

of Österreichische Daimler Motoren cars, the motor oil Gargoyls Öl of the Deutsche Vacuum Oil Company—a subsidiary of the American Mobil oil—and the dragon of the Fafnir-werke Aktiengesellschaft Aachener Stahlwarenfabrik, German manufacturer of engines and mechanical parts for vehicles. They also identify the lion of Peugeot, the French manufacturer, and, supported in a terrestrial sphere, the one of the car manufacturer Gräf & Stift, from Vienna. Finally, we observe the rampant horse of Continental and the elephant of Metzeler, both German pneumatic tire manufacturers.

87. Full page caricature published in the Austrian magazine *Motor*, June 1913. Illustration by Emil Kneifs (1867-1956).

THE TIME THE PLACE

AND THE PUNCTURE

Did you ever spend the greater part of some beautiful evening mending a puncture? You were probably miles from town on some lonely road and there was no other way. You simply had to fix it to get home. That measly little puncture spoiled your temper, made you hot and dirty—in fact, ruined your whole evening's sport. NOW-A-DAYS careful motorists always carry a

STEPNEY Spare Wheel

and are ON THEIR WAY IN LESS THAN A MINUTE. The Stepney Spare Wheel is NOT a demountable rim, neither does it require special fitting. It just clamps to the rim of your wheel without removing your punctured tire.

When you finish your journey remove the Stepney and repair the puncture.

Write for descriptive matter, prices, etc.

The Spare Motor Wheel of America, Ltd.

236 Michigan Ave., Chicago New York Office, 2140 Broadway

A Necessary Equipment to Every Car

BECAUSE: You never know when you are going to have a puncture or blow-out—it's liable to happen anytime, anywhere, in town or on tour—but when it does, as it will often, that's when the "STEPNEY WHEEL" gets in its good work—where it makes good as the greatest invention of the age or the automobilist in trouble. It eliminates the worry, delays and expense incident to tire troubles and insures a speedy trip over all kinds of roads.

HOW THE "STEPNEY SPARE WHEEL" WORKS

In brief, it consists of a metal rim without spokes, which can be used as a spare wheel in case of a puncture or blow-out. It is attached to the rim of the wheel by means of a clamp which is secured by a screw. This device is so simple that it can be fitted to any wheel in less than a minute. The device is made of steel and is strong enough to support the weight of the car and its load. It is also light enough to be carried in the trunk of the car. The device is sold in pairs, one for each side of the car. It is a very useful piece of equipment for every car owner.

ON AND GONE IN LESS THAN A MINUTE

STEPNEY Spare Motor Wheel

The Spare Motor Wheel of America LIMITED

236 Michigan Ave., Chicago NEW YORK OFFICE, 2140 BROADWAY

Write Today for Full Information to

STEPNEY SPARE WHEEL

Every motorist knows that the pneumatic tire while being the greatest blessing, is also, from its unreliable qualities, the greatest curse of motordom.

THE CURE FOR THE CURSE IS A STEPNEY SPARE WHEEL

carried at all times and ready for use. It can be applied and allow you to be on your way in less than a minute. It is fast becoming the equipment of taxicabs and public motor vehicles generally where TIME IS MONEY. Send for our Catalogue explaining and illustrating in full.

SPARE MOTOR WHEEL OF AMERICA (LTD.) - 236 Michigan Ave., Chicago

Our Agents: In New York City, 2140 Broadway; In London, 10, Abchurch Lane; In Paris, 10, Rue de la Harpe; In Berlin, 10, Unter den Eichen; In Rome, 10, Via del Corso; In Milan, 10, Piazza S. Stefano; In Vienna, 10, Ringstrasse; In Prague, 10, Na Mlýnské St.; In Budapest, 10, Váci Street; In Warsaw, 10, Krakowska Street; In Moscow, 10, Tverskaya Street; In Leningrad, 10, Nevsky Prospekt; In Petrograd, 10, Dvortsovaya Street; In Kiev, 10, Khreshchatyk Street; In Odessa, 10, Prater Street; In Constantinople, 10, Pera Street; In Cairo, 10, El Khayma Street; In Alexandria, 10, Esplanade; In Bombay, 10, Colaba Road; In Calcutta, 10, Park Street; In Madras, 10, Market Street; In Singapore, 10, Raffles Place; In Hong Kong, 10, Queen's Road; In Shanghai, 10, Bund; In Hankow, 10, Victoria Road; In Canton, 10, Canton Road; In Peking, 10, Tientsin Road; In Tientsin, 10, Tientsin Road; In Harbin, 10, Harbin Road; In Manchuria, 10, Manchuria Road; In Korea, 10, Korea Road; In Japan, 10, Japan Road; In China, 10, China Road; In India, 10, India Road; In Australia, 10, Australia Road; In South Africa, 10, South Africa Road; In Egypt, 10, Egypt Road; In Persia, 10, Persia Road; In Mesopotamia, 10, Mesopotamia Road; In Arabia, 10, Arabia Road; In Turkey, 10, Turkey Road; In Greece, 10, Greece Road; In Italy, 10, Italy Road; In France, 10, France Road; In Germany, 10, Germany Road; In Austria, 10, Austria Road; In Switzerland, 10, Switzerland Road; In Belgium, 10, Belgium Road; In Netherlands, 10, Netherlands Road; In Denmark, 10, Denmark Road; In Sweden, 10, Sweden Road; In Norway, 10, Norway Road; In Finland, 10, Finland Road; In Poland, 10, Poland Road; In Czechoslovakia, 10, Czechoslovakia Road; In Yugoslavia, 10, Yugoslavia Road; In Rumania, 10, Rumania Road; In Bulgaria, 10, Bulgaria Road; In Hungary, 10, Hungary Road; In Slovakia, 10, Slovakia Road; In Slovenia, 10, Slovenia Road; In Croatia, 10, Croatia Road; In Serbia, 10, Serbia Road; In Montenegro, 10, Montenegro Road; In Albania, 10, Albania Road; In Macedonia, 10, Macedonia Road; In Bulgaria, 10, Bulgaria Road; In Romania, 10, Romania Road; In Greece, 10, Greece Road; In Turkey, 10, Turkey Road; In Iran, 10, Iran Road; In Iraq, 10, Iraq Road; In Syria, 10, Syria Road; In Lebanon, 10, Lebanon Road; In Palestine, 10, Palestine Road; In Jordan, 10, Jordan Road; In Saudi Arabia, 10, Saudi Arabia Road; In Kuwait, 10, Kuwait Road; In Bahrain, 10, Bahrain Road; In Qatar, 10, Qatar Road; In Oman, 10, Oman Road; In Yemen, 10, Yemen Road; In Ethiopia, 10, Ethiopia Road; In Sudan, 10, Sudan Road; In Egypt, 10, Egypt Road; In Libya, 10, Libya Road; In Tunisia, 10, Tunisia Road; In Algeria, 10, Algeria Road; In Morocco, 10, Morocco Road; In Mauritania, 10, Mauritania Road; In Mali, 10, Mali Road; In Niger, 10, Niger Road; In Chad, 10, Chad Road; In Cameroon, 10, Cameroon Road; In Nigeria, 10, Nigeria Road; In Ghana, 10, Ghana Road; In Ivory Coast, 10, Ivory Coast Road; In Senegal, 10, Senegal Road; In Guinea, 10, Guinea Road; In Sierra Leone, 10, Sierra Leone Road; In Liberia, 10, Liberia Road; In Ivory Coast, 10, Ivory Coast Road; In Ghana, 10, Ghana Road; In Nigeria, 10, Nigeria Road; In Kenya, 10, Kenya Road; In Uganda, 10, Uganda Road; In Tanzania, 10, Tanzania Road; In Zanzibar, 10, Zanzibar Road; In Malawi, 10, Malawi Road; In Zambia, 10, Zambia Road; In Botswana, 10, Botswana Road; In Namibia, 10, Namibia Road; In South Africa, 10, South Africa Road; In Swaziland, 10, Swaziland Road; In Lesotho, 10, Lesotho Road; In Mozambique, 10, Mozambique Road; In Zimbabwe, 10, Zimbabwe Road; In Rhodesia, 10, Rhodesia Road; In South West Africa, 10, South West Africa Road; In Namibia, 10, Namibia Road; In Angola, 10, Angola Road; In Congo, 10, Congo Road; In Zaire, 10, Zaire Road; In Gabon, 10, Gabon Road; In Equatorial Guinea, 10, Equatorial Guinea Road; In Sierra Leone, 10, Sierra Leone Road; In Liberia, 10, Liberia Road; In Ivory Coast, 10, Ivory Coast Road; In Ghana, 10, Ghana Road; In Nigeria, 10, Nigeria Road; In Kenya, 10, Kenya Road; In Uganda, 10, Uganda Road; In Tanzania, 10, Tanzania Road; In Zanzibar, 10, Zanzibar Road; In Malawi, 10, Malawi Road; In Zambia, 10, Zambia Road; In Botswana, 10, Botswana Road; In Namibia, 10, Namibia Road; In South Africa, 10, South Africa Road; In Swaziland, 10, Swaziland Road; In Lesotho, 10, Lesotho Road; In Mozambique, 10, Mozambique Road; In Zimbabwe, 10, Zimbabwe Road; In Rhodesia, 10, Rhodesia Road; In South West Africa, 10, South West Africa Road; In Angola, 10, Angola Road; In Congo, 10, Congo Road; In Zaire, 10, Zaire Road; In Gabon, 10, Gabon Road; In Equatorial Guinea, 10, Equatorial Guinea Road; In Sierra Leone, 10, Sierra Leone Road; In Liberia, 10, Liberia Road; In Ivory Coast, 10, Ivory Coast Road; In Ghana, 10, Ghana Road; In Nigeria, 10, Nigeria Road; In Kenya, 10, Kenya Road; In Uganda, 10, Uganda Road; In Tanzania, 10, Tanzania Road; In Zanzibar, 10, Zanzibar Road; In Malawi, 10, Malawi Road; In Zambia, 10, Zambia Road; In Botswana, 10, Botswana Road; In Namibia, 10, Namibia Road; In South Africa, 10, South Africa Road; In Swaziland, 10, Swaziland Road; In Lesotho, 10, Lesotho Road; In Mozambique, 10, Mozambique Road; In Zimbabwe, 10, Zimbabwe Road; In Rhodesia, 10, Rhodesia Road; In South West Africa, 10, South West Africa Road; In Angola, 10, Angola Road; In Congo, 10, Congo Road; In Zaire, 10, Zaire Road; In Gabon, 10, Gabon Road; In Equatorial Guinea, 10, Equatorial Guinea Road; In Sierra Leone, 10, Sierra Leone Road; In Liberia, 10, Liberia Road; In Ivory Coast, 10, Ivory Coast Road; In Ghana, 10, Ghana Road; In Nigeria, 10, Nigeria Road; In Kenya, 10, Kenya Road; In Uganda, 10, Uganda Road; In Tanzania, 10, Tanzania Road; In Zanzibar, 10, Zanzibar Road; In Malawi, 10, Malawi Road; In Zambia, 10, Zambia Road; In Botswana, 10, Botswana Road; In Namibia, 10, Namibia Road; In South Africa, 10, South Africa Road; In Swaziland, 10, Swaziland Road; In Lesotho, 10, Lesotho Road; In Mozambique, 10, Mozambique Road; In Zimbabwe, 10, Zimbabwe Road; In Rhodesia, 10, Rhodesia Road; In South West Africa, 10, South West Africa Road; In Angola, 10, Angola Road; In Congo, 10, Congo Road; In Zaire, 10, Zaire Road; In Gabon, 10, Gabon Road; In Equatorial Guinea, 10, Equatorial Guinea Road; In Sierra Leone, 10, Sierra Leone Road; In Liberia, 10, Liberia Road; In Ivory Coast, 10, Ivory Coast Road; In Ghana, 10, Ghana Road; In Nigeria, 10, Nigeria Road; In Kenya, 10, Kenya Road; In Uganda

THE AMERICAN MARKET. Stepney successfully introduced their spare wheels in the North American market, through the subsidiary Spare Motor Wheel of America established in October 1907. At this time they also stopped utilizing the characteristic image of the bulldog emerging from a tire ring. Perhaps this was because other American companies, such as the Salisbury Tire Co. from Owosso, Michigan (founded in 1906), were advertising with a similar image, with the same breed of dog.

88. Advertisement published in *Motor Age*, June 11, 1908. **89.** Advertisement published in *The Automobile*, May 28, 1908.

90. Advertisement published in *Motor Age*, August 20, 1908. **91.** Advertisement published in *The Automobile*, July 30, 1908.

92. Advertisement in English press, 1912. **93-94.** Advertisements in the American magazine *Motor*, April and July, 1914.



Dunlop Supremacy in America
is an extension of Dunlop Supremacy abroad

DUNLOP

**DETACHABLE
WIRE WHEELS**

are equipped on such noted foreign cars as

Benz	Daimler	Minerva
Berliet	Delaunay-Belleville	Metalurgique
Clement	F. L. A. T.	Mercedes
De Dion	Itala	Napier
Delahaye	Isotta Fraschini	Panhard
Renault	Rolls-Royce	and over thirty others

There are many important reasons why car owners are replacing wooden wheels with Dunlops.



TIME ECONOMY — Dunlops double tire mileage.

AUTOMATIC LOCK — Absolute protection against tire air attachment. Wheel stays on as it should. Never sticks in emergency.

Dunlop Wire Wheels may be fitted to any car in less than a day by your own chauffeur. No dismantling, & no loss of motor power on request.


SAFETY — All steel reinforced construction. Dunlops may bend under great impact but never collapse.

QUICK, EASY CHANGE — Dunlop wheels may be removed and replaced within 30 seconds.

DUNLOP WIRE WHEEL CORPORATION of America, 2128 Broadway, New York
 Pacific Coast Representatives: **AMERICAN EVER READY COMPANY, 1620 12th Street, San Francisco, California, U.S.A.**
 Sole Agents for Canada: **W. H. & A. G. Ltd., 100 King St. W., Toronto, Ont.**

Look for the Speeded Service Sign and the Dunlop Wheel

Specify Dunlop Wire Wheels on Your New Car



When ordering your new car, specify

DUNLOP

DETACHABLE WIRE WHEELS

Such as are used as Standard equipment on the best European cars and thereby bring Your car up to date LONG THE STANDARD OF EUROPE—NOW THE STANDARD OF AMERICA

EASY RIDING—As shocks caused by bumps in the road, sudden application of brakes or clutch are largely absorbed by the elasticity of an interwoven suspension constructed upon a mesh DUNLOP wheel.

TIRE SAVING—DUNLOP wheels add at least 50% to the life of a tire because they are lighter than wooden wheels; they absorb shocks and less tire wear occurs in turns; they reduce the tire heat, etc.

SAFETY—Many times stronger than wooden wheels, Any accident severe enough to demolish a wooden wheel would only bend a DUNLOP wheel.

QUICK TIRE CHANGE—DUNLOP wheels can be removed and replaced in 30 seconds. No remarkable tools. No heavy parts. Any lady can change DUNLOP wheels. They are interchangeable.

