

EXHIBIT A - B



Marilyn Farrell, County Clerk

EF2018-8

12/16/2022 03:34:45 PM

Clerk: LAR

EXHIBIT “A”

Engineer's Report

The Thomas Alfeld Injuries

On

January 9, 2017

Prepared By:

Neal A. Growney, P.E.

January 29, 2020

Neal A. Growney & Assoc., L.L.C.

265 Steves Lane

Franklin Lakes, New Jersey 07417

www.nagallc.com

Neal A. Growney & Assoc., L.L.C.*Franklin Lakes, New Jersey 07417-2319***The Thomas Alfeld Injuries****Engineer's Report****January 29, 2020****1.0 Introduction.**

At approximately 4 PM, on January 9, 2017 Thomas W. Alfeld, II was working on an interior staircase of a residence at 144 Crystal Point Road, Cairo, New York. He was involved in an incident in which of his left eye was injured. I investigated this incident at the request of Attorney Kenneth Fromson.

2.0 Available Information.

- 2.1 Transcripts of the Examinations Before Trial of Thomas W. Alfeld, II and Alan Anderson.
- 2.2 Verified Complaint.
- 2.3 Defendant Apex Tool Group, LLC's Response to Plaintiff's First Set of Interrogatories.
- 2.4 Defendant Apex Tool Group, LLC's First Set of Interrogatories.
- 2.5 Defendants Apex Tool Group, LLC and Home Depot U.S.A., Inc.'s Response to Demand for Documents and Information.
- 2.6 Defendant Apex Tool Group, LLC's Supplemental Response to Plaintiff's Notice to Admit.
- 2.7 Alfeld-Home-Depot-Product-Overview.pdf.
- 2.8 Alfeld-EX-A-Receipt.pdf.
- 2.9 Alfeld-Packaging-Backcover.jpg.
- 2.10 Alfeld-Packaging-Frontcover.jpg.
- 2.11 Alfeld-Picture-cutter.jpg.
- 2.12 Plaintiff's Responses to First Set of Interrogatories.
- 2.13 Plaintiff's Responses to Supplemental First Set of Interrogatories.
- 2.14 Defendant's Exhibits A through P, dated 1-15-19.
- 2.15 Twenty-three (23) photographs, numbered DocID 8461564.JPG through DocID 8461586.JPG.
- 2.16 A photograph identified as 754005230046, of a Hitachi 23 GA. X 1-3/8 in (35 mm) Micro Pin Nails, 2,000, Item# 23004S.
- 2.17 A photograph of A screenshot of homedepot.com Model S2KS5N, Internet/Catalog: 206872615, Store SKU: 126752, identified as Additional Info.
- 2.18 Two (2) photographs of the Hitachi NP 35A 23Ga. 5/8" - 1-3/8" Pneumatic Pin Nailer involved in this incident.

Neal A. Gowney & Assoc., L.L.C.
Franklin Lakes, New Jersey 07417-2319

3.0 Description of Incident.

Towards the end of this workday, Thomas Alfeld began cleaning up the jobsite. There came a point at which he observed a pin nail poking through the floor above where he had previously nailed cove molding. Alfeld ascended a ladder to where he was approximately eye-level with the second-floor landing and reached forward with both arms at shoulder height. Alfeld had a cutter pliers in his right hand. The palm of his right hand faced downward and the cutter pliers' jaws pointed to the left. Alfeld's left hand was cupped and hovering just above the cutter pliers and the nail he was attempting to cut. Alfeld squeezed the pliers' handles to cut off the protruding nail. He felt something pop and something hit his left eye. One of the cutter pliers' jaw had broken and the broken piece flew into his left eye.

Alfeld descended the ladder and briefly looked around the floor. He went into the bathroom to look at himself and then drove home. A liquid was leaking out of his left eye. Alfeld was driven by his wife to Albany Med, where his left eye was removed.

4.0 The Cutter Pliers Involved.

The cutter pliers involved in this incident is a Crescent Low Profile Flush Cut™ 4" 102 mm, diagonal cutter, miniature wire cutter.

5.0 Discussion.

5.1 The incident Low Profile Flush Cut 4" wire cutter, is one item of a two-piece "all-purpose, miniature electronic flushcutter and needle-nose pliers"¹ set that Alfeld purchased new, on December 22, 2016, from the Home Depot U.S.A., Inc. store located at 659 Rt. 23B, Leeds, New York 12451. The set was sold encased in a package having a clear plastic front covering and a paperboard rear panel. The alphanumeric S2KS5N is printed on the paperboard's upper left front corner and the bar code, 0 3710329949 9, is on its lower right rear corner. Also printed on the rear is:

Apex Tool Group, LLC
14600 York Road, Suite A
Sparks, MD 21152

Made in China

See: Alfeld -Picture-Cutter.JPG; Alfeld-Packaging FrontCover.JPG; and Alfeld-Packaging Backcover.JPG, attached.

5.2 The incident cutter pliers was manufactured in late 2016 by Jiangsu Hongbao Hardware Co., Ltd., Daxin Town, Zhangjiagang City, Jiangsu, China, for Apex Tool Group, LLC (Apex). Hongbao started manufacturing these per Apex's design plans and specifications towards the latter half of 2016 (Anderson, p. 36). Prior to Hongbao manufacturing these pliers, Apex had manufactured them in Sumpter, South Carolina.

¹ Alfeld Packaging Backcover.JPG

Neal A. Growney & Assoc., L.L.C.
Franklin Lakes, New Jersey 07417-2319

5.3 This type of cutter pliers is also referred to as diagonals, diagonal cutters and “dikes”.

5.4 Hongbao ships these pliers to Apex, who puts them into their distribution center. Apex in turn sends these pliers off to a customer who orders it from Apex. Home Depot’s register receipt for these pliers identifies the pliers set as “Xcelite”. This wire cutter and pliers set is only sold to Home Depot (Anderson, pp. 26-29). Apex sold these pliers, the same metal product, with the same metal structure but with different colored grips and different brand names elsewhere. In addition to being sold under the Crescent brand, Apex also sells these pliers individually and in sets, under the Xcelite brand. Xcelite is a brand name sold in electronics type channels (Anderson, pp. 31-33).

5.5 Alfeld had previously fastened the cove molding with Hitachi # 23004S 23GA X 1-3/8 inches long pin nails driven by his Hitachi NP 35A 23Ga. 5/8” - 1-3/8” Pneumatic Pin Nailer.

5.6 Pneumatic nailers are commonly utilized in residential construction to fasten wood components. They are available for a number of nail diameters and must be matched to the nail’s size. Pin nails (23 gage) are smaller than brads (18 gage). They are among the smallest in diameter of pneumatically driven nails on the market and are commonly utilized to fasten moldings.

5.7 Prior to this job, Alfeld had previously used similar snips but not that small, to cut nails. This day was the first day Alfeld used this pair of cutter pliers. Prior to this incident he had utilized it earlier that day to cut nails. That successful cutting of nails prior to this incident confirmed to Alfeld that these cutter pliers were appropriate for this task (Alfeld, pp. 24-26).

5.8 Home Depot advises on its website that these “all-purpose” electronic cutter pliers are: built to last, easily withstand regular wear, pressure and damage, and tackle a variety of tough jobs. Home Depot states that this cutter plier’s handles are large enough to be operated with two hands making it easier to deliver high amounts of pressure to these pliers when cutting through thick materials. Home Depot also states that the metal makeup of these pliers makes them durable, ideal for heavy duty industrial or construction jobs.²

5.9 Alan Anderson was Apex Tool Group, LLC’s (Apex) Senior Product Development Engineer in 2016. He testified that the intended use of these cutter pliers is electronics, soft copper, nickel plated copper wire, that sort of thing (pp. 33, 60, 76). There is no industry standard or agreed meaning for the phrase “soft copper wire” (Anderson p. 77).

5.10 Apex states on the rear of this cutter pliers packaging, that these pliers cut soft wire up to 20 AWG. AWG stands for American Wire Gage. AWG is an industry system for designating wire size by its diameter. The higher the AWG number, the smaller the wire diameter is. 20 AWG is 0.035-inch in diameter. 23 AWG is 0.023-inch in diameter. Nails are a wire product. The 23 AWG pin nails are substantially smaller than 20 AWG wire.

5.11 Home Depot displays these “all-purpose” pliers in a section of hand tools that are commonly utilized in construction and mechanical work and not in an “electronics” section. Home Depot also sells 23 AWG pin nails for pneumatic nailers as well as pneumatic nailers. It is reasonably foreseeable that some carpenters patronizing Home Depot’s hand tools

² <https://www.homedepot.com/>

Neal A. Growney & Assoc., L.L.C.
Franklin Lakes, New Jersey 07417-2319

section would purchase these pliers and use them in their work. It is also reasonably foreseeable carpenters would cut 23 AWG pin nails with these pliers as the pin nail's 0.023-inch diameter is substantially smaller than this cutter pliers' 20 AWG wire 0.035-inch diameter rating. I have seen no evidence that Apex restricts these Crescent cutter pliers to only electronic markets.

5.12 Apex's Product Specification, Steel Wire Cut Test, specifies that these pliers shall be able to withstand 50 LBF-IN of applied torque while cutting a single strand of 0.034" diameter steel wire of 63,000/77,000 tensile strength at the mid-point of the (cutter) edge length. Under such conditions, approximately 90 pounds force would be applied to the mid-point of the cutter edge.

5.13 The 50 LBF-IN of applied torque can be achieved by applying twenty-five pounds force to the handles two inches away from the center of its rivet joint. That would approximate a person squeezing the handles with twenty-five pounds of force. However, it is well known that humans can squeeze with a much greater force. Male grip strength has been measured as high as approximately 120 pounds.³ Applying such high grip strength forces produces loads on the cutter pliers' blades higher than those resulting from the 50 LBF-IN torque specified. Apex knew or should have known, that these pliers could be subjected to closing forces much higher than its Product Specification calls for. Apex must design its pliers to accommodate closing forces of grip strengths much higher than that needed to achieve the specified 50 LBF-IN; and ensure that the pliers' manufacture comports with the design.

5.14 20 AWG's cross-sectional area is approximately 0.0008 square inches. 23 AWG's cross-sectional area is approximately 0.0004 square inches. 20 AWG's cross-sectional area is approximately twice that of 23 AWG's cross-sectional area. However, Apex's Product Specification calls for a 0.034" diameter steel wire which has a larger cross-sectional area than 20 AWG does. Anderson testified that the incident pin nail's diameter was within the diameter specification of the steel wire cut test (p. 67). The cross-sectional area of a 0.034" diameter steel wire is approximately 0.0009 square inches; which is more than double the cross-sectional area of a typical 23 AWG pin nail.

5.15 The shear strength of steel is approximately 80 % of its tensile strength. Nails have been produced from 170,000 psi tensile strength steel.⁴

5.16 Anderson testified that there is a limit, either in size or in hardness of what this product was intended to be able to cut (p. 47) but does not know whether these pliers should or should not be able to cut such a pin without breaking (p. 66). A comparison of the stress required to shear the 0.034" diameter steel wire versus that required to shear a 23 AWG pin nail is:

$$0.0009 \times (.8)77,000 \text{ vs } 0.0004 \times (.8)170,000$$

$$55.44 \text{ vs. } 54.40;$$

³ Brickman, P.E., Dennis B., Ergonomic Studies of Grip Strength – Literature Review, Safety Brief, Volume 5, No. 2, Triodyne, Niles, June 1990, p. 4.

⁴ Dove, Allan B., Ed., Ferrous Wire Volume 2: The Manufacture of Ferrous Wire Products, The Wire Association International Inc., Guilford, 1989, p. 309.

— **Neal A. Gowney & Assoc., L.L.C.** —

Franklin Lakes, New Jersey 07417-2319

It shows that this cutter pliers should be able to withstand cutting 23 AWG pin nails. It is my opinion that Apex's Senior Product Development Engineer should have known whether or not these cutter pliers are capable of cutting the commonly utilized 23 AWG pin nails.

5.17 I performed an experiment in which I cut (using my right hand only) 98 - 99 pieces (394 total) of 23 AWG Hitachi pin nails on each of four exemplar Crescent 4", diagonal cutter pliers without any of their cutter blades breaking. This experiment verified the calculation that shows these cutter pliers should be able withstand cutting 23 AWG pin nails without breaking.

5.18 Even though the calculation shows that this cutter pliers is capable of cutting 23 AWG pin nails, and the experiment confirms it, the calculation does not display a large margin for error. The smaller the margin of error, the greater the risk of harmful consequences. Therefore, tight control must be exercised over these cutter pliers' manufacture in order to assure all cutter pliers will not fail during reasonably foreseeable use. Prudent engineering however, dictates that this Crescent cutter pliers not be used to cut nails.

5.19 Apex states on the packaging's back panel that these cutter pliers are:

... made to handle virtually every precision cutter and gripping application with ease and comfort ...⁵;

5.20 It is reasonably foreseeable this cutter pliers will be utilized to cut nails, yet Apex fails to warn to not cut nails with this cutter pliers. It was not a misuse for Alfeld to have cut nails with this cutter pliers.

5.21 Apex Product Specifications specifies the pliers are to be manufactured from High Carbon C1070 or better steel; and the entire body of the pliers is to be hardened. Brittle fracture is a well-known defect that can occur in hardened high carbon steels.

5.22 Fig. 29, attached, illustrates typical ductile and brittle fractures.⁶ A 10X enlargement of the incident Crescent cutting pliers (Exhibits K and L, attached) fracture surface is depicted in Photo # 3140, attached. Photo # 3614, attached, is a 20X enlargement of a portion of the fracture surface.

5.23 The ASM International wrote in 2002:

Ductile and brittle are terms often used to describe the amount of macroscale plastic deformation that precedes fracture. The presence of brittle fracture is a concern, because catastrophic brittle fracture occurs due to the elastic stress that is present and usually propagates at high speed, sometimes with little associated absorbed energy. Fracture occurring in a brittle manner cannot be anticipated by the onset of prior macroscale visible permanent distortion to cause shut down of operating equipment, nor can it be arrested by a removal of the load except for very special circumstances.⁷

⁵ Alfeld-Packaging Backcover.JPG

⁶ Becker, William T., Shipley Roch J., Eds., ASM Handbook, Volume 11 Failure Analysis and Prevention, ASM International, Materials Park, 2002, p. 602.

⁷ Becker, William T., Shipley Roch J., Eds., ASM Handbook, Volume 11 Failure Analysis and Prevention, ASM International, Materials Park, 2002, p. 565.

Neal A. Growney & Assoc., L.L.C.

Franklin Lakes, New Jersey 07417-2319

and:

Ductile overload failures are simply those that exhibit significant visible macroscopic plastic deformation. Brittle overload failures, in contrast to ductile overload failures, are characterized by little or no macroscopic plastic deformation.⁸

5.24 The fracture surface of the incident cutter pliers does not exhibit any significant ductility and its appearance is consistent with brittle fracture. The incident Crescent cutter pliers should not have experienced brittle fracture failure from cutting a 23 AWG pin nail.

5.25 It is my professional opinion that the incident Crescent cutter pliers contained a manufacturing defect that caused its blade to break when Alfeld attempted to cut a 23 AWG pin nail with it. Had this Crescent cutter pliers not been defectively manufactured, it is unlikely that its blade would have broken when Alfeld attempted to cut a 23 AWG pin nail with it, a broken blade would not have been ejected and Alfeld's eye would not have been injured.

