AMAZING FEATS OF SURGERY BY NOBEL WINNER

Dr. Alexis Carrell Has Conducted Many Weird Experiments in Prolonging Life.

STUDIED IN CANADA

Has Found Method to Store Up Tissues From Dead For Use on Patients.

For the first since it was established the Noble prize for research in medicine is to go to the United States. This distinguished honor has just been awarded for the year 1912 to Dr. Alexis Carrel of the Rockefeller Institute for Medical Research, in Newport City. It carries with it a large financial reward, estimated as high as $40,000.

Dr. Carrel is a Frenchman by birth, being a native of Sainte Foy les Lyons, where he was born in 1873. To Canadians his career is of interest, for after leaving France he came direct to Montreal to carry out his researches at McGill University.

Dr. Carrel's honors have came to him as a result of a long line of investigations the culmination of which was the announcement last spring that he had succeeded in keeping the heart tissue of a chicken alive for a period of 120 days after removal from the body. Dr. Carrel's previous discoveries in the field of surgery had already attracted wide attention, but this latest discovery brought him world-wide fame and was the leading topic of discussion by medical men the world around.

The reasons for the particular experiment which brought Dr. Carrel fame and the valuable deduction to be derived from it, have been easily described by himself.

I wished, he said, to find a method by which the store tissues extirpated from the amputated limb of a living animal or a fresh cadaver during the period which elapses between their extirpation and their transplantation on the patient.

It would be very convenient for surgeons to keep in store pieces of skin, periosteum, bone, cartilage, blood vessels, peritoneum, omentum and fat, ready to be used. I attempted to preserve the tissue outside of the organism in a condition of latent or active life.

I found that the permanent active life of the tissue out side of the organism was possible. A piece of chicken heart pulsated strongly 104 days after its extirpation, and connective tissue was growing actively during the fifth month which followed storage could be used in human sur-

Preserving Tissues For Operations.

The color and consistency of the tissues remained generally normal for several weeks. After six, seven or even ten months the microscopical appearance of the arteries was not markedly modified.

The results obtained demonstrate that human tissue preserved in cold storage could be used in humane surgery. Future investigations will show in what measure tissues of infants should be employed as grafts. The tissues actually used in human surgery, as cartilage, periosteum, skin and aponeuroses, could easily be taken in large quantities from the fresh cadavers of foetueses and infants and preserved in vaseline and in cold storage.

A supply of tissues in latent life would be constantly ready for use, and the tubes containing the tissues could even be sent in small refrigerators of type of the thermos bottle to surgeons who needed them. It would simplify very much transplantation of skin, bone, periosteuf and aponeuroses, which are more and more used in human surgery.

Previous to his discovery that heart tissue could be made to live after separation from the body Dr. Carrel already had had a remarkable career. This work had to do with transplanting vital organs and tissues, and with improved methods of the transfusion of blood. Here is one case of the latter.

On March 4, 1908, a daughter was born to a well-known surgeon and his wife. The child weighed eight pounds twelve ounces at birth and appeared to be strong and healthy. In a few hours, however, it developed melaena neontorum, which signifies "hemorrage of the new born," a disease of the first two weeks of life and whose prognosis is extremely grave, the mortality ranging from 50 to 80 per cent. The child bled from the mouth, nose and intestines, and vomited blood. On March 8 the baby was near death.

How a Baby's Life Was Saved.

In this extremeity the surgeon-father invoked the aid of Dr. Carrel, with whose skill and theories he was familiar. Dr. Carrel, assisted by Dr. George E. Brewer, surgeon to Roosevelt Hospital, New York, proceeded as follows:

The right leg of the child was held firmly and the incision was made in the hollow back of the knee, exposing a large vein which was severed. An incision was then made in the left wrist of the child's father and the radial artery, or pulse, exposed. This artery likewise was cut, and Dr. Carrel, whose technique in this line of work is described as amazing by his confreres, then proceeded to sew an end of the father's severed artery to an end of the child's severed vein.

Here was direct transfusion of blood. For some time the father's blood was allowed to flow into the anaemic and impoverished system of the child. In a few moments the baby's skin took on a healthy glow. As if by magic the vomiting and hemorrhage ceased, not to recur. In a word, the child was dying one minute, the next minute was a strong, healthy child.

Weird Vivisection Operations.

