
Canada, having made an invention entitled:

" TRACTION DEVICE "

the following disclosure contains a correct and full  
description of the invention and of the best mode known  
to the inventor of taking advantage of the same.



The present invention pertains to a novel traction device for heavy duty vehicles, and is an improvement over my Can. patents No. 367,104 of June 29, 1937 and No. 410,471 of February 9, 1943.

5 One of the objects of the invention is to provide a traction belt on a standard vehicle that is not ordinarily equipped with such a belt. For this purpose an auxiliary axle is provided forward of the rear axle and supported by a frame attached to the rear axle. The auxiliary  
0 axle carries wheels, and the belt is passed around these wheels and the usual rear wheels.

Another object is to provide an anti-slip drive between the rear wheels and the belt. In the accomplishment of this object the endless member consists  
5 of cleats that lie transversely of the tire treads. Corresponding ends of the cleats are joined by endless belts that form a united endless traction member. The anti-slip construction consists of plugs secured to the  
0 inner surfaces of the cleats at the ends of the tire-engaging portion thereof and entering the grooves of the usual treads. Since the grooves are not circumferential of the tires, the cleats cannot slip.

Another object of the invention resides in the provision of an adjustable connection between the  
15 usual rear axle and the auxiliary axle, as described in detail hereinafter.



The invention is fully disclosed by way of example in the following description and in the accompanying drawings in which:

Figure 1 is a side elevation of the device, partly broken away;

Figure 2 is a plan view;

Figure 3 is an enlarged section on the line 3--3 of Figure 1;

Figure 4 is a detail section, and

Figure 5 is an enlarged detail side section of the device.

References to these views will now be made by use of like characters which are employed to designate corresponding parts throughout.

In Figure 1 is shown a tractor 1 having an auxiliary axle 2 placed in front of the usual rear wheel assembly which will presently be described in detail. The axle 2 carries a wheel 3 on which is mounted a tire 4, as well known in the art.

To an end of the axle is welded a guide 5 which receives a longitudinally and rearwardly extending tube 6. To the tube is welded a laterally disposed U-shaped slide 7 that fits in the member 5. The slide 7 is formed with a lip 8 in which is threaded a screw 9 bearing on the fixed guide 5. By means of the screw the rod 6 is adjusted relatively to the axle.



To the outer end of the rod or tube 6 is welded another lateral U- member 10, the sides of which are doubled by a pair of braces 12 which are also soldered to the tube 6. To the block 13 which encloses the rear axle 14 are soldered depending plates 11 to which are articulated member 10 and braces 12. Between another depending plate 15 and forwardly thereof is an aligned vertical plate 16 secured to the tube 6 somewhat rearward of the axle 2. A screw 17 is slidably mounted in the plate 15 and is joined by a spring 18 to the plate 16. A nut 19 on the rear end of the screw 17 adjusts the tension of the spring 18.

The nut has an aperture to receive a hook for linking to the drawbar of the tractor. In such case a cross pin would replace the slow thread adjustment.

On the rear axle 14 is a wheel 20 of large size for heavy traction and fitted with a rubber tire 21. Across the treads of both tires are laid cleats 22 extending at 23 beyond the sides of the tires. Endless flexible belts 24 are secured to the extensions 23 by clamp plates 25 and bolts 26, to provide a wide traction area.

To prevent slippage of the cleats on the tires, truncated conical members or plugs 27 are secured to the inner surfaces of the cleats, at both sides of the treads, by bolts 28 and inserted in the grooves 29 of the treads, as may be seen in Figure 3.

Although a specific embodiment of the invention has been illustrated and described, it will be understood that various alterations in the details of construction may be made without departing from the scope of the invention as indicated by the appended claims.



THE EMBODIMENTS OF THE INVENTION  
IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS  
CLAIMED ARE DEFINED AS FOLLOWS:

1.- A traction device comprising a plurality of cleats adapted to be laid transversely on a tire, belts joining and secured to the ends of successive cleats, and a pair of spaced plugs secured to each cleat at the tire-engaging portion thereof and adapted to enter the grooves of the tire treads, said plugs consisting of conical members with their bases attached to the cleats.

