

Reçu à
Valcourt le
18 juin 1952
J.A.B.

CANADA

NUMBER

483846

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 invention entitled Auxiliary Gale Assembly for Tractors,

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 Act aforesaid.

In Testimony Whereof, I have hereunto set my hand, and caused the Seal of the Patent Office to be hereunto affixed, at the City of Ottawa, in Canada, this Tenth day of June in the year of Our Lord, one thousand nine hundred and fifty two

Commissioner of Patents.

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

Name.....

Address.....

.....

601.377

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:

"AUXILIARY AXLE ASSEMBLY FOR TRACTORS"

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.

This application is a division of my copending Canadian application, Serial No. 586,343, filed April 6, 1949. The invention pertains to a tractor drive in which an auxiliary axle is incorporated with the driving axle so that a traction belt may be employed for heavy loads. The traction belt drive, as well known, is very desirable for slippery and unprepared surfaces.

The principal object of the invention is to provide a novel and relatively simple means for assembling the auxiliary axle in parallel relation to the power axle for the mounting of a traction belt. Another object of the invention is to provide means for adjusting the distance between the two axles whereby the belt may be tightened or loosened as desired, according to the particular working conditions.

Still another object of the invention is to provide a rugged and relatively simple and inexpensive construction for the purposes set forth.

In the accomplishment of these objects, the auxiliary axle carries a guide in which is slidably mounted a rod connected to the rear axle by means of a block on the latter. The rod carries a nut-like member in which is threaded an adjusting screw bearing on the guide. By adjustment of the screw, the rod is shifted relatively to the guide to adjust the distance between the two axles.

The invention comprises means to control the ground pressure of the auxiliary wheel. A tongue depending from the rear axle assembly is joined by a spring to another tongue depending from the previously mentioned rod. The tension of the spring is adjustable by a nut.

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 elevation of the device.

Reference 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 positioned 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 known in the art.

To an end of the axle is welded a guide 5 which receives a longitudinally and rearwardly extending rod 6. To the tube is welded a laterally disposed bracket 7 that fits in the guide 5. The bracket 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 in a direction transverse of the axle.

To the rear end of the rod or tube 6 is welded another lateral U-member 10, the sides of which are engaged and doubled by a pair of braces 12 which are also welded to the rod 6 as shown in Figure 2. A block 13 encloses the usual rear axle 14, and to this block are welded a pair of spaced depending plates 11. Each such plate is received between a side of the U-member 10 and the adjacent brace 12 which is articulated thereto by a bolt or pin 11'. Another plate or tongue 15 extends downward from the block 14, between the members 11, and still another such plate or tongue 16 extends downward from the rod 6, somewhat rearward of the auxiliary axle 2, as may be seen in Figure 1. A screw 17 is slidably mounted in the plate 15 and is joined by a spring 18 to the tongue 16. A nut 19 on the rear end of the screw 17 adjusts the tension of the spring 18 to control the ground pressure on the auxiliary wheel.

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

- 6 -

On the rear axle 14 is a wheel 20 of larger 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 extensions 23 by clamp plates 25 and bolts 26, to provide a wide traction.

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 are inserted in the grooves 29 of the treads, as may be seen in Figure 3.

In the use of the device, the distance between the axles 2 and 14 may be adjusted to fit the belts 24 or to allow the slack or tightness in the belt according to the particular working conditions. This adjustment is made by turning the screw 9 in one direction or the other by means of a suitable tool. Since the guide 5 is fixed to the axle 2, and the bracket 7 fixed to the rod 6, any longitudinal adjustment of the screw 9 will shift the rod 6 in the guide 5 and consequently move the auxiliary axle 14 which is connected to the rod 6.

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.- In a tractor drive having
a rear axle, an auxiliary axle mounted parallel to
said rear axle, a guide secured to an end of said
auxiliary axle, a rod slidably mounted in said guide
and transversely of said axles, said rod extending
to said rear axle, a block mounted on said rear axle,
a pair of spaced plates secured to said block, a pair
of braces secured to said rod and articulated to said
plates, and means for adjusting said rod in said guide.

