The Automobile

AUTO DEPENDS ON ENGINE TO BE SUCCESSFUL.

The heart of the automobile is the vided. This usually consists of jackets engine. If this vital organ does not for water which are located around function properly the finest body and the cylinders so as to absorb some of chassis in the world will not make a the heat, a radiator on the front of usable automobile. If you puncture a the car for cooling the water and a tire you can drive on to the next ser- pump to keep the water circulating vice station with the thing flat. If a through the cylinder jackets and the fender is ruined or the top wrecked radiator.

progress toward your destination is In addition to all this there is an not necessarily blocked. But if the ignitor for distributing the sparks to engine fails to go, the motorist is out the different cylinders at the proper of luck. A repair job is necessary time, an electric generator for providright then and there if it is to go ing electricity to cause the spark, a tattery in which to store the current ahead under its own power.

Consequently, it is a good idea for generated and an electric motor operthe owner of an automobile to know ated by the battery for cranking the something about that important fac- engine in starting. These are the tor under the hood known as the en- main factors which make up the modgine. He understands something of ern gasoline automobile engine and how an engine functions and what enable the motorist to make his car makes it go. If he knows what makes take him where he wants to go. it go, he will be more likely to know what to do when, for some reason or other, it suddenly stops on him.

used in the majority of all automobiles ing about Ireland, and he said many in this country consists in its simplest hard things concerning the country form of a single cylinder something and its people. like a stovepipe. Inside of this cyl- A big man stood by, listening to the This piston is connected to a crank by means of a connecting rod which transforms the back-and-forth or re- you a coward." ciprocating motion of the piston into a rotary motion. This rotary motion in

made up of from four to twelve of under him. these cylinders together.. They are "Well, I am an Irishman." original motor car engine had but one ard." evlinder. However, as greater power and flexibility were desired, more cylinders were soon added. To-day there is a tendency to greater use of six, eight and tweive cylinder machines. But to understand the operation of

the single cylinder is to appreciate the action of the twelve cylinder engine or any other number. For the twelve cylinders do the same sort of work as the single cylinder, except that each does it at a different time. In order to cause the engine to generate power a mixture of gasoline and air in the form of a vapor is fed into! the cylinder above the piston. To provide this mixture a carburetor is attached to the engine and a valve is furnished which opens to permit the' mixture to enter at the proper time. This valve is opened by a cam which, is driven by a suitable gearing at-

tached to the crankshaft. Next this mixture is compressed in the cylinder and then ignited or set on fire by means of a spark which occurs at the spark plug. When the mixture is ignited it burns rapidly and produces heat. This in turn causes! pressure on the piston, forcing it to slide in the cylinder, and, through

FUNCTION OF MUFFLER.

When the piston has been forced to the end of the cylinder another valve. called the exhaust valve, is caused to It must certainly be admitted that open and the burned gas is permitted Lightning was not quite what its name to escape from the cylinder into the would suggest. In fact, as a race horse

it can be said, first, the piston travels season not only lost it, but had come outward and draws gas from the car- in last. buretor through the open inlet valve. Soon after the owner met a man he into the cylinder. Second, the inlet knew who wanted to buy a horse. valve closes, the piston travels inward "Do you want to buy a good mount?" and the pas is compressed into a small he asked. a spark cocurs, igniting the gas, caus- quired the other. ing it to expand, forcing the piston "Nothing," said the owner, lying outward. This produces the power bravely. which drives the machine. Fourth, "Well, what do you want to sell it the exhaust valve opens and the burn- for?" was the next question. ed gas is forced out as the piston goes "Nothing," came the reply. inward. When the piston has reached "All right, then," said the prospecthe furthest inward position the cylin- live purchaser, who had seen Lightder is ready to take in a new charge ning's last performance, "I'll have it." of gas and repeat the cycle.

In order to keep the pistons and other sliding parts from excessive For flowers that bloom about our feet, wear a lubricating system is embodied. For tender grass, so fresh and sweet, in the engine. This automatically sup- For song of bird and hum of bee, plies oil to all the bearings when the For all things fair we hear or see,

the engine a cooling system is pro- collection of cactus plants.

GEE, IT'S CHILLY UP ON THIS

MEXICAN REBEL ARMY MAKES

TO BE CONTENTED WITH LITTLE

AND NOT ONLY

THAT BUT I're

WORRIED!

