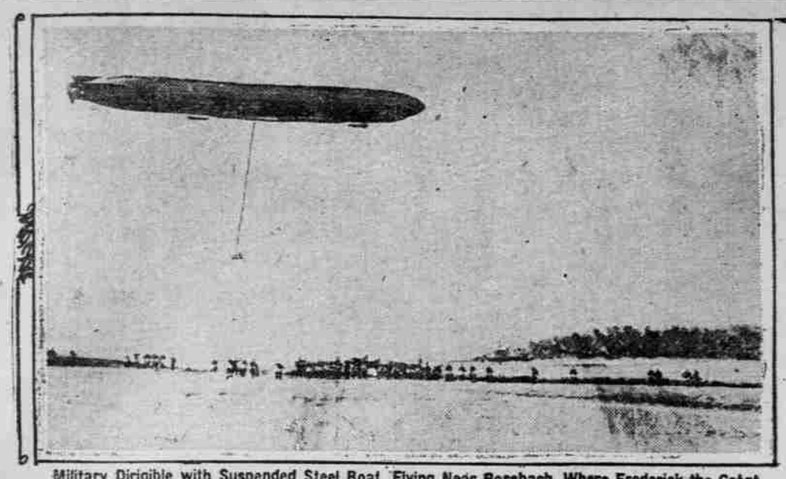
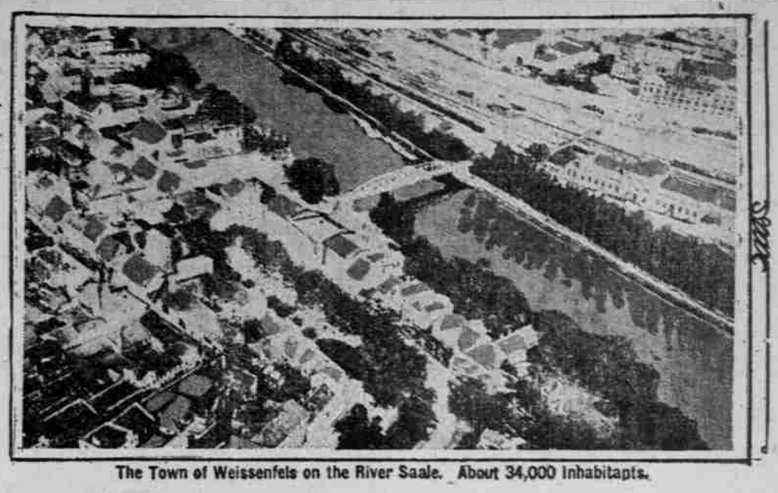
VIEWS FROM A ZEPPELIN

TAKEN FROM AN ALTITUDE OF 500 FEET

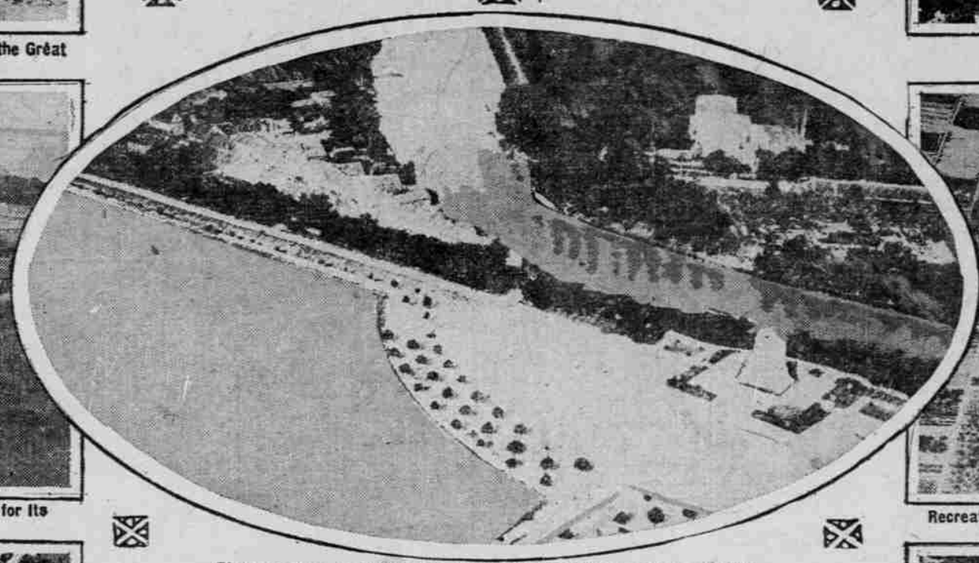


Military Dirigible with Suspended Steel Boat Flying Near Rossbach, Where Frederick the Great Defeated the French and Their German Allies.