2.- In a tractor drive having
a rear axle, an auxiliary axle mounted parallel to said
rear axle, a guide secured to an end of said auxiliary
axle, a rod slidably mounted in said guide and transverse-
ly of said axles, said rod extending to said rear axle,
a block mounted on said rear axle, a pair of spaced
plates secured to said block, a pair of braces secured
to said rod and articulated to said plates, a bracket
fixed on said rod, and a screw threaded in said bracket
and bearing on said guide to adjust said rod in said guide.

3.- In a tractor drive having a rear
axle, an auxiliary axle mounted parallel to said rear axle,
a guide secured to an end of said auxiliary axle, a rod
slidably mounted in said guide and transversely of said
axles, said rod extending to and being connected to said
rear axle, and means for adjusting said rod in said guide,
tongues carried respectively by said rear axle and rod,
and a spring connecting said tongues.

4.- In a tractor drive having a rear axle, an auxiliary axle mounted parallel to said rear axle, a guide secured to an end of said auxiliary axle, a rod slidably mounted in said guide and transversely of said axles, said rod extending to said rear axle, a block mounted on said rear axle, a pair of spaced plates secured to said block, a U-member secured between said plates, a pair of braces secured to said rod and articulated to said plates and U-member, and means for adjusting said rod in said guide. ✓

Albert Fournier,
934 St. Catherine St. 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

"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 right conferred and asking for relief under this Act.

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

(a) The patented article (being one capable of being worked on a commercial scale) is not being worked within Canada to a substantial degree, or

(b) The patented article is being worked in Canada to a substantial degree but the working is being done by a person other than the patentee or a person authorized by him to work the patent, or

(c) The patented article is being worked in Canada to a substantial degree but the working is being done by a person other than the patentee or a person authorized by him to work the patent, and the working is being done for the purpose of

importation from abroad of the patented article by the patentee or a person authorized by him to import the article, or by persons acting in concert with him, or by persons acting indirectly through him, or by persons acting in concert with them, for the purpose of infringing the patent.

(3) If any trade or industry in Canada is unfairly prejudiced by the operation of this Act, to the purchase, use, or disposal of the patented article, or to the process of manufacture of the patented article, the Commissioner may, on application, grant a license to any person to work the patent on such terms as he may think fit.

(4) If any trade or industry in Canada, or any person or class of persons, is unfairly prejudiced by the operation of this Act, to the purchase, use, or disposal of the patented article, or to the process of manufacture of the patented article, the Commissioner may, on application, grant a license to any person to work the patent on such terms as he may think fit.

(5) If any trade or industry in Canada, or any person or class of persons, is unfairly prejudiced by the operation of this Act, to the purchase, use, or disposal of the patented article, or to the process of manufacture of the patented article, the Commissioner may, on application, grant a license to any person to work the patent on such terms as he may think fit.

(6) If any trade or industry in Canada, or any person or class of persons, is unfairly prejudiced by the operation of this Act, to the purchase, use, or disposal of the patented article, or to the process of manufacture of the patented article, the Commissioner may, on application, grant a license to any person to work the patent on such terms as he may think fit.

(7) If any trade or industry in Canada, or any person or class of persons, is unfairly prejudiced by the operation of this Act, to the purchase, use, or disposal of the patented article, or to the process of manufacture of the patented article, the Commissioner may, on application, grant a license to any person to work the patent on such terms as he may think fit.

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(20) If any trade or industry in Canada, or any person or class of persons, is unfairly prejudiced by the operation of this Act, to the purchase, use, or disposal of the patented article, or to the process of manufacture of the patented article, the Commissioner may, on application, grant a license to any person to work the patent on such terms as he may think fit.