THE SERIALIZED LOCK Patented and used only on DUNLOP wheels—is a positive automatic locking device. It is proof against accident and car thieves. DUNLOP wheels can't come off accidentally. Look for this lock.

PRICE—Complete set, consisting of a wheel and a timer hole ready to attach to any standard automobile; 1 spare wheel, with dual tooling and tire pump, with ————— \$60.00

Dunlop Wire Wheel Corporation of America
 General Office: 1510 BROADWAY, NEW YORK, N. Y.
 Branches in Paris, Rome, Amsterdam, 2225 MARKET ST., 161 Folsom Street, San Francisco, Cal.
 Exeter, ENGLAND, GREAT BRITAIN, N. Y.

Write for new literature containing "E" containing full information.



Rudge-Whitworth
DETACHABLE Wire Wheels

The Best Wheel in Europe

Now made in the United States
 by the
STANDARD ROLLER BEARING CO
 PHILADELPHIA, PA.

fitted with
Houk QUICK DETACHABLE Rims

American car manufacturers are just beginning to feel the "wire wheel pressure." Buyers are demanding wire wheels because they have learned of their superior strength, their graceful appearance and their great tire-saving ability (in fact they increase the wear of the tires 70% by actual test).

George W. Houk Company
5001 LANCASTER AVENUE
PHILADELPHIA - - - PENNSYLVANIA

95. The British and European brand of Rudge-Withworth wire-spoke wheels landed on the American market, manufactured by the Standard Roller Bearing Company in Philadelphia. Advertisement published in *Automobile Trade Journal*, January 1913.



MR MARLIN-ROCKWELL INDUSTRIES MR

These famous drivers would not think of entering a race with any equipment other than

Rudge-Whitworth Wire Wheels

These highest grade of all wire wheels hold all records for speed at all distances and can be depended upon to "stand up" under the severest strains at racing speeds and to save all-important time by reason of their quick changeability made possible by their patented and unique locking ring.

The test to which wire wheels are put in a race of several hundred miles is not equalled by one hundred thousand miles of usual motoring service.

Note the added distinction given by Rudge-Whitworth Wire Wheels to the superior makes of cars that are equipped with them.

Manufactured by
STANDARD ROLLER BEARING COMPANY, Philadelphia
Controlled and Operated by
MARLIN-ROCKWELL CORPORATION
EXECUTIVE OFFICES 347 MADISON AVENUE NEW YORK CITY

Durant Howard Lewis Retsa Wilson De Palma L. Chevrolet Mulford G. Chevrolet Milton Vail Toft



MR MARLIN-ROCKWELL INDUSTRIES MR

THE distinctiveness of Rudge-Whitworth Wire Wheels enhances the appearance of the fine types of motors that are equipped with them.

Rudge-Whitworth Wire Wheels

are triple laced—thoroughly tested at every point, bearing far greater load-carrying strength than ever is necessary. The Rudge-Whitworth patented locking ring makes possible remarkably quick changeability and holds the wheel immovably and absolutely true the entire life of the car on which you use Rudge-Whitworth Wire Wheels.

Manufactured by
Standard Roller Bearing Company, Philadelphia
Controlled and Operated by
MARLIN-ROCKWELL CORPORATION
EXECUTIVE OFFICES 347 MADISON AVENUE NEW YORK CITY

OF BICYCLES AND CANNONS. The history of the British company Rudge-Whitworth goes back to 1869, when the engineer and mechanic Daniel Rudge started to manufacture bicycles. After the death of Rudge in 1880, the company merged with their competitor the Whitworth Cycle Company, creating Rudge-Whitworth which, over the years, incorporated motorcycles and automobile spare parts in their catalog. In 1905 they were already working on the detachable wheel and their patents for its manufacture were licensed in different countries. In the United States the rights were handled by the Marlin-Rockwell Corporation, originally a family-owned company specializing in the manufacture of revolvers and pistols. In 1915 it was recapitalized by an investment group from New York and during World War I became one of the largest manufacturers of guns and weapons, supplying the American army and Allied forces with their products. The license for manufacturing the Rudge-Whitworth wheel is an example of the diversification undertaken after the end of the war.

96. Advertisement in *Motor Age* magazine, January 1, 1920.

97. Advertisement in an American magazine, 1926.



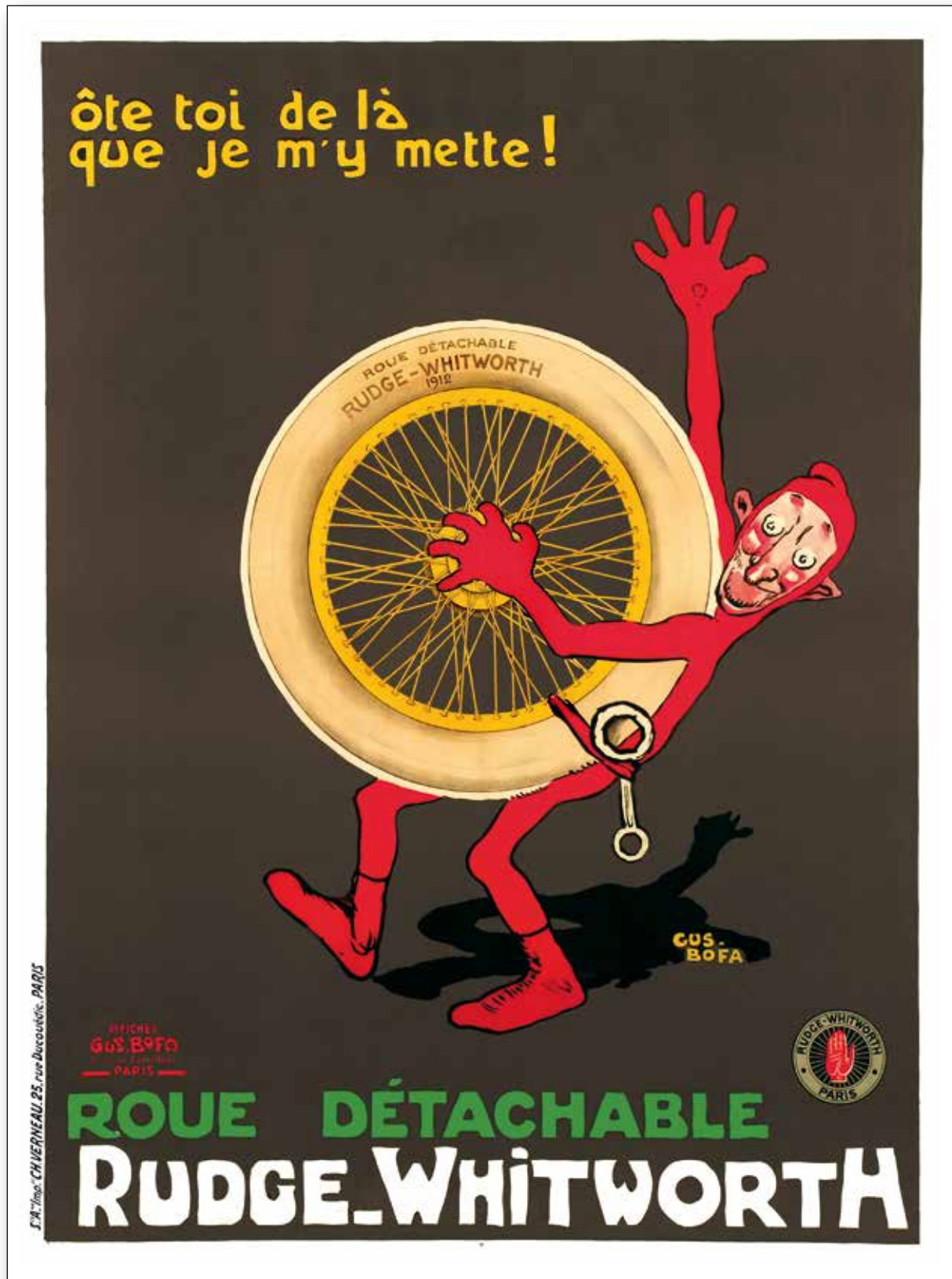
THE CRIMSON ELF.

Rudge-Whitworth wheels advertisements in France were created by the illustrator Gustave Blanchot "Gus Bofa" (1883-1968). Prolific author, graphic designer and illustrator, he was also linked to the development of satirical humorous press for his time. Bofa created a unique character portrayed in the company's advertisements from 1912 to 1917. It was a reddish elf who was willing to help the motorist in the complicated (or simple?) task of replacing the damaged wheel.

98. Advertisement published in *L'Illustration*, June 28, 1913.

99. Advertisement published in the magazine *Automobilia*, *L'Automobile Aux Armées*, special issue for Christmas 1917.





EXPORTING. In France the detachable wheels, presumably made in Britain, were represented by the Roues Détachables Rudge-Whitworth joint stock company, with administrative headquarters and repair shops in Paris. The slogan pronounced by the advertising mascot of the product was very eloquent: "Get out of there, I'm getting in!"

100. Lithograph poster, c. 1912. 120 x 160 cm. Printer: Charles Verneau, Paris. Signed by Gus Bofa.



THE PNEUMATIC TIRE LIFESAVER. The Roue de Secours Hall [Hall Spare Wheel] was a spare wheel made up of a pneumatic tire mounted on a metal rim. Its fastenings allowed it to be fitted on the outside, parallel to the fixed rim of the car wheel where the damaged tire was located. Thus, without dismounting the wheel and for short journeys, it could be utilized until reaching one's destination. It had been manufactured in Great Britain since 1909 and was also commercialized in the French market. The poster shown above portrays the faded worn and damaged tire being aided by the new Hall pneumatic tire and rim.

101. Advertising lithograph poster for Hall spare wheels, 1911. Printing house G. Delattre & Cie, Paris.



HOME MARKET.

For the French market during the first and second decade of the 1900s, the brands of detachable wheels—*rue amovible* or *rue détachable*—included imported brands such as Dunlop or Rudge-Whitworth together with similar products offered by local companies. This was also the case of the Roue Métallique Gallia—wire-spoke wheels commercialized by P. Barthelat—shown in the postcard at the top of the page, knocking out an obsolete artillery wheel. On the left, the promotional postcard shows how the Barthelat wheel could fit with different bands from the same manufacturer: pneumatic tires, non-skid tires and solid rubber tires.

102. Gallia advertising postcard, 1912.

Signed by Raoul Vion (? -c. 1940).

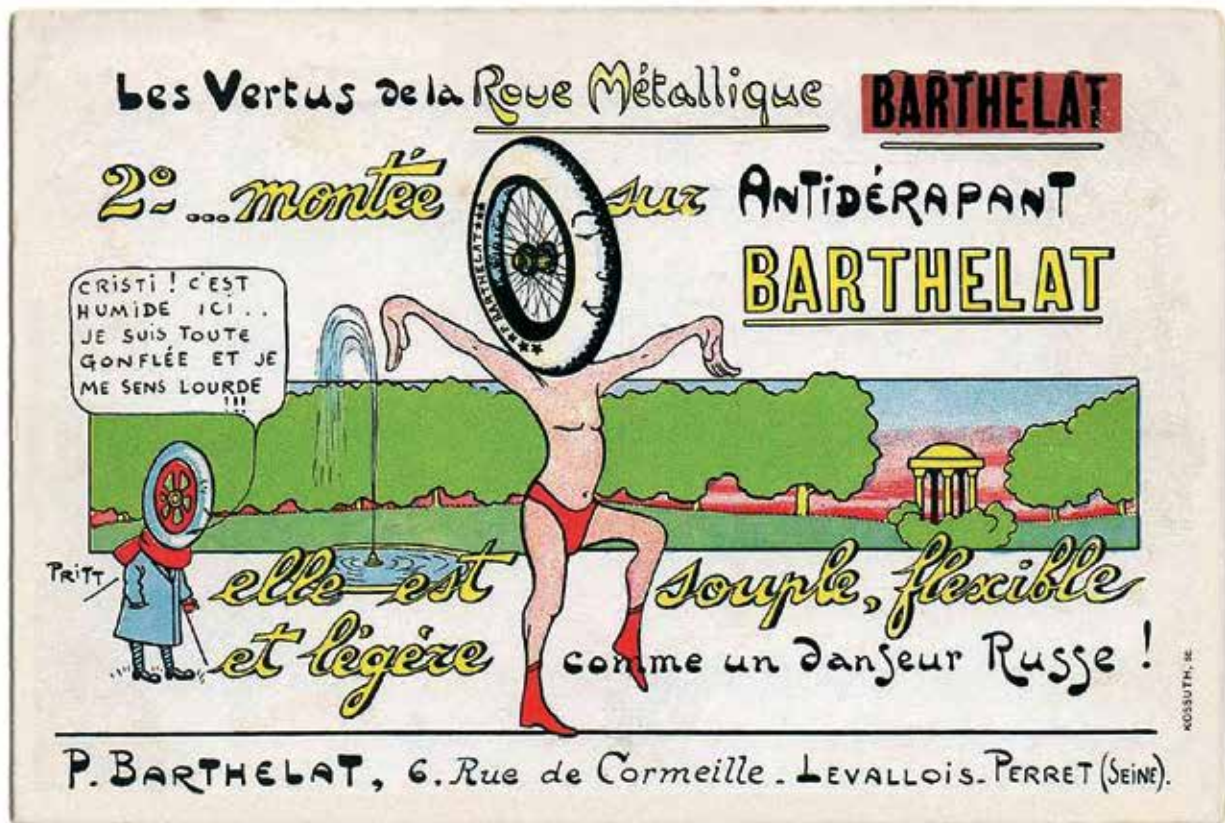
103. Stamp promoting the Gallia wheel, 1913.

Printed by Delattre et Cie., Paris.

104. Advertising postcard for Barthelat wheels

and tires, c. 1914. Printed by Pichot, Paris.

Illustrated by Jehan Testevuide (1873-1924).