5.26 A substantial cause of Alfeld's injury was the defectively manufactured Crescent cutter pliers.

5.27 If Apex's Senior Product Development Engineer does not know if these cutter pliers can cut a commonly used pin nail, having a substantially smaller diameter than what this pliers' is rated for, then how does Apex expect a workman in the field to determine if these pliers can cut a pin nail without breaking?

5.28 In 1955 The National Safety Council published the Hierarchy of Safety Controls.⁹ It is a statement of the order of priority of the steps to be put into effect in order to control hazards of a manufactured product. Beginning with the highest priority and descending to the lowest, this hierarchy is:

1. Design the hazard(s) out of the product. If this is impractical then:
2. Guard the hazard(s). If this is impractical then:
3. Warn the user as to the product's dangers and instruct the user of the steps necessary to be taken in order to safeguard against its hazard(s).
4. If the hazard(s) still exist then personal protective equipment must be utilized.

This hierarchy is well accepted by safety professionals.¹⁰

5.29 The first and second steps of the Hierarchy of Safety Controls are engineering solutions to safeguard hazards. They rely upon physical laws and principles. The third and fourth steps are administrative steps whose efficacies in safeguarding hazards are dependent upon human execution. Human beings are notoriously inconsistent. Warning of a hazard is a

⁸ Becker, William T., Shipley Roch J., Eds., ASM Handbook, Volume 11 Failure Analysis and Prevention, ASM International, Materials Park, 2002, pp. 671, 674.

⁹ National Safety Council, Accident Prevention Manual for Industrial Operations, 3d Edition, Chicago, 1955, p. 4-1.

¹⁰ Barnett, Ralph A., Brickman, Dennis, "Safety Hierarchy" Triodyne Inc., Niles, Illinois, 1985.

Neal A. Growney & Assoc., L.L.C.

Franklin Lakes, New Jersey 07417-2319

higher priority than the utilization of personal protective equipment. For the incident cutter pliers, warning to not cut nails is a greater priority than wearing safety glasses.

5.30 Apex knows these cutter pliers are not designed to cut nails (Anderson p. 76). The design of this cutter pliers is defective as it fails to include warnings to not cut nails with it. Had this cutter pliers' design included adequate warning to not cut nails, it is substantially certain Alfeld would not have attempted to cut the incident pin nail, the cutter pliers' jaw would not have broken and been discharged and Alfeld's eye would not have been injured. A cause of Alfeld's injury was the defective design of the incident cutter pliers that failed to warn to not cut nails with them.

5.31 One of the functions of a product warning sign is to alert the user of hazards associated with the product and its use that the user may be unaware of. It is reasonably foreseeable that persons re-using a hazardous product might not remember its hazards or the steps needed to safeguard one's self from them. On-product warnings also function to remind the user as he approaches the product, of its hazards.

5.32 Anderson testified that the lettering height of the stamped warning on this cutter pliers was brought forward from product data prior to moving its manufacture to Hongbao (pp. 64-65). Industry consensus standards for product warning signs had existed for decades prior to Hongbao manufacturing the incident cutter pliers. The American National Standard Specifications for Accident Prevention Sign, ANSI Z35.1-1972, an industry consensus safety standard, was adopted in 1972. The American National Standard for Product Safety Signs and Labels, ANSI Z535.4-1991, an industry consensus safety standard, was adopted in 1991. The American National Standard Criteria for Safety Symbols, ANSI Z535.3-1991, an industry consensus safety standard, was also adopted in 1991.

5.33 ANSI Z535.4-2011, the succeeding version of ANSI Z535.4-1991, American National Safety Standard for Product Safety Signs and Labels, was adopted in 2011 and in effect when the incident cutter pliers was manufactured. ANSI Z535.4-2011 sets forth performance requirements for the design, application, use and placement of safety signs and labels on a wide variety of products.

5.34 A hazard alert sign is a sign directly related to hazard that identifies the hazard, its level of seriousness, the probable consequences of involvement with the hazard and how the hazard can be avoided.¹¹ Hazard alerting signs are classified according to the relative seriousness of the hazardous situation. There are three hazard classifications, DANGER, WARNING or CAUTION.¹²

5.35 ANSI Z535.4-2011 §6.1 specifies product safety signs or labels shall consist of a signal word panel and a message panel. Signal words are the words used in signal panels. The signal words for hazard alerting signs are "DANGER," "WARNING" and "CAUTION". The signal word "WARNING" indicates a hazardous situation that if not avoided, could result in death or serious injury.¹³

¹¹ ANSI Z535.4-2011 §4.12.3.1.

¹² ANSI Z535.4-2011 §5.1.

¹³ ANSI Z535.4-2011 §4.14.2.

Neal A. Growney & Assoc., L.L.C.

Franklin Lakes, New Jersey 07417-2319

5.36 The loss of an eye is a serious injury. The signal word "WARNING" should be used on hazard alert signs warning of conditions that could result in the loss of an eye. Apex does not use the signal word "WARNING" anywhere on this product; not on the packaging and not on the cutter pliers itself. Apex should have accompanied their instruction to the signal word "WARNING".

5.37 ANSI Z535.4-2011 §7.2.2 specifies that the word WARNING of a warning sign shall be in safety black letters on an orange background.

5.38 A safety instruction sign is a sign that identifies specific safety-related instructions or procedures. Apex's design of this cutting pliers provides for the instruction:

WEAR SAFETY
GLASSES

to be stamped in 0.050 high lettering into one side of each flat, black colored metal handle, near the rivet hole. This stamping, in black lettering on a black background, lacks conspicuity. It is not reasonable to expect users of this cutter pliers to read this small, black lettering stamped on a black background.

5.39 Anderson, Apex's Senior Product Development Engineer does not know what the phrase conspicuity means in relation to product warnings (Anderson, p. 63). He considers that stamping to be clear and legible at arm's length (p. 63). Arm's length on a 99-percentile male would be approximately 36 ½ inches.¹⁴

5.40 ANSI Z535.4-2011 § 8.2.1 requires the lettering of the warning signs on the incident cutter pliers to be of a size that enables persons with normal (including corrected) vision, to read the message panel from the expected viewing distance. Anderson's requirement that this cutter pliers' stamped warning be clear and legible at arm's length is consistent with ANSI Z535.4-2011 § 8.2.1 requirement.

5.41 Utilizing the so-called "James Bond" rule:¹⁵ in order for a person having 20-20 vision (even corrected) be able to read this stamping, his eyes must be no more than approximately 7 ¼ inches away from it. Apex knew or should have known, that a 99-percentile male would be unable to read this cutter pliers' instruction: WEAR SAFETY GLASSES at "arm's length". This instruction is not adequate to convey to users they must: WEAR SAFETY GLASSES when using this cutter pliers. Apex's design of its instructions to WEAR SAFETY GLASSES is defective.

5.42 Each of the cutter pliers handle is encased in red colored cushion grips. The upward face of the left grip instructs, in lettering approximately 0.065-inch high: WEAR SAFETY GLASSES; and in lettering approximately 0.073-inch high: PROTECT YOUR EYES. These instructions are accompanied by a 0.375-inch long, side equilateral triangle having a stylized image of a person's head wearing goggles within it (Anderson, p. 58). See Exhibits K and L, attached.

5.43 Apex knew or should have known that if it wanted its wording: WEAR SAFETY GLASSES; and PROTECT YOUR EYES; on the handle cushion to be warnings, and therefore have the effect

¹⁴ Tilley, Alvin R., The Measure of Man and Woman, Henry Dreyfuss Associates, Watson-Guptill Publications, New York, 1993, pp. 11-12.

¹⁵ Smith, Sidney L., Letter Size and Legibility, "Human Factors", The Human Factors Society, Santa Monica, 1979, 21(6) 661-670.

————— **Neal A. Growney & Assoc., L.L.C.** —————
Franklin Lakes, New Jersey 07417-2319

warnings are to have it should have accompanied them with the signal word "WARNING". Apex' phrases: WEAR SAFETY GLASSES; and PROTECT YOUR EYES; are instructions, not warnings.

5.44 Applying the James Bond rule to the approximately 0.073-inch, high instruction to: PROTECT YOUR EYES, in order for a person having 20-20 vision (even corrected) to read this instruction his eyes must be no more than approximately 9 ¼ inches away from it. Apex knew or should have known that a 99-percentile male would be unable to read the cutter pliers' instruction to: PROTECT YOUR EYES, at arm's length. Apex's design of its instructions to: PROTECT YOUR EYES, is defective.

5.45 While the black lettering of the: WEAR SAFETY GLASSES and the: PROTECT YOUR EYES instructions are in contrast the red coloring of the handle cushions, their small font sizes (0.065-inch and 0.073-inch) cause them to be inconspicuous. It is reasonably foreseeable that users of this cutter pliers will overlook these messages. Apex knew or should have known, that the font size of the instructions: WEAR SAFETY GLASSES and: PROTECT YOUR EYES was too small for the instructions to be sufficiently conspicuous and alert a user of their presence; and thereby inspires him to read it.

5.46 A safety alert symbol is:

A symbol that indicates a hazard. It is composed of an equilateral triangle surrounding an exclamation mark.¹⁶

5.47 The safety alert symbol to be used with a WARNING is a safety orange exclamation mark inside a safety black triangle. Apex does not include any safety alert symbols on the cutter pliers itself or on the packaging.

5.48 Apex placed a safety symbol to the left of its instructions: WEAR SAFETY GLASSES and: PROTECT YOUR EYES. It is a 0.375-inch long sided equilateral triangle having a stylized image of a person's head wearing goggles (Anderson, p. 58). The triangle is approximately 0.325-inch high. The stylized head is approximately 0.071-inch high. See Exhibits K and L, attached. Anderson referred to this image inside the triangle as Goggle Guy.

5.49 This safety symbol appears to be the equilateral triangle specified by ANSI Z535.4-2011 and ANSI Z535.3-2011 for safety alert symbols but with a stylized head symbol replacing the exclamation mark. Apex's should have affixed the safety alert symbol next to its WEAR SAFETY GLASSES and: PROTECT YOUR EYES.

5.50 Apex's design included affixing its "CRESCENT" brand in 0.105-inch high, bold letters to the upward face of the right handle's cushion grip. It is accompanied by a 0.170-inch logo in bold. See Exhibits K and L, 1-15-19, attached. There are no warnings or branding on the other side of the cutter pliers handles.

5.51 Applying the James Bond rule, a person having 20-20 vision (even corrected) would be able to read **CRESCENT** from approximately 15 inches away from the cutter pliers. The "CRESCENT" brand is far more conspicuous than : WEAR SAFETY GLASSES and PROTECT YOUR EYES. Judging by the conspicuity of the brand and the inconspicuousness of the WEAR SAFETY GLASSES

¹⁶ ANSI Z535.4-2011 §4.11

— **Neal A. Growney & Assoc., L.L.C.** —
Franklin Lakes, New Jersey 07417-2319

and PROTECT YOUR EYES phrases, Apex placed a higher value on the user knowing the name of this cutter pliers than the user protecting their eyes by wearing safety glasses.

5.52 There is ample room for Apex should have affixed the warnings:

WARNING Do Not Cut Nails See Photos 3623 and 3665, attached;

Wear Safety Glasses See Photos 3622 and 3670, attached;

WARNING Wear Eye Protection See Photos 3625 and 3668, attached;

For soft wire up to 20 AWG See Photo 3673, attached;

in 18-point Arial font, approximately ¼ inch high, on this cutter pliers handle, which would be readable from approximately 35 ¾ inches, virtually an arms-length away.

5.53 Section 6 of ANSI Z535.4-2011 specifies that a product safety sign shall consists of a signal word (e.g. WARNING) panel plus a message panel. Section 7.2.2 specifies that the signal word WARNING shall be in safety black letters on a safety orange background.

5.54 Apex did not place warnings of any hazards associated with cutter pliers' use on the package's paperboard front panel.

5.55 Apex instructs on the upper right corner of the packages' paperboard rear panel:

Wear Safety Goggles

5.56 This instruction is written in black lettering, upper case approximately 0.075-inch high and lower case approximately 0.056-inch high on a white background. It is accompanied by a white vertical panel to its left, having an abstract oval facial image wearing goggles on a black circle. See Exhibit G, 1-15-19, attached. Apex's design fails to comply with ANSI Z535.4-2011 requirements as it does not include the signal word "WARNING" written in black lettering on an orange background.

5.57 This cutter pliers is a common tool used by workmen. The efficacy of a warning on the front of the package of a product like this one is far greater than a warning on the rear of the package. The front is the face of the product the prospective buyer is most likely to view and read. Whereas there the manufacturer must depend on the consumer, whom he has no control over, to turn the package over in order to read any warning on the rear of the packaging. Even if the consumer does turn it over and read the rear, it is not likely consumers will repeatedly re-read a warning on the rear of the packaging. Packaging is commonly discarded. A warning on the rear of the packaging is most likely at best to be only a one-time conveyor of the manufacturer's warning to the user. It is not realistic to expect a warning on the rear of packaging to have repeat value. A warning on the rear of packaging is unlikely to remind the user of the hazards associated with this cutter pliers whenever the user is re-using it.

— **Neal A. Gowney & Assoc., L.L.C.** —

Franklin Lakes, New Jersey 07417-2319

5.58 Apex's design is defective as it fails to warn on the front of its packaging to not cut nails with this cutter pliers, that cutting nails with this cutter pliers risks breaking its jaws and to wear eye protection whenever using this cutter pliers.

5.59 Apex's design of this cutter pliers is defective as it fails to adequately warn of the dangerous hazards associated with its use. Apex's failure to adequately warn of the dangerous hazards associated with this cutter pliers use was a cause of Alfeld's injuries.

5.60 Should new information become available, I reserve the right to review it and alter my opinions accordingly

6.0 Opinion.

Within the bounds of a reasonable degree of engineering certainty, based upon my engineering education, training and experience, the facts of this case and subject to new information, it is my professional opinion that:

6.1 The incident Crescent cutter pliers contained a manufacturing defect that caused its cutting jaw to break.

6.2 Had this Crescent cutter pliers not been defectively manufactured, it is unlikely that its jaw would have broken when Alfeld attempted to cut a 23 AWG pin nail with it, the broken jaw would not have been ejected, struck and injured Alfeld's eye.

6.3 A substantial cause of Alfeld's injury was the defectively manufactured incident Crescent cutter pliers.

6.4 The design of the incident Crescent cutter pliers is defective as it fails to adequately warn of the dangerous hazards associated with its use.

6.5 Apex's failure to adequately warn of the dangerous hazards associated with this Crescent cutter pliers use was a cause of Alfeld's injuries.

Should new information become available, I reserve the right to review it and alter my opinions accordingly.

Sincerely,



Neal A. Gowney, P.E.