OR NOTHING IN THE WAY OF

MOUNTAIN! BEING WITH THE

IT NECESSARY FOR A GUY

COMFORT: BRRRR: 5

MUTT AND JEFF



He Proved His Case.

The little man of the club, his back The gasoline engine which is now supported by the mantleshelf, was talk-

inder sades a plug of metal, shaped to other's vaporings. He smiled occafit the interior of the cylinder snugly, sionally until the little man said in a

turn is transmitted to the rear wheels. Voice:

"I said, show me an Irishman and Most picturesque and famous of wide.

Sw I'll show you a coward," replied the them all is the Kyoto Cherry Blossom | Switzerland holds its Narcissus Fes-

most usually found in a combination "You are an Irishman? Well"-and of six cylinders. However, there are a smile of joy flited over the little many four cylinder cars and some man's face as he saw a hole through have eight and twelve cylinders. The which he could crawl-"I am a cow-



means of the connecting rod, to turn won a degree of doctor of science by delivering a thesis on the Alpha rays of Polonium at the Sorbonne, Paris. ----

A Bargain.

muffler. The muffler provides a cham- it was a "washout," 'and would have ber in which the gas cools and escapes. been more at home in a hearse. It To sum up the action of the engine, had just lost its nineteenth race of the

space at the top of the cylinder. Third, "What's the matter with it?" in-

Thankfulness.

In order to keep the tremendous heat Father in heaven, we thank Thee.

of the burning gas from over-heating One of the latest English fads is the



PARTY PROPOSES TO FLY IN P. A. KING'S BAY The present base of the Amundsen-Ellsworth North Pole expedition at ling's Bay is shown on the map herewith. This also indicates the relation of this area to Norway on the south and to the objective of the party. The two ships. Farm and Hobby, are seeking out a suitable jumping-off place at some point north of King's Bay. The

May's Floral Festivals.

of May, floral festivals, symbolical of famous cherry tree at Kyoto, the first tions last.

Every town and village throughout | from all parts, special trains being the empire celebrates the occasion, but run from Berne, Geneva, and other

Engines in modern automobiles are little man, whose knees were shaking Festival, Japan's great national holi- tival at Montreux, usually towards the end of the month. It draws visitors

OTHE INTERNATIONAL SYNDICATE.

VERTICAL

3-A coarse variety of cinnamon

4-A short space of time (abbr.)

7-Pertaining to a corona

11-A thin piece of meat for

9-Dominion of a duke

14-A narrow passageway

17-A triangular boat sall

29-Member of Congress (abbr.)

36-A native of island of Crete

37-A Middle West State of U. S.

42-Private meeting of members of

SENOR, I'M'

AFRAID I'VE

INTO TROUBLE!

GOT YOU

AND ME

a political party

45-Correlative of "neither"

31-Books for holding photos

16-An American poet

20-A part of the head

35--Used for drying ink

2-A horse color

6-Conjunction

brolling

18-To Join, connect

25-Cut slantingly

26-Perform

33-Preposition

39-Treaties

43-Purchaser

49-The whole

51-A knot or knob

57-Personal pronoun

Good Team Work, eh?

59-Musical note

52-Separate Into grades

y 47-Saliva

AND TO THINK THAT THE

UNDER A WARM BLANKET

ENEMY'S GENERAL IS

POUNDING HIS EAR

MAKES ME GOOD

AND SORE:

48-Total

28—Flexed

8-Sharp

12-Authentic

CROSS-WORD PUZZLE

SUGGESTIONS FOR SOLVING CROSS-WORD PUZZLES

Start out by filling in the words of which you feel reasonably

sure. These will give you a clue to other words crossing them,

and they in turn to still others. A letter belongs in each white

space, words starting at the numbered squares and running either

horizontally or vertically or both.

HORIZONTAL

11-A New England State (abbr.)

France and Switzerland

1-Prefix meaning "chief"

15-The poison tree of Java

17-Mountain range between

23-Incipient decay in overripe

27-A wanderer of the desert

36-Large city of U. S. (abbr.)

49-Latin for "gold" (abbr.)

55-A plant of the cabbage famil

60-Roman goddess of grain and

24-Prefix meaning "back; again"

10-What one rows with

13-The spawn of fish

9-A lively dance

22-Personal pronoun

21-Lawful

25-Victous

32-Permit

41—Deed

46-Treats

61-Filthy

SLEEP IS GONNA BE OUT OF

WOOLEN BLANKET TO KEEP

THE QUESTION WITHOUT A

US WARM! WHAT A LIFE!

