

July 26th, 2017

Office of the Secretary
U.S. Consumer Product Safety Commission
Room 502
4330 East-West Highway
Bethesda, Maryland 20814

Via: <http://www.regulations.gov>.

Docket No. CPSC-2011-0074-1154

**Comments of National Consumers League to the U.S. Consumer Product Safety Commission
on “Table Saw Blade Contact Injuries; Notice of Proposed Rulemaking; Requests for
Comments and Information”**

I. Introduction:

The National Consumers League (NCL) respectfully submits these comments to the Consumer Product Safety Commission (“CPSC” or “the Commission”) in the matter of the Safety Standard Addressing Blade-Contact Injuries on Table Saws. NCL is the nation’s pioneering consumer organization and has been engaged with this issue since 2010 when the organization wrote to five CPSC Commissioners asking for a safety standard on table saws.¹ NCL applauds the Commission’s April 27, 2017, 3-2 vote to move forward with a Notice of Proposed Rulemaking (NPR) setting a safety standard on table saws.²

Approximately 33,400 Americans go to hospital emergency rooms every year for injuries sustained while operating table saws. More than 4000 of these injuries are amputations, an average of 11 amputations every day. These injuries cost society more than \$4 billion annually, and rob victims of employment and recreational opportunities for the rest of their lives.

Current safety standards described under *UL 987 Stationary and Fixed Electric Tools* do not mitigate the risk posed by table saws. A trend analysis performed by CPSC staff found “no discernable change in the number of injuries or type of injuries related to table saw blade contact from 2004 to 2015.”³ This analysis follows despite the introduction of several voluntary

¹ [Link to NCL original letter](#)

² <https://business.cpsc.gov/Newsroom/Video/commission-meeting-decisional-matter-safety-standard-addressing-blade-contact>

³ “Notice of Proposed Rulemaking Performance Requirements to Address Table Saw Blade Contact Injuries,” CPSC Staff, January 2017, page 3.

safety standards in various revisions of UL 987, such as the 2005 requirement of a riving knife and the 2007 requirement of a modular blade guard.⁴

The technology that satisfies CPSC's proposed standard already exists. Known as Active Injury Mitigation (AIM), it is currently available on only one company's table saw models. SawStop, LLC's AIM technology is able to prevent injury by stopping the table saw blade from spinning within milliseconds of contact by any body part. SawStop currently has tens of thousands of saws in circulation and has demonstrated its effectiveness with thousands of finger-saves to date.⁵

CPSC has a mandate to adopt safety measures where a product poses an unreasonable risk of injury, existing industry voluntary standards do not adequately mitigate the risk of injury, and where there is an affordable and available solution. With these requirements as a guideline, our comments underscore the need for a mandatory safety performance standard on table saws.

II. Background information: Statement from Sally Greenberg, Executive Director, NCL

In December of 2004, NPR's Chris Arnold reported about a new product that would all but eliminate the risk of injury posed by table saws.⁶ The story described the significant risk that operators face when using a table saw: one slight slip of the wrist enough to cause a trip to the emergency room, and the loss of a finger or hand altogether. Arnold interviewed table saw operators who agreed that it doesn't matter if you're a veteran woodworker or a high schooler in shop class; anyone who operates a traditional table saw can suffer these injuries.

Arnold also spoke to the saw's inventor, Stephen Gass, a patent attorney by trade with a PhD in physics, who made it his mission to make table saws safer. Out of his own garage in a month's time, he developed a technology that does just that. Gass's table saw uses a built-in

⁴ Notice of Proposed Rulemaking Performance Requirements to Address Table Saw Blade Contact Injuries," CPSC Staff, January 2017, page 30-31.

⁵ SawStop.com

⁶ <http://www.npr.org/series/137392806/striving-for-a-safer-table-saw>

electrical sensor to detect contact between a human body and a saw blade. When the saw's sensor detects contact, it triggers a brake mechanism with the remarkable power to stop a spinning blade in a matter of five milliseconds. That type of rapid response is enough to limit the damage to a mere papercut as opposed to a severed finger or thumb and a lifetime of disability.

But instead of gratitude for his breakthrough invention, Gass encountered animosity from a power tool industry that resisted – and continues to resist – incorporating affordable and available safety technology into its products. The industry claimed it was too costly to implement this AIM technology, and refused to pay the entirely reasonable⁷ licensing fees that every patent holder – including the very companies that refuse to license AIM technology – requires of anyone using its patents. Necessity being the mother of invention, Gass started his own business and began selling safe saws under the brand name, SawStop.

The high degree of risk and the severity of injury – and a pattern of injury as the statistics cited above make crystal clear – mean that table saws are a consumer product that carries an unreasonable risk of injury to the user when there is a readily available and affordable safety technology to make it safe.

In October of 2011, the Commission published an Advanced Notice of Proposed Rulemaking (ANPR) on the subject of whether a new performance safety standard is needed for table saws. With a 5-0 vote, including both Democratic and Republican appointees, the Commission moved forward on the ANPR, leading to the NPR that was voted on in April 2017. NCL urges the Commission to follow this path and finalize the NPR, a process that began in 2006 when the Commission first voted in favor of a petition requesting a performance standard for systems designed to reduce or eliminate injuries as a result of contact with table saw blades.⁸

III. Injury Risk and Financial Burden Posed by Table Saws

⁷ In fact, SawStop offered reasonable licensing terms with two power tool companies at rates of 3-8%, which by any standard is fair, reasonable, and non-discriminatory. While these deals were not finalized, the fact that two companies were in active discussions to license at said rate is strong evidence of the fair nature of SawStop's licensing requests.

⁸ "Regulatory Options for Table Saws," Office of Information and Regulatory Affairs, Fall 2016.

In 2015, CPSC staff estimates there were 33,400 table saw, emergency department-treated injuries. Of these, 30,800 (92%) involved the victim making contact with the blade, resulting in injuries ranging from lacerations, fractures, amputations, and avulsions. Amputations account for over 4,000 injures per year, an average of 11 per day. Table saws account for an estimated 52.4 percent of all amputations related to workshop accidents.