Attachments

602 / Fracture

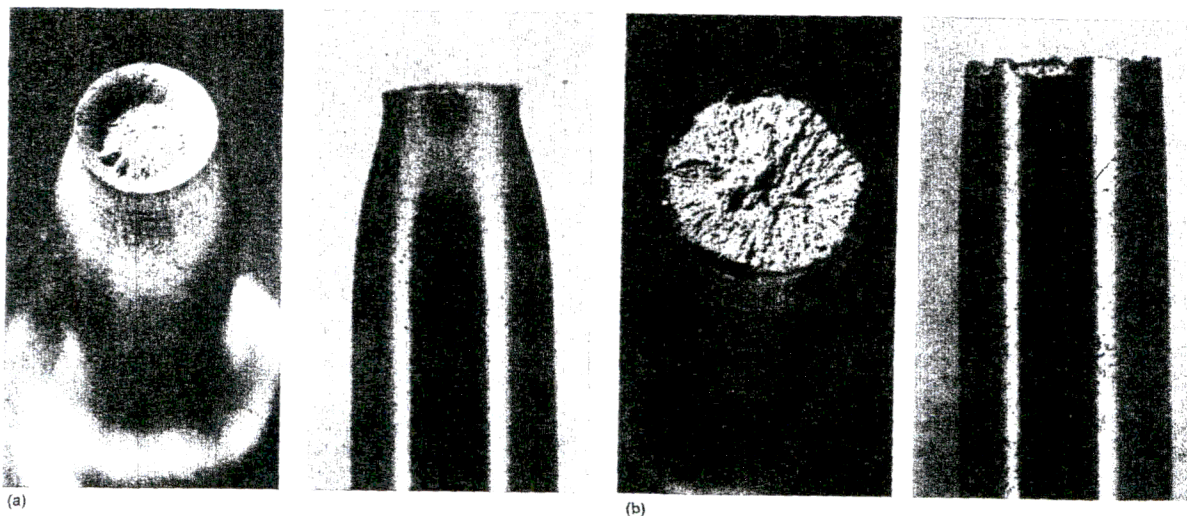


Fig. 29 Appearance of (a) ductile and (b) brittle tensile fractures in unnotched cylindrical specimens. Courtesy of George Vander Voort

Notched Specimens

Sample size can result in a less ductile condition, and Table I lists the effect on ductility for maintaining proportional specimen dimensions (constant w/l and width/length ratios) while increasing the sample width (all samples had square holes located in the center of the panel and sides 45° to the longitudinal axis). The width

parts but can be quite common during metalworking and fabrication. There are differences in crack-initiation location and fracture planes depending on whether the component is loaded in plane stress (cylindrical sections) or plane strain (plate-type specimens). For short (small height-to-width) cylindrical parts, a compressive load that leads to plastic deformation causes the

with additional deformation. This appears in metals and in polymers loaded in compression as the width changes—two bands to four or more bands as the width increases. Alternatively, if there is considerable barreling in the unconstrained directions, cracking may also initiate at the surface, as in the plane stress loaded specimens.

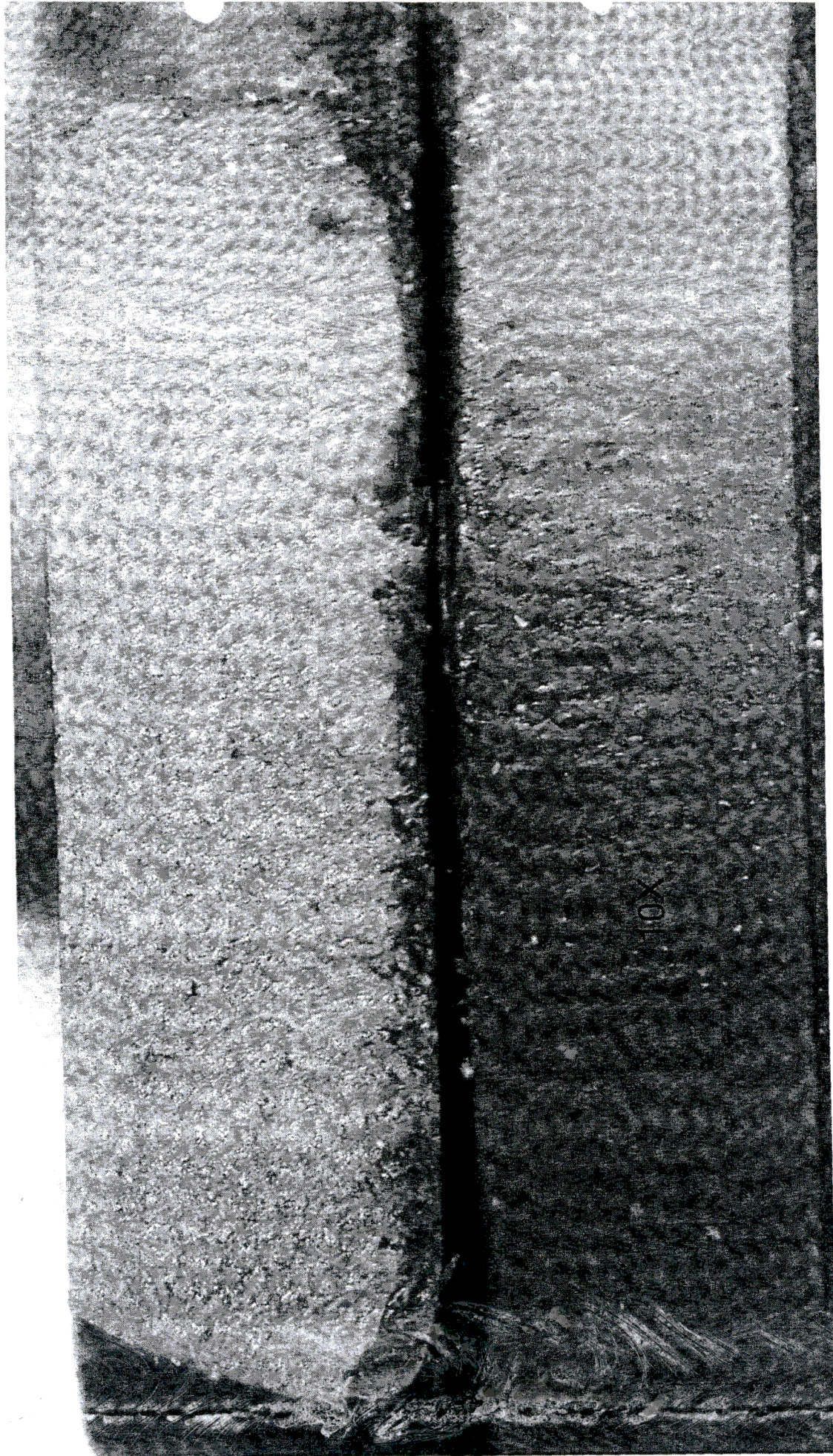


Photo # 3140

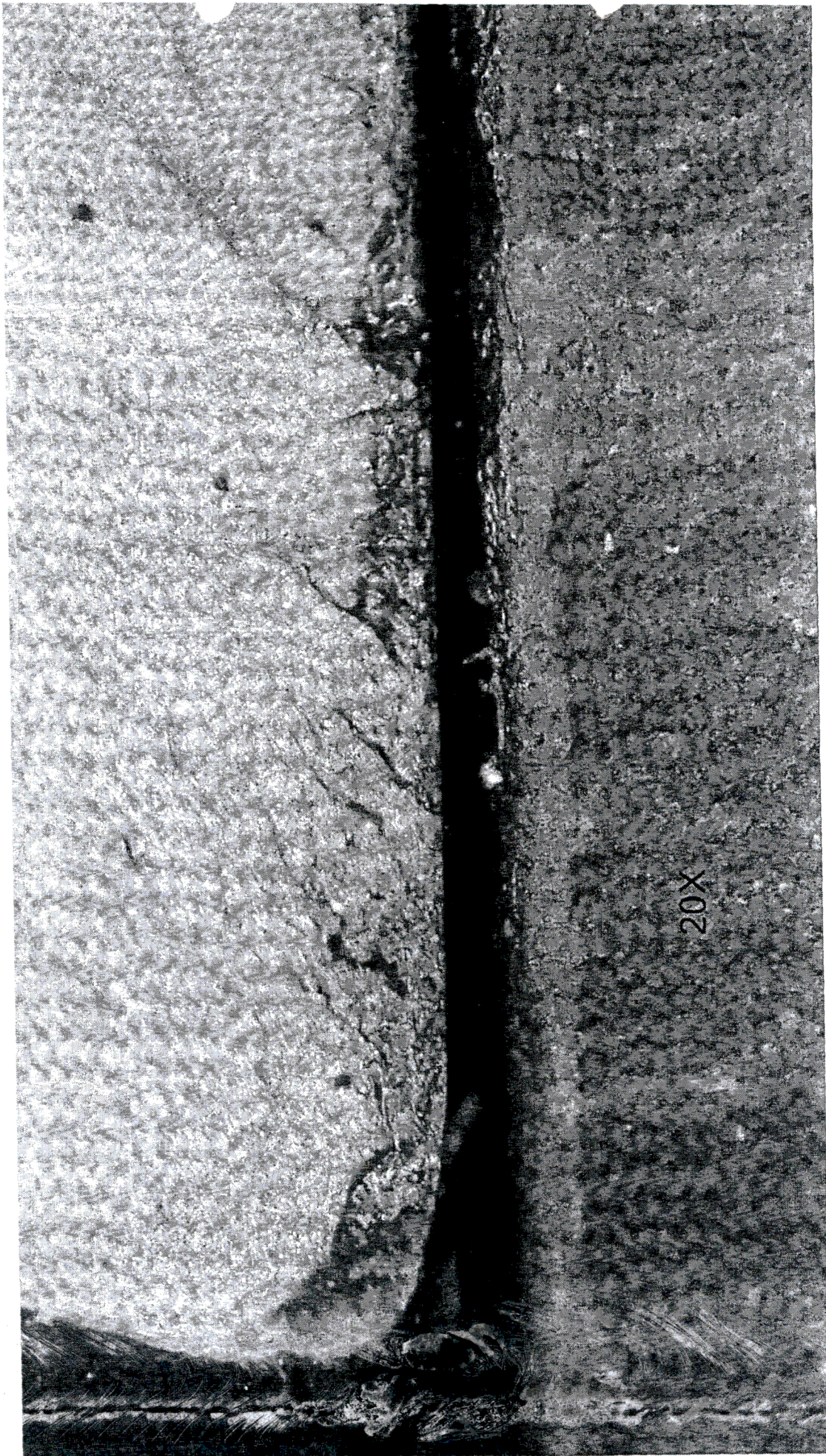
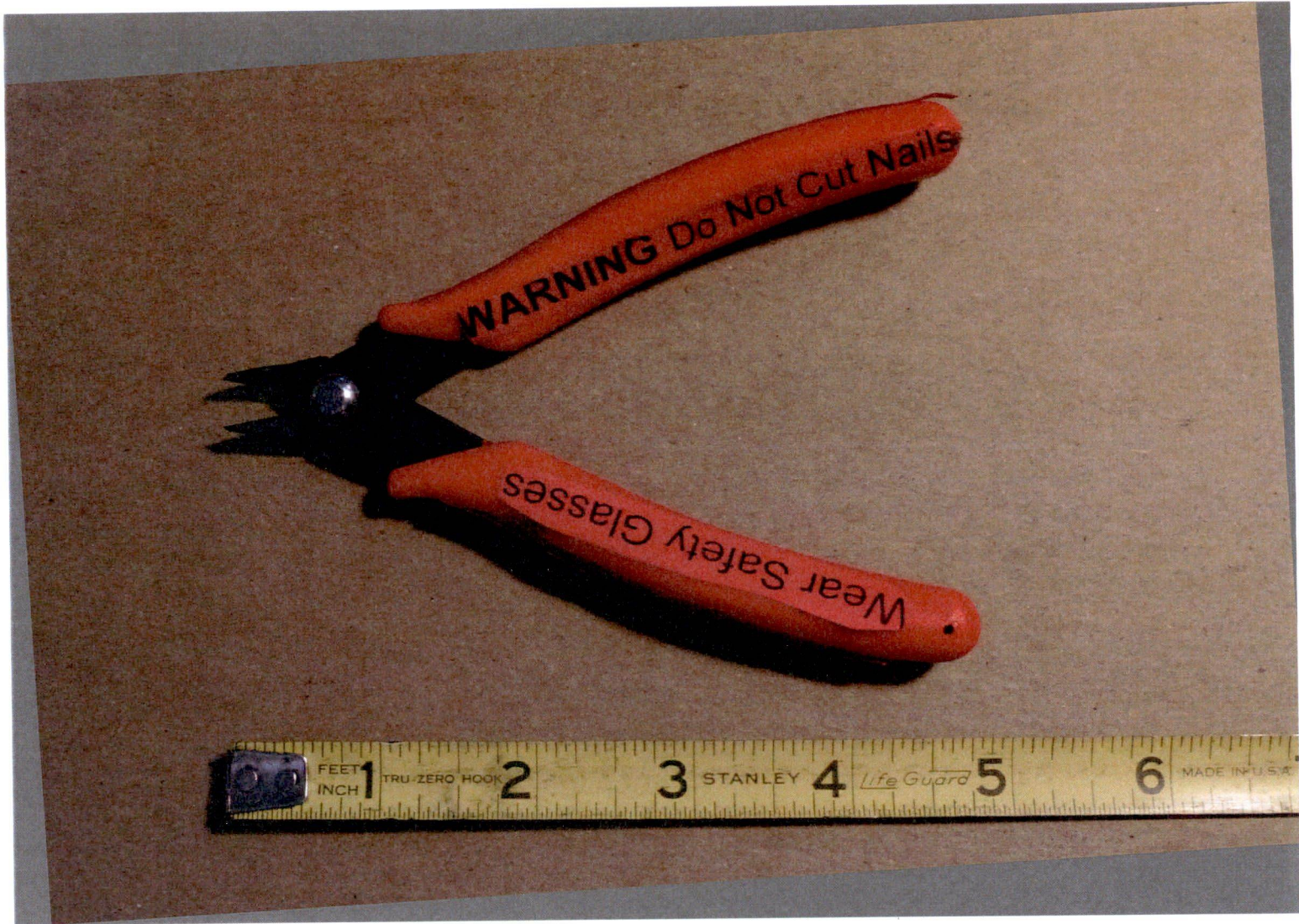
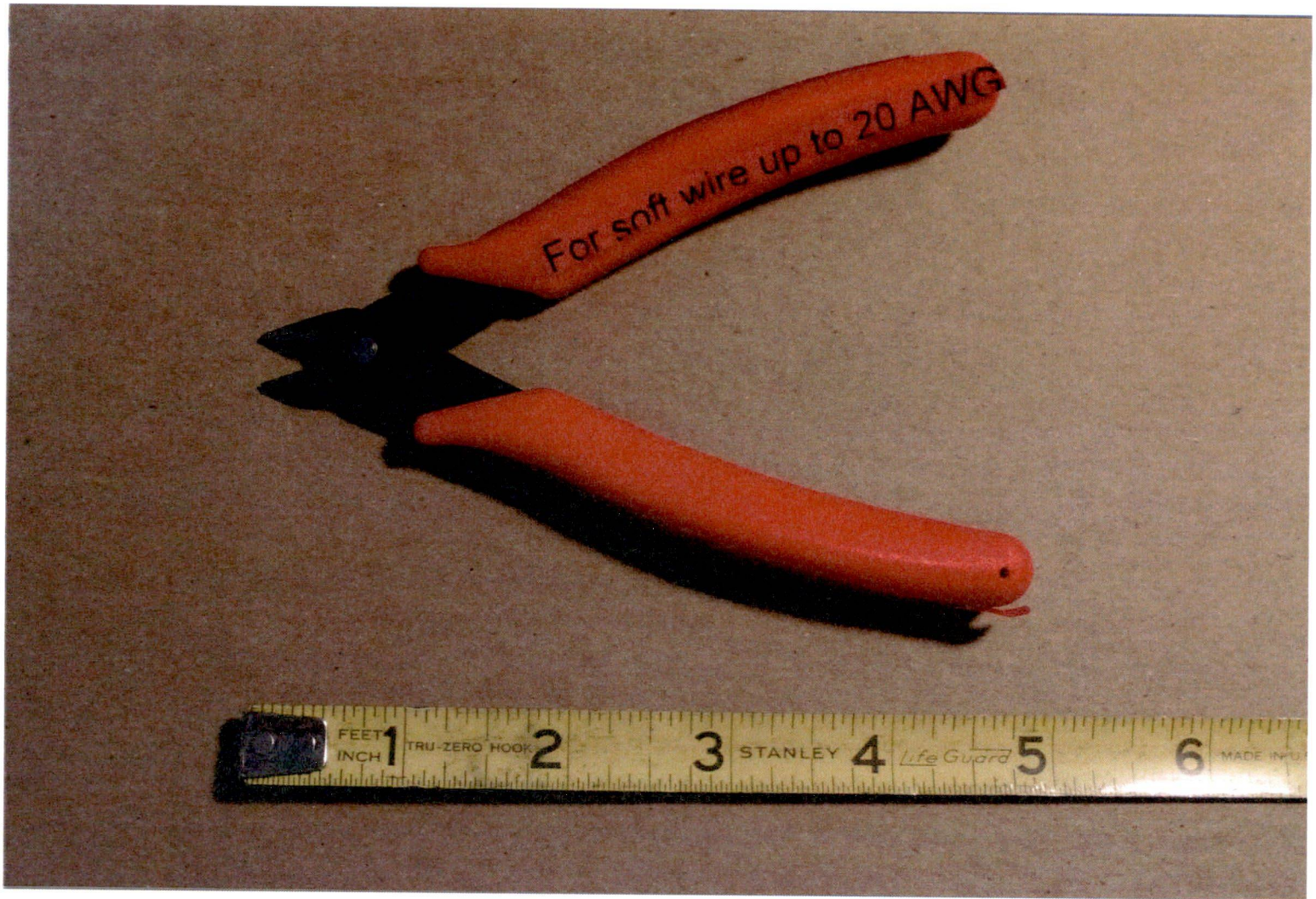
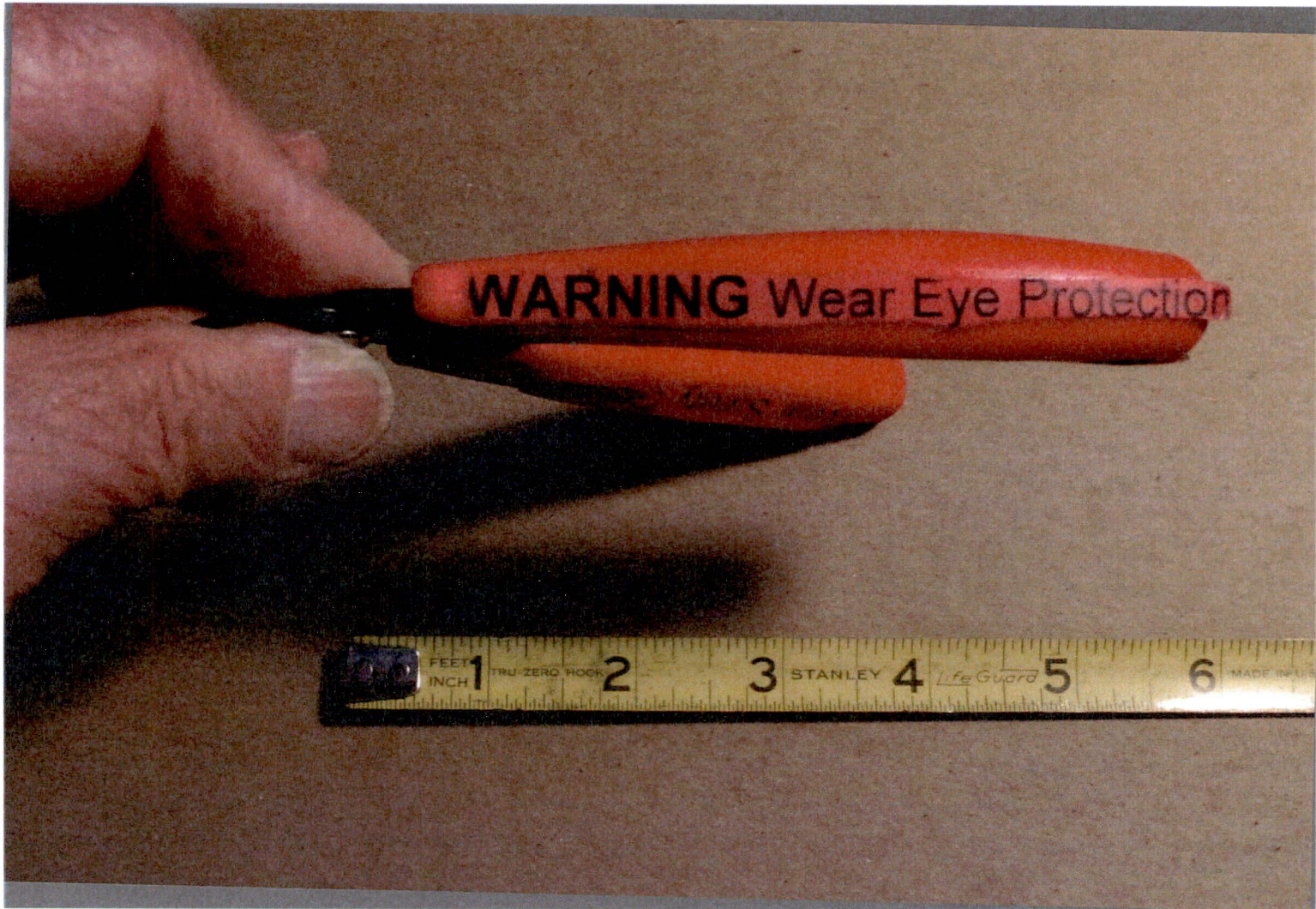