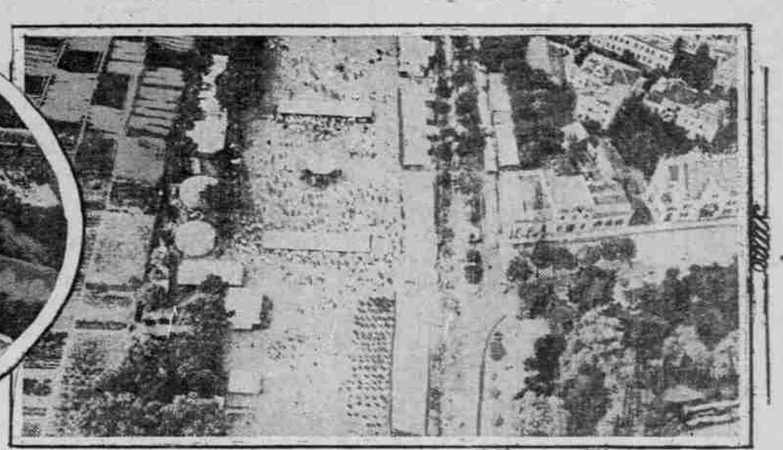


The Town of Weissenfels on the River Saale. About 34,000 Inhabitants.

The Eleventh Century Castle of Neuenburg on the River Unstrut, Near Freyburg, Noted for Its Sparkling Wines.

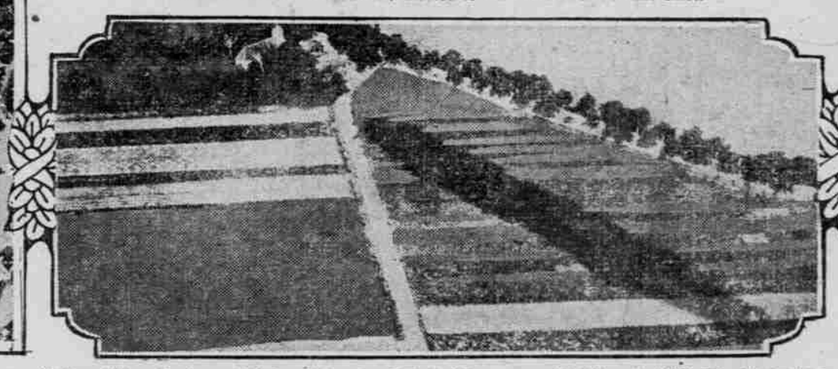


Bismarck Turn at Weissenfels, Erected to the Founder of German Unity.

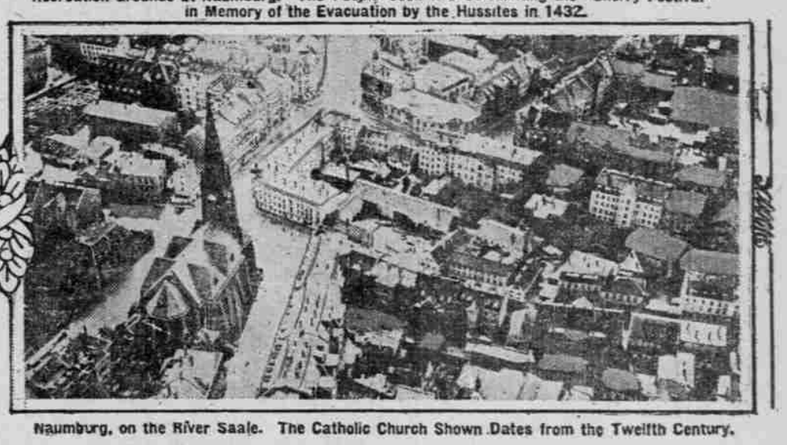


Recreation Grounds at Naumburg. The People Seen Are Celebrating the "Cherry Festival" in Memory of the Evacuation by the Hussites in 1432.

