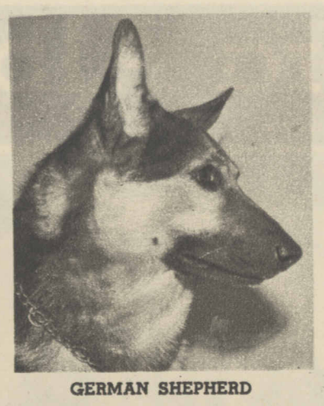
Mostly About Dogs

By BOB BECKER

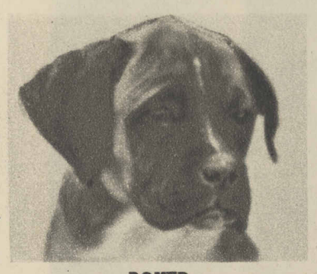
AIREDALE



GERMAN SHEPHERD

IRISH TERRIER

CHIHUAHUA



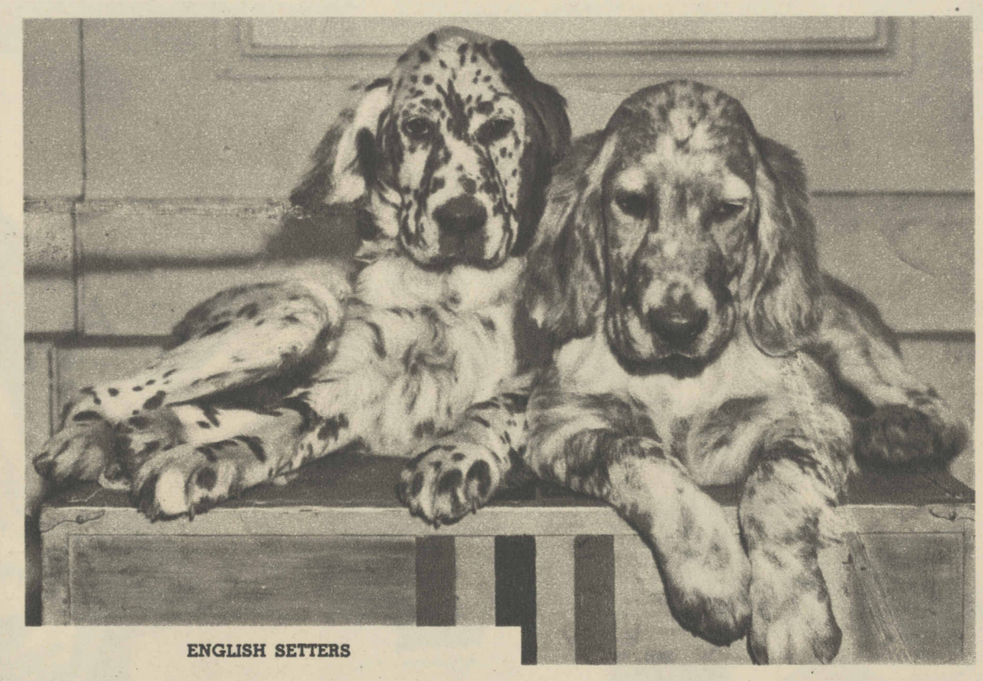
BOXER

At right:
WELSH TERRIER

New List of Pups for Gifts

WITH CHRISTMAS just about one week away, families everywhere are looking for sturdy, healthy puppies to be given as Christmas gifts to the children. A large majority of these puppies will come from the fifteen most popular breeds, a list that includes the cocker spaniel, Boston terrier, Scottish terrier, beagle, fox terrier (smooth and wire varities), Pekingese, dachshund, springer spaniel, chow, bulldog, collie, Pomeranian, Irish setter, Doberman, and Great Dane. It will be noticed that at the head of this list are what the kennels describe as "dogs of house pet size." Families that have a limited amount of room, and therefore want a rather small companion dog as a pet, naturally would turn to a breed that isn't large, a tendency which has boosted such breeds as the cocker, Boston terrier, Scotty, beagle, fox terrier, Pekingese, and dachshund into leading positions.

Altho a large majority of the Christmas puppies will be selected from the fifteen leading breeds in America, it doesn't mean that these breeds are the only ones that make satisfactory pets. In the next fifteen most popular breeds, the ones that rank from number 16 to number 30 in the list, are some marvelous dogs of varied size and usefulness with commendable traits. Number one dog in the second group is the beautiful English setter, a stylish, affectionate sporting breed. Then follow in order the German shepherd (erroneously called police dog), intelligent working breed whose best reference is that he is being widely used to guide the blind; the Airedale, one of the largest of our terrier breeds and a rugged companion dog that makes a good guard around the home; the Irish terrier, a medium-sized, active breed which is intelligent and alert; the tiny Chihuahua, interesting and amusing toy breed; the boxer, a strong, active working breed which when trained makes an excellent guard dog; Sealyham terrier, the white, wiry-coated little "badger dog," that has lots of personality; St. Bernard, one of America's best loved working breeds; Dalmatian, the old "coach dog" of the nineties, which is now making a comeback and winning new friends; poodle, distinctive and smart breed which also is gaining in popularity; Kerry blue terrier, one of the most unusual terrier breeds; Cairn terrier, a "house dog size" terrier which has the temperament, personality, and courage that dog fanciers like; Welsh terrier, a lovable little terrier that is smart and easy to keep and should go a long way in this country; schnauzer, rugged dogs which are bred in three sizes; and the bull terrier, an active, plucky terrier that can handle any situation.