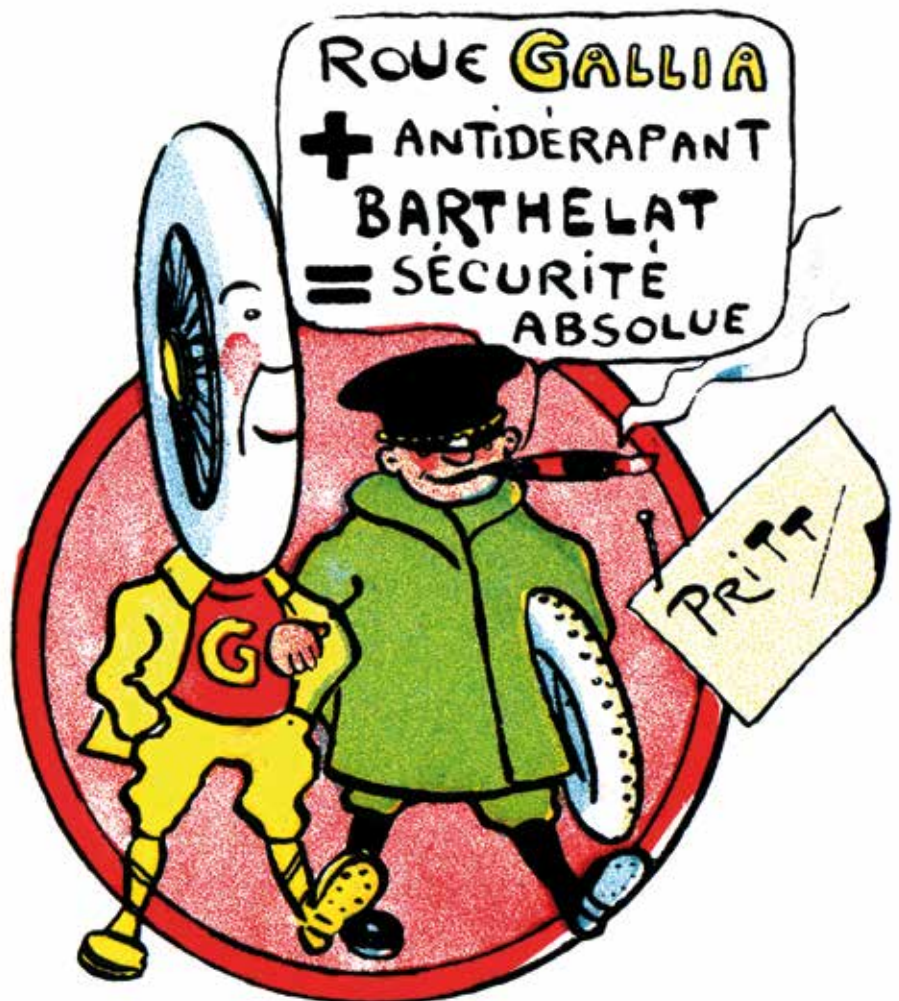


THE VIRTUOSO WHEEL.

Since 1913 the Gallia metal wheel was manufactured and commercialized directly by Etablissements Gallia, a joint-stock company with an office located at 67 Boulevard Bessières in Paris. For their part, the P. Barthelat firm went on to manufacture their own metal wheels in addition to non-skid covers, pneumatic tires and solid rubber tires at their production facilities located in Levallois-Perret.

That is why the postcards of the series "Les Vertus de la Rue Métallique" published by P. Barthelat were recycled, bypassing the previous reference to the Gallia wheel and printing the name of Barthelat in its place.

105-111. The six promotional postcards of the series "Les Vertus de la Rue Métallique" advertising the wheels Gallia / Barthelat, 1913. Printed by Kossuth, Paris. Illustrations signed by Georges Pritt.



Les Vertus de la Roue Métallique

BARTHELAT

4°...

ANTIDÉRAPANT BARTHELAT

J'AI DU ME CASSER UN RAYON EN DÉRAPANT... JE SUIS TOUTE BRISÉE !...

roule longtemps, adhère mieux, consomme moins.

P. BARTHELAT, 6, Rue de Cormeille, LEVALLOIS-PERRET (SEINE).

TÉL. : 575.45

Les Vertus de la Roue Métallique BARTHELAT

1° elle économise les

UN DE PLUS

STOCK POUR MOINS DE 5000

pneus et l'argent !

P. BARTHELAT, 6, Rue de Cormeille, LEVALLOIS-PERRET (SEINE).

Les Vertus de la Roue Métallique BARTHELAT

ENCORE UNE DE MES SOLIDES QUI VIENT DE RENDRE SON MOUVEMENT !

ELLE SE VOIE FAIBLEMENT !

3° elle est propre, moderne & élégante.

P. BARTHELAT, 6, Rue de Cormeille, LEVALLOIS-PERRET (SEINE).

TÉL. : 575.45

Les Vertus de la Roue Métallique BARTHELAT

5° L'utile Maladresse et...

AVEC UNE Roue Métallique BARTHELAT, PLUS FIN, ANTIDÉRAPANT BARTHELAT, ON NE PEUT PAS DÉRAPER !

TEL. : 575.45

... la **BONNE** **ADRESSE !**

Les Vertus de la Roue Métallique

6°

GALLIA

et maintenant... voilà la Roue **GALLIA** lancée !

P. BARTHELAT, 6, Rue de Cormeille, LEVALLOIS-PERRET (SEINE).

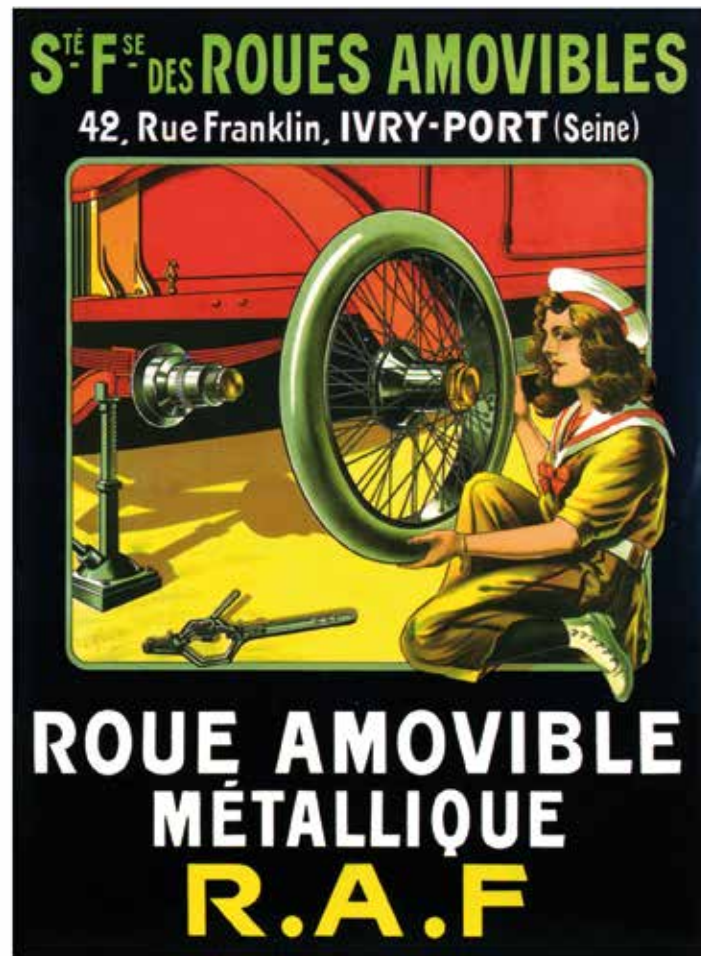


THE R.A.F. METAL WHEEL.

In addition to Gallia and Barthelat, other well-known brands were the Hardie wheel of the Aug. C. Gomes & Cie. and the R.A.F. metal wheel manufactured by the Société Française des Roues Supplées under license with Dunlop. The image above shows a unit of military ambulances from the brand Panhard-Levassor, equipped with R.A.F. metal wheels and ready to serve in the Great War. The *roues amovibles* allowed for simple assembly and disassembly, as depicted in the poster on the right, in which a young lady is able to manipulate and change it without major problems.

112. Advertising poster for R.A.F. wheels and their use in World War I, c. 1916.

113. Lithograph R.A.F. wheel poster. 120 x 157 cm. Printer: Frossard, Courbet et Cie, Paris. Signed by G. Marnier. c. 1920.



October 28, 1914.

THE HORSELESS AGE

19

Tires Changed Under Fire

Spares which are unnecessary in civil life are indispensable for active service, but not many cars had the necessary space for carrying these. Detachable wheels are a valuable acquisition. On one occasion when drawn up for a tire change we were fired on by German stragglers hiding in the woods behind the Allies' lines. The change was made while shots were flying. Under such circumstances there was a wonderful amount of satisfaction in knowing that the change would occupy but a few seconds, for my car was fitted with detachable wire wheels. Electric system is indispensable.

what the... correspondent says

For Rapid Tire Changes and Real Wheel Strength Use


HOUK Detachable Wire Wheels

HOUK MFG. CO. of Buffalo, N. Y.
New York Branch, Broadway and 58th Street


In writing to advertisers please mention THE HORSELESS AGE.

HOUK WIRE-SPOKE WHEELS. In the advertisement shown here for the detachable wire-spoke wheels manufactured by the American company Houk, an alleged newspaper excerpt explains the vicissitudes of an American war correspondent—in 1914 the United States maintained itself out of the conflict—deployed to the European front. The text narrates how the speed in changing a damaged wheel, being under fire from German soldiers, was key to be able to continue the route without suffering losses.


114. Advertisement published in the motor industry magazine *The Horseless Age*, October 28, 1914.



"The new standardized truck equipped for bad weather."
—*The Scientific American*, Nov. 3, 1917.




"This U. S. Marine Corps ambulance will carry eight patients."
—*The Commercial Car Journal*, Jan. 8, 1918.



"Many of the Quartermaster's trucks have previously seen severe service in Mexico."
—*Leah's Weekly*, Jan. 5, 1918.

WHEELS

for MOTOR VEHICLES



"This truck kitchen will serve three hot meals a day to 2000 men."
—*Collier's Weekly*, Dec. 29, 1917.

"War chariots of the American Army"

(Note the wood wheels)

The accompanying illustrations are taken from recent issues of several well-known magazines. They show a few of the many purposes for which motor vehicles are being used by every branch of the service.

These illustrations also testify definitely and conclusively to the high appreciation of the Government for WOOD wheels.

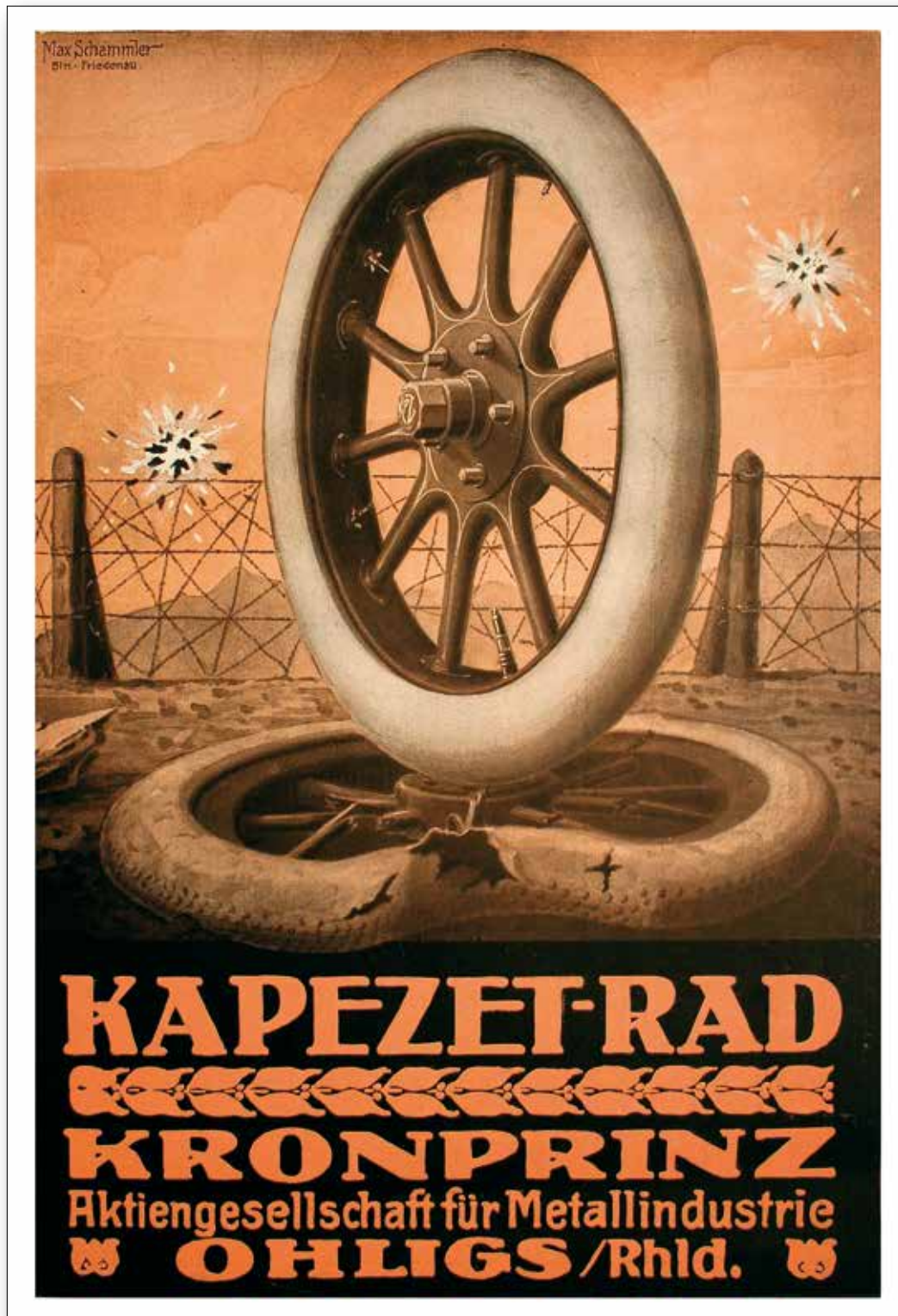
Motor transports, armored cars, ambulances, camp kitchens—and all manner of vehicles, large and small—are going forth equipped with WOOD wheels to do the strenuous work of war.

Wood wheels have been selected for these cars because the experience of engineers extending over many years has proved that they are unequalled for any service where strength, elasticity, durability and ease of repair are essential.