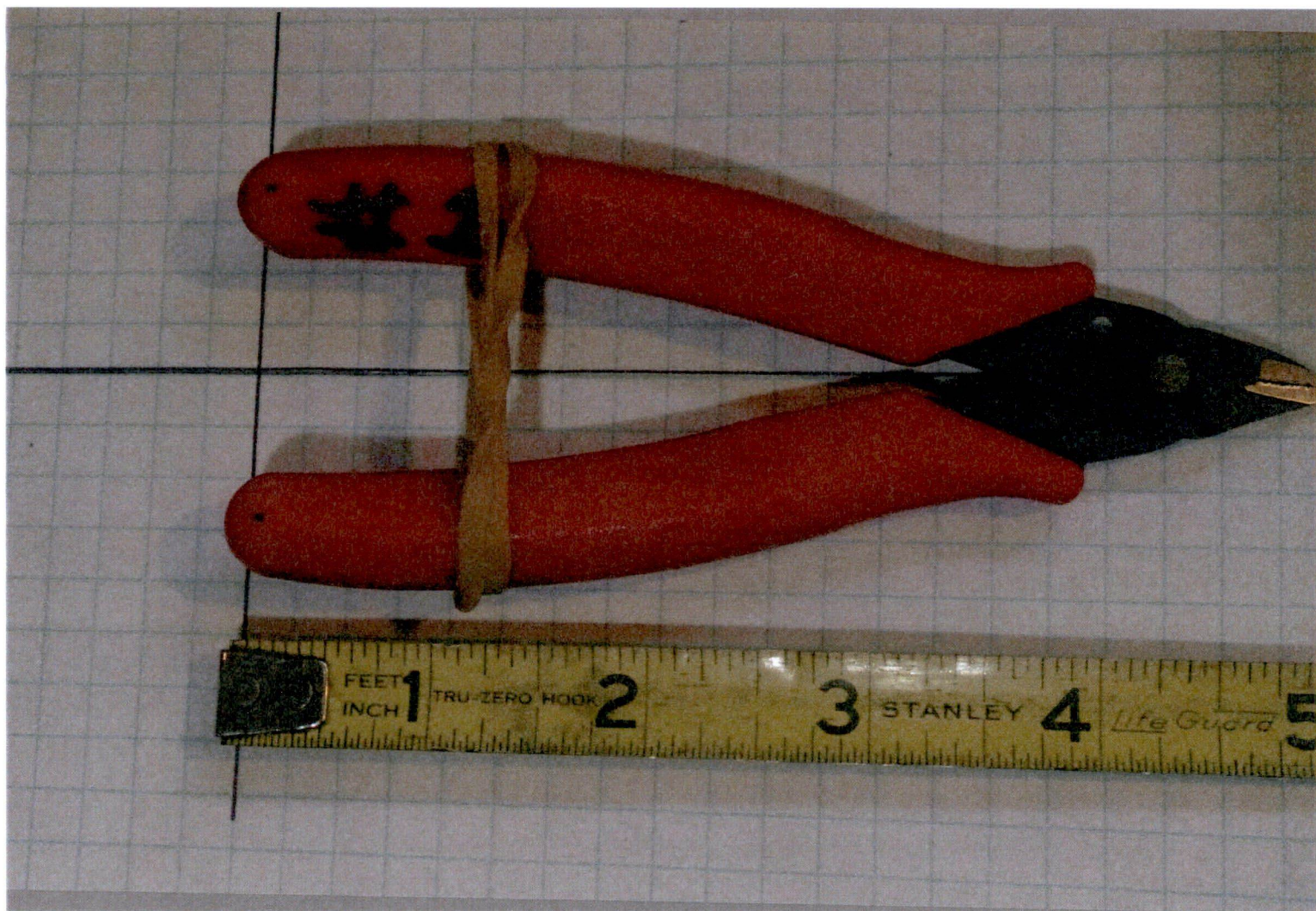
Photo # 3614

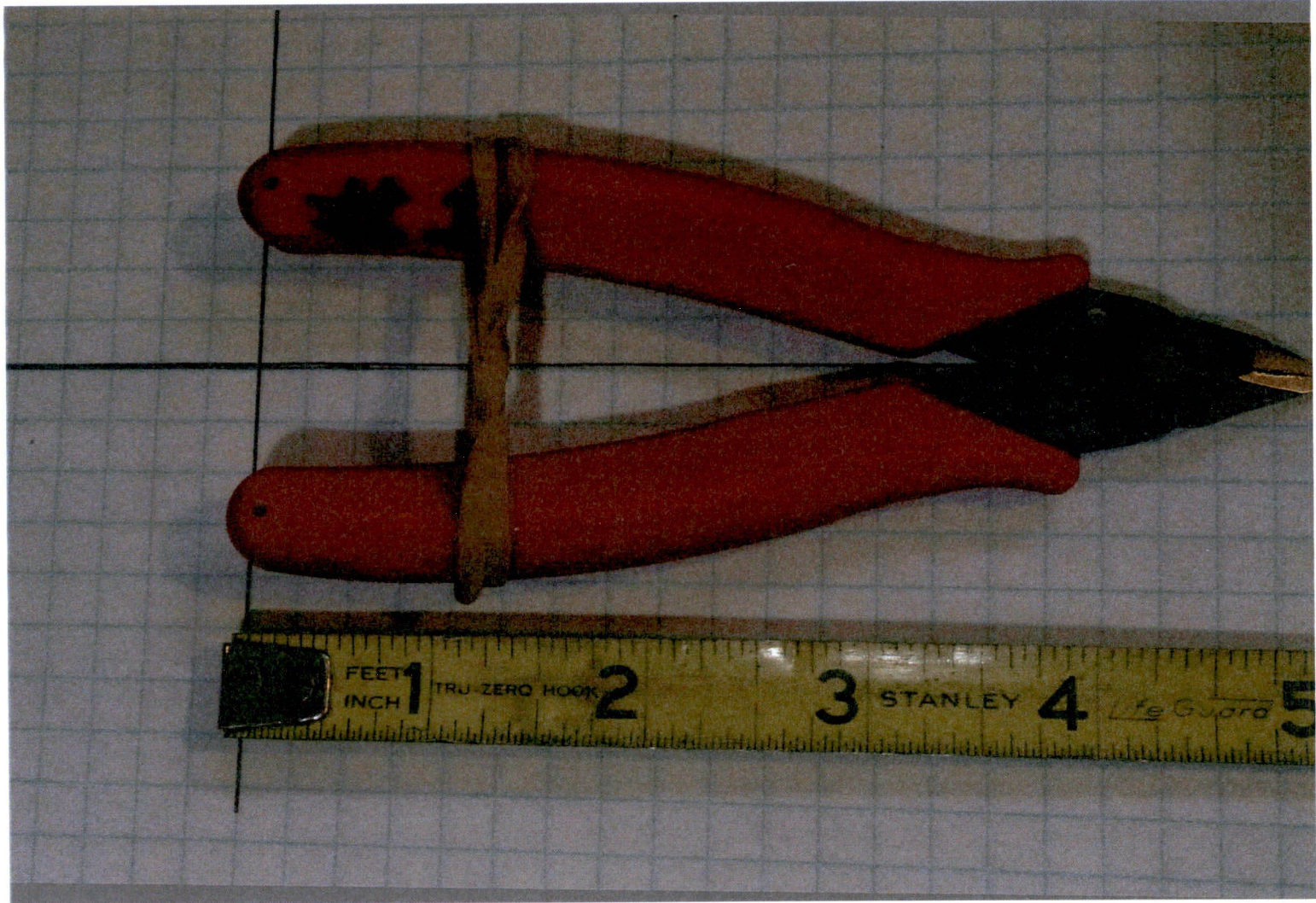


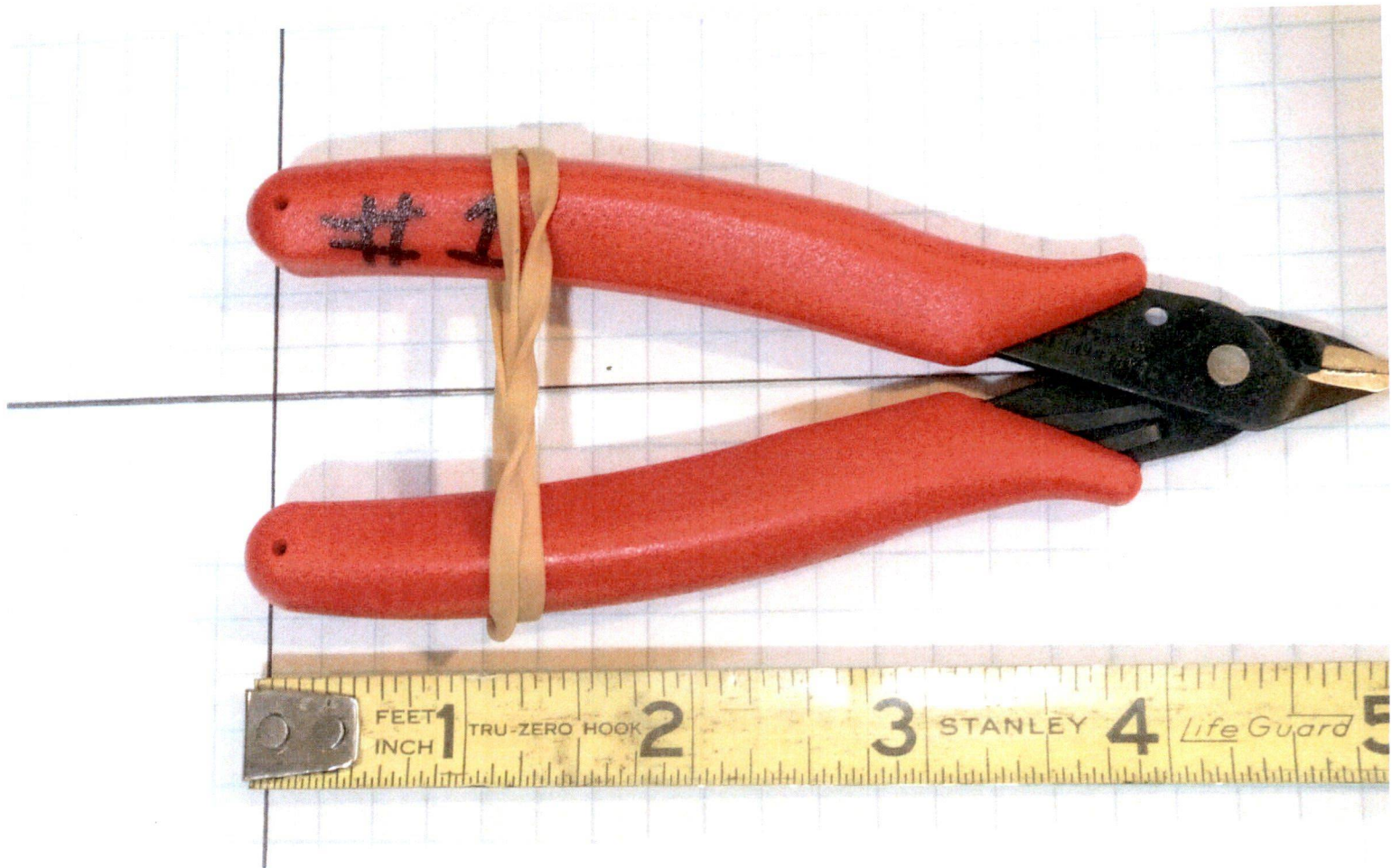


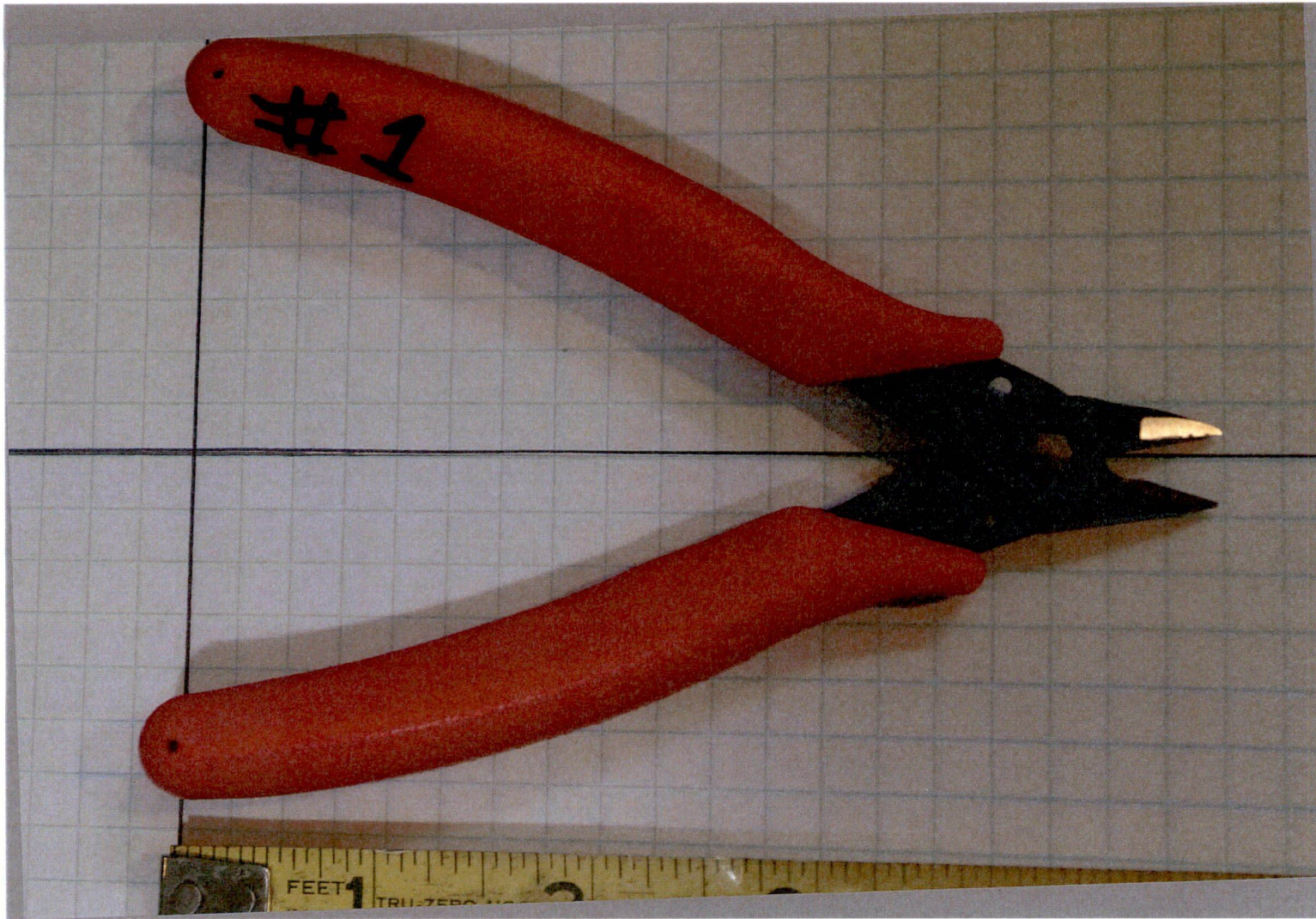