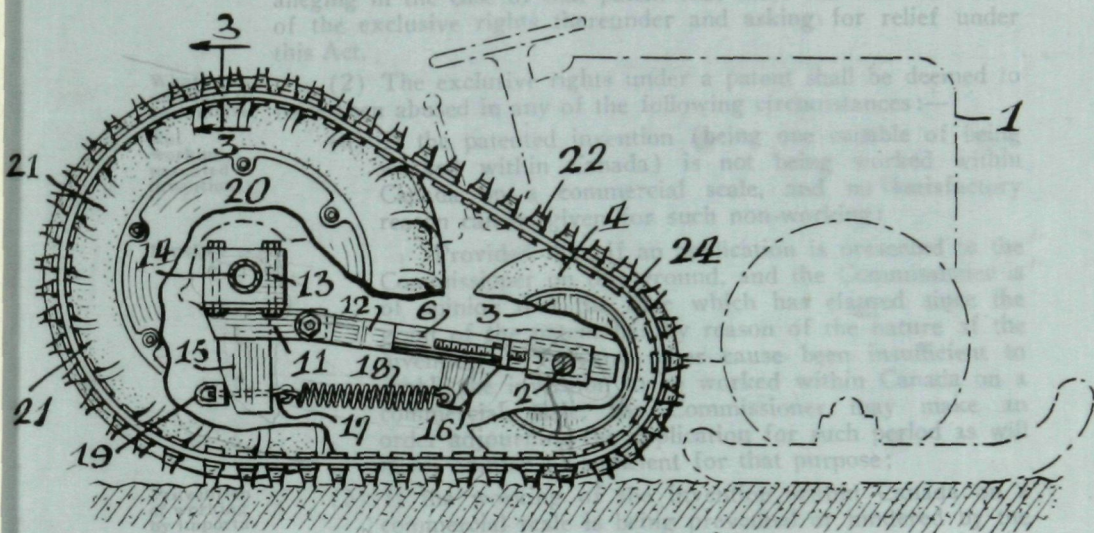


Fig. 1

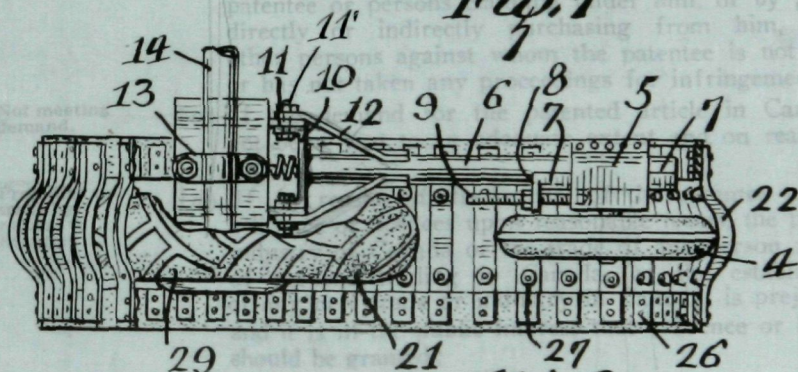


Fig. 2

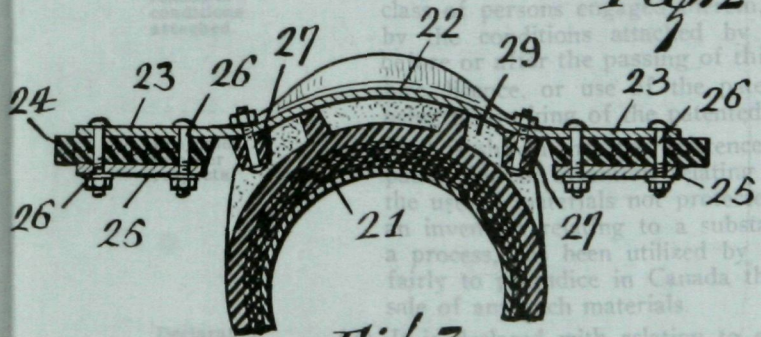


Fig. 3

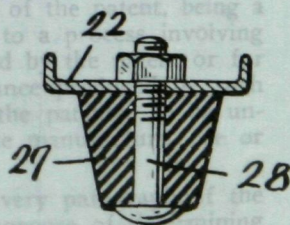


Fig. 4

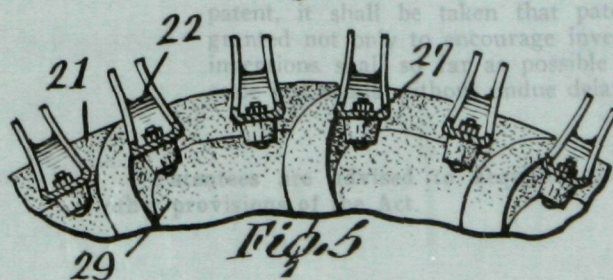


Fig. 5

Inventor:
Joseph Armand Bombardier

PATENT AGENT.

Alfred J. ...

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Abuse of rights under patents.

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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.