B-ERER!

29-Musical note

34-Public vehicle

40-A thick slice

50-Disdamfully

53-A certain pace

59-Fuzzy covering

harvests

TERRIBLY

MORRIED

MUTT!

SENOR

54-A country of Asia

56-A Turkish governor

58-A heavy weight (abbr.)

44-Indefinite article

30-One of the grains

5-Roosters

"Show me an Irishman and I'll show During practically the whole month its pivotal point, so to speak, is the towns during the two days the celebra-

for the dead who fell in the Civil War. time a big jump to 18.688,092 bushels The graves of the fallen heroes are in 1902, and 24,566,703 bushels in everywhere decorated with blossoms, 1903. In 1910 46,589,228 bushels of Day, Geneva its White Rose Day, ket, in 1915 exports were 140,306,613 while France celebrates Lily Day.

The Rainy Day.

When there comes a day that's rainy, As it's certain, sure to do, Just draw upon your savings Instead of looking blue. If you haven't saved much money,

Then draw upon a smile, And see if that won't help you Over many a weary mile.

When there comes a day that's rainy, Don't fill it up with sorrow, But set about a job or two-It may be fine to-morrow: The rainy day is dripping down On other folks than you-

----Robins at Dawn.

Maybe in trying to cheer them up

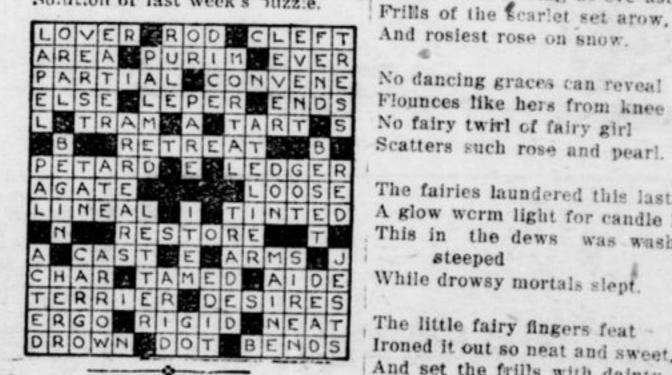
The sun will shine for you.

As dawn came wanly sliding In at my window grey A burst of music waked me, A chorus wild and gay-A mad and merry chorus

From trees about the lawn-A joily band of robins Glad hailing in the dawn.

Such wild delight, such music bright, buyers. Burst from their pulsing throats, Such scorn of fear and love of cheer Bubbled from ringing notes,-No pipes of Pan though piercing sweet Of airy films that fly and float; Could fling out more delight Than my red-vested choristers Singing Thy Dawn of Light.

---Solution of last week's puzzle.



Nova Scotia Butter Boom.

The outstanding feature of the agri- The poppy wears her silk and lace, creameries industry. The year 1924 Her silken flounces bides and shows showed an increase over the previous As the wind goes and blows. year of 563,156 pounds of butter, and an increase in business done of \$153,-

Pieces in a Piano. into the making of a high-grade piano. Ward Beecher.

WHILE THE ENEMY'S GENERAL

WAS AT MESS THIS EVENING

AND TOOK HIS BLANKET FOR

TONIGHT! I MEANT NO

MON HARM! I'M WORRIED!

I SLIPPED INTO HIS TENT

A SOUVENIR! I HAD NO

IDEA HE'D NEED IT

The Natural Resources Intelligence Service of the Dept. of the Interior

Canada has made tremendous prospicuous position in the wheat marthis cereal.

The rapid increase in Canadian n 1923 to 474,199,000 bushels.

Canada's influence on the world's

same authority.

be of an unusually high order and, through the Canadian system of grading and elevator regulations, merits At nine o'clock, on December 24, a the standing it has among foreign rather chubby old man with a white

Poppy.

The poppy flaunts the petticoat Lucent and crystalline.

Or the moth's wing at eve astir; Frills of the scarlet set arow,

Flounces like hers from knee to heel,

The fairies laundered this last night,

steeped While drowsy mortals slept.

cultural industry of the province last Clear starched, with such a delicate left hand turn."