2.- A traction device comprising a plurality of cleats adapted to be laid transversely on a tire, belts joining and secured to the ends of successive cleats, and spaced plugs secured to the inner surfaces of said cleats at the tire-engaging portions thereof and adapted to enter the grooves of the tire treads, said plugs consisting of truncated conical rubber members.

3.- A traction device comprising a plurality of cleats adapted to be laid transversely on a tire, belts joining and secured to the ends of successive cleats, and a pair of spaced plugs secured to each cleat at the tire-engaging portion thereof and adapted to enter the grooves of the tire treads, said plugs consisting of truncated conical rubber members.

Albert Fournier,  
934 St. Catherine Street East,  
Montreal, Canada.

Patent Agent for the Applicant.



The attention of Patentees is called to the following section of The Patent Act, 1935.

Abuse of rights under patents.

85. (1) The Advisory Council of Canada or any person interested may at any time after the expiration of three years from the date of the grant of a patent apply to the Commissioner alleging in the case of a patent that there has been an abuse of the exclusive right conferred by the patent and may request the Commissioner to cause the patent to be deemed void under the Act.

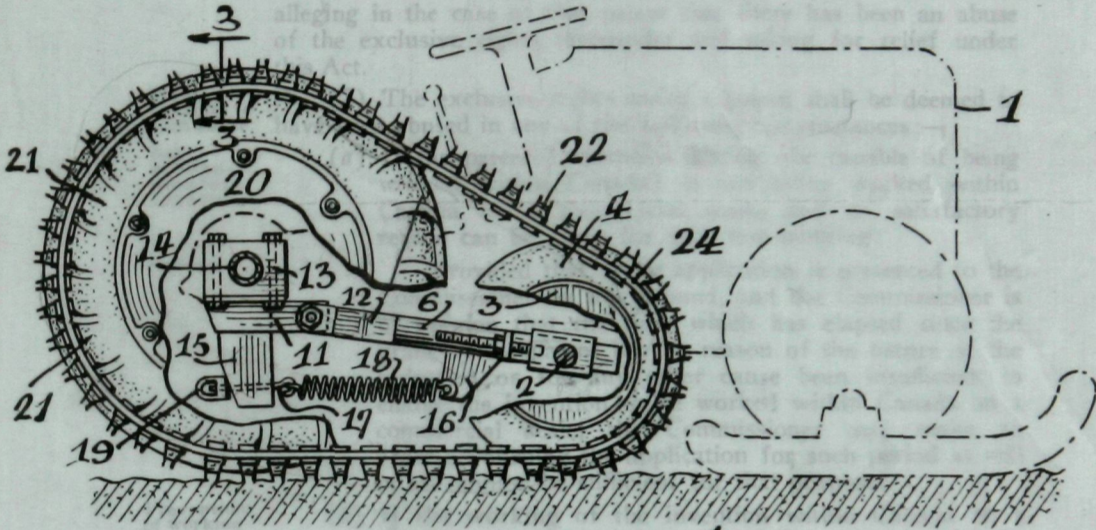


Fig. 1

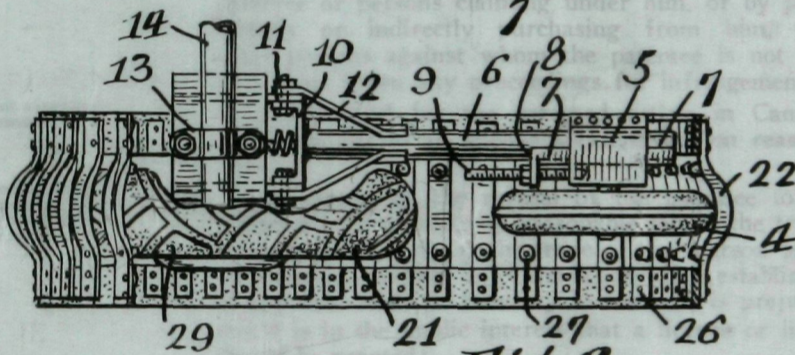


Fig. 2

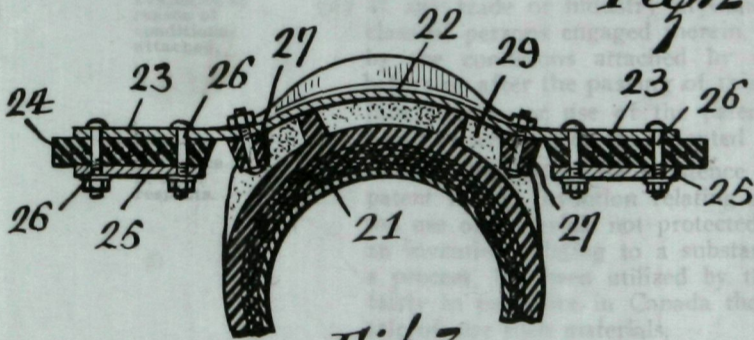


Fig. 3

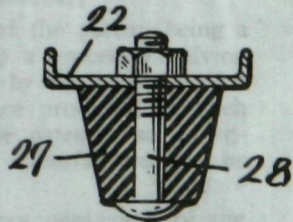


Fig. 4

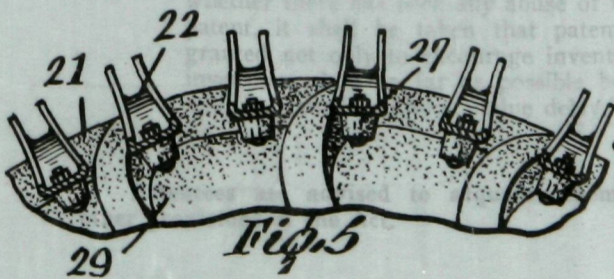


Fig. 5

Inventor:  
Joseph Armand Bombardier  
Patent Agent:

*Alfred J. ...*



The attention of Patentees is called to the following section of The Patent Act, 1935.

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"65. (1) The Attorney General of Canada or any person interested may at any time after the expiration of three years from the date of the grant of a patent apply to the Commissioner alleging in the case of that patent that there has been an abuse of the exclusive rights thereunder and asking for relief under this Act.

What amounts to such abuse.

(2) The exclusive rights under a patent shall be deemed to have been abused in any of the following circumstances:—

Not working, patented invention.

(a) If the patented invention (being one capable of being worked within Canada) is not being worked within Canada on a commercial scale, and no satisfactory reason can be given for such non-working:

Proviso.