Dr. Carrel has made many transplantations of organs in animals. Here is the way one was done: Having anaesthetized a cat so that the subsequent operation was absolutely painless, Dr. Carrel removed the kidneys, together with their blood vessels, the aorta (the largest artery in the body), the vena cava (the largest vein in the body), the nerves, the nervous ganglia (or centres), the urethers (the tubes running from the kidneys to the bladder), and part of the bladder. These organs were replaced by similar organs from another cat. The cat with the new organs recovered and the organs resumed their functions.

"No therapeutic value can be expected from a graft of kidneys," said Dr. Carrel, in commenting on this particular experiment, "unless the secretions of the new organs should be practically normal."

Another remarkable experiment was accomplished by Dr. Carrel by means of a human leg sent from a New York hospital. He removed some of the arteries and put them in a dog, which easily survived the operation and remained healthy. He opened the dog later and found that it was doing beautifully. However, he added, the important thing is whether the tissue from animals can be used in man.

One reason for his success in transplanting organs has been the careful and systematic manner employed by Dr. Carrel in joining the several ends of blood vessels.

A HARMLESS WAY TO DARKEN THE HAIR

A Little Sage and Sulphur Makes Gray Hair Vanish—A Remedy For All Hair Troubles.

Who does not know the value of Sage and Sulphur for keeping the hair dark, soft and glossy and in good condition? As a matter of fact, Sulphur is a natural element of hair, and a deficiency of it in the hair is held by many scalp specialists to be connected with loss of color and vitality of the hair. Unquestionably, there is no better remedy for hair and scalp troubles, especially premature grayness, than Sage and Sulphur, if properly prepared.

The Wyeth Chemical Company of New York put out an ideal preparation of this kind, called Wyeth's Sage and Sulphur Hair Remedy, in which Sage and Sulphur are combined with other valuable remedies for keeping the hair and scalp in clean, healthy condition.

If your hair is losing its color or constantly coming out, or if you are troubled with dandruff or dry, itchy scalp, get a fifty cent bottle of Wyeth's Sage and Sulphur from your druggist, use it according to the simple directions, and see what a difference a few days' treatment will make in the appearance of your hair.

All druggists sell it, under guarantee that the money will be refunded if the remedy is not exactly as represented. Agents: Robert Simpson Company, Limited. 2

SHELTER WILL BE BUILT IN ANOTHER LOCATION

Society For Prevention of Cruelty to Animals Decides to Extend Their Work.

The Society for the Prevention of Cruelty to Animals held a very largely attended and enthusiastic meeting on Tuesday afternoon at 70 Madison ave.

President Mrs. Durie gave the opening address and reported the fact that the city council had prohibited the opening of the shelter on Davenport road, but that the society will open it in another part of the city in the near future.

Besides the municipal grant promised by the city council, the society has received promises of large sums of money from individuals, with which to buy property. One member offered to buy a runabout to be used in connection with the shelter. Mrs. Durie also stated that the police commissioners had refused to appoint two extra humane officers, but that the society would keep after them until they acceded to their request.

Several cases were reported, which were illustrative of the work of the society. Since the council forbade the erection of the shelter, the membership of the society has grown almost 100 per cent., and Mrs. Durie considered the council's action as a good piece of advertising for the society.

HOLIDAY SHOPPING GREATER THAN EVER

Santa Claus Is Just as Popular Now as Before Time of Present Generation.

Your old friend, Mr. Santa Claus, is coming with bells on this year, for sure.

Some of the older citizens may forget that this good gentleman was once a friend of theirs, and that he is still just as popular with the boys and girls of today. But such is the fact, and, judging from the shopping crowds, the spirit of Christmas has taken a firm hold on this community.

After the last present has been selected there is always someone who has been overlooked. Such an emergency may be taken care of by taking advantage of The World's Bible offer. The $5 volume is just about the nicest book for presentation purposes ever thought of, and all that is required to get it is one certificate and a small expense bonus amount to defray the expense items of distribution. What better could you ask? A Bible is at once appropriate and useful, but this particular Bible contains:

Illustrations in the type matter.
Full-page monotones.
Color-plate engravings.
Engraved maps in colors.
Self-pronouncing text.
Marginal references.
Educational helps.
Over 1200 pages.

It is stamped in gold and is actually worth $5, but you can get it only thru the popular certificate plan of The World.

Today's certificate is printed on another page of this issue. Clip it and present it and you'll learn how to relieve your mind of the worries of Christmas giving.

A DIFFERENT PLAYER-PIANO.

A Really Magnificent Gift for Christmas.

There is something very distinctive about the Heintzman & Co. new player-piano. At their handsome piano salon, 193, 195, 197 Yonge street, they will be glad to demonstrate these special features at any time. This player-piano will make a handsome Christmas present.