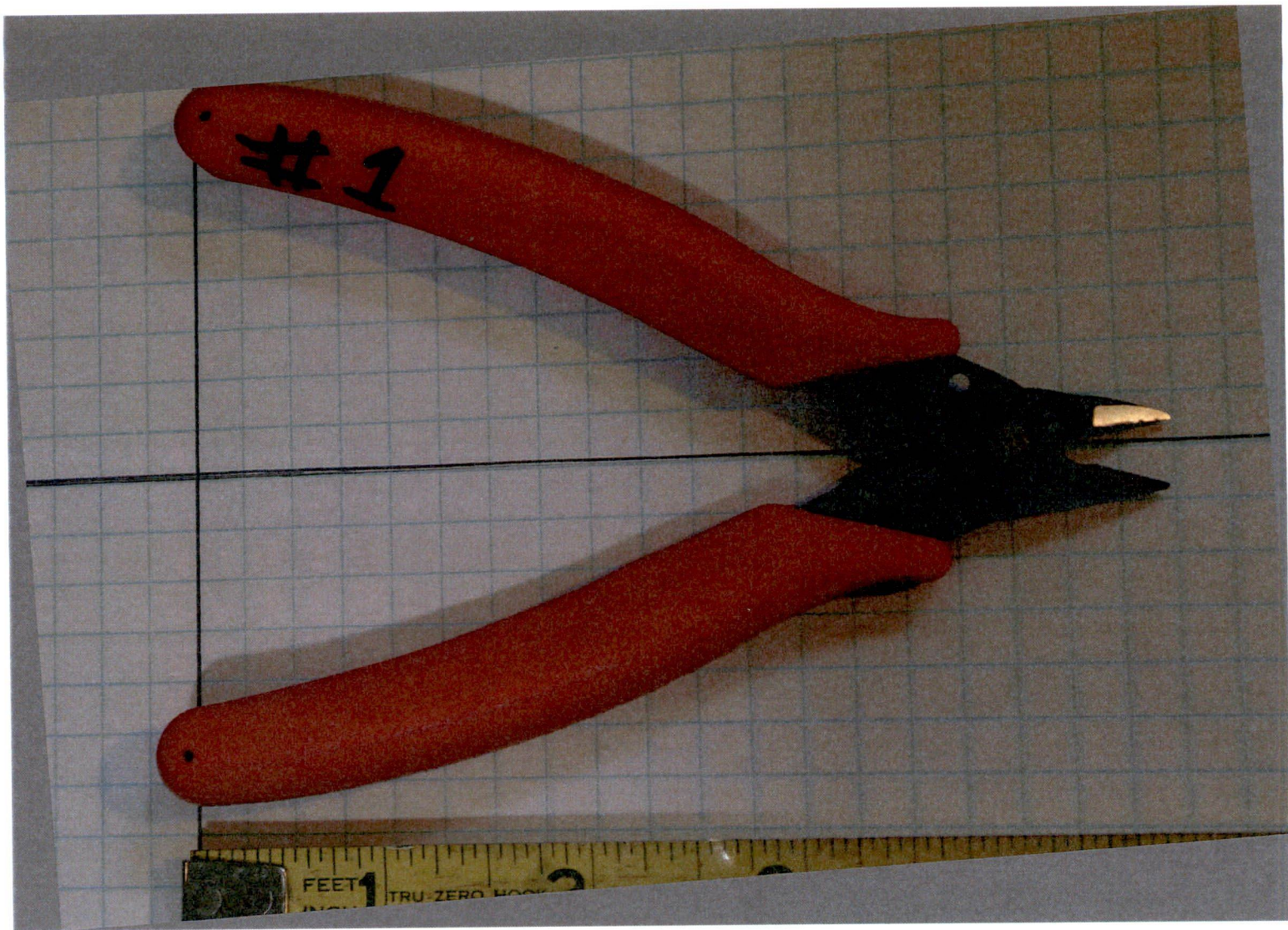


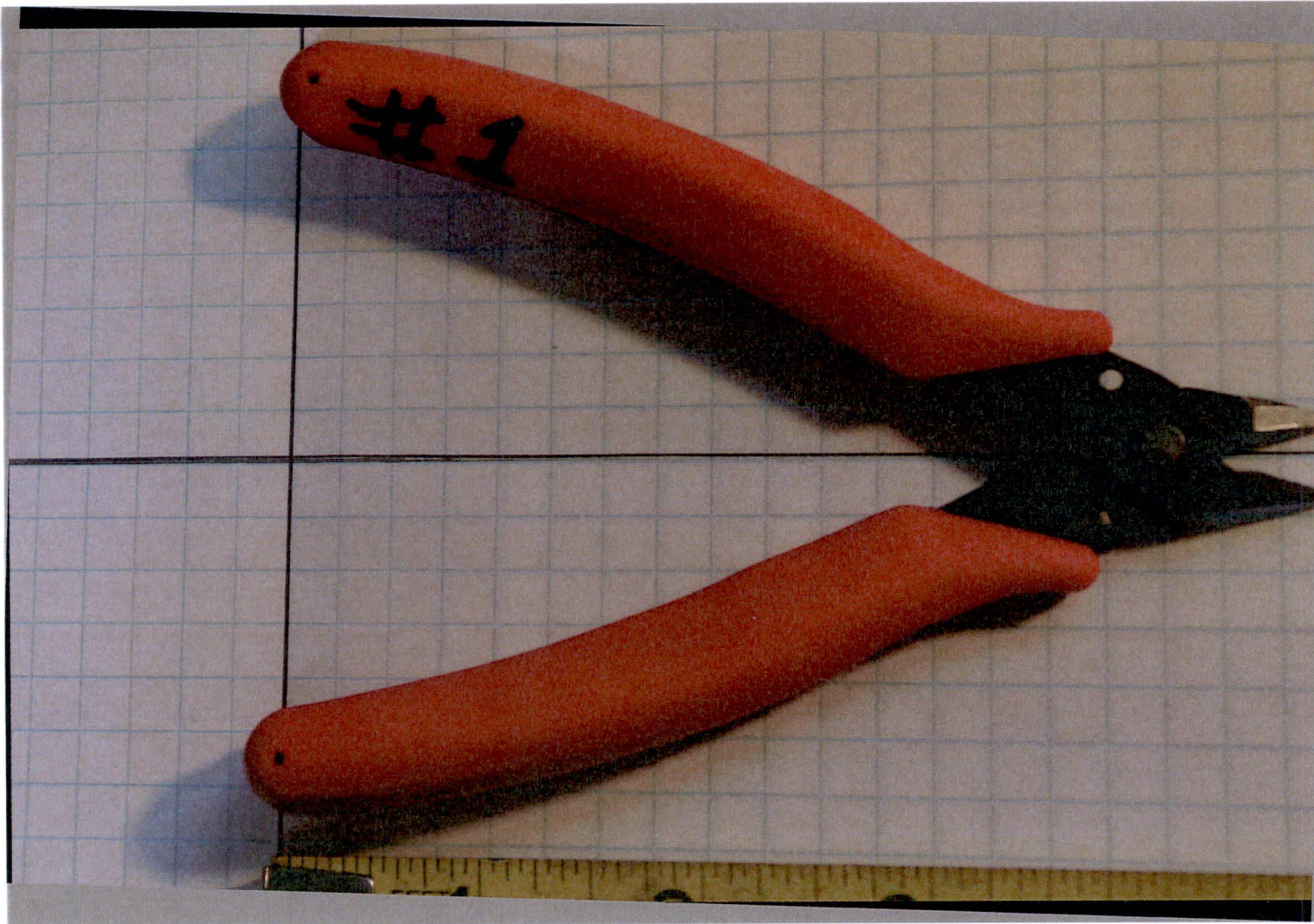


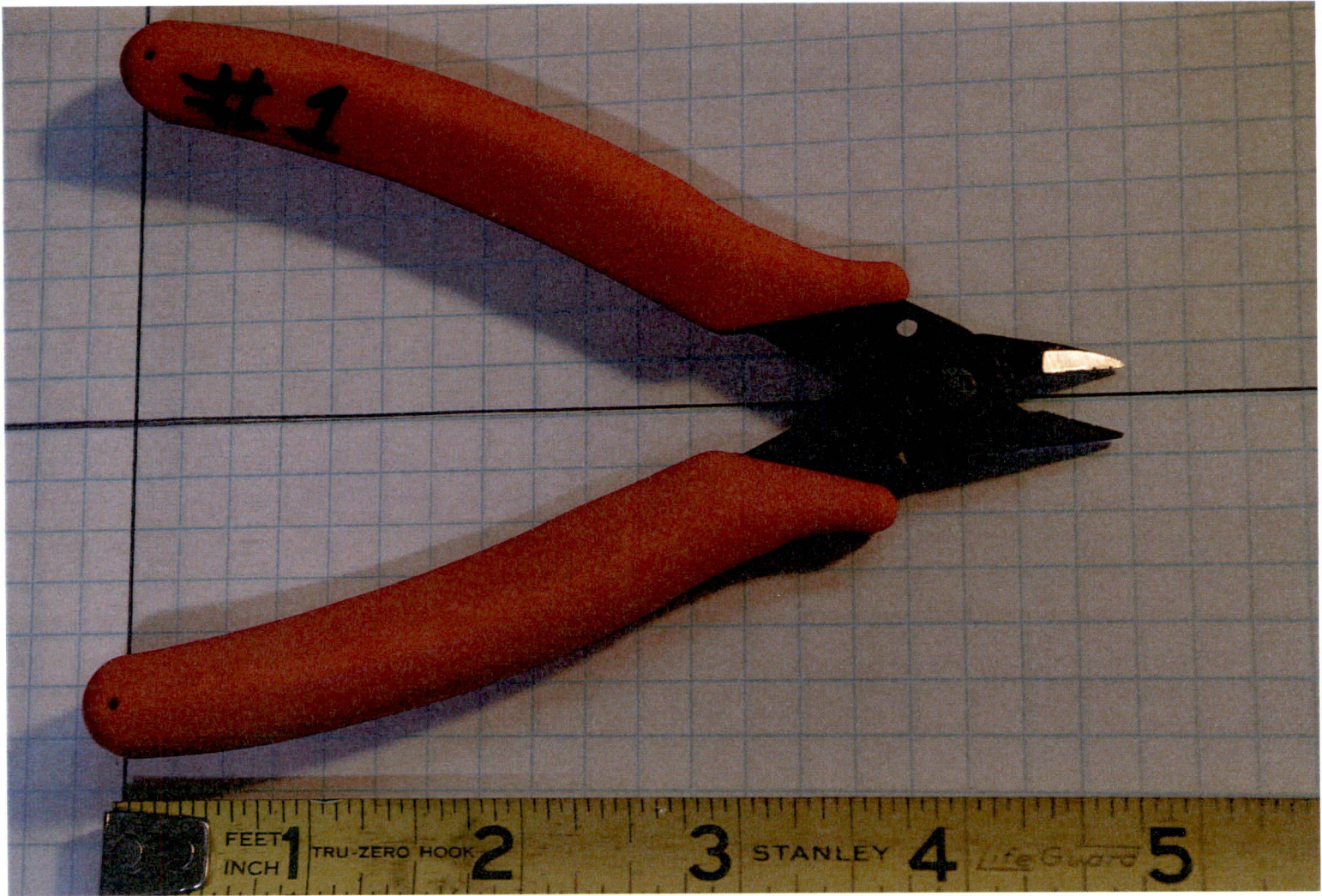