Buildings of the Military Academy at Naumburg.



Lutzen, Where Gustavus Adolphus, of Sweden, Defeated Germans and Austrians in 1632. The Chapel Is a Memorial Marking the Field of Battle. Part of Which Lies Under the Shadow of the Dirigible.



Naumburg, on the River Saale. The Catholic Church Shown Dates from the Twelfth Century.

FLYING terror! This name has been bestowed on the Zeppelin dirigible as now perfected for war purposes. At a safe height, 1000 yards or more, soars the cigar-shaped balloon, some 500 feet long, propelled by double screws. A gondolan, built of steel plate and proof against rifle bullets, is so fastened that it can be lowered to a few hundred feet from the ground, to take observations or to throw bombs on the enemy.

Like a dreadnought with auxiliaries, submarines, torpedo boats, destroyers and hydroplanes, the aerial war craft comprises scouting aeroplanes to ward off attacks and a crew of pilot engineers, photographer, signalman, artillerists—picked men all. This is the latest development, after years of trials, after scores of failures, of Count Zeppelin's dirigibles.

Until war was begun some airships were still engaged in missions of pleasure, carrying passengers across Germany. There were scheduled regular excursions between Berlin, Hamburg, Cologne, Frankfurt on Rhine, Munich and Leipzig. In calm weather the trip through the aerial regions, at a speed of 60 miles an hour, proved immensely interesting and certainly far more comfortable than a ride in a noisy, jolting, dust-filled railroad car.

After the first sensation, feeling that nothing solid is beneath one and a suspicion of seasickness bravely overcome, one's equanimity of equilibrium is restored in spite of the knowledge that all laws of gravitation are being defied, all nervousness subsides in favor of a sense of confidence—disappears in the absorption of overwhelming novelties, to be winged through the air onward, upward; novel sights, new sensations, fascinations. Light unimpeded from all sides—free air—you feel like a bird, exhilarated, intoxicated.

I recently had an opportunity to participate in a trial trip from the depot at Leipzig, traversing some picturesque bits of the Saxon country. A few photographs were attempted at an altitude of 600 to 800 feet. Reproductions are shown on this page.

This district is celebrated for the battles fought in it. At Lutzen King Gustavus Adolphus of Sweden defeated the combined German and Austrian hosts in 1632. A memorial chapel marks the field of battle, part of it now darkened by the shadow from the dirigible.

In one of the photographs of Naumburg we see the recreation grounds with tents and many people assembled. The white dots denote light dresses, which are in preponderance on such occasions. It is the annual "Cherry Festival," in memory of the year 1432, Saxony had been invaded by the warlike Hussites, who did not hesitate to use the sword to persuade the Saxon Catholics to accept the new doctrines. In sore plight, the children of Naumburg assembled and in procession appeared before the Huss general, Prokopius, praying for the intruders' departure in the name of peace. Prokopius granted the petition of the defenseless and soon left with his unruly followers. When the cherries are ripe every year a fair and festival is held.

Castle Neuenburg is on the River Unstrut, some four miles north of Naumburg and to the south of Freyburg, a small town well known from its chief product of sparkling wine, also as the home of "Father John," the originator of modern gymnastics, the German "turner."

Castle Neuenburg dates from the eleventh century and was one of the residential palaces of the landgrafen of Thuringia.

In the photograph of a military dirigible a company of infantry is drilling on the fields near Rossbach, about halfway between Neuenburg and Naumburg. The battle of Rossbach, in 1757, was fought and will live in history for its widespreading results. Frederick the Great of Prussia with his 22,000 men signally defeated 40,000 French under General Soubise, assisted by an almost equal number of German allies on the French side.

Near it, in 1813, another fierce but indecisive engagement was fought by the united Russian and Prussian forces against the French.

There Is No Such Thing As Athlete's Heart, *Says Investigator*

German Professor Delves Into the Physiological Effects of Games, Training and Over Exertion.

Professor Albu, Who Has Published Remarkable Book on Action of Sport on Physique and Health.