ENGLISH SETTERS

Bull terrier

Schnauzer

In buying a puppy, no matter what the breed, it's wise not to take one that is too young.

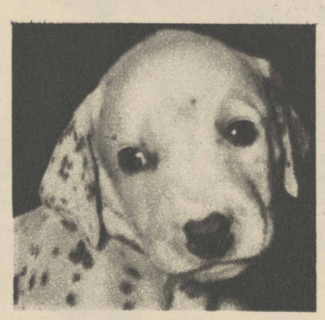
ST. BERNARD

SEALYHAM TERRIER

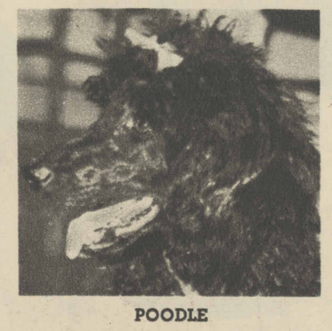
When you buy a very young dog you are bound to have more trouble raising it than one which has stayed in the kennel several weeks longer and is sturdier and stronger. Then, too, the older pup can stand more play and mauling. Another point is to ask the seller if the dog has received its first inoculation against distemper. Naturally this treatment, important to both the dog and the owner, adds slightly to the cost of a puppy, but it's well worth while.

It is smart business to pay a fair price for a sound, healthy puppy from good stock rather than to buy a "bargain" puppy of uncertain ancestry from a "here today, gone tomorrow" kennel or other vender of dogs.

Altho we rarely see a dog that we do not like, and most any dog is better than none at all in the home, we always urge a family considering a Christmas puppy to pick one that may be registered. In other words, choose a puppy whose ancestry is known, because you'll find that it really costs just as much to feed and care for a cross-bred as it does to raise a good looking pure-bred dog.



DALMATIAN

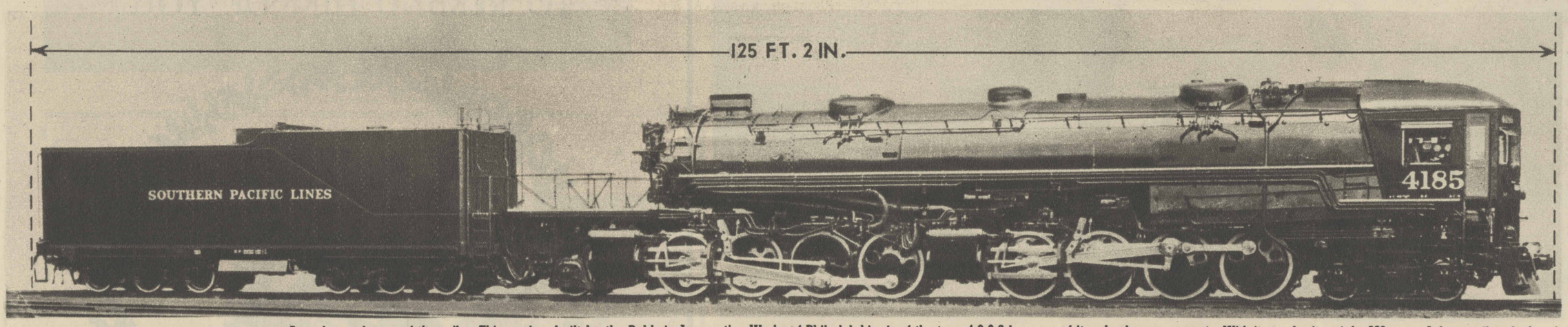


POODLE

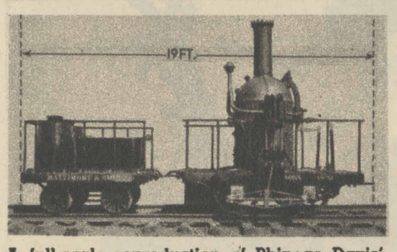
KERRY BLUE TERRIER

At left:
CAIRN TERRIER

The Graphic Laboratory of Popular Science



A modern colossus of the rails. This engine, built by the Baldwin Locomotive Works of Philadelphia, is of the type 4-8-8-2 because of its wheel arrangement. With its tender it weighs 526 tons. It burns oil as fuel and is suitable for either freight or passenger service. This picture is reproduced in scale with that of the old locomotive at the left, showing the comparative sizes.



A full-scale reproduction of Phineas Davis' steam locomotive, the York, which was built in 1831. It weighs three and a half tons. This reproduction now is an exhibit of the Museum of Science and Industry, Chicago.

Railway Locomotives—Speedy Symbols of a Rejuvenated Industry

FOREWORD The accompanying article is the first of a series on the subject of railway locomotives, particularly in their present-day aspects. The modernization of our railway systems, including the development and construction of modern locomotives, has accomplished, in fact, the rejuvenation of the industry. This is a rejuvenation brought about to a large extent as the result of an editorial campaign of encouragement waged by The Chicago Tribune for the last dozen years.

