Mostly About Dogs

By BOB BECKER

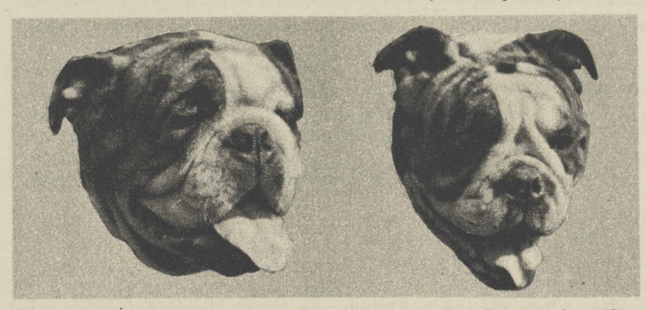
'Curb Your Dog' Good Advice

A four-month-old German shorthaired pointer named Idella's Jewel. (Tribune photos.)

STATE LAWS and city ordinances concerning dogs vary greatly in all parts of the United States. Many times owners find it necessary to muster their forces to defeat unfair ordinances directed at dog ownership.

Recently there was a flareup of anti-dog feeling in Chicago, a city that has a large dog population and likes its dog shows and field trials. The criticism that found its way into the press was that dog owners were permitting their pets to soil buildings, grassy parkways, sidewalks, and other public areas.

One has only to look at New York to find the answer to this clash between the public and the dog owners. In New York, truly



A pair of bulldogs all ready to go into the show ring. At left is Beau Ban, at right Del Rae. Both are owned by Dr. Bert Franklin.

a doggy city, an ordinance has been passed to make for a cleaner city and at the same time compel the indifferent dog owner to consider public welfare. The ordinance demands that dogs be curbed. There are signs everywhere with the request, "Curb your dog." It means that owners cannot allow their pets to soil buildings, nor can a dog make a nuisance of himself on the grass of the parkway or on the sidewalk. As a result there are practically no complaints about the dogs soiling sidewalks or grassy places which the public uses. Any one not curbing his dog when the occasion demands it is given a ticket and must go to court and pay a fine.

C. E. Harbison, secretary of the International Kennel club, nationally known dog authority and long a resident in the east, commented on this "curb your dog" ordinance in New York in this way:

"When New York passed the ordinance compelling owners to curb their dogs at the proper time the police department was attacked and all the dog owners were both furious and much alarmed. Now I am convinced that dog owners wouldn't want this ordinance taken from the books on any consideration. It has reduced the anti-dog feeling in the city, because the dog now

A Pomeranian, named Blackacre Little Love. It is owned by Helen Nowicki.

is not a public nuisance when on the streets with his owner. Moreover, a regulation on curbing the dog works no hardship on the owner. It really is only a reminder to the dog owner of his civic sense of duty and his responsibility as a good citizen."

If dog owners (in Chicago and in other cities where criticism of dog manners has arisen) were smart they would not wait to have a curbing law—perhaps an unfair one—forced on them. On the contrary, they would be the first to ask that such an ordinance be passed and thus disarm any future criticism on this point. After all, there are ordinances against people committing nuisances, as, for example, the regulation against expectorating on sidewalks and other public places.

This general trend of thought undoubtedly is a wise approach to the problem. An attack invariably is better than defense. In this case dog owners have an excellent opportunity to attack their own problem and solve it with a broad view to civic welfare, and at the same time create good will for themselves, rather than sit back and try to put up what eventually would be a losing defense.

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DOG NOTE

A springer spaniel breeder in an eastern city has furnished six champions from one litter of eight dogs.

The Graphic Laboratory of Popular Science

Fallen Tree to Modern Independent Spans

● Three previous articles in this department were discussions of arch bridges, from earliest times to the present day. How they developed from the simplest arch, formed of two stones leaned together, to colossal steel structures such as the Sydney, Australia, harbor span was traced through more than 5,000 years of history. Today two other types of bridges are considered—the independent-span and the continuous-span bridges.

By JOHN A. MENAUGH

(A. P. photo.) Kappelbruecke (Chapel bridge) of Lucerne, Switzerland, built upon a series of independent spans.