-Katherine Tynan. poles.

hardly put more upon a man than he cident." More than 1,000 different pieces of can bear. Worry is rust. It is not An Englishman has succeeded in material, varying from felt to wood, the revolution that destroys the ma- taking the noise out of an airplane

SENOR

By Bud Fisher.

STOP WORRYING!

MEXICO I'LL MAKE

OF THE TREASURY!

YOU SECRETARY

WHEN I BECOME

PRESIDENT OF

Natural Resources Bulletin.

at Ottawa says:-

gress in the past twenty-five years in the production of wheat, and the extension of her wheat areas is attracting considerable attention among wheat-growing and wheat-buying countries. At the opening of the present century the excellence of Canadian hard wheat became recognized, but occupied a comparatively incenkets of the world. Within the past twenty-five years-but a day in the life of a nation—that position has been entirely reversed, and Canada has advanced from ninth to second place as a grower of wheat, and from fifth to first place as an exporter of

acreage devoted to wheat is shown by the following figures: In 1900 in all Canada there was but 4,224,542 planted to wheat; in 1910 this area had increased to 8,863,151 acres; in 1920 to 18,232,374 acres; and in 1924 to up 22,055,710 acres. The production of wheat in 1901 amounted to 55,572,368 bushels, in 1910 to 132,048,782 bushels, in 1920 to 263,189,300 bushels and There is something for both you and I;

The big man touched the little man the triumph of spring over winter, are blossoming of which is regarded as an The United States has a May flower enormous growth of exports. From on the sleeve and said in a heavy bass celebrated in various parts of the event of national importance, to be festival—Decoration Day. This was the small amount of 6 871,939 bushels communicated by telegraph far and originally instituted to show respect in 1901 they took what was at that There's something for Similarly Vienna has its Daffodil wheat was poured into the world marbushels and in 1924, 214,630,825 girl to have a beautiful face."

Canada has a wonderful opportunher wheat fields and in the quality of drunk. the wheat that her soil and climate produces, but in the fact that the wheat industry of Russia, which was a chief competitor, has not recovered its pre-war status. Canadian wheat is much in demand both in Great Bribe produced at a comparatively low cost, in competition with American grown wheat.

The farm cost of producing wheat in Western Canada in 1923, as esti-[mated by the United States' Tariff Commission, was 82 cents a bushel, of trouble. including a land charge, figured as interest on stated land values. These figures were opposed to a cost of \$1.47 to keep from seeing. per bushel, the estimated cost of producing similar wheat in Minnesota, Montana and Dakotas, made by the

Canadian wheat is acknowledged to

Of fairy gauzes, fairy fine,

-May Howe Dakin. Lighter than lightest gossamer,

And rosiest rose on snow. No dancing graces can reveal

A TARTS No fairy twirl of fairy girl

A glow worm light for candle light; This in the dews was washed and

The little fairy fingers feat -Ironed it out so neat and sweet, And set the frills with dainty skill Ruffled at the wind's will.

.

worry. Work is healthful; you can fifty miles an hour; "unavoidable acivery and many kinds of metal, enter chinery, but the friction.—Henry motor and probably the same thing

The civilized people are the ones

Your reputation runs down in about he same proportion as your bills run

Ode to An Apple Pie.

Under the crust of the old apple pie

There's something for me

Ragson Tatters says: "I kin remember when it seemed worth while for a

A village is a place where people ity, not only in the productiveness of sing "Sweet Adeline" without being

> chap who only takes soft drinks to save the wear on his gold tooth.

tain and on the Continent and can "are you traveling the straight and In silence the man handed over his card, which read, "Signor Ballancio,

some joy, but they surely avoid a lot

Some children have a good time, and some are not permitted to be

The Unknown.

beard knocked at the door of the Orphans Asylum. A man came to the door but refused to let him in.

"But don't you know who I am?" said the old man. "I'm Santa Claus." "That don't make any difference," replied the door keeper. "Wednesdays is visiting days. Darn these foreigners anyway," he said to himself.

-

He-"You say you will meet me at eight o'clock. What time will you be

It is called a wave of prosperity.

Now that short skirts are here again an increase in jay walking fatalities is to be expected.

Native-"Three hot dog stands an'

encourage the use of better telephone

"Wanted-A boy to drive a Ford with a knowledge of plumbing fit-

who go to see the hole being drilled. One reason why a chicken crosses

Maybe the automobiles will soon cut the population down to the point where every person vill be a car own-

The straight and narrow path is plenty wide for its traffic.