CPSC staff concluded that medical expenses as a result of table saw injuries cost upwards of \$1 billion annually. The cost of treating amputations account for roughly two-thirds of these expenses. The overall economic impact to society of these injuries is approximately \$4.06 billion.⁹

Given the rate, severity, and financial impact of these injuries, it is only appropriate to deem table saws a consumer product that poses an unreasonable risk of injury. The question then becomes what measures can be taken to best mitigate the risks they pose to society.

IV. Failure of Current Safety Measures

Current industry-wide safety measures have proven ineffective at reducing the risk of blade-contact, table saw injuries. The existing measures are described under recommendations by Underwriters Laboratories (UL), which has published several editions of *UL 987: Standard for Stationary and Fixed Electric Tools*. These standards are voluntary in nature, and are heavily influenced by the power tool industry. Despite the introduction of recent safety features such as the riving knife and modular blade guard, CPSC staff's trend analysis on table saw injury rates found no discernable change in the number of injuries or type of injuries and no discernible change in the risk of injury associated with table saw blade contact from 2004 to 2015. Efforts to incorporate more advanced safety features in recent editions of UL 987 have been lobbied against by the power tool industry, which claims the existing industry standards are sufficient. For example, in 2011, the Power Tool Institute (PTI), the largest trade partnership of power tool manufacturers, stated in comments to CPSC that based on results from "their own survey" of

⁹ Tab C, Staff Briefing Package, at 2-3.

table saw safety, the voluntary standards as they currently stand “[are] adequately addressing table saw injuries.”¹⁰ This is patently wrong as the CPSC data confirm. Because the CPSC staff’s report expresses appreciation of some of the updated voluntary standards, PTI wants us to believe that this is evidence of the effectiveness of these standards. The CSPC report states unequivocally, however, that that there is “little evidence that improvements in these passive safety devices have effectively reduced the number or severity of blade contact injuries on table saws.”¹¹

A thorough examination of specific cases of injuries caused by table saws reveals why safety measures such as the modular blade guard are ineffective. An estimated two-thirds of injuries are caused when the blade guard has been removed prior to an operator making a cut, while the other third occur with the guard intact.¹² This is troubling on two fronts. First, the fact that blade guards can or must be removed in order to make certain cuts means they are insufficient as a safety measure. If operators are removing the blade guard, there needs to be some other safety mechanism at play in order to mitigate the risk of injury. Second, the fact that thousands of injuries occur even when the blade guard is in use means it is ineffective as a safety measure. The idea that injuries can and do occur at a high rate even in the presence of the supposed safety feature is enough to suggest the need for something far more effective, which we know is available for widespread adoption. In sum, the poor track record of current industry-wide safety features demonstrates the need for an effective and mandatory safety standard.

V. CPSC Recognizes Need for Improved Safety

CPSC has correctly identified table saws as a consumer product worthy of a performance requirement, as demonstrated by the adoption of the ANPR and now the NPR. The

¹⁰ “Table Saw Blade Contact Injuries; Advance Notice of Proposed Rulemaking Comment of Power Tool Institute, Inc.,” PTI, March 16, 2012.

¹¹ “Safety Standard Addressing Blade-Contact Injuries on Table Saws,” CPSC, May 12, 2017, page 48.

¹² “Survey of Injuries,” CPSC, March 2011, page 29

Commission's proposed standard requires table saws to be equipped with AIM technology to limit the severity of injury as a result of contact with a spinning blade. As noted above, AIM is a term used to describe a system that detects imminent or actual contact between a body part and a saw blade, thus triggering a response to mitigate the extent of injury that would have otherwise occurred. It is "active" rather than "passive" because the mitigation strategy reacts to the actions of the operator. By contrast, a modular blade guard is a passive system, because its level of protection is fixed and independent of the actions of the operator. The specific requirement calls for a performance standard that limits the depth of a cut to 3.5 mm to a body part approaching the blade at a rate of 1 meter per second. Note that the performance standard DOES NOT require a specific type of technology – sensor or laser or any other design. Instead it requires that the saw perform in such a way that it doesn't inflict serious injury on the user.

VI. Technology that can Prevent Serious Injury Already Exists

A table saw design that employs AIM technology and satisfies the CPSC performance requirement already exists. Manufactured by SawStop, AIM has been on the market for over a decade, and has recorded thousands of finger-saves to date. SawStop saws are equipped with sensors that can detect contact between the saw blade and the human body. As noted earlier, when skin comes into contact with a spinning blade, the electrical signal on the blade changes, triggering a brake mechanism that stops the blade from spinning in under five milliseconds. This powerful, active response to blade contact limits the depth of cut to 1.5-2.8 mm, well within CPSC's performance requirement of 3.5 mm. The efficacy and availability of this product are such that compliance with the CPSC standard is feasible for all table saw vendors and all types of table saws, from contractor saws, to bench saws, to cabinet saws. They are all dangerous without AIM technology and all capable of inflicting grave injuries on users. If PTI members don't like SawStop and don't want to license this groundbreaking technology, they have had many years – over 16 – to invent an alternative technology. But they never brought an original

design to market¹³ and never explained why. What they have done instead is attack SawStop's technology, control the voluntary standards process at UL so that any effort to require adoption of AIM technology as a voluntary standard is defeated, and refuse to take any actions whatsoever to promote the production of a truly safe table saw.

VII. Safety and Financial Benefit to Consumers

Adoption of CPSC's proposed standard would eliminate roughly 54,850 medically-treated table saw injuries per year.¹⁴ This carries both a substantial safety and financial benefit to consumers, table saw operators, small business owners, and society at large. From a safety standpoint, the Commission's proposal is fairly obvious: the proposal all but guarantees the elimination of risk associated with operating a table saw and is based on many years of careful research by CPSC experts on staff. They identify the 3.5 mm benchmark as an appropriate level to ensure safety. What was once a devastating injury resulting in lacerations to vital nerves and blood vessels becomes a minor prick akin to a papercut. This gives operators the peace of mind that in the event of an accident, they will not be subject to a lifetime of pain and suffering, but instead will be able to continue their professional and personal pursuits unabated. There is simply no denying the enormous safety benefits as a result of this proposal.