BERLIN, Sept. 1.—(Special Correspondence.)—Professor Albert Albu, Germany's greatest authority on nutrition and on the hygiene of sport, has published a pamphlet which, fortunately, got out ahead of the war. It upsets many current notions as to the physiological effects of games, training and over-exertion. He laughs at most accepted ideas and sets up a new sport theory of his own, the main point of which is that a man is either fit or not fit for sport, and that in the first case it is immaterial what sport he chooses.

All sports which require strained bodily exertion affect the body, says Professor Albu, in the same way. The supposed physiological difference between quick, brief and violent games and slow games with sustained bodily strain does not exist.

The effect upon heart and kidneys is identical; and it is a mistake to think that the heart is affected by the first and not by the second. The organ which is affected is the brain. Violent sports which involve overheating have dangers for the brain, but for the heart they have no more dangers than has slow, heavy exertion. The hearts of a long-distance walker and of a football player undergo the same strains and risks.

Laymen, says Albu, exaggerate the permanent influence of sport on the heart. There is no such thing as an athlete's heart. By "athlete's heart" is meant a heart hypertrophied or otherwise typically affected by over-exertion. All exertion affects the heart's functioning in a particular way. Whether a man plays a game violently for five minutes or exerts himself heavily for five hours, his heart functions in the same way.

As long as the exertion lasts the heart has to pump into the arteries from three to five times the normal quantity of blood. This means an increase of pressure in the blood vessels until the heart's muscles through over-exertion suffer a kind of temporary paralysis. But frequent repetitions of this over-exertion do not produce any chronic abnormality which a doctor can recognize as an athlete's heart.

Dr. Albu has proved this by examination. In some cases he found that the heart had decreased in size; in some it had increased, and in others there was no change in its size. Hence games and athletics, if they affect the heart at all, affect it in different ways, but there can be no question of a particular diagnosable kind of "athlete's heart." This conclusion is backed by the South German doctor, Maltzahn, who says he has examined the hearts of 70 footballers, hockey players and long-distance walkers and runners and "found nothing that can be traced distinctively to sport exertion."

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Albu says that from the hygenic standpoint the choice of games and sports is immaterial. A game affects a man's health not because of its nature, but because of his nature. The vital questions are the player's age, his bodily constitution and power of resistance; finally the question of his training. If a man is all right in these respects he can choose what sport he likes.

Over-exertion, says Albu, does exist as a hygienic fact, though it has no permanent effect on the heart. The best test of it is the time taken after playing an active game for the heart to revert to its normal pulsation. A healthy heart, after strong but not excessive exertions, ought to return to its normal number of beats within 15 minutes after the exertion ends. If it takes much longer, then over-exertion may be assumed.

Long walks, carrying burdens, are one of the chief causes of such over-exertion. The German military "baggage marches"—Gepackmarschen—constantly produce over-exertion. In these marches the men cover from 20 to 35 miles, carrying knapsacks, rifles, bayonets and cartridges. Sometimes the knapsacks are filled with sand. Professor Albu's examination of men after such achievements shows that over-exertion is general. Of eight men examined not one regained his normal heart beat within half an hour of the end of the march.

Vegetables, says Albu, are a wholly unsuitable diet for any man who wants to cover a long distance, or otherwise to keep up extra exertion during a long period. That is a scientific fact, because vegetables are poor in albumen, which is needed to replenish the muscles. The fact may also be proved empirically. German tests in the "baggage marchee" show that the flesh-eating soldier has the greatest endurance. Many feats of endurance have been accomplished on vegetable food, but that only proves the marvelous adaptability of the body to unsuitable nourishment.

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Dr. Horaz Maltzahn supplements these theories with the doctrine that at some ages women are quite as well fitted as men are for violent exertion, and that at some ages they are even superior. There is no game, however violent, which girls under 14 may not play on equality with boys. Between 14 and 20, girls should play games moderately and avoid violent exercise. After 20, if they are in good health they are as fit to play games as men.

When past middle life women are rather better equipped than men to play games. "The spectacle of elderly women of past 50 engaging in games which require quick movements often causes laughter, but nine out of ten women of 50 are better fitted to play lawn tennis and golf than men are."