**AUTOMOTIVE WOOD WHEEL
MANUFACTURERS ASSOCIATION**
105 NORTH 13th ST. PHILADELPHIA

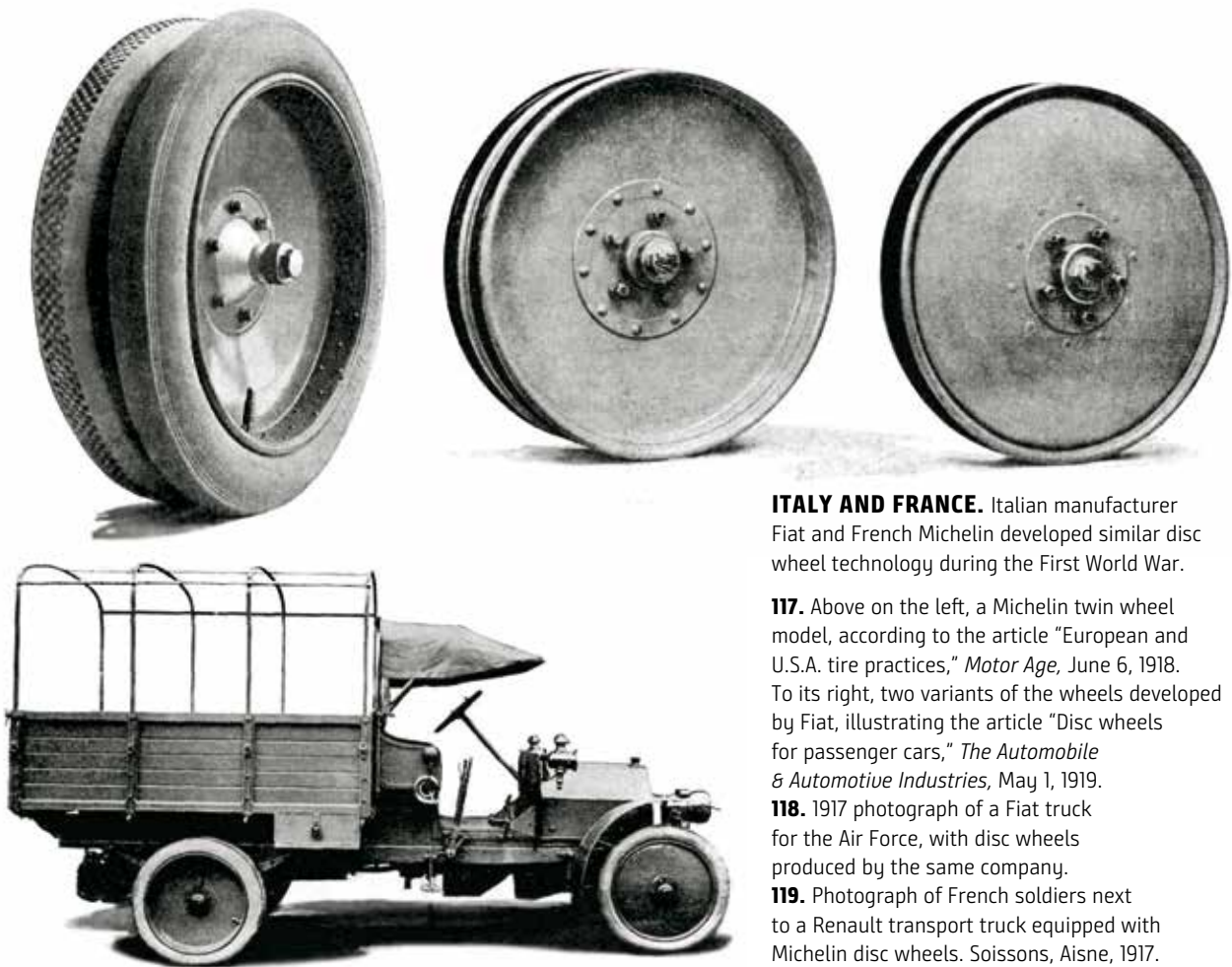
ARTILLERY WHEELS. The advertisement by the Automotive Wood Wheel Manufacturers Association, shown above, aimed to reinforce the reasons justifying the use of the artillery wheel. This was done by photographs published in the press, which showed U.S. Army vehicles—transport trucks and vans, ambulances and truck kitchens—equipped with this technology, a demonstration of its effectiveness and especially its efficacy under the hardest conditions.

115. Advertisement published in the motor industry's monthly magazine, *Automobile Trade Journal*, May 1918.



INDESTRUCTIBLE WHEELS. The above image is an advertising poster for the wire-spoke rim wheels manufactured by the German company Kronprinz, founded by Rudolf Kronenberg and Carl Prinz in 1897. The illustration depicts the supremacy of metal over wood when serving as structural material for wheels that equipped military vehicles on the battle fronts. The Kronprinz AG für Metallindustrie de Ohligs, together with the city of Solingen, started their activities as an industry dedicated to the manufacture of metal products—tubes, profiles, machinery parts—made of iron and steel. Soon they directed part of production to the booming sector of bicycles and later, also to the supply of wheels and rims for the emerging market of motorcycles and automobiles. In 2001 they were acquired by Michelin, and dedicated entirely to manufacturing the range of steel rim wheels for the multinational company.

116. German lithograph poster, 1916. Signed by illustrator and poster artist Max Schammler (1868-?).



ITALY AND FRANCE. Italian manufacturer Fiat and French Michelin developed similar disc wheel technology during the First World War.

117. Above on the left, a Michelin twin wheel model, according to the article "European and U.S.A. tire practices," *Motor Age*, June 6, 1918. To its right, two variants of the wheels developed by Fiat, illustrating the article "Disc wheels for passenger cars," *The Automobile & Automotive Industries*, May 1, 1919.

118. 1917 photograph of a Fiat truck for the Air Force, with disc wheels produced by the same company.

119. Photograph of French soldiers next to a Renault transport truck equipped with Michelin disc wheels. Soissons, Aisne, 1917.





FRENCH ADVERTISING. Michelin devoted much of their advertising efforts in promoting the use of the *roue amovible*, becoming one of their star products along with the new Cablé pneumatic tire that soon replaced the prematurely obsolete R.U.-Roulement Universal.

120. Lithograph poster, 48 x 74.5 cm, 1921. Illustrated by Albert Philibert.

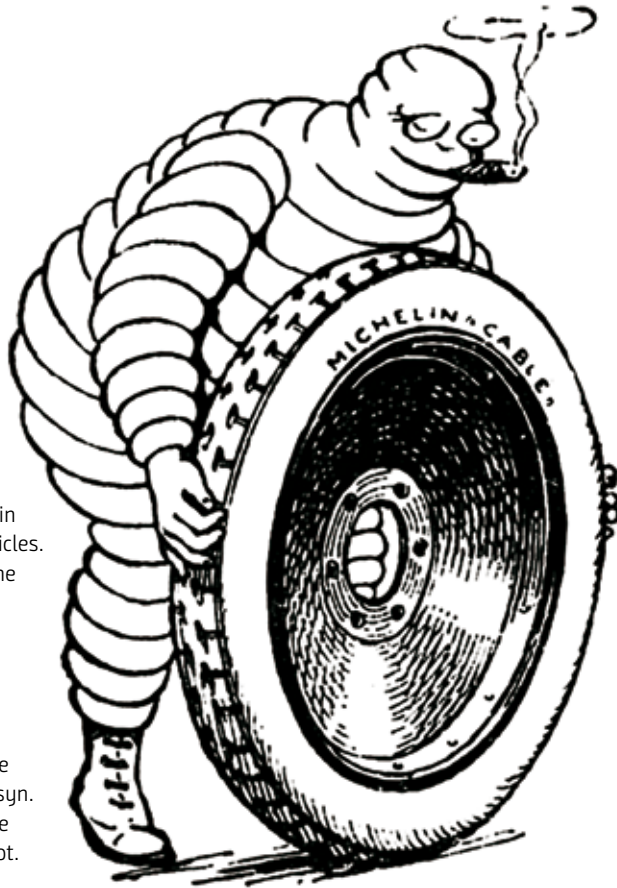
MICHELIN DISC WHEELS FOR BATTLE AND FOR DAILY USE.

As the text in the image immediately below shows, the Michelin wheel surpasses all the tests that it is subjected to, in spite of the rough terrain and the worst conditions, as amply demonstrated in military battle scenes where it equips military vehicles. In addition, as explained by the second image at the bottom of the page, its ease of cleaning, assembly and maintenance—so much so that even a young girl is able to handle it—makes it the ideal choice to equip automobiles for civilian use.

121. Advertising vignette. Michelin Studio c. 1920.

122. Advertising vignette published in the magazine *L'Illustration*, July 5, 1919. Illustrations by E. L. Cousyn.

123. Advertising vignette published in the magazine *L'Illustration*, April 16, 1921. Illustrations by G. Hautot.



Pratique et solide, la roue Michelin n'a jamais lâché le flegme en pleine bataille. Elle a tenu, sur les pistes défoncées des champs de bataille.

LE 12^e SAMEDI DE MICHELIN

PETITE ROUE PAS CHÈRE !

La Roue Michelin

Aujourd'hui, chers Samediistes, ma petite Confédération hebdomadaire participe de la Cte... confédération : elle roulera en effet sur la roue, à laquelle mon pays Michelin a donné son nom.

Vous parler d'elle, c'est encore vous entretenir du Tourisme des Champs de Bataille, car elle a contribué à rouler les Boches, en roulant sur les voitures d'état-major, sur les autos de reconnaissance de l'artillerie, sur les canonniers, sur tous les véhicules enfin qui ont traversé tous les cahots, bondi sur toutes les routes marmelades, et bu tous les obstacles et qui, de sa part, n'ont jamais connu la panne.

La roue Michelin a fait ses preuves en triomphant de toutes les épreuves... à ses brèves et piteuses !

C'est une vieille amie du front. Aussi le touriste, qui ne doit point s'attendre à trouver dans les

régions dévastées par la guerre des pistes de voitures avec vitres brisées, d'épaves bien des ennemis et bien des pannes (même Miquet !), en maintenant sa voiture de bonnes et solides roues Michelin.

La Roue Michelin, c'est la Roue chère par excellence : elle a du galbe et de l'allure ; elle ajoute à l'élégance des plus belles carrozeries. C'est la Roue simple entre toutes, puisqu'elle est amovible au moyen de 4 ou 6 boulons seulement.

C'est la Roue solide qui, pendant la guerre, a tenu sur tous les fronts, — la Roue qui a bien tourné !

C'est la Roue pratique qui dévore à la fois l'espace et le temps, car un enfant peut le remplacer en trois minutes et la nettoyer en moins de temps encore.

C'est l'amie du pneu, dont elle prolonge la vie en le refroidissant.

Enfin — ce qui ne gâte rien ! — c'est encore Elle qui égale la machine marquée. Mon vieux ami Sandis Hailleur l'a prouvé dans une formule législative !

Ces jolies petites roues Michelin réalisent l'idéal des petites roues pas chères ! Leur devise est : « Bien marcher et bien marcher ! »

BIBENDUM.

Simple et chic, la roue Michelin ajoute à l'élégance des plus belles carrozeries en leur donnant l'air et la fois légère et puissante qu'elles méritent.

Le montage facile de la Roue Michelin.

Vous avez l'intention d'acheter une voiture ?

Exigez qu'elle vous soit livrée

sur ROUES MICHELIN.

Vous vous en félicitez lorsque vous aurez apprécié la simplicité de leur montage et de leur entretien, la parfaite sécurité qu'elles vous donneront.

Vous serez sûr, en effet, de pouvoir toujours les démonter aisément. Vous serez sûr aussi qu'elles ne se démonteront jamais toutes seules quand vous roulez, et qu'elles "tiendront", si vous heurtez quelque obstacle.

Mais, peut-être avez-vous déjà votre voiture et n'est-elle pas montée sur Roues Michelin ? Nous en causerons Samedi prochain.

Le nettoyage aisé de la Roue Michelin.



THE WHEEL OF VICTORY.

The characteristic pose of Bibendum lifting the detachable disc wheel victoriously as if it were a trophy—and thus showing its lightness and manageability—was repeated profusely in different advertising media and in the press advertisements for the firm.

124. Detail of full page advertisement on the back cover of *La Petite Illustration*, 1920. Signed by Georges Hautot.

125. Cover page of publicity pamphlet, c. 1920.

Illustration by E. L. Cousyn.

126. Back cover of a Michelin road map, c. 1924. Illustration by Georges Hautot.



THE DYNAMIC DUO.

The French illustrator Henri Genevrier (1881-1951), whose artistic name was Grand'Aigle, contributed his particular vision of the mythical universe of Bibendum. In the poster shown above, the mascot appears as a modern-day Mercury with winged feet, moving full speed next to the new Michelin detachable wheel. The scene introduces a new character, Bibendum's faithful pneumatic companion dog, who follows the rhythm of his master. The canine mascot was shown in this unique appearance, and recovered almost eighty years later—in a TV advert launched in 2004 for the American consumer. Later it was adapted to the form of a promotional stuffed animal and resin figure, always accompanying Bibendum, as part of publicity campaigns.

127. Poster signed by Grand'Aigle, 1925.

128. Illustration of the back cover of a Michelin Road Map (French), 1925.

129. Illustration of the back cover of a Michelin Road Map (Spanish), 1925.





THE WHEEL AND THE STAMP.

Another of the advertising media on which images of the Michelin wheel were portrayed included promotional stamps—known as poster stamps or cinderellas—, authentic miniature posters that displayed the product and which traveled glued to letter envelopes and package wrappers.

130. Various promotional stamps issued by Michelin between 1923 and 1927.



Flasques LUMEN

Brevetés
POUR ROUES À RAYONS



**TOUS LES AVANTAGES
DE LA ROUE À RAYONS**

**LE CHIC ET LA FACILITÉ DE NETTOYAGE
DE LA ROUE À VOILE PLEIN**

INSTANTANÉMENT AMOVIBLES

Adoptés par les principaux constructeurs de voitures de Luxe

EN VENTE PARTOUT - NOTICE FRANCO SUR DEMANDE

J. LACOSTE. Constructeur
28, Boulevard de Strasbourg. PARIS (X^e)




**MODERNISEZ
ET
EMBELLISSEZ
VOTRE VOITURE
en équipant vos roues
avec les**

Flasques LUMEN

nouveaux dispositifs brevetés
permettant d'adapter
nos Flasques
sur toutes les roues

**SILENCIEUX
INSTANTANÉMENT AMOVIBLES**

EN VENTE DANS TOUTES BONNES MAISONS
NOUVEAUX PRIX EN BAISSE
Notice franco sur demande

J. LACOSTE Constructeur
28.30, Boulevard de Strasbourg. PARIS XI^e

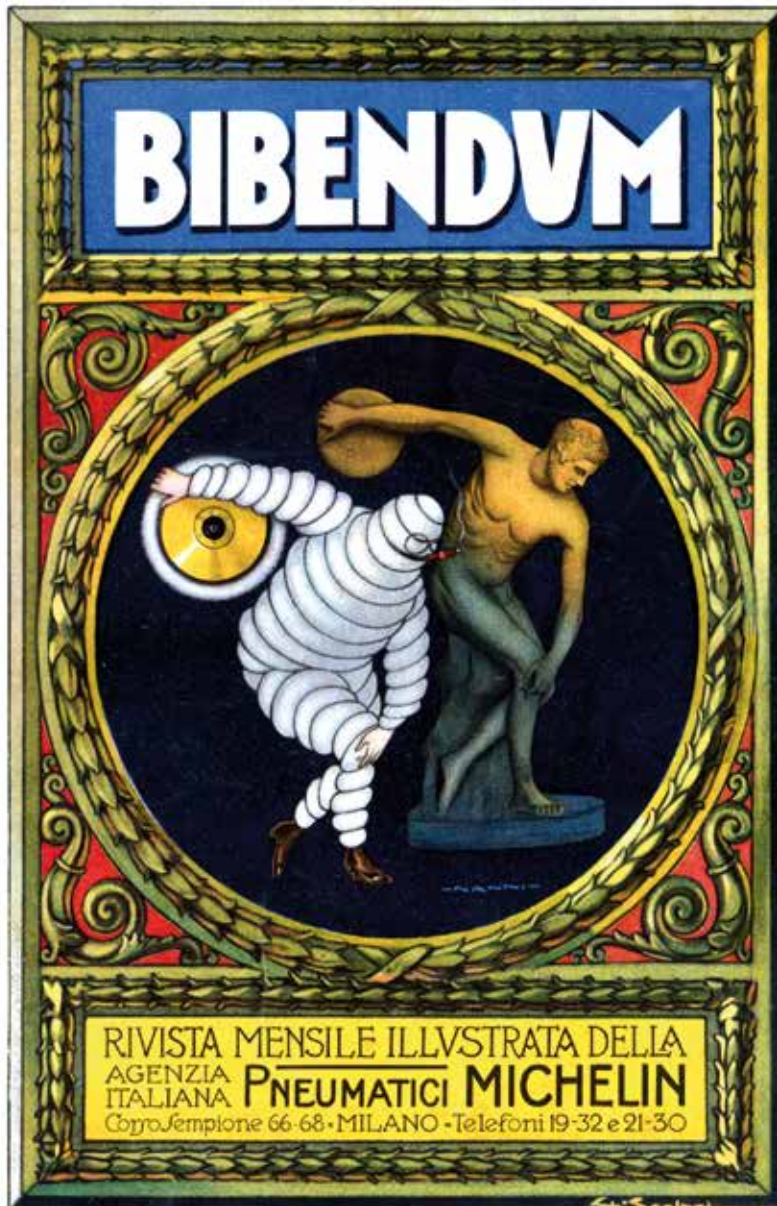


LOOK ALIKES. One of the possibilities offered by certain manufacturers was to attach a hubcap to the most economical and lightest wire wheels to protect them from the dirt, dust and mud from the roads. During the early part of 1925 in France the popular brand of *flasques* [hubcaps] known as Lumen was launched by the firm J. Lacoste in Paris. As stated in a news item covering the presentation of the product in the French magazine *La Nature, revue des sciences et de leurs applications à l'art et à l'industrie*, published in the first half of 1925, "(...) thus, a R.A.F. or Rudge-Whitworth wheel looks like a Michelin wheel."