What is equally compelling are the financial benefits to society following the implementation of such a standard. Conservative estimates place the benefits at \$753 per table saw equipped with an automatic safety system¹⁵, and CPSC staff has placed estimates ranging from \$2,300 up to \$4,300 per saw.¹⁶ These values are derived from the assessment of medical

¹³ The power tool company, Bosch, attempted to introduce an AIM-equipped saw to market in 2015; however, an administrative law judge found that the Bosch saw, called REAXX, infringed upon two patents held by SawStop. This ruling has since been upheld, and suggests the Bosch saw does not introduce an original design to market. Bosch could, of course, license the SawStop technology to recommence sales of its saw.

¹⁴ "Preliminary Regulatory Analysis of the Draft Proposed Rule for Table Saws," Directorate for Economic Analysis, CPSC, December 2016, page 17-18.

¹⁵ Letter to U.S. Consumer Product Safety Commission from George F. Carpinello of Boies, Schiller & Flexner, LLP, July 13, 2011, page 2.

¹⁶ "CPSC Staff Briefing Package," January 2017, page 4.

expenses saved as a result of table saws equipped with AIM technology. Altogether, CPSC staff places the total benefits to society at \$630 million to \$2.3 billion.¹⁷

In sum, NCL believes that CPSC should - without delay - implement its proposed performance standard for table saws. CPSC was created for the very purpose before us: to assess marketplace hazards and address unreasonable risk of injury with better and safer designs when there is an affordable and available solution. The table saw safety standard readily meets these criteria. Table saws represent a critical consumer product to the woodworking professional and hobbyist, but at present they are incredibly dangerous if even the slightest mistake is made. The existing industry voluntary safety regulations are woefully inadequate in reducing the risks, as demonstrated by the ongoing drumbeat of injuries year in and year out that have not been reduced by the voluntary safety standards. The unwillingness of the power tool industry to voluntarily implement AIM technology into all of their products and their resolve to fight every effort by consumer advocates and responsible business to implement that technology is surely a low point for corporate social irresponsibility. If industry will not act on its own accord to promote safety, certainly CPSC must.

A technologically viable safety system does currently exist that satisfies the CPSC proposal. The technology is proven and, if adopted, would save thousands of consumers annually from the debilitating injuries so often associated with blade contact accidents. What is more, the financial benefits to society far outweigh the costs, meaning this proposal more than complies with the requirement that “expected benefits of the rule bear a reasonable relationship to its costs.”¹⁸ In the following section, we address the primary arguments in opposition to the CPSC proposal.

VIII. Responses to Arguments against a Safety Measure

¹⁷ “Preliminary Regulatory Analysis of the Draft Proposed Rule for Table Saws,” Directorate for Economic Analysis, CPSC, December 2016, page 41.

¹⁸ Id. 2058(f)(3)(E)&(F).

Argument: Creation of a monopoly

The Power Tool Institute (PTI) opposes the proposed performance standard for fear it will result in a monopoly for SawStop, the only company currently operating with AIM technology built into all of its saws. They contend that the standard would force the rest of the industry to license the SawStop technology, which is not economically viable for most manufacturers and would force some out of business.

Response:

PTI and member companies have from the outset taken a hostile stance toward a safety technology that prevents injuries and protects users. PTI and its member companies have, one by one, refused to license SawStop's proven and extremely effective technology, arguing that SawStop is charging too much for their patent. This is a gross exaggeration; the royalty fees of which the PTI speak typically amount to \$13 for the average bench saw,¹⁹ a more than reasonable cost that exists within the well-established practice of patent law that spurs innovation and rewards ingenuity in the marketplace.

If PTI's members still do not wish to license SawStop's existing technology, they are perfectly capable of developing their own technology. PTI is a trade association made up of companies that employ thousands of creative and highly trained engineers and themselves have multiple patents on all of their products that they fight to protect. They have had 15 years to develop an alternative technology. Instead, the industry continues to sit on its hands, placing all of its efforts into preventing needed safety reforms and attacking SawStop as a monopoly every chance it gets. To allow PTI and its member companies to use these arguments is to reward inaction and lack of concern for the safety of their own customers. Moreover, the dramatic benefits in terms of cost and safety to consumers and society at large far outweigh any conceivable disruption to the power tool industry as a result of this regulation, as demonstrated by the roughly \$2.3 billion saved per year according to the CPSC staff analysis cited earlier in these comments.

¹⁹ "Response to PTI on SawStop," Woodshop News, October 26th, 2011.

Argument: Market should dictate a consumer’s choice to adopt safety features, not government

Many of the comments submitted following the publication of CPSC’s NPR opposed the proposed rule on the basis of belief in market-driven forces to determine product features, not the government, including the very disappointing comments of Commissioner Joseph Mohorovic, whose arguments about consumer choice run totally counter to the mission of CPSC. Detractors believe that consumers who wish to purchase table saws with AIM safety mechanisms such as SawStop should be free to do so at their discretion, and those who wish to purchase conventional saws should be free to do so at theirs.

Response:

We don’t allow only some cars to have airbags and seatbelts; these proven safety devices are required to be manufactured on all cars. Simply put, safety technology isn’t merely for those who can afford it. Table saws are capable of inflicting excruciating and grave injuries. They are a prime example of a product for which consumers do not adequately appreciate the level of risk they undertake. This concept of unreasonable risk posed by a product has been well-articulated by the Fifth Circuit court, which affirmed the principle in a similar case involving blade-contact injuries with lawn mowers. On that occasion, the court stated that it was necessary for “injuries resulting from foreseeable misuse of a product to be counted in assessing risk” and that “there is no evidence that consumers accurately appreciate the nature of the risk of blade-contact injuries.”²⁰ It is the same with table saws. When considering the scope of injury posed by unsafe table saws to under-informed consumers, the Commission must surely find them worthy of a regulatory safety standard.

