An Innovative Alerting Mechanism for Mobility Assistive Devices

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Often physically challenged and aged persons have to rely on the use of mobility assistive devices such as walking frames to aid with their mobility, balance and support. In the event of the user falling, the user may be unable to alert others of their distress. An alarm mechanism which, when fitted onto a mobility device, could alert others of the distress and need for assistance, and was identified as a practical and innovative solution. Interviews with physically challenged and elderly persons who made use of a walking frame were conducted to establish whether there was a need for such an alarm device and whether they would indeed use such a device. An alarm technician was consulted to establish how alarm systems worked. Finally, the Mobility-Aid-Alarm prototype was planned, designed, built, tested and improved. The device is lightweight, portable and user friendly, therefore it will not hinder the stability of the walking frame or the mobility of the user. Once the device was built it was demonstrated to people who utilize walking frames. The results of the interviews conducted suggested that an alarm mechanism which when fitted onto a walking frame to alert others of distress would be beneficial. Following the advice of the alarm technician, the prototype was built using a simple closed circuit alarm system which when triggered, through the separation of the magnetic contact, became activated and sounded a siren. The Mobility-Aid-Alarm prototype was successfully built and tested for walking frames. In addition, this prototype could be attached to a wheel chair or most other mobility assistive devices.