131-132. Advertisements in the magazine *L'Illustration*, 1926 and March of 1927. Illustrations by Henry Lebeuf.



Novembre - Dicembre 1921 - Serie II^a N.2 - Conto corrente con la Posta

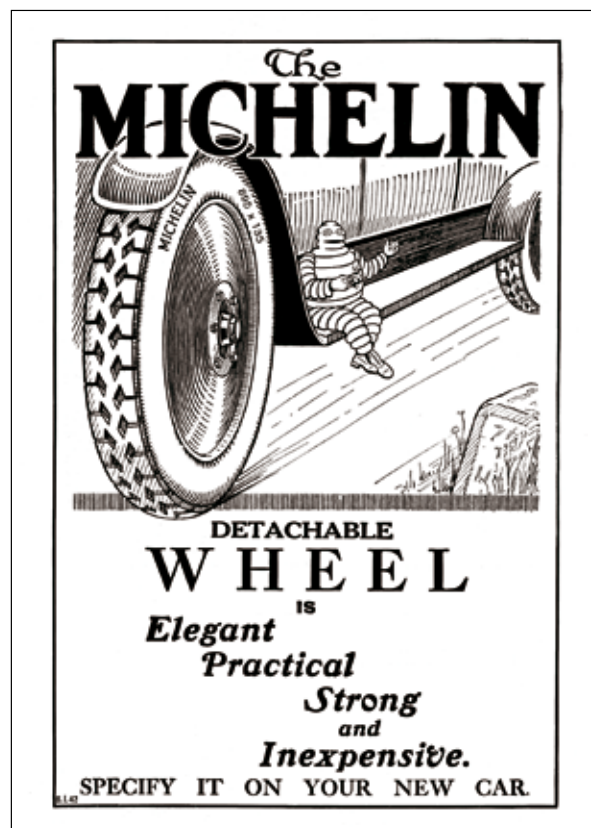


DISC OF SUCCESS.

The Michelin disc wheel, competing with technologies similar to the one developed by the Fiat firm, was also present in the Italian market. The factory of the French company established in Turin presumably satisfied the needs of the local market and the exports to other European countries. The image on the left shows the cover of the magazine *Bibendum*, portraying the mascot holding a disc wheel in a humorous tone. The character, transformed into an athlete, imitates the pose of Myron's classic disc thrower.

133. Interior illustration published in the Italian corporate magazine *Bibendum*, March-April 1922. Illustrated by Carlo Biscaretti di Ruffia (1879-1959).

134. Cover of the magazine *Bibendum*, November-December 1922 issue. Illustrated by Nino Nanni (1888-1969).



ON ALL FRONTS. Throughout the year 1920 Bibendum multiplied his appearances in the British press to promote the Michelin detachable wheel, in both newspapers and magazines. The illustrations always appear unsigned.

135. Advertisement in *The Sphere*, August 14, 1920. **136.** Advertisement in the magazine *The Graphic*, December 18, 1920.

137. Advertisement in *The Graphic* magazine, June 26, 1920. **138.** Advertisement in *The Graphic* magazine, July 24, 1920.



*In the
Eyes
of
Motordom*

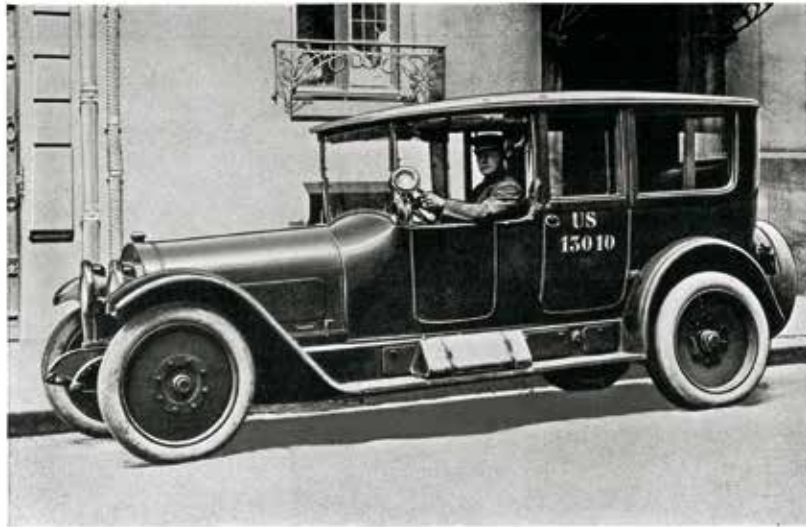
THE
MICHELIN
COVER, TUBE
and WHEEL
make the Ideal Combination.

Get your Agent's Opinion.

B.1.38

MOTOR DOMAINS. The shocking image of Bibendum, whose eyes are made up of disc wheels, serves to illustrate the motto "In the eyes of Motordom" (meaning "For the eyes of the motorist" or "in the eyes of the motor world"). The inner tube plus the cover, along with the detachable wheel, form a perfect combination for the motorist.

139. Advertisement in the English magazine *The Motor*, June 30, 1920.



Wheels For the General

The war-torn, shell-pocked roads of France, in World War I, were the direct cause of the development of the steel automobile wheel by The Budd Company. The first ones were installed on General Pershing's staff cars.

The need for better products, however, does not have to be dramatic, to spark Budd's engineering curiosity and inventiveness.

Nobody wanted the all-steel automobile body until Budd invented it, to provide greater safety and open the floodgate of mass automobile production.

There was only bleak and silent depression when The Budd Company brought new life to the business of railway passenger carrying by creating the all-stainless steel, streamlined train.

Railroad interest in self-propelled railway passenger cars ranged from apathy to antagonism, because of past experience, until Budd introduced RDC, the stainless steel rail diesel car fully qualified for main line, branch line, commuter, long haul and short haul service, that attracts traffic and reduces operating costs substantially.

Constant scrutiny of the needs of the day, and of the future, and search for better ways to satisfy them, are Budd's daily life. It is a practice which has brought worldwide acceptance of Budd products and methods, and has changed the course of many industries. The Budd Company, Phila., Detroit.

Budd



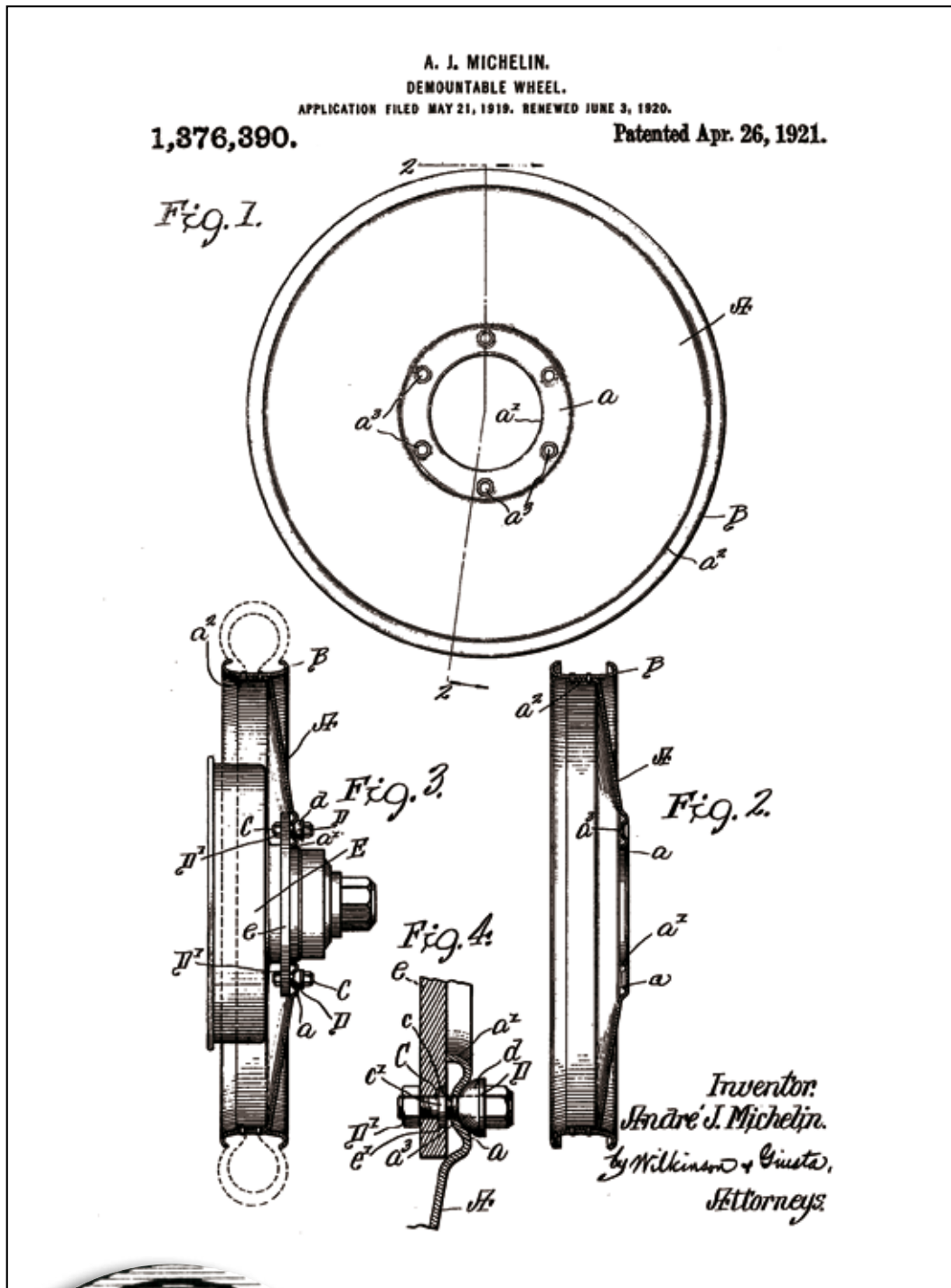
WHEELS FOR THE GENERAL.

One of General Pershing's official limousines was a 1917 model from the Locomobile firm, equipped with twin wheels in the rear and individual front-mounted wheels, to navigate the uneven roads of the French front. In 1919, after the armistice was signed, he was given a new car—with rounded lines, more stylized and modern—equipped with simple disc wheels built by the Budd company. The Locomobile company took advantage of this fact for publicity and it turned it into a selling point—for example in the advertisement published in the magazine *Motor* in March 1920—, as Budd did thirty years later with the advertisement shown above.

140. Advertisement for Budd Company in the monthly *Fortune* magazine, July 1950.

141. Image of the limousine built in 1919 for General Pershing's use.

142. Pershing's first Locomobile limousine, built in 1917 for use in the field.



THE PATENT.

The American patent for the *roue amovible* solicited by André Jules Michelin, who signed as its inventor, was deposited for evaluation in May 1919 and finally granted two years later. Following the agreement reached with the Budd Wheel Corp. for the production of this technology in the United States, the "Budd Michelin" seal was incorporated into the disc wheel manufacturing process. On the left, the appearance of the shaft socket located in the center of the wheel's exterior, with the design of the "Budd Michelin Wheel" emblem.

143. First illustrated page, of the three that make up the American patent of the "Demountable Wheel."

144. Emblem extracted from a catalog of the period.

MICHELIN

Disc Wheels



Announcement

We take pleasure in announcing that we have secured the sole rights for the manufacture and sale, in the United States, of the Michelin Disc Wheel. This wheel is already well known to hundreds of thousands of Americans who observed its unqualified success on the battlefields during the Great War on thousands of army trucks, ambulances, staff cars and other army vehicles. This wheel is not an experiment in any sense, as it has been tested for years and its great sturdiness proved in the most exacting service.

8 Reasons Why Michelin Disc Wheels Are Superior to All Others

- 1 They add distinction to every car—large or small—in keeping with modern attractive design.
- 2 They are lighter than other wheels. No heavy automobile can carry extra or double loads.
- 3 Their smooth grooves prevent injury in skidding conditions of collisions. They never break.
- 4 They are easier to clean and they stay clean longer. They take the only complete maintenance.
- 5 They are absolutely silent. Nothing to get out of motor running in tunnels, nor up or down.
- 6 They are disc for reflecting heat. The flat wheel has over 100 sq. ft. of reflecting surface.
- 7 They make the steering easier. Just leave the line at the controls, and the disc wheel will.
- 8 They help the job of a car, giving it the appearance which is its most single offer.

Wishing to give our automobile manufacturers and the motoring public generally the utmost in advanced wheel equipment, we have installed in our extensive plants all the needed special machinery to manufacture Michelin Wheels in very large quantities.

Inquiries are solicited and we are ready to supply new cars. Write and pay you.

BUDD WHEEL CO.

Philadelphia

MICHELIN AND BUDD.

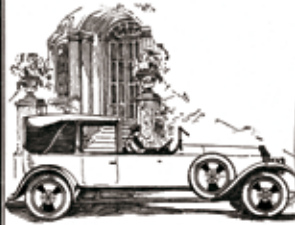
During 1920, the year of the product's launch, disc wheels manufactured by the Budd Wheel Corp. were intensively advertised in newspapers, generalist magazines and specialized motor world press, in local, state and national dissemination campaigns, always under the Michelin brand.

145. Full-page advertisement published in *The Boston Sunday Globe*, March 14, 1920.

146. Full-page advertisement published in *The Detroit Free Press*, July 15, 1920.

MICHELIN

Disc Wheels



Distinction

As the country glides, the hands along the motor trails, on the highways, and show signs of the great motorage for miles—motor cars nearly equipped with Michelin Disc Wheels.

What a thoroughbred air these newest wheels impart to a car!

Their rugged grooves, their beauty of form and color, add the final note to complete their refinement of appearance which marks the motor car of distinction.

No cumbersome attachments to mar the graceful sweep of their lines. No spokes to reflect the mud and dust of the highway. Instead, a single, solid disc of steel—in brief a thing of beauty—which hides the mighty underbody of the car.

And Michelin Wheels, in spite of their tremendous strength, are lighter than wheels of wood or wire.

