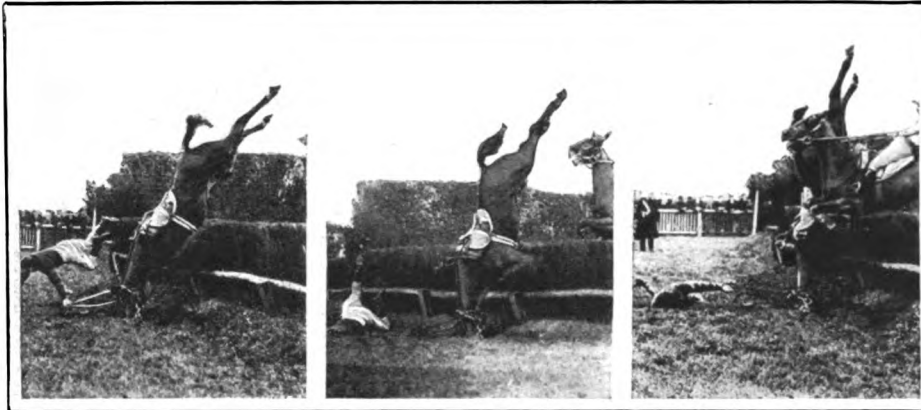


Three Cameras Snap Horse and Rider in Bad Tumble



© U. & U. These photographs of a spectacular tumble were snapped by three different cameras at intervals of less than one one-hundredth of a second

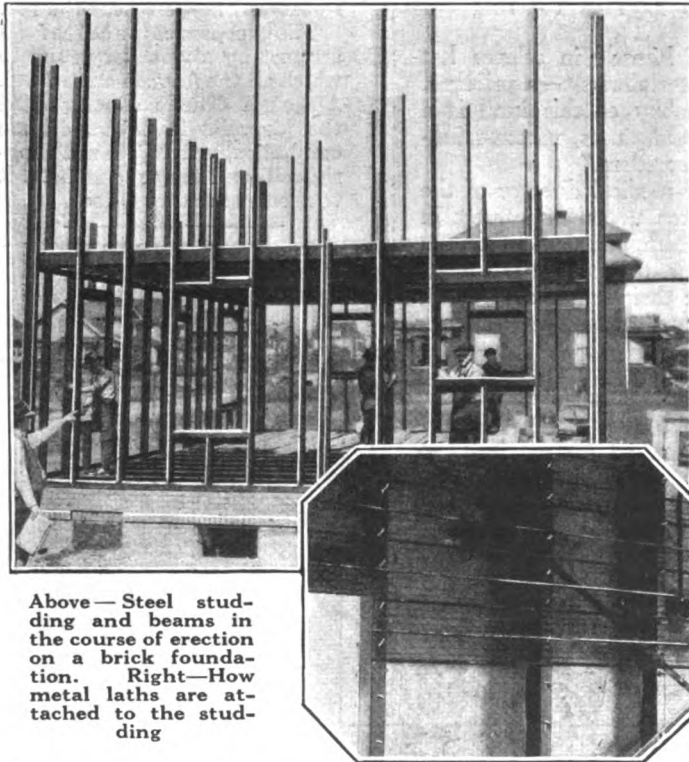
WHAT happens when a horse and rider fall in a steeplechase jump? The question was answered when three remarkable pictures of such an accident were snapped almost simultaneously by three different cameras at a recent meet near Sandown Park, England. The horse jumped short, and its foreleg was caught and held by the branches of the stiff hedge forming the obstacle. The rider was thrown headlong from the saddle, and the mount pitched forward head first, landing on its nose.

Man and mount were both badly hurt, because the horse was unable to recover.

Snapped at intervals of less than one one-hundredth of a second and from virtually the same viewpoint the three photographs form a unique and interesting action study.

Houses Built of Steel "Lumber"

METAL lumber has arrived. In a demonstration dwelling under construction in Canton, Ohio, joists and rafters of structural steel are used instead of wood. The steel framework is arranged so that it may be set on any kind of foundation, and



Above—Steel stud-
ding and beams in
the course of erection
on a brick founda-
tion. Right—How
metal laths are at-
tached to the stud-
ding

finished on the exterior with any sort of brick or stucco the owner desires. No metal is visible in the completed dwelling.