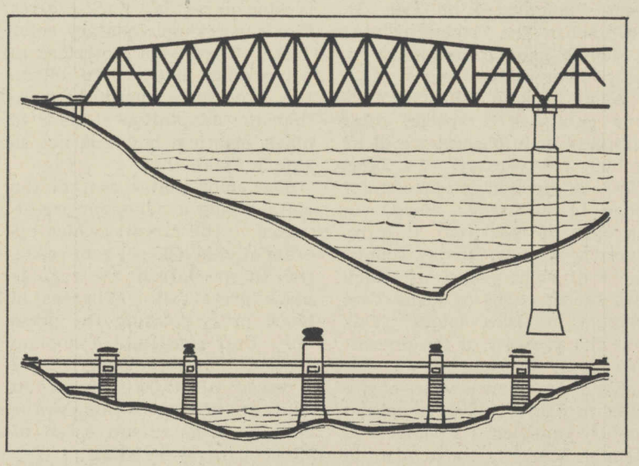
WHAT MAY have been and probably was the first of all bridges was the handiwork of nature. Man, if we are to believe the scientists, had not yet appeared on earth when one of the first of the tall trees of the antediluvian jungles crashed down across a stream to form a bridge. Footbridges of this sort were used by prehistoric men centuries later—men who had not yet thought of devising the simple arch.

The bridge provided by a fallen tree is of a type known as the independent span. Both the independent span and the continuous span have been in use for ages, and the principle of each is employed even today in bridge construction.

The independent span as applied to the bridge of the present day is one that extends from pier to pier or from abutment to abutment, without extending beyond the supports. Engineers assert that the stress set up in a bridge of this type by its own weight and by the loads that move over it can be figured out with extreme accuracy. Bridges of this form as now constructed generally consist of main girders placed above or below the platform they support, the girders being provided with top and bottom booms, either straight or curved, connected together by web systems of various types. Girders are proportioned so that the depth as a rule is from one-eighth to one-twelfth of the span, the greater the depth the stiffer the girder. The top boom is in compression, while the bottom is in tension.

The limiting span of this type, in best engineering practice, is about 800 feet.

The celebrated Kappelbruecke (Chapel bridge) which spans the River Reuss at Lucerne, Switzerland, employs a large number of independent spans and stretches across the stream in an S shape. Its builders probably reasoned that this shape would help the structure withstand the strong current of the river. And obviously they were correct, for the bridge was built in the middle ages and still is standing, although constructed in the main of timbers.



Upper diagram: Portion of an independent-span bridge. Lower diagram: A continuous-span bridge.

Connected with the bridge in midstream is the ancient Wasserthurm, a tower which tradition says once was a lighthouse. On the wooden ceiling formed by the covering of the bridge is a set of pictures painted 200 years ago that show scenes from the history of Lucerne.

Whether modern steel girders are used or simple heavy timbers, such as in the Lucerne bridge, the principle is the same. The famous Red Lacquer bridge of Nikko, Japan, while slightly arched, actually is an independent-span bridge, resting upon two heavy supports on either side of the stream. Its overhanging ends faintly suggest the cantilever principle.

In the bridge across the Ruhr at Duren, Germany, an independent-span bridge, the girders, instead of standing horizontally, as is the common practice, lean toward the center to form a triangle as one views them from the ends of the bridge. This type of construction is said to be extremely sturdy.

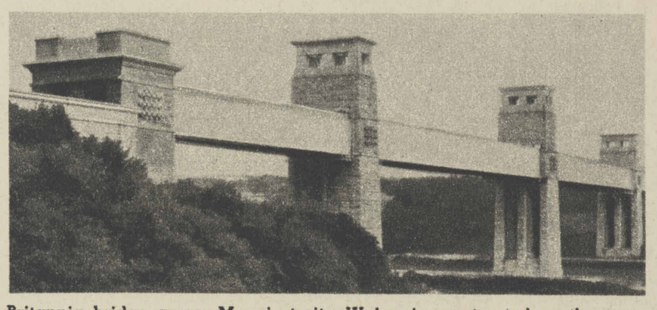
Continuous spans as applied to bridges are those that reach over more than one opening. They are lighter than independent spans in relation to their lengths, but stresses on them are difficult to calculate. In addition to the problem of stresses this type of bridge is subject to marked expansion and contraction with rises and falls of temperature.