No matter what your next car may be, specify Michelin Disc Wheels.

Seven Other Reasons Why Michelin Disc Wheels are Superior

- 1 They add distinction to every car—large or small—in keeping with modern attractive design.
- 2 They are lighter than other wheels. No heavy automobile can carry extra or double loads.
- 3 Their smooth grooves prevent injury in skidding conditions of collisions. They never break.
- 4 They are easier to clean and they stay clean longer. They take the only complete maintenance.
- 5 They are absolutely silent. Nothing to get out of motor running in tunnels, nor up or down.
- 6 They are disc for reflecting heat. The flat wheel has over 100 sq. ft. of reflecting surface.
- 7 They make the steering easier. Just leave the line at the controls, and the disc wheel will.
- 8 They help the job of a car, giving it the appearance which is its most single offer.

Manufactured and sold in the United States exclusively by

BUDD WHEEL CORPORATION

Philadelphia, Pa.

At The Auto Show
Michelin Disc Wheels
For Any Car From
Cadillac To Ford

*See
The
Michelin
Man
Perform
At
The
Show.*

THROUGHOUT the world war Michelin Disc Wheels did heroic work on thousands of cars, ambulances, trucks and other army vehicles. In the front of battle, over shell torn roads, on lines of communication — everywhere these sturdy wheels met the severest tests and proved themselves superior to all others in the essentials of safty, strength, simplicity and ease of operation.

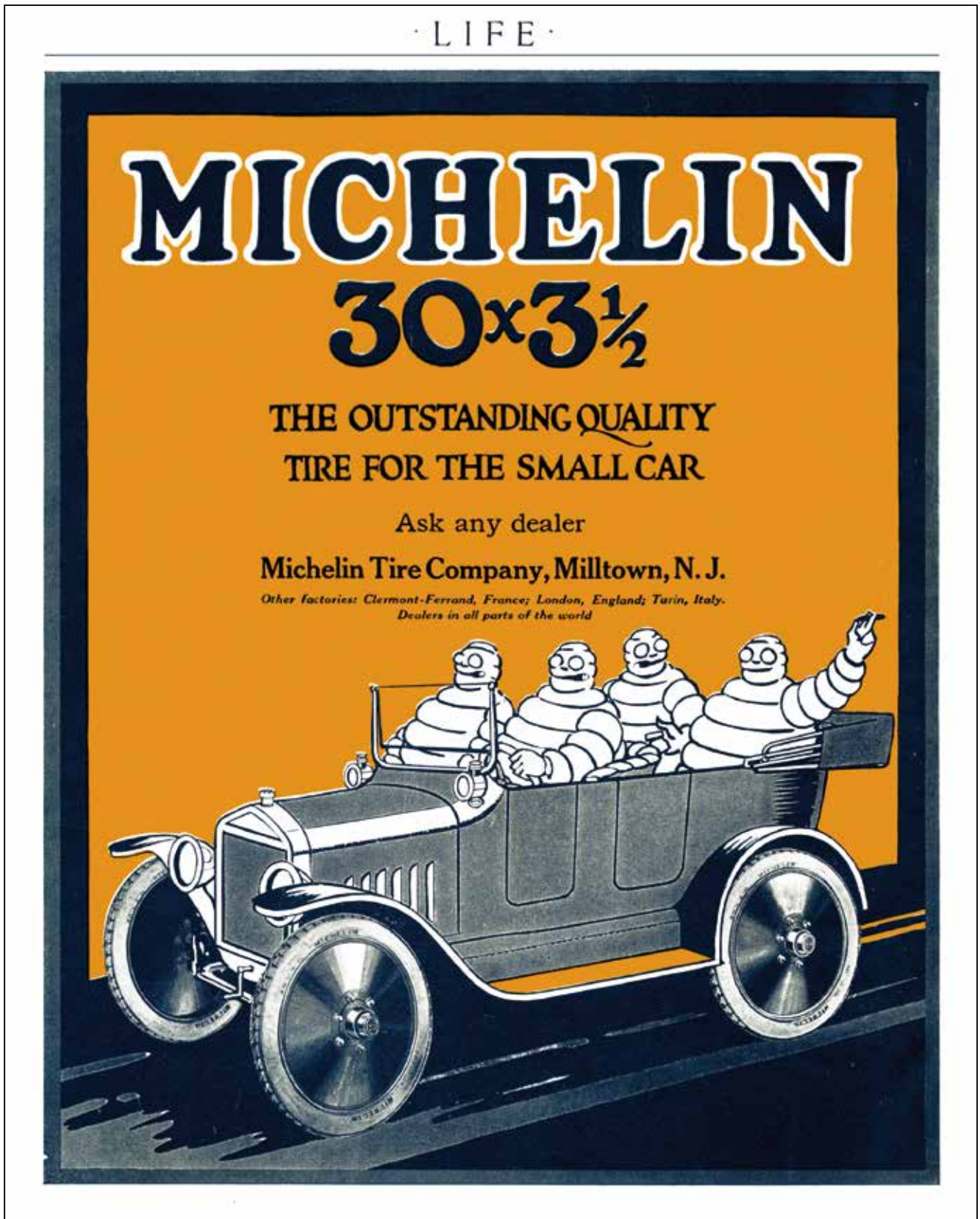
Booth 5A — Decatur Auto Show
March 3, 4 and 5

Michelin—TIRES—United States
ELDER & CONNARD

Vulcanizing — Repairing — Oils — Greases — Accessories
214-218 North Franklin Street

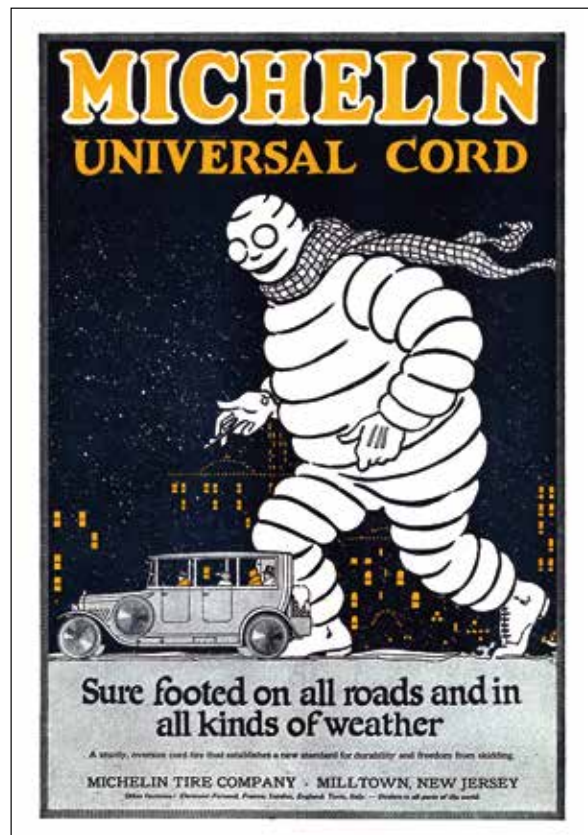
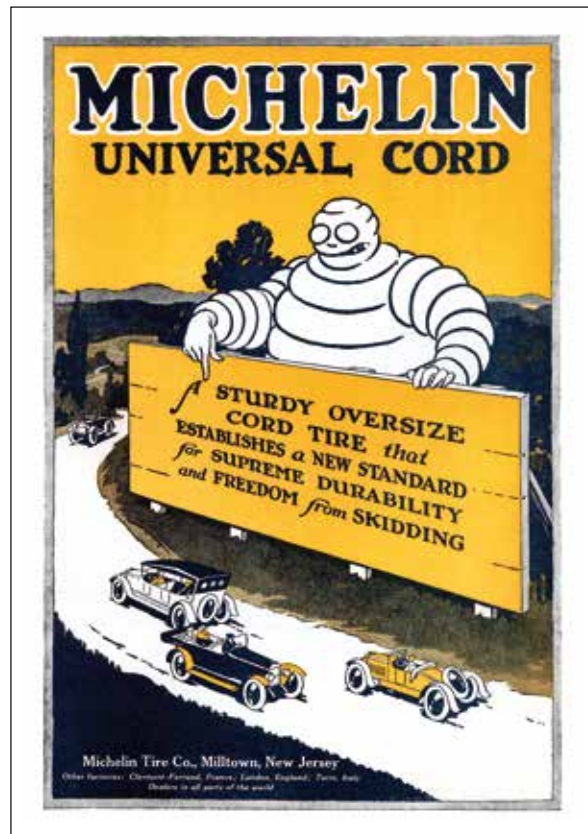
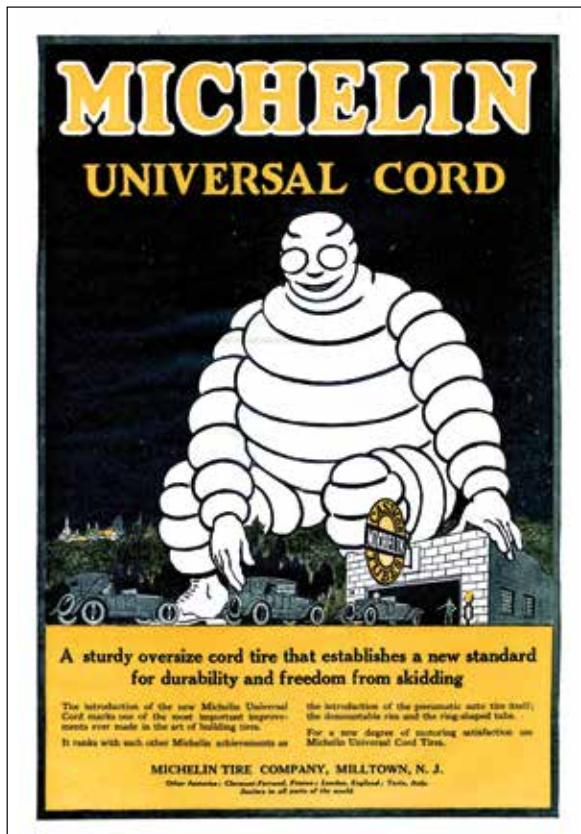
RATIONALE. In the above image, the recounting of the service provided by Michelin's disc wheels during the Great War serves as a letter of introduction for the product, exhibited at the Decatur Auto Show in March 1921. As the advertisement explains, Michelin wheels were available for all kinds of vehicles, from high-end cars such as the luxurious Cadillac to the simple and utilitarian Ford. In addition, a side note informed of a special promotional act: "See the Michelin man perform at the show."

147. Advertisement in the local newspaper of Decatur, Illinois, *The Decatur Review*, February 27, 1921.



CIRCLE OF FRIENDS. Beginning in 1920, Michelin tire advertisements incorporated disc wheels, showing them equipping the featured cars. In this example, the popular four-seater Ford T presents a cloned multiplication of the mascot Bibendum, who appears as a driver, co-driver and a couple of passengers.

148. Full-page advertisement published in *Life* magazine, March 1920. Illustration by Arthur N. Edrop.



THE COLOSSAL BIBENDUM. The examples shown here in a series of 1921 advertisements portray a giant Bibendum ready to help and advise the motorist. The vehicles, of course, are equipped with all the novel Michelin disc wheels.

149-152. Advertisements in *The Literary Digest*, April 10, June 12, August 21 and November 27, 1921.



MICHELIN Cords

Always in the lead—Now better than ever

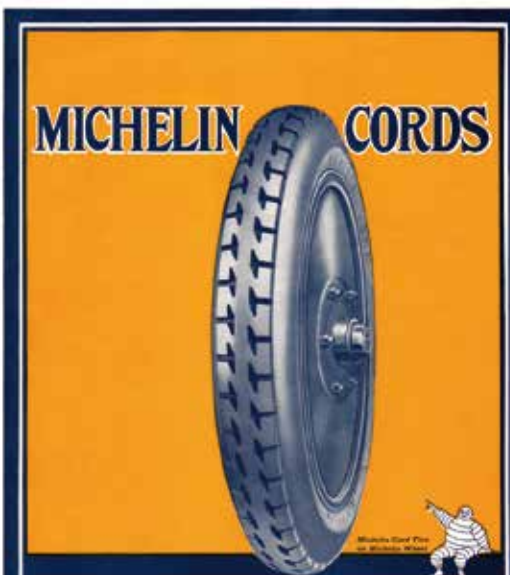
EVERY motorist owes it to himself to give Michelin Tires a trial in comparison with other makes.

The new and improved tread compound; the extra width and thickness of tread; the sturdy oversize body; the

regulated easy riding qualities; the superior protection against skidding—all these advantages are yours in the truly wonderful 1921 Michelin Cord Tire.

And Michelin's moderate prices are not the least of Michelin advantages.

MICHELIN TIRE COMPANY, MILLTOWN, N. J.
Other Offices: Chicago-Ford, France, London, England, Turin, Italy—Dealers everywhere



MICHELIN CORDS

Another Step Forward in Tire Construction

Michelin has been making pneumatic automobile tires for 26 years. Michelin does not make the most tires, but none are made better.

Now Michelin has developed a tread compound which is just as great an improvement as the demountable rim or the ring-shaped tube or other notable Michelin inventions.

You probably use Michelin Ring Shaped Tubes and know they are best. You will find Michelin Casings just as good.

MICHELIN TIRE COMPANY, MILLTOWN, N. J.
Other Offices: Chicago-Ford, France, London, England, Turin, Italy—Dealers everywhere



MICHELIN CORDS

Most motorists know of the unique quality of Michelin Cords, but not so many know that Michelines cost no more than ordinary makes. Ask your dealer for comparative prices.

MICHELIN TIRE CO. MILLTOWN, N. J.

To Users of Our Wheels: The latest Michelin Ring-Shaped Tube can now be had with angle-valve—making inflation easy from the outside of the wheel.



MICHELIN CORDS

SINCE 1895, when Michelin introduced the world's first pneumatic automobile tire, the name Michelin has stood for absolutely the best in tires. Today Michelin Cords are better than ever, but they cost no more than ordinary makes. Ask your dealer for comparative prices.

MICHELIN TIRE CO. MILLTOWN, N. J.

To Users of Our Wheels: The latest Michelin Ring-Shaped Tube can now be had with angle valve, making inflation easy from the outside of the wheel.

THE TINY BIBENDUM. In this other series of advertisements from 1922, Bibendum is represented on a small scale and takes the back seat, transferring the focus to the Michelin Cord tire that continues to appear mounted on the Budd-Michelin disc wheel.

153-156. Advertisements in *The Literary Digest*, July, September 17, September 23 and December 16, 1922.



ROLLING ALONG WITHOUT GOING ASTRAY.

The poster made in 1921 by Albert Philibert to advertise the *roue amovible* in France was also used for Michelin advertising in distinct markets in the European continent as well as in America. In the United States, the illustration was reproduced on the back covers of the series of four road maps edited in 1922 by the Michelin Tire Company in Milltown and designed for the American motorist. The image on the left is an adaptation of the poster on the back cover of a Latvian magazine from 1924, advertising the firm Sitmans & Bdris—distributor of Fiat cars and Michelin tires—based in Riga, the capital of a then independent Latvia.