Provided that, if an application is presented to the Commissioner on this ground, and the Commissioner is of opinion that the time which has elapsed since the grant of the patent has by reason of the nature of the invention or for any other cause been insufficient to enable the invention to be worked within Canada on a commercial scale, the Commissioner may make an order adjourning the application for such period as will in his opinion be sufficient for that purpose;

Prevention of working by importation.

(b) If the working of the invention within Canada on a commercial scale is being prevented or hindered by the importation from abroad of the patented article by the patentee or persons claiming under him, or by persons directly or indirectly purchasing from him, or by other persons against whom the patentee is not taking or has not taken any proceedings for infringement;

Not meeting demand.

(c) If the demand for the patented article in Canada is not being met to an adequate extent and on reasonable terms;

Prejudice to trade by refusal to licence.

(d) If, by reason of the refusal of the patentee to grant a licence or licences upon reasonable terms, the trade or industry of Canada or the trade of any person or class of persons trading in Canada, or the establishment of any new trade or industry in Canada, is prejudiced, and it is in the public interest that a licence or licences should be granted;

Prejudice by reason of conditions attached.

(e) If any trade or industry in Canada, or any person or class of persons engaged therein, is unfairly prejudiced by the conditions attached by the patentee, whether before or after the passing of this Act, to the purchase, hire, licence, or use of the patented article, or to the using or working of the patented process;

Prejudice in other respects.

(f) If it is shown that the existence of the patent, being a patent for an invention relating to a process involving the use of materials not protected by the patent or for an invention relating to a substance produced by such a process, has been utilized by the patentee so as unfairly to prejudice in Canada the manufacture, use or sale of any such materials.

Declaration of basis of grants of patents.

(3) It is declared with relation to every paragraph of the next foregoing subsection that, for the purpose of determining whether there has been any abuse of the exclusive rights under a patent, it shall be taken that patents for new inventions are granted not only to encourage invention but to secure that new inventions shall so far as possible be worked on a commercial scale in Canada without undue delay."

Patentees are advised to acquaint themselves with this and the other provisions of the Act.