(On With Laughter)

hat pay the highest price for beads.

It may be a hair, that the cook has left

'Neath the crust of the old apple pie.

The tightest guy we know is the

"My friend," said the missionary,

Tight Rope Walker." Those who never marry may miss

Some shows are worth going miles

Nothing left of Trotzky now but the

Our theory is that Lot's wife turned back to get her kodak.

Waves, you know, effect those only at the top.

Motorist-"How far from here is the nearest filling station?"

Everything is useful. Fool drivers

It is not work that kills men; it is Modernism - Blinding headlights;

could be done to a motorcycle if anyone cared to try.

It takes about a year's production from a good oil well to equal the amount of gasoline used by motorists

the road is to pick up a little feed in a swell cafe on the other side.

It is also an accident when one escapes an automobile accident

Whales Off Chil. Whales are said to come nearer the

shores of Chill than any other part

ON PARLIAMENT HILL Largest of Fifty-three B Weighs Ten Tons-Only One Like it in World.

SPLENDID CARILLON

FOR OTTAWA TOWE

WONDERFUL MEMORIL

Work on the memorial tower on liament Hill has been resumed. slowly but surely the contours of lofty spire are being evolved. In meantime the carillon of 53 1 which will fling its musle down Ottawa valley and across to the neau hills, is in process of cons tion by the British company, to w

the contract was awarded. The heaviest of the bells will w ten tons, and will have a diamete eight feet and two inches. The 1 est will weigh only fifteen pounds will measure only seven inches diameter. The note of the largest will be in the key of E. The tone immediately following will omitted ,and the notes of the real ing bells will advance by semithrough the chromatic scale.

The contract for this magnifi carillon was placed with the celebra firm of bell founders, Mesers, G. and Johnston, of Croydon, Eng. who will also manufacture the mechanism necessary for driving hands of the four sixteen-foot diam clock faces and for striking the l and chiming the Westminster quaon the carillon bells.

Duplicate of New York Carillo The Ottawa carillon will be la

cal in size, height and number of with that destined to be placed sh in the tower of the Park Av church, New York, and now not completion in the Croydon foot These two sister carillons will ! fore be the largest in the world next in size being that in the low St. Rombaulds cathedra, at Ma which has 45 bells, the heaviest w ing about six tons. The belis will be arranged der

tier in the belfry in such a way as the passenger elevator travels wards to the observation gallery e bell will be visible, while the worl the great clock will be displayed large glass case in the centre of clock chamber. The carillon will be played cartilonneur or bell organist by m

of a hand clavier, the arrangement which is identical with the conso an organ, except that light we levers take the place of the fvory These levers are attached by m of wires and cranks to the clan which strike the bell on the inside face at a point near its greatest eter; the travel of the clapper is one inch, which is sufficient to out the full volume of sound red for carillon playing, while still i ing the delicate touch necessary ! able a single operator to manif so many bells.

May Use the Feet.

Pedals are attached to the connected to the larger bells, and these can be played by foot hand; this enables the player to them more forcibly than would be hible with the hand levers, and t allows him to execute the more cate passages of music by leaving hands free for the rapid manipu of the levers connected to the #1

The arrangement of the bel their steel framework will be sno at any later time a fully auto machine for tune playing, start predetermined times during the

A feature of this carillon is the

bells will not only be in absolu

can be added.

with each other, but that the ha ies of each bell will be tuned strike note, resulting in pure and odious bell tones and making po the true harmony and brilling dences of this highest type In view of the memorial acr this carillon, it is satisfactory to that this perfect tuning cannot

fected by use, atmosphere or and

metal of which the bells are cas

alley of the purest copper and

tainable, blended in the most

proportions, and although col

may pass, the tones will remain

cal with those heard on the dedication. The possibilities of such an mert are known to few, and Ill come as a revelation to the tho who hear it, when its music, flu the magnificent companile that nearing completion, is first hear

city, river and valley. Radio to Broadcast Chimes An unlimited repertoire of m airs, favorite songs and me

classical music and compo adapted to exemplify the unique of the bells is available, and music will become a great atti to Ottawa, and will also be sha means of the radio by the ent minion. The position and setting of

would be difficult to imagine ideal comparile for these bell over a large erea.

lon are of vital importance,



ONTARIO ARCHIVES TORONTO