By JOHN A. MENAUGH

THE Baltimore and Ohio railroad on Jan. 4, 1831, offered a cash prize of $4,000 for the best American-made steam locomotive. Under the stipulations of this contest the locomotive had to weigh three and a half tons and had to be able to draw a load of 15 tons on a level track at the rate of 15 miles an hour.

Phineas Davis, a watchmaker of York, Pa., won the prize with a quaint little engine which he called the York. It consisted of a vertical boiler and mechanisms mounted upon four 30-inch wheels.

Altho it is not the purpose of this article and the ones that follow in the series to trace the development of the steam locomotive thru its various phases, a picture of a reproduction of Davis' engine and one of a modern steam locomotive are shown on this page, so that the reader may see at a glance just what has been this marvelous development in the relatively brief space of little more than a century.

In between these two locomotives, which represent the earliest and the latest types, there have appeared innumerable different kinds of power units designed to draw cars and coaches on railway tracks, some of which have proved impractical and others of which have been decided improvements on their predecessors. Even since the beginning of the present century there has been marked improvement in design, construction, and power of locomotives. Actually, from the engineering standpoint, there has been greater progress in this field in the last 39 years than in all the time before.

When the average person thinks of a modern locomotive he most likely has in mind one of those that hauls a high-speed passenger train, a towering steam engine, a streamlined and beautiful Diesel-electric engine, or one of those electric units that drags a transcontinental flyer thru the mountains or the congested areas of a big city. The average person does not as a rule think of the modern freight engine, yet the development of the freight locomotive has paralleled in virtually every way the development of the passenger locomotive.

Freight traffic in this country is far more important in dollars and cents than passenger traffic. Last year, for example, the total revenue from freight traffic on class I. railroads was $2,858,077,292, as compared with $405,883,269 for passenger traffic. To take in these vast amounts freight trains traveled 422,388,483 miles and passenger trains 393,791,736 miles. Class I. railroads represent approximately 95 per cent of the track mileage in the country and are all those whose annual revenues are more than a million dollars each.

Up until that time in recent years that the country began to lay stress on speed, most of the heavy freight was carried by the so-called drag freights, trains operating without schedule and with which speed was a secondary consideration. The main objective in designing a locomotive for drag freight service was to provide an engine which would carry the largest possible percentage of total weight on the driving wheels in order to obtain the maximum hauling capacity in proportion to locomotive weight. In general the driving wheels were of small diameter and the boiler power was suited to slow-speed service.

When competition about 15 years ago began to force the railroads to haul freight at higher speed, however, a new design of steam locomotive became necessary, one that not only could haul heavy loads but also move at increased speeds. The driving wheel and cylinder dimensions were increased, the steam pressure was raised, and the boilers were enlarged to insure sustained high horsepower. The locomotive evolved carried a smaller proportion of its total weight on its driving wheels, but its horsepower was greater, so that with a given tonnage the new engine could run away from the old one. A similar development, as has been mentioned, has taken place in the passenger locomotive. For some railroads, especially those that move large volumes of perishable commodities at high rates of speed, locomotives have been designed that are suitable for either freight or passenger service.

The modern steam locomotive, using superheated steam at pressures of 250 to 300 pounds a square inch and temperatures of 650 to 750 degrees Fahrenheit, develops a horsepower hour* on about half as much fuel and water as a locomotive of thirty years ago not provided with means for superheating its steam. The superheater is an apparatus for increasing the temperature of steam without augmenting its pressure. It increases the working efficiency of the boiler. The most remarkable improvement in the steam locomotive since its invention has been the introduction and use of superheated steam.

At the end of 1938 there were 43,810 locomotives in use on the class I. railroads of America. Of these 42,637 were steam, 829 were electric units, and 344 were either Diesel-electric, gasoline, or gasoline-electric.

From the above figures it can be seen that, altho it still predominates numerically in the field, the steam locomotive has competition. The electric locomotive has been in use in main line service since 1895, when the Baltimore and Ohio electrified the Baltimore tunnel. Electrification today is represented in about 1.25 per cent of the total of route mileage in the country. The advantages of using electric traction in inclosed terminal and tunnel operations are obvious.

"Moreover," according to Charles E. Brinley, president of the Baldwin Locomotive Works of Philadelphia, "in handling heavy tonnage over long, steep grades an electric locomotive composed of two or three units coupled together, but operated from a single cab, can be employed. This concentrates a large amount of power in one multiple locomotive and makes possible advantageous operating speeds on ascending grades. Alternately, the electric locomotive, on a long descending grade, can be operated on the regenerative principle, feeding energy back into the line, the result being a retarding effect which controls the speed of the train without the use of the brakes."

The Diesel-electric locomotive has been in use for switching service since 1925. Five years ago it went into service on thru passenger trains, and today it is being experimented with in thru freight service.

*A horsepower hour is the work performed or energy consumed by working at the rate of one horsepower an hour.

NEXT WEEK—The Modern Steam Locomotive.