How to Find the True Length of a Landing Gear

By George White

After muddling through this process a couple of times because I couldn't remember what I'd been taught in a university Descriptive Geometry course, I figured I might not be the only muddler. Looking through some old notes, including a 1940 issue of Flying Aces, I came up with enough information to be able to explain it. This diagram can be used for cabanes as well as landing gear.

The only real effort involved is to be able to align a side view and a front view exactly on the same level with each other. Plans are rarely drawn so considerately as to have the two views on the same level. You may need make copies at your friendly copy store and paste the two views in line.

Once you've done that, it is a simple manner of rotating the side view of each of the legs down to an imaginary 90º down position as shown, giving dimensions A and B. As you can see, dimensions A and B are the same lengths as that shown on the side view. Then draw lines across under the front view so that they are exactly the same distance below the fuselage as lines A and B. Then draw lines straight down from the ends of the landing gear front view as shown. Then draw lines from the landing gear-to-fuselage point to the points where the lines from the ends of the landing gear meet the lines from distances A and B. The drawing is more easily understood than this half-baked explanation!