Steel lumber is prepared in a number of designs for standardized houses. For each standard house, every metal joist, stud, and channel is supplied in the exact size required and is clearly marked for its place in the structure. The pieces are held in place with three-eighth and seven-sixteenth inch bolts.

The framing of the outer walls is of four-inch channel shapes with prongs punched on the inner and outer flanges for the quick and firm attachment of metal lath. The partitions are erected of two- or four-inch studs, on both sides of which expanded metal lath is attached. Plaster is then applied as in wooden houses.

The floors are built on steel beams spaced two feet apart. To the sides of these beams are bolted wooden nailing strips, to which the flooring is nailed. Similar nailing strips on the steel rafters permit any kind of roofing to be used.

Wood grounds are provided for the insertion of windows and door-frames and for all trimmings.

The advantages of the steel house, aside from increased strength and fire resistance, lie in the fact that the frame can be erected by three men faster than carpenters can saw, fit, and nail the lumber used in the ordinary dwelling.

More Pleasure from Your Car at Less Cost

HOW you can cut the cost of running your car will be described in detail in the March issue. You will find valuable tips, straight from the actual experiences of other automobile owners, in the articles submitted by POPULAR SCIENCE MONTHLY readers in the contest, "How I Keep Down Car Expenses," which opened in October. The most instructive of these articles will appear next month. Winners in the contest are:

First Prize, \$35—F. A. Cuffe, 79 Hamilton Place, New York City.

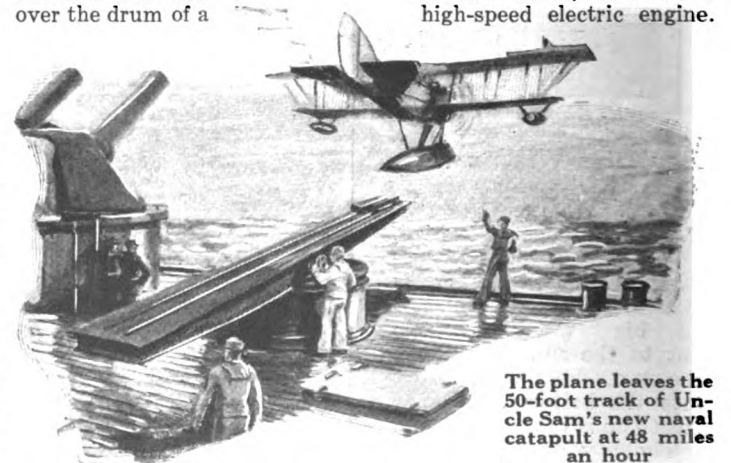
Second Prize, \$15—W. Burr Bennett, Box 41, Honesdale, Pa.

Honorable Mention—R. A. Houston, South Charleston, O.; L. R. Fritz, Wymore, Neb., and Joe V. Romig, Allentown, Pa.

Planes Catapulted from Ships

CATAPULTS that hurl naval seaplanes into the air at a speed of 48 miles an hour, regardless of the direction in which the battleship is proceeding, may be added to the equipment of all American line-of-battle ships. Successful tests conducted recently at the Philadelphia navy yard indicate that at last, after years of experiment, naval engineers have invented a method by which airplanes can be shot from the deck like arrows from a bow.

The catapult consists of a grooved track about 50 feet long, mounted on a turntable so that it can be pointed into the wind independently of the deck or turret to which it is attached. On this track runs a small carriage, or cradle, on top of which the seaplane is placed and held by quick-releasing clips. An endless chain is attached to the cradle, and is run over the drum of a high-speed electric engine.



The plane leaves the 50-foot track of Uncle Sam's new naval catapult at 48 miles an hour

When this engine is started, cradle and plane move down the track at a rapidly accelerating speed until in 50 feet they are traveling at 48 miles an hour. At this point the cradle is suddenly stopped by powerful pneumatic brakes and shock-absorbers, the clips are released, and the plane is hurled into the air. In tests made with the two-seater NC9, the plane scarcely dipped three feet as it left the catapult.