Indeed, the CPSC was created over forty years ago with the purpose of protecting the public from the unreasonable risk of injury posed by consumer products.²¹ The Commission’s work saves society over \$1 trillion annually, and has “contributed to a decline in the rate of

²⁰ *Southland Mower v. Consumer Product Safety Commission*, 619 F.2d 499 (1980).

²¹ <http://www.encyclopedia.com/social-sciences-and-law/political-science-and-government/us-government/united-states-consumer>

deaths and injuries associated with consumer products.”²² The mitigation of injury from table saws falls directly under the Commission’s jurisdiction. The CPSC staff analysis found that table saws pose an unreasonable risk of injury that can affect even the most experienced woodworkers. Over 52.4% of amputations as a result of a woodshop place injury are caused by table saws, placing them in a unique category of consumer product safety consideration.²³ The recommendation takes into account the explicit risk posed by table saws that are present regardless of the operator’s experience or degree of negligence and finds it reasonable to create such a rule.

Failure to adopt the NPR would violate a forty-year precedent set by the Commission’s promulgating of safety standards in consumer products ranging from lawn mowers, to toys, to medicines, to poisons, to garage doors, to refrigerators.²⁴ These standards have saved countless lives and prevented injuries, and many of the reforms introduced by the Commission have become desirable staples of the industry.

Argument: A performance standard unreasonably increases the retail cost of table saws

PTI argues that a performance standard forces manufacturers to raise prices to remain competitive, thus making table saws unaffordable. They say that consumers who wish to buy table saws that incorporate AIM technology are free to do so, while those who wish to buy less expensive saws should be equally entitled.

Response:

The increase in retail costs are far outweighed by the saved costs of medical expenses. PTI fails to acknowledge the costs built into unsafe table saws that fall to society at large, such as medical expenses, insurance premiums, and lost work time. When these factors are considered, the average saw produced with AIM technology actually *saves* society anywhere from \$750-\$4,300 per saw. This greatly outstrips any cost increase associated with adoption of

²² www.cpsc.gov

²³ “Briefing Package Notice of Proposed Rulemaking Performance Requirements to Address Table Saw Blade Contact Injuries,” CPSC, January 2017, p. 52.

²⁴ NCL letter to House Appropriations Committee

an AIM technology performance standard. What is more, a performance standard will serve as an impetus for innovation, leading to more saws using different technologies that will eventually lead to reduced retail costs over time.

IX. Testimony from Woodworking Professionals

NCL maintains relationships with woodworkers and small-business owners who have been exposed to an injury resulting from contact with a table saw blade, either as the employer of a victim or a victim themselves. Below, we include excerpts of their own testimony in favor of CPSC's proposed performance requirement:

Curtis Harper, a Utah firefighter and sole proprietor of a cabinetmaking business writes in a letter to Senator Mike Lee (R-UT),

"I had a table saw accident in October 2007 as I was notching out a corner on a piece of oriented strand board. As I grabbed the waste piece to throw it in the waste bin, it slipped out of my hand. As it fell, I saw it dropping directly on to the blade and I was afraid the waste piece would hit the blade and kick back at me, so I grabbed for the piece. Unfortunately, my hand was on top of the board as I grabbed the piece and my hand came across the full length of the blade. The cut went up through and between my little finger and ring finger, severing all the ligaments, tendons and nerves to the little finger, which was later amputated....

I was so pleased when the CPSC decided to work on a safety standard to require injury mitigation technology on every table saw sold in the U.S.... I believe that if the government mandated new safety technologies for table saws it would save millions of dollars, maybe billions, in healthcare costs, insurance costs, pain and suffering and permanent disability."

Michael Bankester, who owns a cabinet shop in Alabama, had a similar experience. He writes,

"In 2016, I lost the tip of my left thumb along with the end knuckle on my middle finger and I was severely cut through my pinkie and ring finger as a result of an accident on a table

saw. My livelihood is building cabinets and other wood products, but you can't do any of that without both hands. It took a year before my hand was back close to normal and it never will be 100%. Accidents like mine happen no matter if you are a beginner or have used one as long as I have, which is 31 years. After the accident, I replaced the saws in my shop with SawStop saws, which are equipped with safety technology that prevents the kind of injuries I suffered. I wish all saws could have this kind of safety built in.

Since I purchased SawStop saws, we have had a number of incidents in our shop that could have turned into tragedies, but didn't. One incident occurred when one of our employees was ripping wood. When ripping narrow strips of wood you can't use a guard that covers the blade because there's not enough room for it. So you either have to rely on your own skill or a SawStop saw to make sure you don't lose your fingers. Our employee was ripping wood for 1/4" trim and got too close to the blade, made contact, but only got a very small scratch. If it had been a regular table saw he would have lost his thumb. He's a young man and it would have been awful for him to have a handicap like that for the rest of his life. Because of the SawStop technology he didn't have to worry about it, he was able to just go back to work. In another case, an employee was ripping with a push block and his hand slipped off, striking the blade. He got bloodied, but only needed a band-aid to cover the cut. He could have lost most of his hand and his guitar playing would have been over for life. But he got another chance."

As Mr. Bankester says, AIM-equipped SawStop blades saved his young employee's hand, preventing an unnecessary, lifelong tragedy. Sadly, this is not always the case. Below is testimony from Josh Ward, a college student who lost several fingers on his left hand in a high school shop class accident:

Josh Ward is from Sisters, Oregon. In 2012, he was a junior at Sisters High School. In wood shop class, he was instructed to make a series of unsupervised cuts to a piece of plywood using an older model table saw. Unfortunately, the plywood caught and kicked back, violently drawing his left hand in to the spinning blades, severing three of his fingers, and breaking multiple bones in his hand. After extensive surgery and treatment, his surgeons were

able to save one out of the three fingers. He has struggled mightily, undergoing seven surgeries, and fighting multiple infections for months at a time. His medical bills recently topped \$350,000.