157. Back and front cover of the Michelin Philadelphia drop-down road map, printed in five colors and accordion-folded, 1922. In addition to the city of Philadelphia and surrounding areas, it includes the southern half of New Jersey, and areas of Maryland and Delaware.

158. Michelin's advertisement on the back cover of the Latvian magazine *Nedela, Ilustrēts Schurnals*, number 15, April 11, 1924.

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THE SATURDAY EVENING POST

October 9, 1920

DISTEEL WHEELS



Count the Wheels that Run True

YOU will find that they are Disteel Wheels, inevitably Disteel Wheels. The United States Tire Company has issued this warning to motorists: "A displacement of only *one degree*" in a wheel "has the same effect on a tire as if it were dragged 92½ feet in every mile."


Wobbly wheels destroy tires, and waste power and gasoline. Disteel Wheels are all steel—no uneven shrinking or expanding. They keep in perfect alignment, run true, stay round and hold the tire straight and firm. Therefore, wheels that run true are Disteel Wheels, the Inwardly Curved Wheels.

Exclusive Manufacturers: Detroit Pressed Steel Company, Detroit, U. S. A.
New York Boston DISTEEL WHEEL CORPORATION Chicago San Francisco

THE WHEELS THAT COMPLETE THE CAR

DISTEEL WHEELS. The principal competitor of the Budd-Michelin disc wheel was that made by the Disteel Wheel Corporation, a subsidiary of the Detroit Pressed Steel Co. which also produced chassis and bodywork components for the automotive industry. In January 1918 they launched an ambitious nationwide campaign, first in motor industry magazines such as *Motor*, *Automobile Trade Journal* and *Motor Age* and later in generalist magazines such as *The Literary Digest* (first advertisement published on April 20) and *The Saturday Evening Post* (first advertisement published on April 27).


159. Full page advertisement published in the magazine *The Saturday Evening Post*, October 9, 1920.



DISTEEL WHEELS
The Wheels that Complete the Car

OWNERS of motor cars, beautiful and fortified with Disteel Wheels, appreciate, not only the greater Individuality and Distinction of their cars, but the even more essential Engineering Advantage — the vastly greater Security, Economy and Economy of motoring.

Detroit Pressed Steel Company
Detroit • New York • Chicago • Boston • San Francisco



DISTEEL WHEELS
The Wheels that Complete the Car

THE single outstanding fact that Disteel Wheels are now either standard or optional equipment on thirty-eight different makes of American motor cars, constituting the quality of the industry, is the best evidence of Disteel Wheels' supremacy and prestige.


Detroit Pressed Steel Company
DETROIT NEW YORK BOSTON CHICAGO SAN FRANCISCO



DISTEEL WHEELS
The Wheels that Complete the Car

Disteel Wheels are pre-eminent because they are designed by American Engineers to meet the severest American road-conditions and the most discriminating American taste. The Inward-Dish of the Disteel Wheel adds Beauty and Distinction to the motor car and new factors of Security and Economy to Luxurious Motoring.

DETROIT PRESSED STEEL COMPANY
DETROIT, U. S. A.



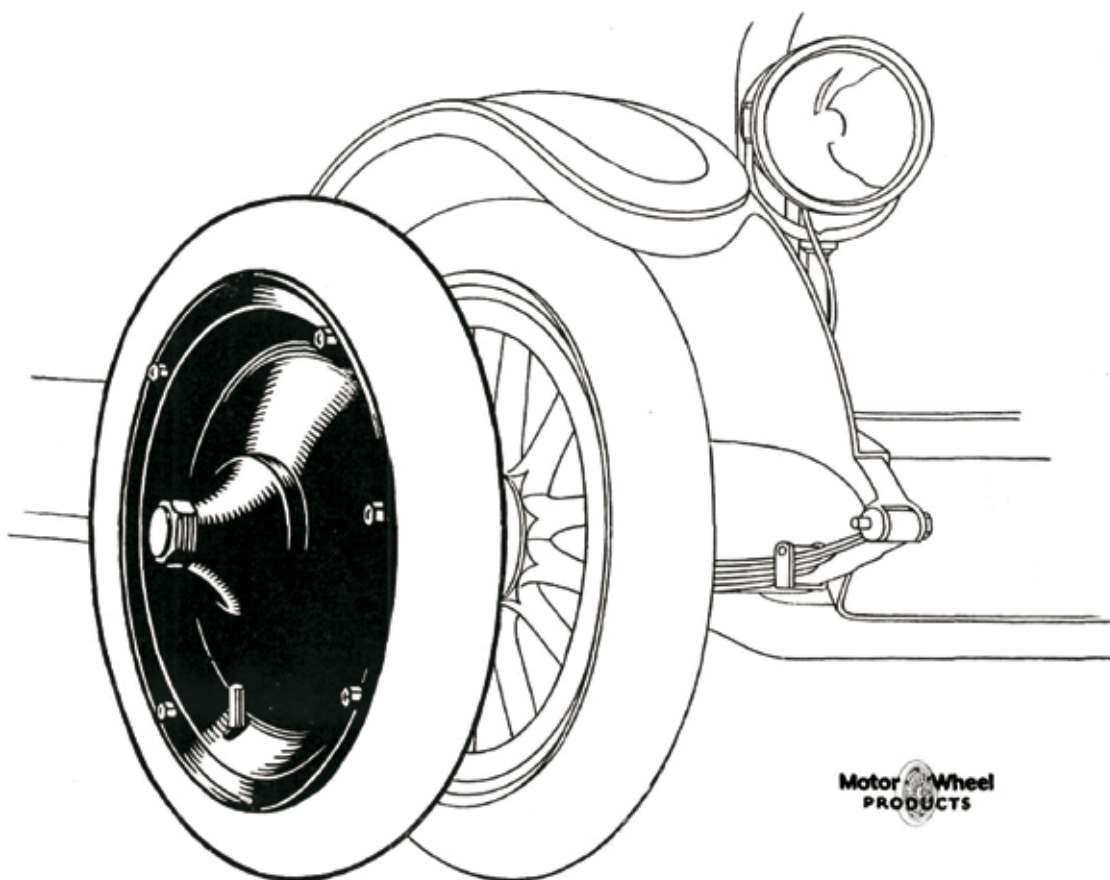
DISTEEL WHEELS
The Wheels that Complete the Car

IN addition to the obvious mechanical superiority of Disteel Wheels, it is their adaptability to the lines and color-scheme of the car that has appealed to the esthetic taste of discriminating motorists. Disteel Wheels give the car the owner's individuality. They make the car peculiarly and distinctively the owner's own.

Detroit Pressed Steel Company
Detroit New York Boston Chicago San Francisco

STEEL, NOBLE METAL. Disteel Wheels' advertising campaigns in 1920 included numerous full-color and full-page advertisements in leading magazines such as *Scribner's Magazine* or *Harper's Magazine*. This intense advertising can be understood within the context of the fierce competition that was being unleashed. One must bear in mind that the Michelin steel disc wheels had been launched on the market—accompanied by widespread promotional dissemination—in January of that same year.

160-163. Full page Disteel Wheels advertisements published in various magazines during 1920.



**Motor Wheel
PRODUCTS**

Identical Mounting Gives Instant Fit

Gier Tuarc Steel Disc Wheels are identical in installation and operation with regulation wood wheels. To change to Gier Tuarc Steel Wheels simply take off the wooden wheels and slide on the Gier Tuarc wheels. Not a single nut or bolt on your car is changed.

And in operation

- you inflate tires from the outside of the disc just as you do a tire mounted on a wood wheel
- in changing tires you change the rim—as in wood wheel practice—not the entire wheel.

This is vital, for changing wheels is at best a hard, mussy job—and in larger sizes almost impossible for one person. This disagreeable labor is eliminated in Tuarc wheels, by the use of regulation demountable rims.

The "two-arc" construction not only adds distinguishing beauty to Gier Tuarc Steel Wheels but provides great strength with extreme lightness.

The powerful appeal of these advantages cannot be overestimated. Write us for complete information about the remarkable Gier Tuarc Steel Disc Wheels.

MOTOR WHEEL CORPORATION, Lansing, Michigan

Motor Vehicle Wheels Complete
1310 S. Grand Ave., Los Angeles, Cal.

Metal Stampings—Steel Products
33 W. 42nd St., New York City

Gier
Tuarc
STEEL WHEELS

TUARC DISC WHEEL (1). The Gier Tuarc disc wheel, which appeared in the spring-summer of 1921, was designed in such a way that the socket of its axle was the same as the standard one employed for artillery wheels, thus making the replacement simple.

164. Full page advertisement published in the journal *Automotive Industries & The Automobile*, June 30, 1921.



Strong and Beautiful—but Convenient

You are won at first sight by the dignified charm of Gier Tuarc Steel Disk Wheels. Their remarkable feature: design is so distinguished in appearance as it is superior in strength and balance.

But the preference of so many motorists for Gier Tuarc Steel Wheels rests also on convenience and economy. The standard detachable rims of the Gier Tuarc Wheel spare you the labor of handling whole wheels for every tire change. The need for only four complete wheels is a great economy.

Gier Tuarc Wheels save you the cost and trouble of changing tires and hubs. Simply remove the present wheel—the Gier Tuarc Wheel slip right on without the slightest change.

There are many other outstanding Tuarc advantages, such as the accessible outside air valves.

Ask your garage or dealer about Tuarc Steel Wheels for your car. If information is not available write to us directly.

MOTOR WHEEL CORPORATION, LANSING, MICHIGAN
 Gier Tuarc Wheel Company • Steel Rimless • Steel Parts
 1000 E. Grand Ave., San Antonio, Cal. • 10 W. 40 St., New York City

Gier Tuarc STEEL WHEELS



Better Operation and Appearance

Tuarc wheels create no competing with practicability. On these steel wheels tire changing requires within the capacity of anyone who can handle a detachable rim. Hubs are never exposed, an subject to heavy roadside manipulation.

Indication, with any air hose, is through direct outside standard wheel valve stems—first made possible for steel wheel use by the original Tuarc design. Specifications are conveniently carried on the rim above, involving no extra weight. Essential to permanent quiet, true running, and great strength is the exclusive gas space, shock-resistant design of the Tuarc wheel proper.

No more emergency air refilling now can with Tuarc wheels or are applying them to their present cars, for the same reason which makes them standard factory equipment on some of the latest automobiles, including the Packard Sport Model.

MOTOR WHEEL CORPORATION, LANSING, MICHIGAN
 Gier Tuarc Wheel Company • Steel Rimless • Steel Parts
 1000 E. Grand Ave., San Antonio, Cal. • 10 W. 40 St., New York City

T u a r c



Instant Hub Fit—Accessible Valves

Transferring your car with Gier Tuarc Steel Wheels is simply simple and quick. This is because the hubs on Gier Tuarc Wheels are absolutely identical with the hubs on your old wheels.

The changing is also just as convenient as in standard practice—Tuarc Wheels are equipped with regulation detachable rims.

The valve stems are fully accessible on the outside of Tuarc Wheels.

Their double-arc construction assures superior strength and lightness, as well as reasonable economy. Here is the perfect steel wheel.

If your service station or garage cannot supply full information write to us.

MOTOR WHEEL CORPORATION, Lansing, Michigan
 Gier Tuarc Wheel Company • Steel Rimless • Steel Parts

Gier Tuarc STEEL WHEELS



Gier Tuarc STEEL WHEELS
 —a Motor Wheel Product

Ahead!—with Every Betterment

TUARCS were the first with the outside valve stems, because Tuarc were first with the double curve design—the best of steel wheel improvement.

With this pioneer leadership Tuarc are logically looked to for the highest development of the steel wheel.

It was Gier Tuarc Steel Wheels which eliminated all need for special hub parts, an economy feature of equal value to manufacturer, dealer and user.

Organizations and individuals capable of handling the wheel-hub distribution of Gier Tuarc Steel Wheels are invited to apply for exclusive territory assignments.

MOTOR WHEEL CORPORATION, LANSING, MICHIGAN
 Motor Wheel Products—Steel Rimless—Steel Parts

500 Park Blvd., Rochester 10, N.Y. • 1000 E. Grand Ave., San Antonio, Cal. • 10 W. 40 St., New York City
 1000 E. Grand Ave., San Antonio, Cal. • 10 W. 40 St., New York City
 1000 E. Grand Ave., San Antonio, Cal. • 10 W. 40 St., New York City

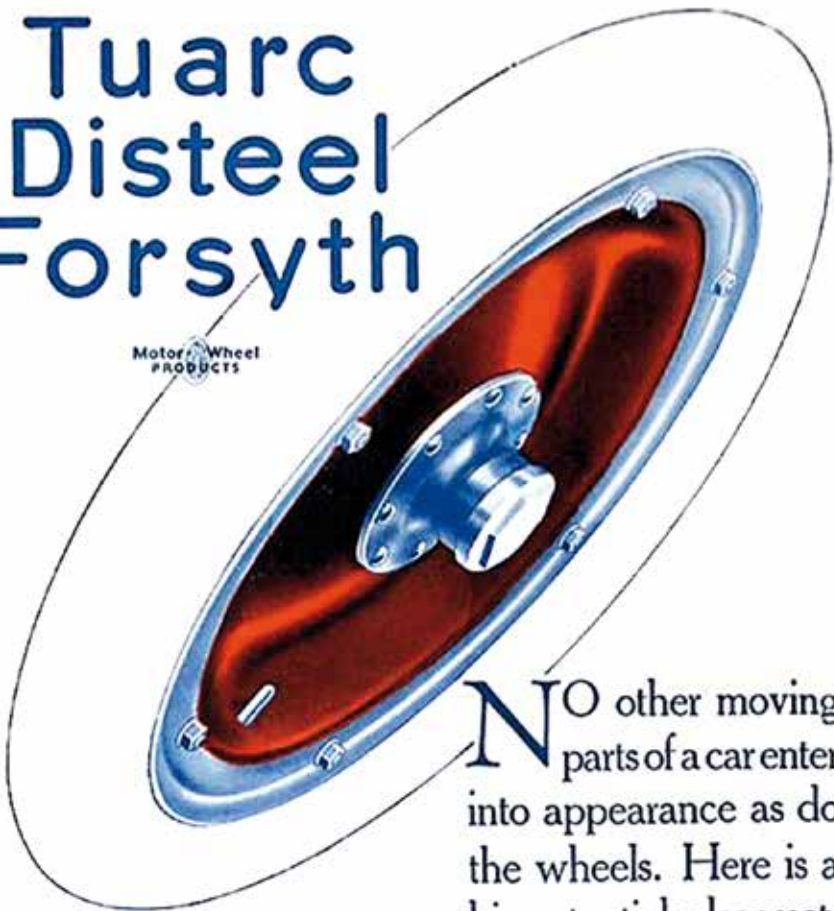
THIS SYMBOL IN ANY ADVERTISEMENT MEANS: SEE "CHILTON AUTOMOBILE DIRECTORY" FOR COMPLETE BUYING INFORMATION

TUARC STEEL WHEEL (II). Just as their direct rivals had done, the Motor Wheel Corp. launched a significant publicity campaign to advertise their Gier Tuarc wheels. Long series of advertisements were published in specialized press such as *Motor Age*, *The Automobile & Automotive Industries*, *Automobile Trade Journal* or *Motor* and generalist ones such as *The Saturday Evening Post*.