Take, for example, the Britannia bridge over Menai straits, Wales, which is pictured in an accompanying illustration. It is a continuous-span bridge of four spans. Two of the spans are 456 feet long each, and the other two are 230 feet long each, and the extreme expansion and contraction of the bridge from end to end is about four inches. Britannia bridge, designed by Robert Stevenson of railway locomotive fame, was completed in 1850. It is formed by a wrought iron tubular girder through which trains pass. This bridge was the first large example of wrought iron construction. It contains more than 11,000 tons of this type of metal.

An ancient bridge across the "Water of the White Dragon" in Tibet is an example of how primitive men constructed a continuous-span bridge. There is only one span in this bridge, but there are four supports, one at either end of the structure and two out for a distance from either end, formed by slanting supports built from shore.

Next week—Suspension and Cantilever Bridges.

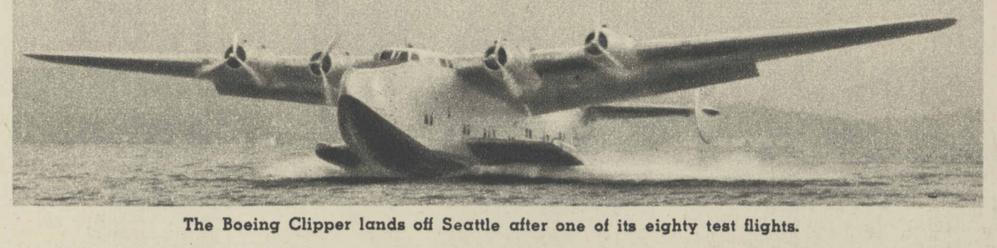
(Ewing Galloway photo.) The ancient Red Lacquer bridge of Nikko, Japan, is slightly arched, but in principle is an independent-span bridge.



Britannia bridge across Menai straits, Wales, is constructed on the continuous-span principle. Designed by Robert Stevenson, it was completed in 1850. (Ewing Galloway photo.)

Test Piloting—An Exact Science

By WAYNE THOMIS



The Boeing Clipper lands off Seattle after one of its eighty test flights.

IN THE haphazard days of aviation—1912 through 1922—a test pilot's duty amounted chiefly to proving that a new airplane would fly.

Today the testing of big airplanes has become an exact science. Instead of one hardbitten pilot, a test crew now consists of eight or ten flight engineers. The tests will require months of work, most of which will be on the ground. And in flight the ship to be tested will carry literally hundreds of special instruments to record temperatures, pressures, strains, vibration, noise, fuel flow, and air flows.

A typical example of current practice is the testing by the manufacturer of the Boeing 314—the 82,500-pound flying boat built for Pan American Airways' Atlantic and Pacific ocean routes. This boat—to carry 74 passengers over long sea flights—is completing its tests now for the civil aeronautics authority.

"We used 100 different precision instruments simultaneously during our tests," said Robert J. Minshall, vice president of engineering for Boeing, in describing the trials of the plane.

Each of the readings was taken repeatedly at various altitudes, speeds, power conditions, attitudes of the airplane, and at various outside air temperatures. Analyzed by a special corps of Boeing engineers, these reports tell the story of how to operate the Clipper and where to expect its best performance.

One of the most important tests involved the 1,500-horsepower fourteen-cylinder Cyclone engines. Four instruments gave temperature readings at 61 different points on the four motors; one master pressure indicator gave pressures at 35 different points; and there were 26 other pressure indicators.

The tests included 80 takeoffs and landings, some 450 miles of taxiing, 5,000 miles of concentrated flight testing over a period of five months.

The testing, and changes made as a result thereof, resulted in what is said to be extraordinary ease of handling for the pilot of the Clipper. Although the big ship weighs 41 tons, it handles like a small sport plane and can be flown with less force on the rudder pedals than normally used in driving a car.

The tested performance of the ship is: Takeoff with 42-ton load in 30 seconds; climb with full load at 1,100 feet a minute; will climb with full load above 20,000 feet; top speed 200 miles an hour at 11,000 feet, and cruising speed is 155 miles an hour. Range of this airplane is said to be 3,600 miles with a load of twenty passengers and three tons of cargo.

Part of the elaborate testing equipment in the Clipper cabin.

● For attractive offers of dogs, turn to the Dogs, Cats, Birds, and Pets columr in the want ad section of today's Tribune.