Needless to say, this incident and injury has had a devastating effect on Josh. He has had to give up his lifelong dream of becoming a firefighter. But Josh is a fighter. While undergoing his extensive treatment, he saw the valuable work done by the health care providers and has now set his sights on a career in nursing. I am happy to tell you that Josh just finished his freshman year at Linfield College in Oregon.

Josh strongly supports the enactment of a national standard that would require table saws to be equipped with safety technology that would prevent what happened to him from happening to anyone else. He knows the safety technology exists. In fact, Josh's school bought a safer table saw after his incident. But a national standard is needed to protect all table saw users from these foreseeable, painful and permanent injuries. CPSC has known about safe table saw technology for over ten years – it is time for the agency to enact a safety standard.

These stories are similar to those of thousands of other workers, hobbyists, and small business owners who have suffered as a result of workplace accidents caused by blade-contact with table saws. Their stories are tragic, particularly in light of the fact that they are entirely preventable. CPSC's proposed safety standard all but eliminates the possibility of another tragedy from occurring ever again.

X. Conclusion

The evidence is overwhelming that this very dangerous product can be made almost entirely safe. This is an unprecedented opportunity to all but eliminate a horrific pattern of injuries associated with one category of product. We support the conclusion of the CPSC staff analysis that finds a standard of AIM technology that limits the depth of cut by a spinning table

saw blade to no more than 3.5 mm appropriate, and encourage the Commission to finalize the proposed rule accordingly. Doing so falls squarely within CPSC's original mission to protect American consumers from undue injury caused by lacking safety standards in consumer products.²⁵

Table saw blades cause over 30,000 emergency department-treated injuries annually, resulting in excruciating pain, expensive medical costs, and lifelong disabilities to victims. Since 2006, the Commission has considered the issue of table saw safety as worthy of investigation. Since then, numerous detailed studies conducted by CPSC staff and others have confirmed that the adoption of a performance requirement makes sense for both safety and financial reasons to consumers, table saw users, small business owners, and society at large.

The power tool industry has a vested interest in preventing this performance requirement from succeeding. We don't agree with their position, nor do we understand it, but it is a fact nonetheless. The industry should not be rewarded for their years of resistance to making their products safe for users and consistent failure to adopt the safety measures that have been available for over a decade. The Commission owes it to every victim of a table saw blade contact injury and all current and future table saw users to adopt this common-sense standard. In so doing, table saws will go from being the most dangerous tool in the workshop to the safest, and no one will be subject to the devastating effects of these terrible injuries. Thank you for your consideration.

Respectfully Submitted,

Sally Greenberg
Executive Director
National Consumers League

Peter Blum
National Consumers League

²⁵ CPSC is an independent federal regulatory agency formed in 1972 with a mission to protect the public against unreasonable risks of injury or death from consumer products through education, safety standards activities, regulation, and enforcement.

<https://www.cpsc.gov/About-CPSC/Contact-Information/>

XI. Additional Resources

1. NCL 2010 Letter to CPSC: Saw Safety



November 24, 2010

Inez Tenenbaum
Chairman
Consumer Product Safety Commission
4330 East West Highway
Bethesda, MD 20814

Dear Chairman Tenenbaum:

The National Consumers League urges the CPSC's speedy action in supporting rulemaking for the safety of table saws. The CPSC has jurisdiction to do so under 5 U.S.C. section 553 (e) and 15 U.S.C. section 2058 (i). The facts cry out for CPSC attention.

It has been seven years since the 2003 SawStop petition was filed asking that the Commission take action toward a safety standard on table saws. See the petition at the link below.

Petition CP 03-2, Requesting Performance Standards for Table Saws - Part 1 (0841)
<http://www.cpsc.gov/library/foia/foia03/petition/Bladesawpt1.pdf>

The technology exists – and indeed is being used today by one manufacturer – to prevent the needless and brutal accidents associated with the hazards of using table saws. These involve amputations of fingers, including potentially those of teenage students working with table saws in woodworking classes.

While this petition languishes before the Commission, with no action taken by previous CPSC officials, every day ten new amputations associated with the use of table saws occur. According to CPSC's own data, a table saw injury occurs once every nine minutes. The average per-accident business cost is estimated to be \$67,000. 30,000 people suffer injuries from table saws each year, and over 3,000 suffer amputations. Table saws sold in the U.S. are currently required to meet UL Standard 987 for Stationary and Fixed Electric Tools but this standard does little to prevent the amputations and injuries described above.

The hazards posed by table saws are unacceptable, especially when we have the means to prevent these accidents.

Once again, one company has developed and patented this safety technology. This is ample evidence that safer table saws can – and must – be adopted across the industry.

The safety technology involves a detection system such that when the table saw blade senses an electrical signal given off by human tissue – like a finger – the safety system is activated and the blade stops. Clearly the technology is effective, as demonstrated by hundreds of testimonials from shop teachers, hobbyists, students and others who operate table saws.

In this regard, NCL strongly urges the Commission to take action toward a performance standard

for table saw safety. We would urge you to give the industry a specific time period in which to adopt current technology or develop new technology to prevent grave injuries and amputations from table saws. The benefits of a performance standard include allowing for innovation and creativity in the design of a table saw with these safety components built in.

Table saw safety – and the ability of CPSC to take action to protect users of table saws– seems to us to be a classic example of how the Commission’s role was envisioned by Congress when the CPSC was established in 1972. While table saws do have certain inherent hazards, that is not an excuse for failing to enact safety regulations for these products. There are many products, such as lawnmowers and ATVs, which are inherently dangerous and yet are still regulated by the Commission. And because we now have the technology to prevent those hazards and the pain, suffering and cost that goes along with any pattern of human injury from a hazardous product, the Commission should take action. In closing, it is our view that the Commission should delay no further, and we urge decisive steps toward a rulemaking on table saw safety.

Thank you for your time and attention to our concerns.