It is a mistake, says Maltzahn, to associate nervous strength with dexterity in sports and games. On the contrary, people with weak nerves—that is, so-called "nervous" people—are commonly the best game players. Dr. Maltzahn came to this conclusion after testing the nervous condition of lawn tennis players, good and bad. He tested the players for nervous reactions and found that of seven particularly adept and skillful players six had abnormally great reactions, thus indicating excessive nervousness. After that he tried numerous bad and indifferent players, including nearly the whole of his local club, and he found that most of the different players had slight—that is, healthy—reactions.

"It is not true," says Maltzahn, "that 'strong' nerves go with skill in games and sports. The best players have usually delicate or hypersensitive nervous systems. That is true, at least, of lawn tennis and billiard players, but it is not necessarily true of footballers or boxers. There is a state of the body which may be called "sportgemass' or 'sport fit.' It is a nervous state. Men and women of dull, lymphatic temperament seldom make good game players, and, as a rule, they have no liking for games. Liking for games is the individual's desire to bring out a dexterity and adeptness which are part of a nervous temperament."

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Maltzahn says that a good rough classification of humanity would be into "sport individuals" and "non-sport individuals." The sport individuals include the finer half. "Hence Anglo-Saxon countries abound in delicate, nervous yet virile types. It is the custom in Germany to ascribe this type to sport. It is probable, however, that Anglo-Saxon sport is the result of this type and not the cause of it."

EVEN THE PLANTS GET TIRED, SAY SCIENTISTS

DR. J. C. BOSE, of Calcutta, whose experiments have aroused so much interest in London, sees life not so much asserting itself by an adaptation to environment as recording itself by its responses to stimulus. The stimulus may be chemical or mechanical, it may be stimulus of heat or of light or of electricity. The response, again, may be mechanical, as in the case of a contraction of muscle, or it may be shown by certain electrical changes. It is by these electric responses that a unity of matter may be demonstrated, for it is of no consequence whether the stimulus was applied to a metal, to a plant or to a piece of animal muscle, response was universal.

Hence he describes death as the failure to respond to stimulus.

"Nor steel nor poison,
Malice domestic, foreign levy, nothing
Can touch him further."

wrote Shakespeare of the dead King; he had passed beyond "response."

Dr. Bose has contrived strange instruments that tell us exactly when the dying fail to respond. Not only will plants show us the death struggle, but they will, through his inventions, record their gradually weakening responses until the end. To all who are fighting against experimental animal vivisection there is something very suggestive in these discoveries, seeming as they do to point the way to an investigation of animal reactions through the examination of vegetable organisms.

Plant functions are immensely simple compared with the complexities of animal physiology, but the difference is one of degree, not kind. This humane vivisector has proved incontestably by his researches in plant irritability that anaesthetics and stimulants, cold and heat, starvation and repletion, poisons and antidotes produce identical effects upon plants and animals.

He has extorted the same response from metals. "Tin," he writes sympathetically, "is, usually speaking, almost indefatigable. I have obtained several hundreds of successive responses showing practically no fatigue." He has studied fatigue exhaustively; weary cauliflower stalks have sighed out their story to him and platinum has yawned for his benefit. It is not too much to say that he has found a continuity of reaction throughout the organic and inorganic world.

Incidentally, he has corrected some of our popular notions of phenomena. Shelley's sensitive plant

"Opened its fernlike leaves to the light,
And closed them beneath the kisses of night."

For a long time we all thought it slept. But we are told "the fanciful name of sleep is often given to the closure of certain leaflets of certain plants during darkness. These movements . . . have nothing whatever to do with true sleep." Shelly's "Mimosa," in point of prosaic fact, keeps very late hours, falling asleep in the early hours of the morning and waking up at noon.

Pushball on Horseback.

The American Boy.

Pushball has won some favor as a game played by contestants on foot, the object being to push the ball over the other team's goal line. But now the Out-West Riding Club of Los Angeles is playing the game on horseback. The ball is six feet in diameter, air-inflated and built like a basket ball. Mounted on bronchos, the riders endeavor to force the ball over the goal, the ponies doing the actual pushing. The scrimmages are exciting in the extreme, as horses and riders are often thrown. The players are hardy and well trained and so usually escape injury.

Small Choice.

(Boston Transcript.)

Pat—Yis, sorr, wur-rk is scarce, but Oi got a job last Sunday that brought me foive dollars.

Mr. Goodman—What! You broke the Sabbath?

Pat (apologetically)—Well, sorr, 'twas a case of wan or the other av us.