

Foam Dispenser



In spraying plastic foam, such as polyurethane used for insulation and soundproofing, the foam's two ingredients, properly proportioned, must be combined just before spraying and they must be fully mixed to insure proper hardening and adherence. William G. Simpson, a NASA employee at Marshall Space Flight Center, invented a mixing device that improves upon other mixers; it provides a more thorough blending of the ingredients and enhances the consistency and uniformity of the sprayed foam. The device is a spray nozzle insert equipped with a series of discs that cause the material to change direction repeatedly, so that they are completely blended by the time they reach the nozzle outlet. The simple construction of the dispenser makes cleaning easy; the nozzle is unscrewed, the insert removed and cleaned, and the mixing chamber flushed out.

Simpson obtained a patent for the invention and a license to manufacture and market the nozzle, known commercially as the Simpson Mixer; it is pictured (left above) at the tip of a spray gun. Simpson formed a company to sell the device and he is supplying it to a number of foam applicators. One such is Commercial and Industrial Applicators, Inc. (CIA, Inc.) Houston, Texas. CIA, Inc. applies polyurethane foam elastomeric coatings for insulation of tanks, pipelines and roofing systems. At left, a CIA, Inc. technician is using the Simpson Mixer to dispense an elastomeric coating onto the roof of a building at Texas A&M University; the photo below shows the job near completion, with a topping of ceramic granules (red-brown area) over the coating to achieve the aesthetic appearance desired by the university.