Sincerely,



SALLY GREENBERG
Executive Director
National Consumers League

CC: Robert Adler
Commissioner

Nancy Nord
Commissioner

Anne Northup
Commissioner

Thomas Hill Moore
Commissioner

2. Appeals from Woodworking Professionals, Hobbyists, and Accident Victims for a Safety Standard

The following letters come from woodworking professionals and hobbyists, who either suffered an accident or worked with someone who suffered an accident as a result of blade contact with a table saw. These letters represent the appeals of thousands of other victims and parties concerned with table saw safety, earnestly requesting the adoption of a mandatory standard. Some of the letters contain images some viewers might find graphic in nature.

From: Frank Oslick [mailto:franko1946@msn.com]
Sent: Tuesday, December 07, 2004 4:39 PM
To: info@sawstop.com
Subject: Bravo!

This is an outline of my right hand. In 1961, when I was 14 years old, I suffered an accident on a table saw that left me with 2 fingers and 1/2 of a thumb. I was right handed.

For the last 43 years I have not lived a single day without regretting that accident. If your device prevents even **one** person from going through what I have gone through it is a world class accomplishment.

God bless you.

Frank Oslick



Sen. Mike Lee
U.S. Senate
361A Russell Senate Office Building
Washington, DC 20510

Dear Senator Lee,

I am a firefighter from Provo, Utah. I'm also the sole proprietor of a business called Masterpiece Cabinet and Mill. As you may recall, I met with you in 2011 to express my support for a safety standard that will prevent the tragic and life-altering injuries that happen on table saws. I am happy to report that after we met with you, the Consumer Product Safety Commission voted unanimously to begin the process to enact a table saw safety standard. I am writing to you today to ask you to oppose any effort to delay the work of the CPSC to develop that standard.

Just to refresh your memory, I had a table saw accident in October 2007 as I was notching out a corner on a piece of oriented strand board. As I grabbed the waste piece to throw it in the waste bin, it slipped out of my hand. As it fell, I saw it dropping directly on to the blade and I was afraid the waste piece would hit the blade and kick back at me, so I grabbed for the piece. Unfortunately, my hand was on top of the board as I grabbed the piece and my hand came across the full length of the blade. The cut went up through and between my little finger and ring finger, severing all the ligaments, tendons and nerves to the little finger, which was later amputated.

My first thought after the accident happened was that I would lose my job as a firefighter. I worked very hard for over seven years to become a firefighter and it is very precious to me. But I had never seen a firefighter who didn't have all of his fingers. Luckily, I'm a hard worker and my boss said I could keep my job. He told a co-worker that I do more work with one hand than most of his firefighters do with two, so I was fortunate. However, the injury was still very painful and it is much more challenging to be a firefighter with my reduced strength and capability.

The CPSC estimates that there are approximately 40,000 table saw injuries treated in hospitals every year and about 4,000 of them result in finger or hand amputations. A safety technology exists and is currently on the market that can prevent virtually every one of those horrific injuries. I was so pleased when the CPSC decided to work on a safety standard to require injury mitigation technology on every table saw sold in the U.S.

Unfortunately, that process has taken much longer than I thought it would. But there is some good news - I hear that CPSC expects to propose a safety standard by the end of this year. I also hear, however, that some table saw companies that do not want to make safer saws are asking Congress to pass an amendment to the bill to fund the government that will cause further delay to the standard. I think that is wrong because these injuries are so prevalent, and they could be prevented. I believe that if the government mandated new safety technologies for table saws it would save millions of dollars, maybe billions, in healthcare costs, insurance costs, pain and suffering and permanent disability.

I respectfully request that you work to oppose any effort to make it more difficult for CPSC to enact a table saw safety standard.

Thank you, again, for your time and consideration. Meeting with you was a highlight for me. I look forward to working with you so that nobody else has to suffer a table saw injury as I did.

Sincerely,

Curtis Harper
1723 W 120 S
Provo, UT 84601

C. Michael Bankester
35160 Pine Road South
Stapleton, Alabama 36578

November 2, 2016

Sen. Richard Shelby
U.S. Senate
304 Russell Office Building
Washington, DC 20510

Dear Sen. Shelby,

I own a small cabinet shop in Stapleton, Alabama called Bankester's Quality Cabinets. I recently learned that the Consumer Product Safety Commission is working on a safety standard that will prevent the tragic and life-altering injuries that happen on table saws. I am writing to you today to ask you to oppose any effort to delay the work of the CPSC to develop that standard.

In 2016, I lost the tip of my left thumb along with the end knuckle on my middle finger and I was severely cut through my pinkie and ring finger as a result of an accident on a table saw. My livelihood is building cabinets and other wood products, but you can't do any of that without both hands. It took a year before my hand was back close to normal and it never will be 100%. Accidents like mine happen no matter if you are a beginner or have used one as long as I have, which is 31 years. After the accident, I replaced the saws in my shop with SawStop saws, which are equipped with safety technology that prevents the kind of injuries I suffered. I wish all saws could have this kind of safety built in.

Since I purchased SawStop saws, we have had a number of incidents in our shop that could have turned into tragedies, but didn't. One incident occurred when one of our employees was ripping wood. When ripping narrow strips of wood you can't use a guard that covers the blade because there's not enough room for it. So you either have to rely on your own skill or a SawStop saw to make sure you don't lose your fingers. Our employee was ripping wood for 1/4" trim and got too close to the blade, made contact, but only got a very small scratch. If it had been a regular table saw he would have lost his thumb. He's a young man and it would have been awful for him to have a handicap like that for the rest of his life. Because of the SawStop technology he didn't have to worry about it, he was able to just go back to work. In another case, an employee was ripping with a push block and his hand slipped off, striking the blade. He got bloodied, but only needed a band-aid to cover the cut. He could have lost most of his hand and his guitar playing would have been over for life. But he got another chance.

The CPSC estimates that there are approximately 40,000 table saw injuries treated in hospitals every year and about 4,000 of them result in finger or hand amputations. The safety technology on the saws that I purchased can prevent virtually every one of those horrific

injuries. CPSC is working on a safety standard to require injury mitigation technology on every table saw sold in the U.S. I think that is the right thing to do.