Don't Wait Too Long to Enter THE PROVERB CONTEST

TIME is fleeting—the great and entertaining Contest of The Toronto World is rapidly drawing to a close. There are only five more Proverb Pictures to be published—but as the time limit for sending in answers has been extended to midnight of Tuesday, December 31st, there is still time to enter and compete for the prizes.

Look Here, Proverb Contestants

There is absolutely no objection to the use of pen and ink in filling out Proverb Contest Coupons. Rule 3 of the Contest states that answers to the Proverbs may be written with pen, pencil or typewriter.

The suggestion in yesterday's World to omit the use of the pen was made only on account of so many contestants who complained that pen and ink blurred their writing. Fill out your answers in any manner to suit your fancy.

THE FIRST SET OF ANSWERS WILL HAVE NO PREFERENCE OVER THE LAST

In this competition the contestant who deposits the first set of answers will stand no better show than the last. The correct answer—correct in wording, spelling and punctuation, and exactly as contained in The World's Book of English Proverbs—are the essentials that will count. Therefore anyone may enter now and get in line to win a share of

$5000 12 GRAND PRIZES FREE

First Prize—A $2250 Jackson Touring Car
Second Prize—A $750 Blundall Player Piano
Third Prize—A $350 R. F. Wilks Piano
Fourth Prize—A $300 Burnett Piano
Eight Other Grand Prizes—Thirty Other Prizes

Enter the Contest Now--Read List of Prizes and Solve the Proverb on Page 2 Today

ALTHO the time limit for sending in answers has been extended until midnight of December 31st, there's no time to lose. Beginners and contestants who desire extra back pictures and coupons should place their orders early as there will be no more special coupon offers or reductions from the regular price.

EXTRA BACK PICTURES & COUPONS
Are 1c for the Daily and 5c for the Sunday.

All of the back proverb pictures and their coupon blanks from one to seventy-one, inclusive, are now on sale at the office of The World, or they will be sent to any address in Canada by return mail, prepaid, upon receipt of $1.17 stamps, express or postoffice money order.

Order the Back Numbers and Enter Now You May Win a Big Prize!

GIRLS GAVE EXHIBITION

Fine Entertainment by Pupils of the Somers School.

The Somers School of Physical Training gave a very interesting physical training exhibition Tuesday night in C.O.F. Hall before a large audience. The program was rendered by girls attending the school. There were fifteen numbers on the program, which included a series of gymnastic drills, folk dances, fencing and vocal solos. The leaders' corps of the Central Y.M.C.A. gave an exhibition of gymnastics on parallel bars. Miss Jessie Alexander's elocution was much appreciated, and the solos by Miss A. Montgomery, "A Winter's Lullaby," Mrs. Herbert Coleman, "I Wonder If Ever the Rose" and "Sunshine and Rain," and Miss Eleanor Wright were enthusiastically received.

TWO THRESHERS MAY DIE.

WYOMING, Dec. 10.—(Can. Press.)—Two fatalities may result from threshing accidents near here today. Guy Lucas, a young farmer, is in an unconscious condition as the result of being struck on the head while threshing, and Joseph Scott, a farmer residing near Camlachie, is in an almost equally dangerous condition from wounds of the same nature.

IS YOUR HOME WARM?

If not, see us about it. Over ten thousand of Toronto's best homes warmed by the Novelty Hot Water and Hot Air Heaters. Twenty years a success behind them. Advice and estimates free.

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BRITISH OFFICER KILLED BY TRIBESMEN.

TEHERAN, Persia, Dec. 11.—(Can. Press.)—Captain Ackford of the British army has been killed by tribesmen near Shiraz, capital of the Province of Fars.

ROBT. BICKERDIKE, M.P., HURT.

OTTAWA, Dec. 11.—Robert Bickerdike, Liberal member for the St. Lawrence Division of Montreal, on his way to the house of commons this afternoon, fell and fractured his leg. Mr. Bickerdike was taken to Montreal.

$1,000 REWARD

For information that will lead to the discovery or whereabouts of the person or persons suffering from Nervous Debility, Fits, Skin Disease, Blood Poison, Genito Urinary Troubles, and Chronic or Special Complaints that cannot be cured at The Ontario Medical Institute, 233-265 Yonge Street, Toronto. ed

ESCAPED FIRE AND WATER.