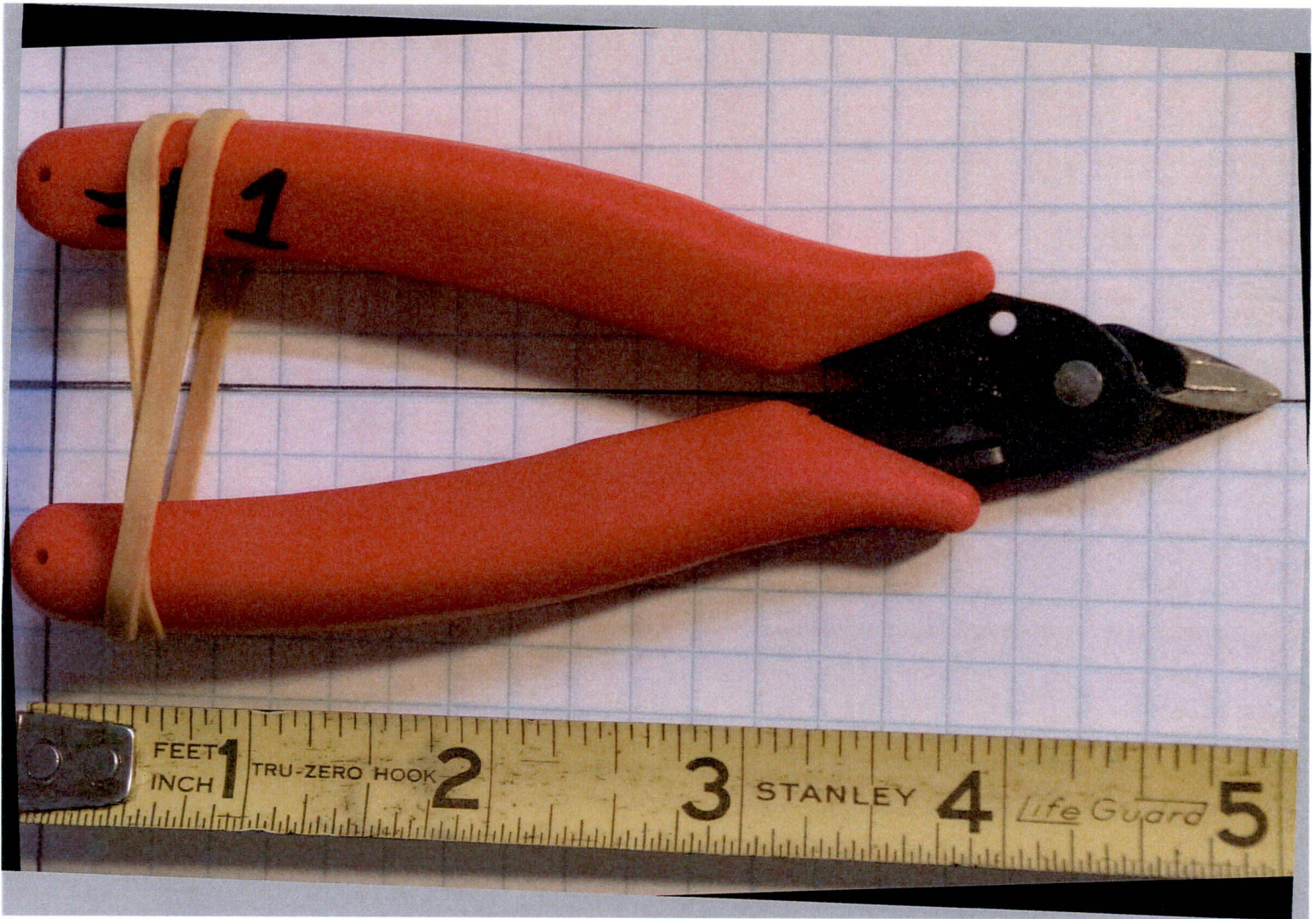


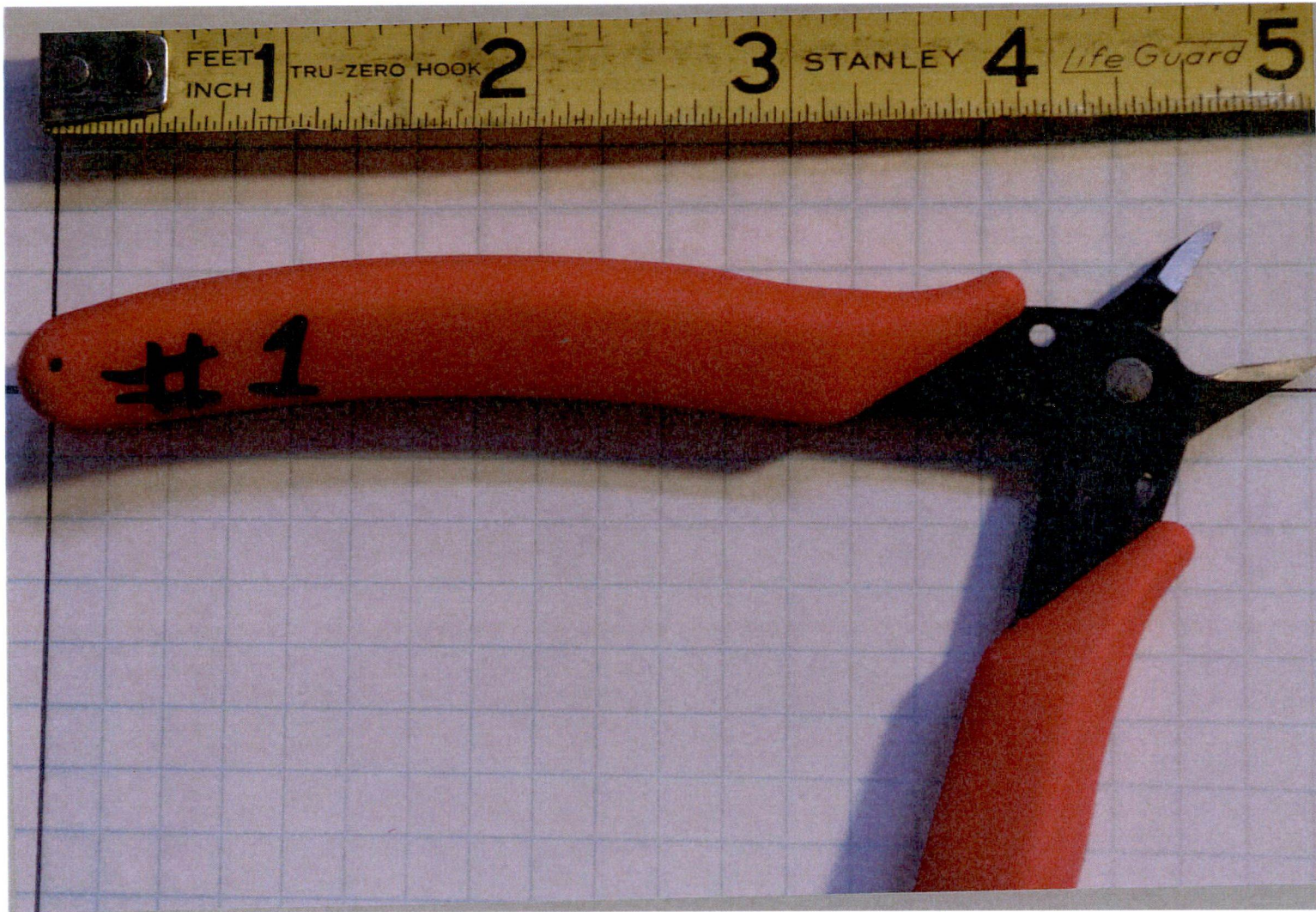


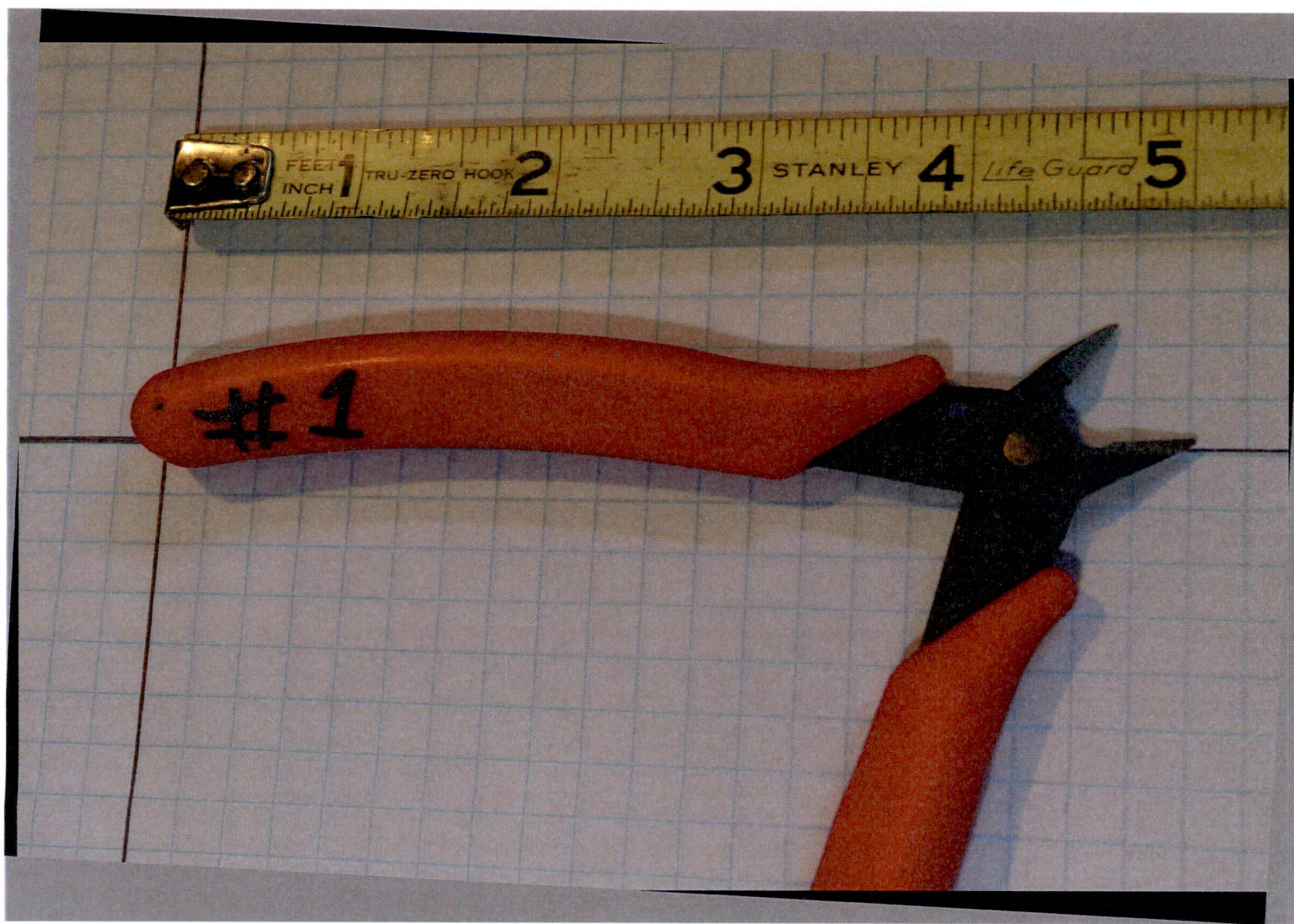


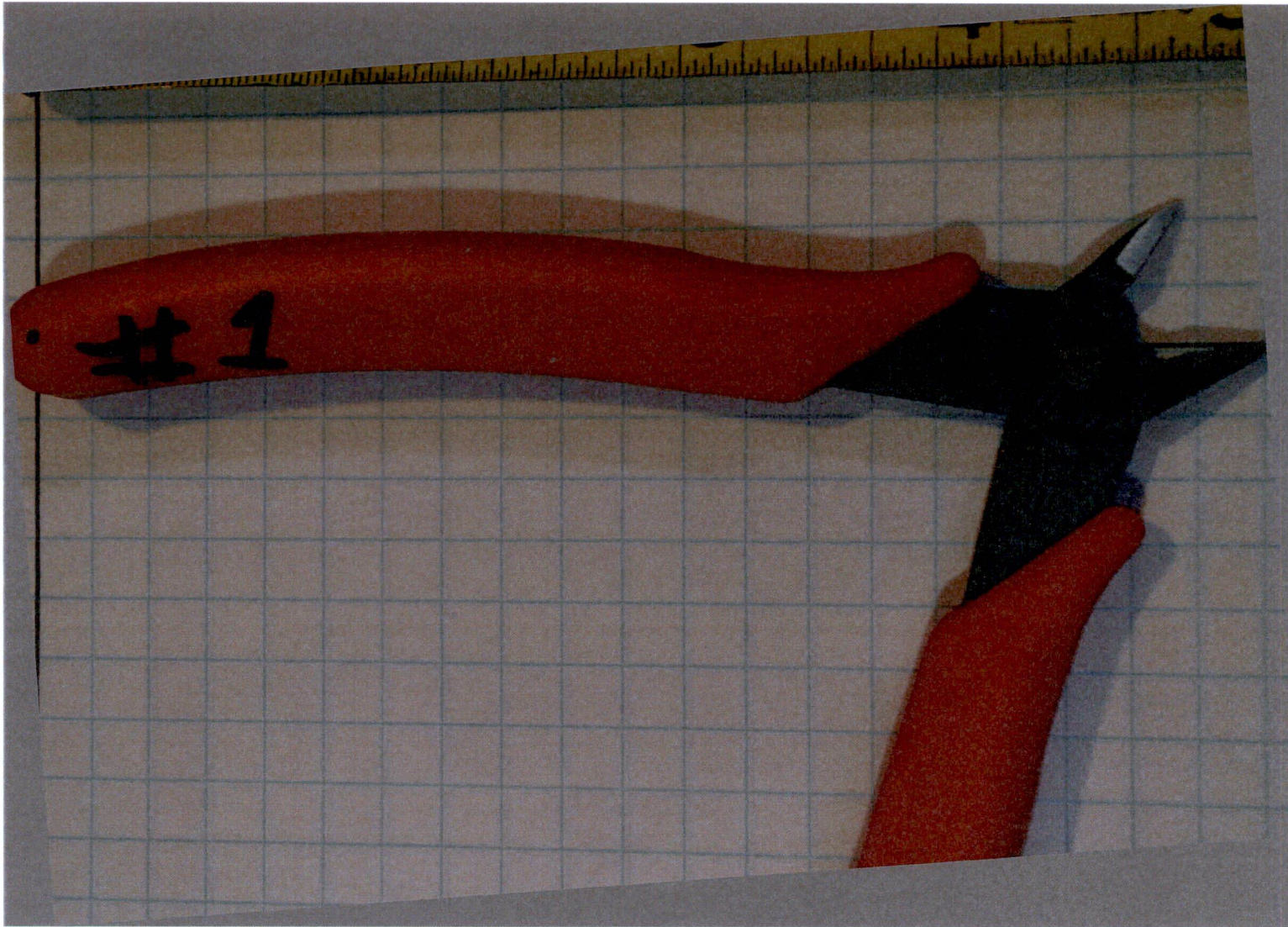