I have heard that some table saw companies that do not want to make safer saws are asking Congress to pass an amendment to legislation to fund the government that will cause unnecessary delay to the standard. I was told that you are the Chairman of a Subcommittee that is in charge of the funding for the CPSC. I respectfully request that you do not add any amendment to that funding that would slow down the process to enact a table saw safety standard. I believe such a standard is long overdue.

Safer table saws will save money because they will prevent costly medical bills and lost work time. In addition, many of these injuries take people's livelihoods away because the effects are lifelong and debilitating. That is not good for the overall economy of America.

I believe very strongly that this type of safety technology should be mandated for all table saws sold in America. The U.S. Congress should not get in the way.

Thank you so much for your time and consideration.

Sincerely,

C. Michael Bankester

October 20th, 2016

Sen. John N. Boozman
U.S. Senate
141 Hart Office Building
Washington, DC 20510

Dear Sen. Boozman,

My family owns a small cabinet door-manufacturing business in Hot Springs, Arkansas called: Cabinet Door Shop (www.cabinetdoorshop.com). As you may recall, my wife and I met with you in 2011 to express our support for a safety standard that will prevent the tragic and life-altering injuries that happen on table saws. I am happy to report that after we met with you, the Consumer Product Safety Commission voted unanimously to begin the process to enact a table saw safety standard. I am writing to you today to ask you to oppose any effort to delay the work of the CPSC to develop that standard.

The CPSC estimates that there are approximately 40,000 table saw injuries treated in hospitals every year and about 4,000 of them result in finger or hand amputations. A safety technology exists and is currently on the market that can prevent virtually every one of those horrific injuries. We were so pleased when the CPSC decided to work on a safety standard to require injury mitigation technology on every table saw sold in the U.S.

Unfortunately, that process has dragged on much longer than we anticipated, but there is a light at the end of the tunnel. We hear that CPSC expects to propose a safety standard by the end of this year. We also hear, however, that some table saw companies that do not want to make safer saws are asking Congress to pass an amendment to the bill to fund the government that will cause further delay to the standard. We think that is outrageous, because every one of these injuries changes lives forever, and we should not wait any longer to put an end to these preventable tragedies.

Let me refresh your memory about my story:

In the early 2000's, two of our employees suffered serious injuries using conventional table saws without safety technology. The two employees were injured within about six weeks of each other. After these incidents, our insurance costs rose dramatically. Medical costs of the two injuries exceeded \$90,000. We also lost two great employees because both ended up quitting due to trauma. One of the two employees was an accomplished classical guitar player. He had a nervous breakdown because of the accident and his life was forever altered.

We purchased a new table saw in 2004 with the safety technology we mentioned. Subsequently, another one of our employees had an accident on the new saw, but the result was only a small scratch like a paper cut instead of a serious injury or amputation. The employee did not miss a single hour of work and the whole experience was handled for the cost of a band-aid and a roll of toilet paper.

We believe very strongly that this type of safety technology should be mandated for all table saws sold in America. In the woodworking world, it is well known that conventional table saws are the most dangerous tool in the workshop. With the new safety technology, the most dangerous tool can become the safest. It is a benefit to the worker, to the employer, to the consumer and to society.

As I explained, the CPSC has been working for about five years to put into place a standard that will require safety technology on all new saws sold in the U.S. Congress should not do anything to delay this process further.

I respectfully request that, in your role as a Member of the Senate Appropriations Committee, you oppose any effort to make it more difficult for CPSC to enact a table saw safety standard.

Thank you so much for your time and consideration. Meeting with you was a highlight for my wife and me. We hope you will be able to help us make sure that very soon serious table saw injuries will become a thing of the past.

Sincerely,

Gerald Wheeler (501) 617-3000
136 Bratton Drive
Hot Springs Arkansas
71901

Adam Thull

Owner, Thull Woodworking
Crosslake, Minnesota

How the accident happened

Mr. Thull owns his own woodworking business. He is a very experienced woodworker and has been working in shops since he was very young. Adam was cutting panels on a Ridgid contractor saw on May 12, 2010 and as the material started to fall off the backside of the saw, he instinctively went to grab the panel. As he was pulling the panel back, his elbow caught the top of the blade and the blade then pulled his elbow further into the blade, up to the center portion of his forearm.

The result of the accident

The blade cut completely through the ulna bone and ulnar nerve in his right forearm, and also caused extensive damage to muscles, tendons and ligaments. Since the accident, Adam has been going through extensive medical treatment and therapy. He has an upcoming visit to the Mayo Clinic to review the possibility of harvesting nerves from his ankles and feet and transplanting them to his forearm and hand. Doctors estimate it will take 3-5 years for him to recover.

Adam had recently started a woodworking business and was self-employed at the time of the accident, so this has been very tough financially on his young family. At the time of the accident, his family relied solely on him for the household income. Though he is still able to do woodworking, he cannot continue his business because doing the work is too painful and slow to be able to turn a profit on what he builds. He is now in the process of applying for Social Security. He has had medical assistance step in to help with the medical bills, so the out-of-pocket cost of the injury to him and his family is not yet fully known. His wife now works as a part-time nurse to cover living expenses while Adam recovers. Adam has been interviewing for jobs but has not been able to get one because in every interview he has been asked what he can commit to do physically and he cannot yet answer that question. Every day is different in regards to the level of pain he feels in his hand and the degree he can move his fingers.

The need for government action

The table saw is a piece of equipment on which human error can occur and cause life-changing injuries. Now that there is technology to avoid this, it should be required on every saw. Adam believes he would now be purchasing a home and building his business if government regulations would have required that his table saw be equipped with modern safety technology.

Images of Adam's injury and family follow on the next page.