SARNIA, Dec. 11.—(Special.)—William Lacroix and four redskins, who live on the Walpole Island Reserve, had a narrow escape from both fire and water when the former's launch took fire in the St. Clair River, near Walpole Island, and ignited a forty gallon tank of gasoline, which immediately exploded. The boat was headed for the shore, but the flames spread so fast that the men had to jump into the river. All reached the shore safely.

THURSDAY, DECEMBER 12, 1912

TORONTO WORLD'S Proverb Contest
$5,000 IN PRIZES

Began Oct. 3rd. Last Picture Dec. 16th

NO. 71 PICTURE Represents the Following Proverb

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Name .....

No. ..... Street

City or Town .....

DO NOT SEND IN ANSWERS UNTIL AFTER LAST PICTURE IS PUBLISHED.

What Well-Known English Proverb Does This Picture Represent?

TORONTO WORLD'S PROVERB PICTURE NO. 71

The World's Book of English Proverbs Solves the Pictures Correctly

THE Toronto World's Book of English Proverbs will prove of great assistance to contestants in the Proverb Contest. It contains several thousand commonly used and well-known English Proverbs, including all of the correct ones to be selected to the series of proverb illustrations. The book is well printed and neatly bound, the Proverbs being alphabetically arranged and classified for quick reference. Its use to contestants in arriving at the correct Proverb answers, together with the proper spelling, wording and punctuation, will prove indispensable. The price of the book is Fifty Cents, at the office of The World. By mail, two cents extra.

MAIL ORDERS SHOULD BE ADDRESSED TO THE CONTEST MANAGER THE TORONTO WORLD, TORONTO, CANADA

List of Prizes Aggregating More Than $5,000 in Value

1ST PRIZE—$2250 NEW OLYMPIC 1913 MODEL, FIVE-PASSENGER JACKSON TOURING CAR, with all the latest attachments, fully equipped. Purchased from the Jackson Car Company of Ontario, Limited, 328 High Park avenue.

2ND PRIZE — $750 BLUNDALL PLAYER - PIANO, Louis XV. style, with fifteen Music Rolls and Bench. Purchased from The Blundall Piano Company, 144 Spadina avenue.

3RD PRIZE—$350 R. F. WILKS UPRIGHT PIANO, in beautiful walnut case. Purchased from R. F. Wilks, 11-13 Bloor street east.

4TH PRIZE—$300 BURNETT UPRIGHT PIANO, in mahogany. Purchased from the Burnett Piano Company, 276 Yonge street.

5TH PRIZE—$265 INDIAN MOTORCYCLE. Purchased from The Toronto Motorcycle Company, 384 Spadina avenue.

6TH PRIZE—$265 EXCELSIOR AUTOCYCLE. Purchased from Percy A. McBride, 343 Yonge street.

7TH PRIZE—$250 NINE - PIECE DINING - ROOM SUITE, in fumed oak. Purchased from L. Yolles, Furniture, 363-365 West Queen street.

8TH PRIZE — $225 SIX-PIECE BEDROOM SUITE, in full mahogany. Purchased from S. Levinter, 401-405 West Queen street.

9TH PRIZE — $150 GENUINE SOLITAIRE DIAMOND RING. Purchased from Ellis Bros., Diamonds, 108 Yonge street.

10TH PRIZE—$100 FOUR-PIECE LIBRARY SUITE, in fumed oak, pigskin leather upholstered. Purchased from L. Yolles, 363-365 West Queen street.

11TH PRIZE — $100 GENUINE SOLITAIRE DIAMOND RING. Purchased from Ellis Bros., Diamonds, 108 Yonge street.

12TH PRIZE — $50 DIAMOND CLUSTER RING. Purchased from Ellis Bros., Diamonds.

13TH TO 17TH PRIZES—$50—LEATHER TRAVELING BAGS, at $10 each. Purchased from Fink Trunk & Bag Co., 143 West Queen street.

18TH TO 42ND PRIZES—$62.50—L. E. WATERMAN IDEAL FOUNTAIN PENS, $2.50 each.

ADDITIONAL PRIZES TO BE ANNOUNCED LATER.

Entry to Contest May Be Made at Any Time

Have Your Newsdealer Begin to Serve You With a Copy of The Daily and Sunday World Every Day From Now On.

Back numbers of the Proverb Pictures and their Coupon Blanks may be had at the office of The World, or by mail. The price is 1 cent for the Daily and 5 cents for the Sunday. Where back numbers are ordered by mail 1 cent additional for every ten numbers must be remitted for postage. All of the back numbers from October 3rd to date will be mailed prepaid to any address in Canada upon receipt of $1.17.