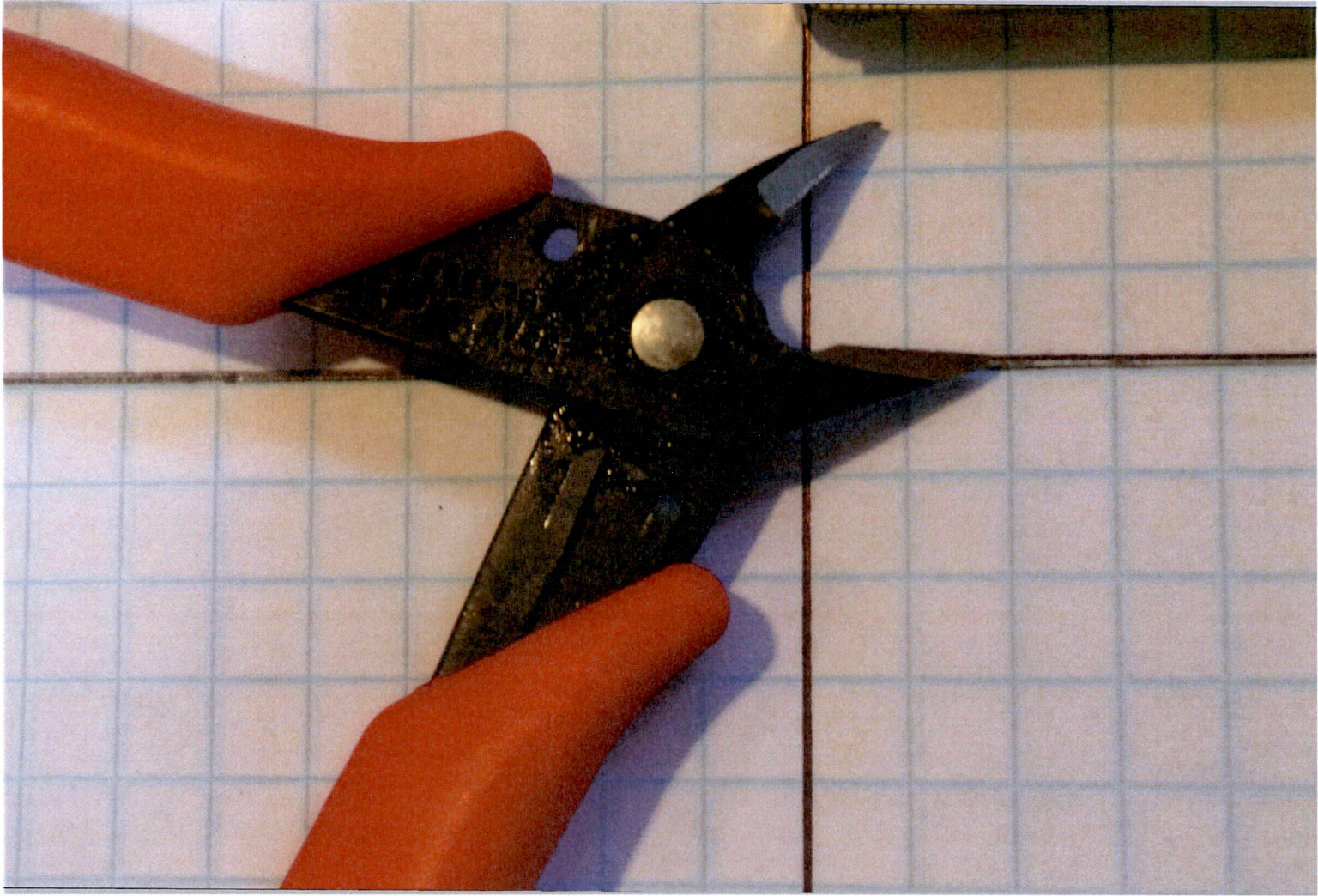


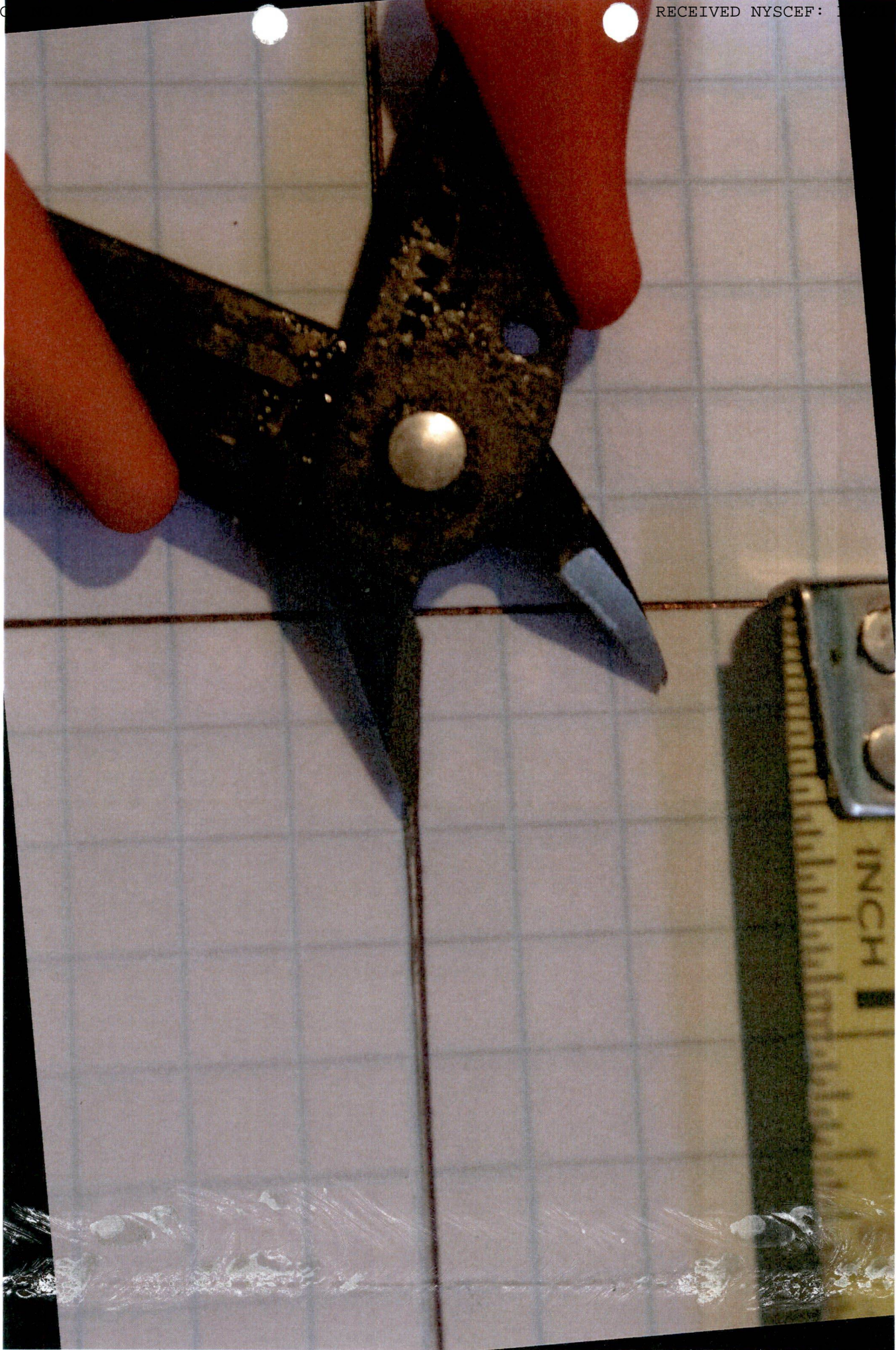


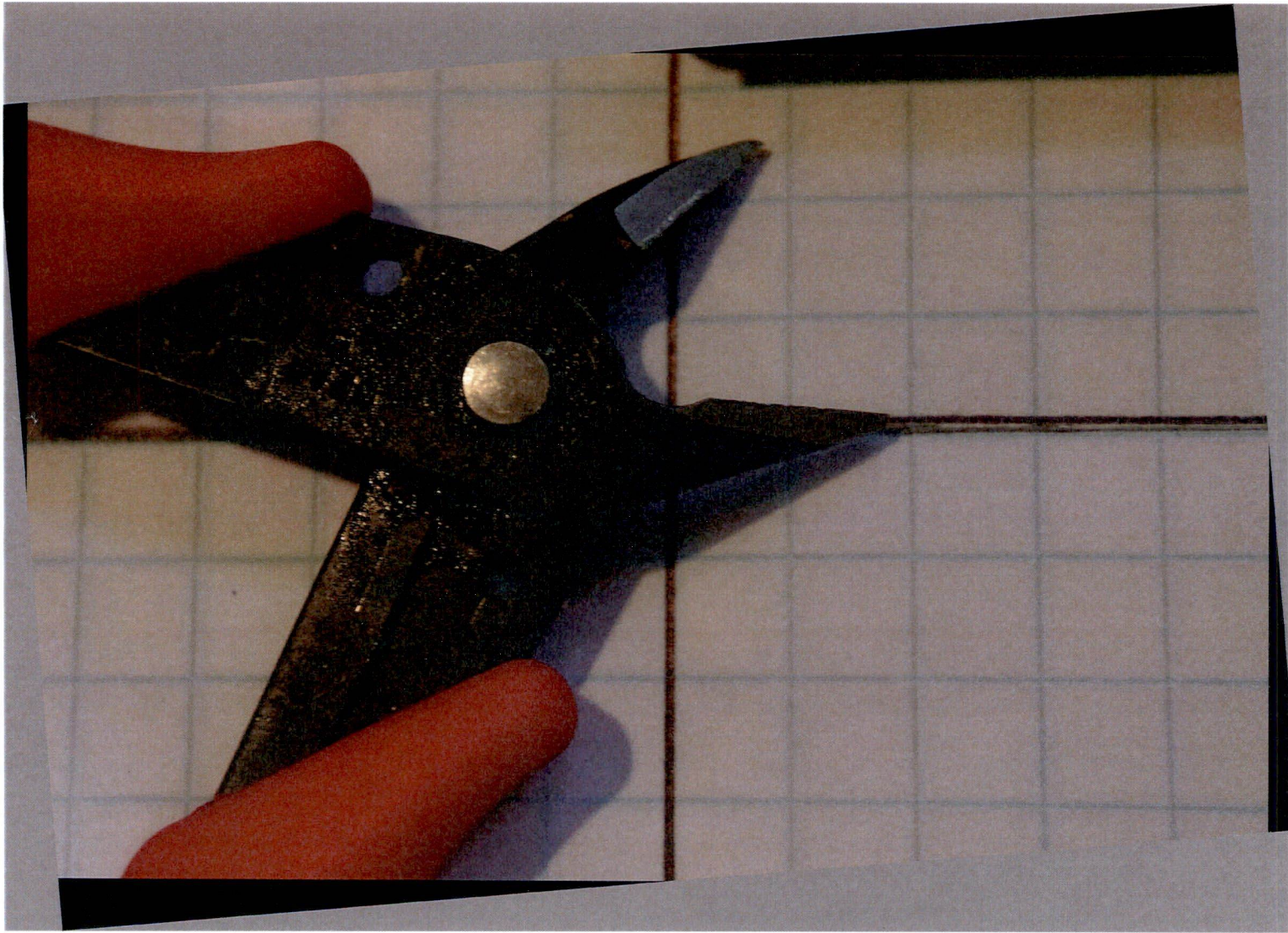


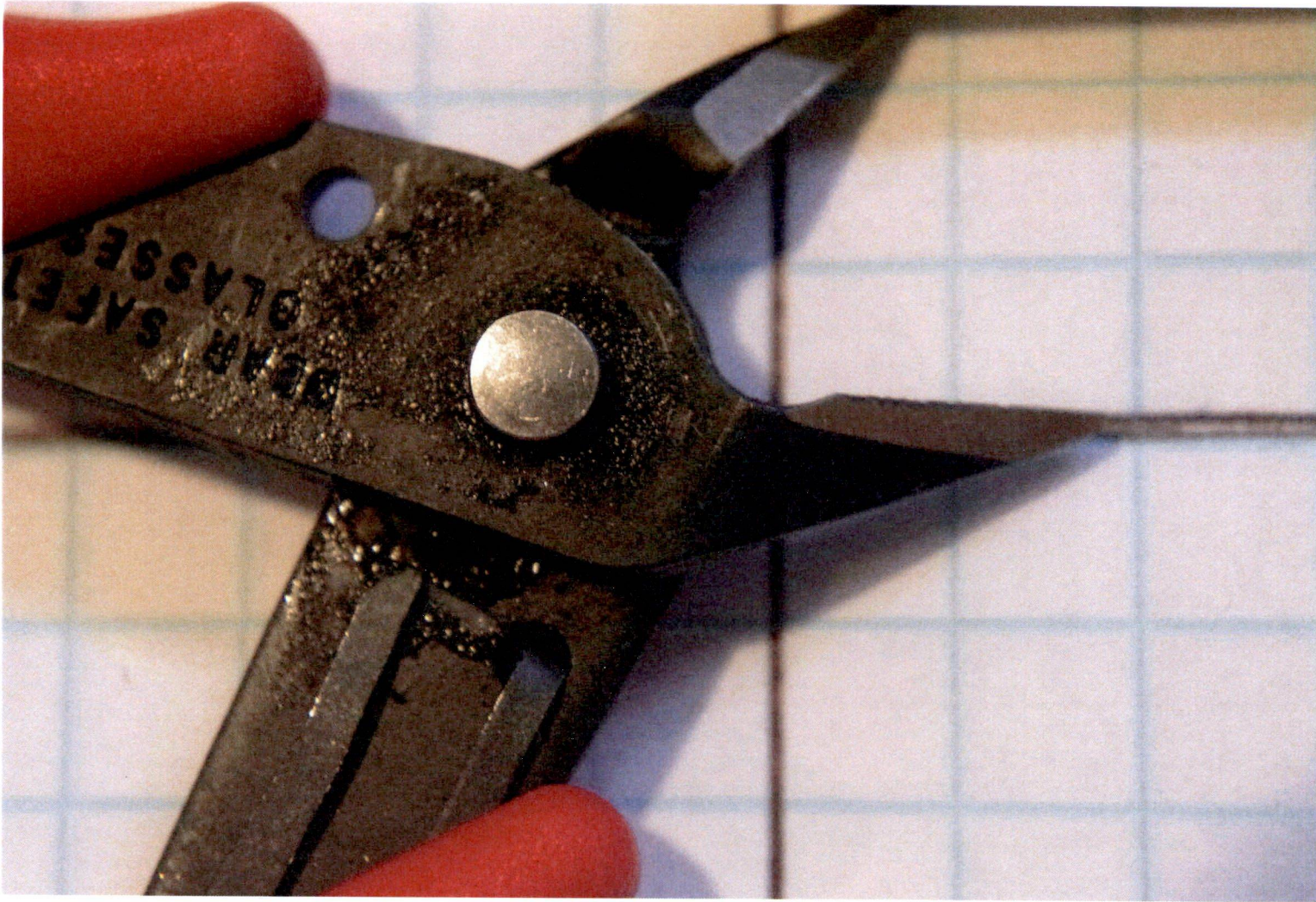