Chris Hackler
Self-employed
Enola, Arkansas

How the accident happened

Chris has been working on table saws since 7th grade (33 years) and had never had an accident. His table saw accident happened at 10:45pm on March 11, 2011. He was on the front porch of a house he was remodeling, just planning to make a few cuts on some trim work. As he was pushing the board through, the piece he was cutting began to ride up on the blade. Chris had his push stick in his right hand, and as he began to push the board down on its back side with the push stick to keep it from riding up further, the board broke. A piece of the board shot back at him, hit his arm, and flew past his face. When the board broke, the push stick moved into the blade. The blade caught the push stick and pulled it and Chris' hand further into the blade. Chris' hand rolled over the saw blade. He wrapped his hand, without knowing the extent of the damage, and woke his wife to take him to the hospital, as it was faster than calling an ambulance.

The result of the accident

The doctor talked through the options with Chris once he had a chance to review the extent of the damage. The decision was made to take the ring finger off to the first knuckle, as there was too much damage to save that finger (see photo on next page). Chris still feels pain in the end of the finger that doesn't exist. He says it feels like someone digging under his fingernail with a nail file, but no fingernail exists. The middle finger was repaired by shortening the finger and stretching the skin down. His middle finger is now the same length as his pointer finger. The bones in his middle finger are still damaged and Chris must take extra care as they heal. He has lost range of motion in his thumb. Some things that seemed simple before are quite awkward now. Things such as tying his shoes, zipping up his pants, buttoning his shirt, combing his hair and turning on his vehicle.

Chris is self-employed and his business provides diminished values for vehicles involved in accidents. As part of his business, Chris does a lot of writing and since he is right handed and his injury was to his right hand, he had to learn has learned to write by holding a pen between his middle and index fingers. He can now write for only about 30 minutes and then has to take a break, so he is much less productive. Chris did not have health insurance at the time of this accident. He doesn't know all the costs of his injury, but thinks his medical costs so far are around \$8,000 - \$9,000.

The need for government action

The technology exists and the consumer can be protected. It is a benefit to the consumer, to their family and to society. Government has a responsibility to mandate that newer, safer technologies be used on table saws. Chris says if we regulate what goes in an Easter egg because someone might swallow it, then we should also regulate table saws.



Gerald Wheeler

Owner, Cabinet Door Shop, Hot Springs, Arkansas

Mr. Wheeler owns a small cabinet door-making business called Cabinet Door Shop (www.cabinetdoorshop.com). He purchased a new table saw with modern safety technology after two employees suffered serious injuries using conventional table saws without safety technology.

How the accident happened

Two of Gerald's employees were injured by table saws within about six weeks of each other. The first accident was in December 2000. The employee was cutting a board when a knot in the wood grazed the edge of the blade and spun, warping the blade to the side. The employee had to let go of the board with one hand to push the stop button on the saw. When he did, the board jumped up and the employee, in response, pushed down. When he did, his hand moved forward into the blade. The second accident happened virtually the same way to an employee with many years of experience.

The result of the accident

After these incidents, Gerald's insurance costs rose dramatically. Medical costs of the two injuries exceeded \$90,000. Gerald also lost two great employees because both ended up quitting due to trauma. One of the two employees was an accomplished classical guitar player and had a nervous breakdown because of the accident. His life was forever altered.

Gerald purchased a new table saw in 2004 with safer technology. Subsequently, another one of his employees had an accident on the new saw, called SawStop, but the result was only a small scratch like a paper cut instead of a serious injury or amputation. Below are images of this employee's injury.



MVC-001F.JPG
(208KB)



MVC-004F.JPG
(209KB)



MVC-005F.JPG
(211KB)

The need for government action

Gerald feels the government should require table saws to include something like SawStop because the technology is available and will prevent accidents that alter people's lives and that severely impact a business owner. Gerald says, "Once you have experienced employees getting hurt like this, you have to bring in new people and train and attempt to replace these experienced employees. Financially an owner is affected as Worker's Comp increases as well as any out of pocket medical costs that are not covered. The worst is that as an employer, you feel

like a criminal when your employees get hurt. Encouraging businesses with discounts might help, but the only way to get the safety on table saws is to mandate it.”

Curtis Harper
Firefighter
Provo, Utah

How the accident happened

Curtis is a fireman as well as a sole proprietor of business called Masterpiece Cabinet and Mill. He had seen SawStop and the safety feature and thought he needed it, but did not want to put it on his credit card. He wanted to pay cash and was in the process of saving for it when he had an accident on his conventional table saw. The accident happened in October 2007 as Curtis was notching out a corner on a piece of oriented strand board. As he grabbed the waste piece to throw it in the waste bin, it slipped out of his hand. As it fell, he saw it dropping directly on to the blade. As the piece was dropping onto the blade, Curtis was afraid the waste piece would hit the blade and kick back at him, so he grabbed for the piece. Unfortunately his hand was on top of the board as he grabbed the piece and therefore his hand came across the full length of the blade. The cut started at his wrist and went up through and between his little finger and ring finger, severing all the ligaments, tendons and nerves to the little finger, which was later amputated. (See next page for picture of injury).

The result of the accident

Curtis was back to work as a firefighter in 6 weeks, but the injury was still very painful. Now, even after 4 years, the hand hurts at times. He has incurred about \$4,000 in out-of-pocket costs. The insurance covered 2/3 of the \$12,000 of medical costs. He underwent 8 weeks of physical therapy after the injury. If he had opted to save the little finger, it would have involved 2-3 years of therapy, time off work and multiple operations. Most likely the pinky still wouldn't have functioned properly, so he opted to have it taken the rest of the way off. His grip strength is gone in that hand. It is more challenging on his job as a fireman.

The need for government action

"These injuries are so prevalent; it happens to so many people across the US and now is preventable," explains Curtis. He says that if the government mandated new safety technologies for table saws "...it would save millions of dollars, maybe billions, in healthcare costs, insurance costs, pain and suffering and permanent disability. For companies not to put safety technology on saws because of financial reasons is the wrong reason. Safety says 'do it'. Companies aren't doing it because it's going to cost them. It feels like they are putting their finances first and their customers second. You cannot sell a table saw in the US without safety guards, a law that makes a safety item mandatory. These guards can actually cause accidents on the saw. The guard is not the answer to preventing accidents. New safety technology is."