165. Advertisement in *Automotive Industries & The Automobile*, July 21, 1921. **166.** Advertisement in *Motor* magazine, July, 1922. **167.** Advertisement in *The Saturday Evening Post*, 1921. **168.** Advertisement in the *Automobile Trade Journal*, May 1922.

Tuarc Disteel Forsyth

Motor Wheel
PRODUCTS



NO other moving parts of a car enter into appearance as do the wheels. Here is a big potential sales asset. Capitalize it with Tuarc, Disteel, or Forsyth, the prevailing steel wheels.

MOTOR WHEEL CORPORATION
Wood Wheels, Steel Wheels, Stampings
LANSING, MICHIGAN

In This Issue—Save Tires and Reduce Rubber Prices

MOTOR AGE

VOL. XLVIII
Number 12
DECEMBER 31, 1925

CHICAGO, DECEMBER 31, 1925

First to be Seen—
Last to be Seen to

Mechanical perfection and complete utility are rarely combined in a form that is so beautiful as the Tuarc Type H steel wheel.

Steel strength, highest convenience in mounting or inflating tires, consistent lightness, and complete silence are embodied in simple centers which flow nicely into the contour of balloon tires.

The impression this wheel makes reinforces the fact that it is the first moving part of a car to be seen. The construction of the Tuarc Type H makes it about the last moving part which ever needs to be seen to.

MOTOR WHEEL CORPORATION
LANSING, MICHIGAN

The Tuarc Type H in detail



Disteel Tuarc

FUSION. In March 1923, the Motor Wheel Corp. acquired the two rival companies Disteel Wheel and Forsyth Brothers. Thanks to this policy on the concentration of businesses, in their catalog from that same year they offered three types of steel disc wheels: Tuarc, Disteel and Forsyth. The Tuarc wheels were indicated for those transports that needed detachable tires that were easy to access and repair; Disteel wheels were suitable when it was necessary to equip the vehicle with a spare wheel; and Forsyth wheels were ideal for light cars.

169. Advertisement in magazine, 1923.

170. Front cover for Disteel-Tuarc in *Motor Age* magazine, December 31, 1925.



**A Steel Wheel Built for an Automobile
Not a Makeshift for the Sake of Appearance**

The HARVEY STEEL WHEEL is the only scientifically constructed triple-disc steel wheel ever designed for the motor car. It has all the elements of strength, durability, safety, and lastly—tire-changing simplicity.

Three 20 gauge steel discs scientifically combined in a solid unit, giving all the strength of a solid wheel, in a hollow wheel, without the excess weight. Guaranteed to be immune from "side swipe," bucking and to safely stand the usual road tests applied to two-ton truck wheels.

It has the only demountable self inter-locking rim ever introduced on a steel wheel. Tires can be changed in less than two minutes.

Dealers: Your accessories are for motor cars. Sell HARVEY STEEL WHEELS the same way under the same principle. Don't be satisfied to handle a wheel that has a grouchy come-back. Let your customers have the advantage of owning a steel wheel that you can guarantee, in perfect confidence. A wheel you'll never have to apologize for.

The demand that will follow the national introduction of the HARVEY STEEL WHEEL, will surprise the entire industry.

Mail a two-cent stamp today for our illustrated booklet, giving mechanical details of construction and dealers' discounts.

HARVEY RIM AND WHEEL COMPANY
Buffalo, New York

HARVEY
STEEL WHEELS

Motordom's Yes has been loud

So loud that already we are far behind in orders. New orders must go on our waiting list, for it will be some weeks before our production can catch up with even the present demand.

This lightning response of demand is evidence conclusive that the Harvey Steel Wheel is the auto wheel of the future. It is the only steel wheel with a demountable rim—and this demountable rim is the most perfect ever designed. It is made in three sections—it rides on the wheel all the way round. It is guaranteed against collapse from buckling.

The Harvey is a completely stamped wheel—it must run 100% true, thus permitting of an absolutely true mounting of the tires and greater tire mileage.

Strength considered, the Harvey is the lightest wheel made.

This newest of all motorizing improvements is a masterpiece. It is safe—it saves time—it saves time in changing tires. It is the pettiest job since the stream-line body was designed.

Write us for further information. Send two-cent stamp for four-color booklet "Distinctiveness in Auto Wheels."



HARVEY RIM & WHEEL COMPANY
BUFFALO, N. Y. U. S. A.

THE HARVEY WHEEL.


The Harvey Rim & Wheel Company from Buffalo, New York, was established in September-October 1919 to take over the production and business previously generated by the Interlocking Rim & Wheel Company in San Francisco and Stockton, California. The technology of their own disc wheel was developed by George E. Harvey, and the patent was finally granted—with reference number 1,420,097—on June 20, 1922.

171. Full page advertisement published in the magazine *Motor Age*, November 6, 1919.

172. Full page advertisement published in *Automobile Trade Journal*, October 1919,

230 **MOTOR AGE** April 1, 1920

GLOBE DOUBLE DISC WHEELS



BEAUTY UTILITY

AN entirely new and different quick demountable disc wheel for the Ford car—extremely simple, practical, artistic. No other disc wheel approaches the GLOBE Double Disc WHEEL in appearance and in the ease and quickness with which tires may be changed. It is the simplest, sturdiest quick demountable wheel in existence.

GLOBE Double Disc Wheels will add a new touch of beauty to any Ford. They will impart new and graceful lines, suggestive of pep and speed.

They are extremely simple in construction and very easy to put on and take off. No rights and lefts to bother with; each wheel is interchangeable on all four hubs. You can change wheels in five minutes at the most.

The valve stem is always accessible no matter where the wheel stops. The tiresome job of cleaning mud from spokes is gone when you use Globe wheels.

Globe wheels always stay in perfect alignment. Wobbling and tread wear are done away with. This feature alone will reduce tire bills enough to justify the purchase of GLOBE Double Disc WHEELS.

Globe wheels have the advantage of safety over wood wheels. They will not collapse under the severest skidding. The double disc construction takes care of that.

Lock-Fast Tire Carrier for Ford cars puts the spare tire under lock and key. A turn of the hand locks and unlocks the carrier. No squeak or rattle. Easily put on. The best looking and most practical tire carrier for Fords.

DEALERS—Write for prices and discounts on Globe Wheels and Lock-Fast Carriers. You can make money with them.

THE GLOBE MACHINE & STAMPING CO.
1280 W. 76TH ST. CLEVELAND, O.

Here's the newest Peerless product




PEERLESS WHEEL DISCS

FOR FORD CARS

—and like the others—Peerless Radiators, Fenders, Tool Boxes and Combinations—it's a sure-fire seller.

We don't claim it has the high degree of utility that other Peerless Products possess—it's essentially a novelty. But it's a novelty that moves fast, that pays big profits and costs little to stock.

The Peerless Wheel Disc slips on easily over the ordinary Ford wheel and gives it the grace of a solid disc wheel. Easily washed—and there's no rattle or noise. Made in two colors—maroon or black—for either clincher or demountable rims. Ask your jobber—or if he hasn't them, write us direct.

Retail Price, \$10.00 Per Set

THE CORCORAN MFG. CO. Dept. 18
Section Avenue Norwood Cincinnati, Ohio



MULTIDISC WHEELS

"The Ace of the Road"

Scientific Construction

Aside from the vastly greater beauty which Multidisc Wheels give to the car, their scientific construction gives to the motorist a greater sense of security, a greater degree of comfort and convenience than he has ever before experienced.

Discriminating motorists will readily appreciate the many sterling qualities of these super wheels.

Unmist strength combined with extreme light weight, the convenience of both demountable rim and demountable wheel, perfect and permanent alignment, resulting in great savings in tires, and wonderful resiliency, greatly improving the riding qualities of the car.

There are only a few of many advantages. May we send you literature explaining in full

LACK MANUFACTURING COMPANY
PADUCAH, KENTUCKY.

266 **MOTOR AGE** January 3, 1919

"CHALMERS" "TURTLE DECK MODEL"



Schutte DISC WHEELS

APPEARANCE

Nothing adds quite so much to the appearance of a car as a set of Schutte Discs. They are well made and light in weight, being formed from long drawn steel. The large, good-looking hub caps are of aluminum. The discs are easily mounted and are made to fit any style of wood or wire wheel. There will be several cars at the "Show" equipped with Schutte Discs. Full information sent on request.

CHARLES SCHUTTE BODY CO.
LANCASTER - PENNSYLVANIA

173. Advertisement for Globe in *Motor Age*, April 1, 1920. 174. Advertisement for Peerless in *Automobile Trade Journal*, June 1920. 175. Advertisement for Multidisc in *Motor Age*, November 4, 1920. 176. Advertisement for Schutte in *Motor Age*, January 3, 1919.



2 Ton Truck showing Clark Internal-Gear Axle and Clark Disc Steel Wheels as equipment

CLARK
Rear Axles Steel Wheels Locking Differentials
For Motor Trucks
EQUIPMENT

Every element of Clark truck equipment is designed for a certain purpose. The load-carrying member of the axle has no function other than to support the load. The driving member is for the sole purpose of giving speed reduction and power transmission. The wheels are simple and strong.

Clark Equipment is found only on good motor trucks

CLARK EQUIPMENT COMPANY
BUCHANAN — MICHIGAN



CLARK
Rear Axles Steel Wheels Locking Differentials
For Motor Trucks
EQUIPMENT

**Clark Disc Steel Wheels
Give Long Life to Trucks**

Good or bad roads have no terrors for Clark Equipped Trucks. Clark Disc Steel Wheels will outwear any trucks. They require no attention. *Clark Axles give 12 to 14 inches road clearance*

Clark Equipment is found only on good motor trucks

CLARK EQUIPMENT COMPANY
BUCHANAN — MICHIGAN



In Your City,
**Watch for these
Disc-Wheel Trucks**

By its steel disc wheels—you'll know the truck that hauls at lowest cost on city routes.

You'll meet these trucks every block in America's chief cities where Walkers have been introduced. The Walker Electric in New York would make a parade more than twice the length of Manhattan Island; in Chicago, a procession more than seven miles long.

Watch for them—notice that nearly all the recognized leaders in American business use them on their city routes—American Railway Express Co., Beech-Nut Packing Co., Commonwealth Edison Co., and so on down the alphabet to Vacuum Oil and Wrigley.

Whatever your business—bakery, dairy, department store, ice cream distributor, laundry, manufacturing, wholesale—leading firms in your line and every line use Walkers.

Ask yourself why Walker Electric lead with these business leaders. There is only one possible answer—because Walkers give greatest economy and satisfaction on city routes. Write for lot of Walker users in your line—ask them.

They'll tell you every Walker saves them hundreds of thousands of dollars every year. They'll tell you horses can't compete with Walkers even on house-to-house deliveries and freight yard hauls. They'll tell you four Walkers operate at the cost of one or two "gas" trucks. They'll tell you the Walker as the leading truck for city routes by virtue of quantity production, experience, quality, economy, tonnage and mileage, prestige building service and freedom from mechanical troubles.

WALKER VEHICLE COMPANY, CHICAGO
America's Leading Manufacturer of Electric Street Trucks
BRANCHES AND DEALERS IN PRINCIPAL CITIES
Load Capacities: $\frac{1}{2}$ —1—2—3 $\frac{1}{2}$ —5 tons

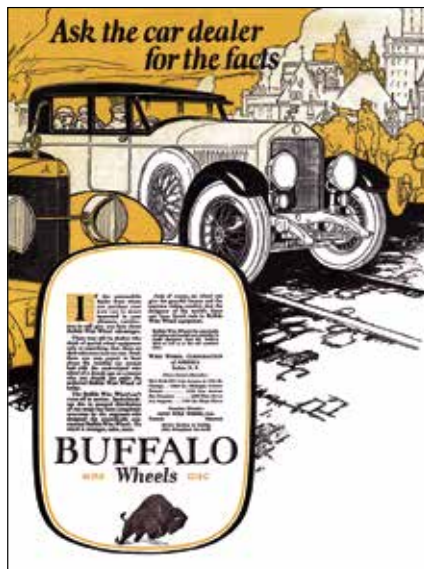
**WALKER
ELECTRIC TRUCKS**
Lowest Trucking Cost on City Routes

HEAVY-DUTY DISCS.

The passenger and freight transport sector, especially heavy-weight vehicles and trucks, also benefited from entirely metal wheels, including pressed steel disc wheels. The equipment was offered by firms specializing in mechanical components such as the Clark Equipment Company, represented in the advertisements on the left, or produced directly by manufacturers of trucks and vans, such as Walker Electric Trucks, as seen in the above advertisement.

177-178. Advertisements published in the magazine *Automobile Trade Journal*, December 1918 and April 1919.

179. Advertisement in *The Literary Digest*, October 20, 1923.



The Wire Wheel Corporation of America from Buffalo, New York, used as their corporate symbol the figure of a burly and powerful bison or buffalo for their Buffalo Wheels brand of wire and disc wheels.

182. Advertisement in *The Saturday Evening Post*, November 29, 1924.





For Every Wheel Requirement

The public sets the style in wheels. What type wheel will be selected no one can say—it is a matter of personal opinion. But there is one statement that can be made without possibility of contradiction—motorists want good wheels; safe wheels; wheels of consistent quality. They quite evidently find exactly what they want in Hayes Wheels. Increasing demand *proves* it.


So that choice may not be limited to one particular type of wheel, Hayes offers *every* type—Wood, Wire and Disc. The public realizes that thirty-six million Hayes Wood, Wire and Disc Wheels in service during 16 years *means* something. The motorist recognizes that the name “Hayes” on the lug denotes the genuine; takes advantage of this knowledge and enjoys the advantages Hayes Wheels and only Hayes Wheels can give in any type wheel that is desired.

HAYES WHEEL COMPANY, Manufacturers, Jackson, Michigan
 Factories: Jackson, Mich.; Flint, Mich.; John’s, Mich.; Anderson, Ind.; Nashville, Tenn. Canadian Plants: Chatham and Markham, Ont. Export Office: 30 Water St., New York City

HAYES WHEELS

WITH ATTACHED LUG RIMS—STANDARDIZED IN WOOD, WIRE AND DISC

“Look under the hubcap” and the attached lug.
 Look on the attached lug to find the “Hayes” name.



HAYES WHEELS
of Natural Wood
 Hayes Wheel Company, Jackson, Mich.

FROM CARTS TO CARS.

Clarence B. Hayes, from the outset, was an entrepreneur closely linked to the wheel industry. First, equipping animal-drawn vehicles through his own company, the Kalamazoo Wheel Company (1889) and later as Director and Vice President of the Imperial Wheel Company from Flint, Michigan. In 1908 they acquired the former National Wheel Company and established the Hayes Wheel Company, which began with a staff of about one hundred employees and which in 1924, had six different factories—including the Canadian division in Chatham, Ontario—and nearly 4,000 workers. His company focused production on automotive wheels, both as artillery and wire-spoke wheels as well as steel disc wheels.

183. Advertisement in *The Saturday Evening Post*, June 13, 1925.

184. Advertisement in magazine, 1926.