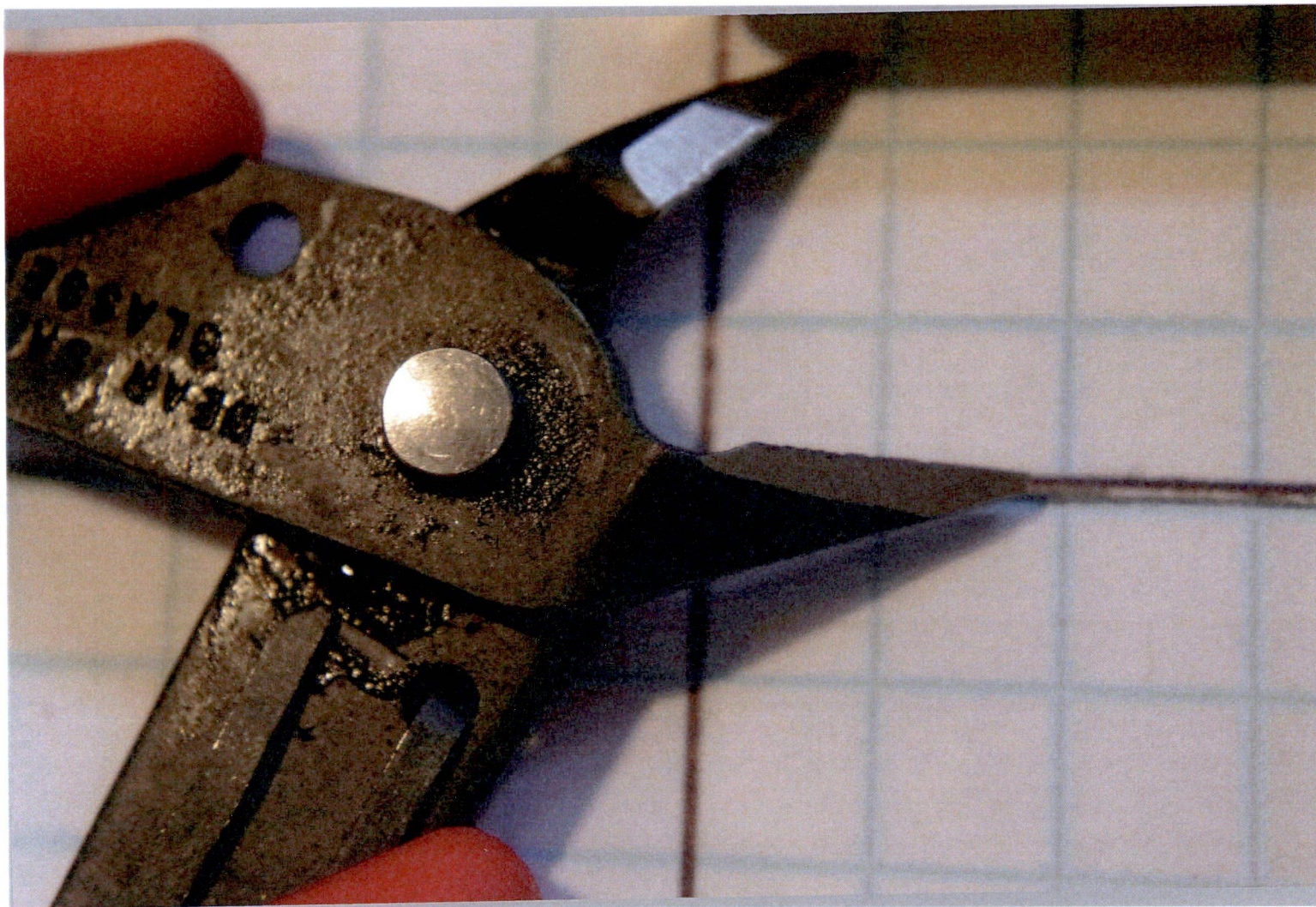


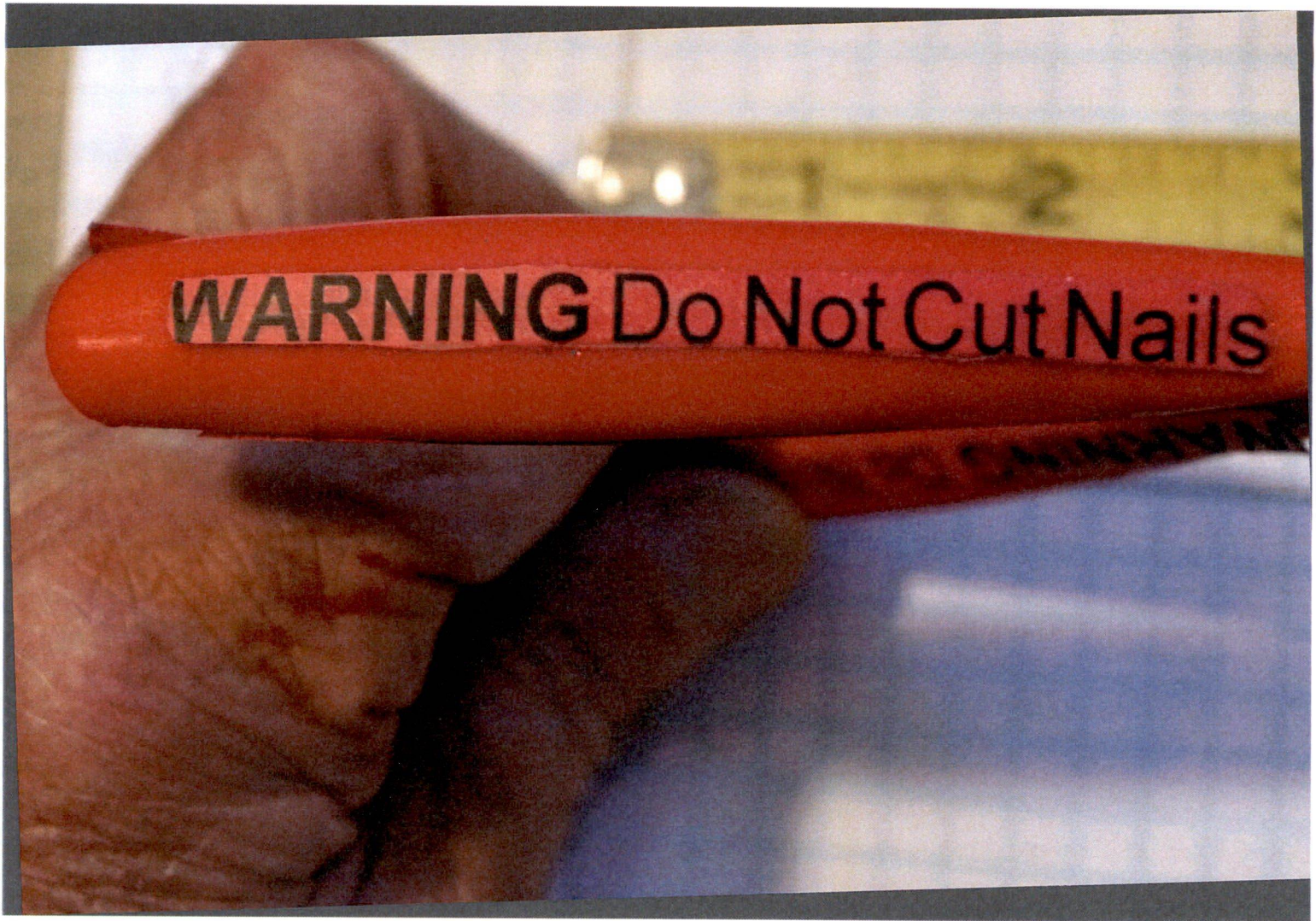


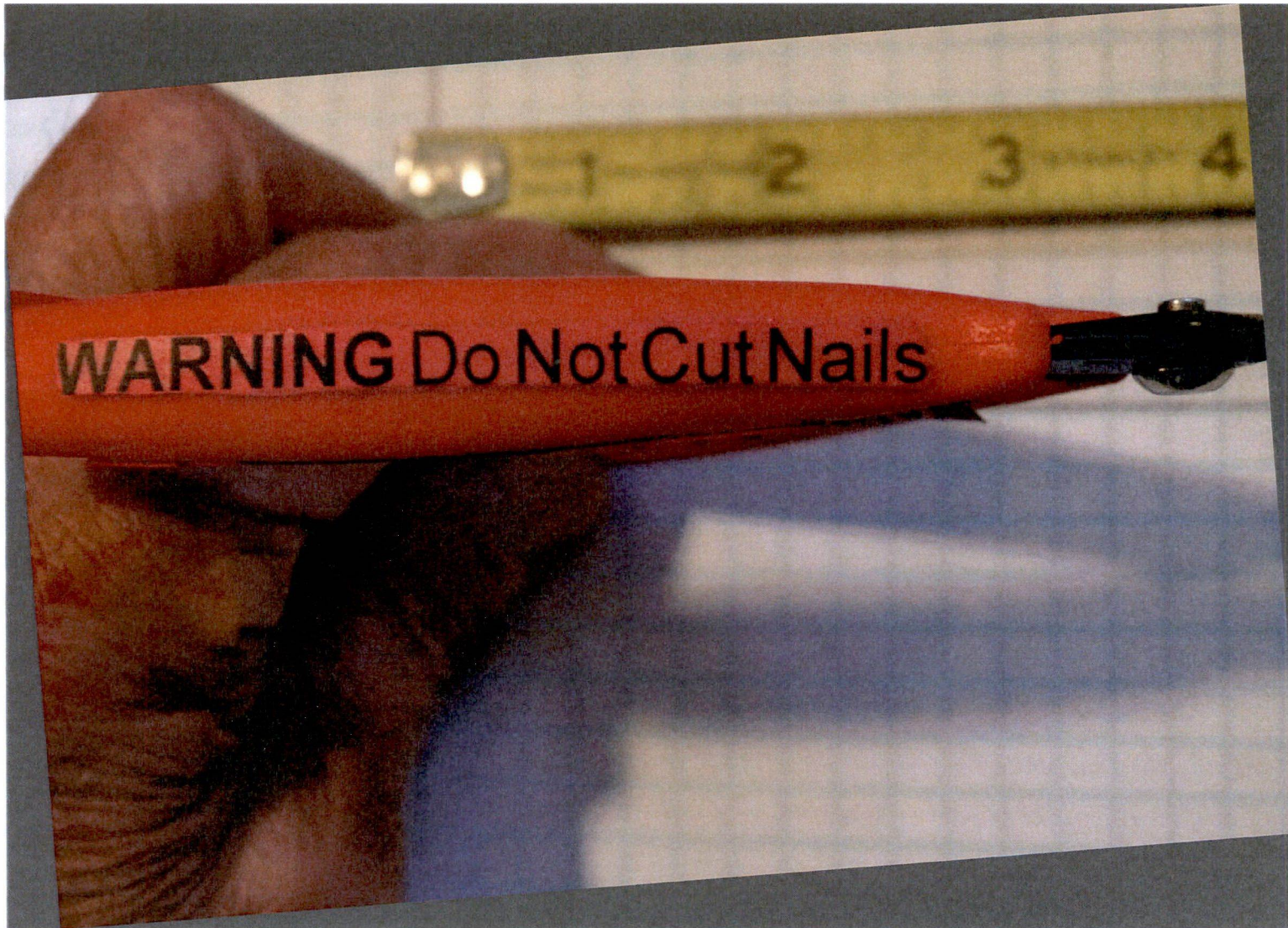




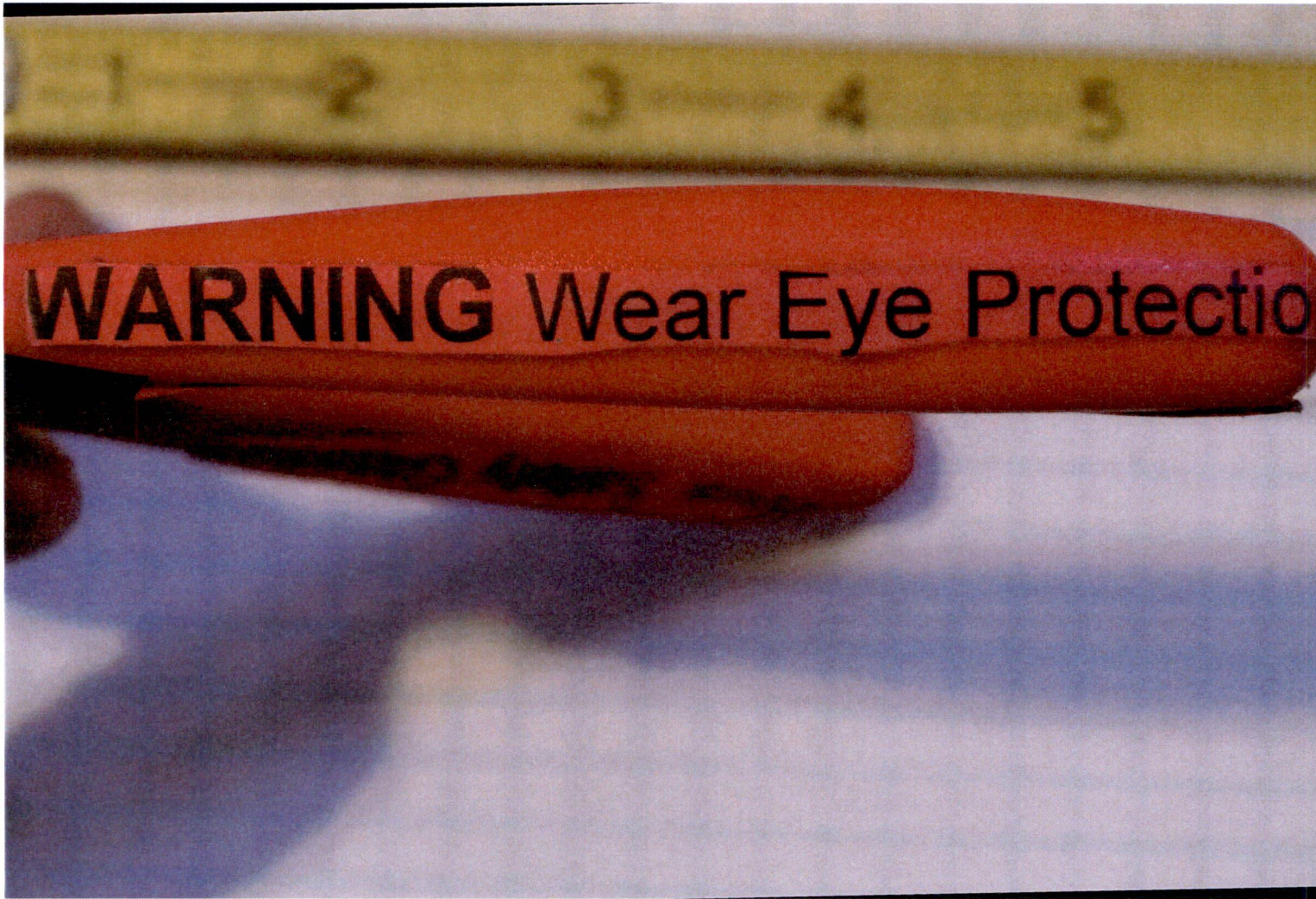


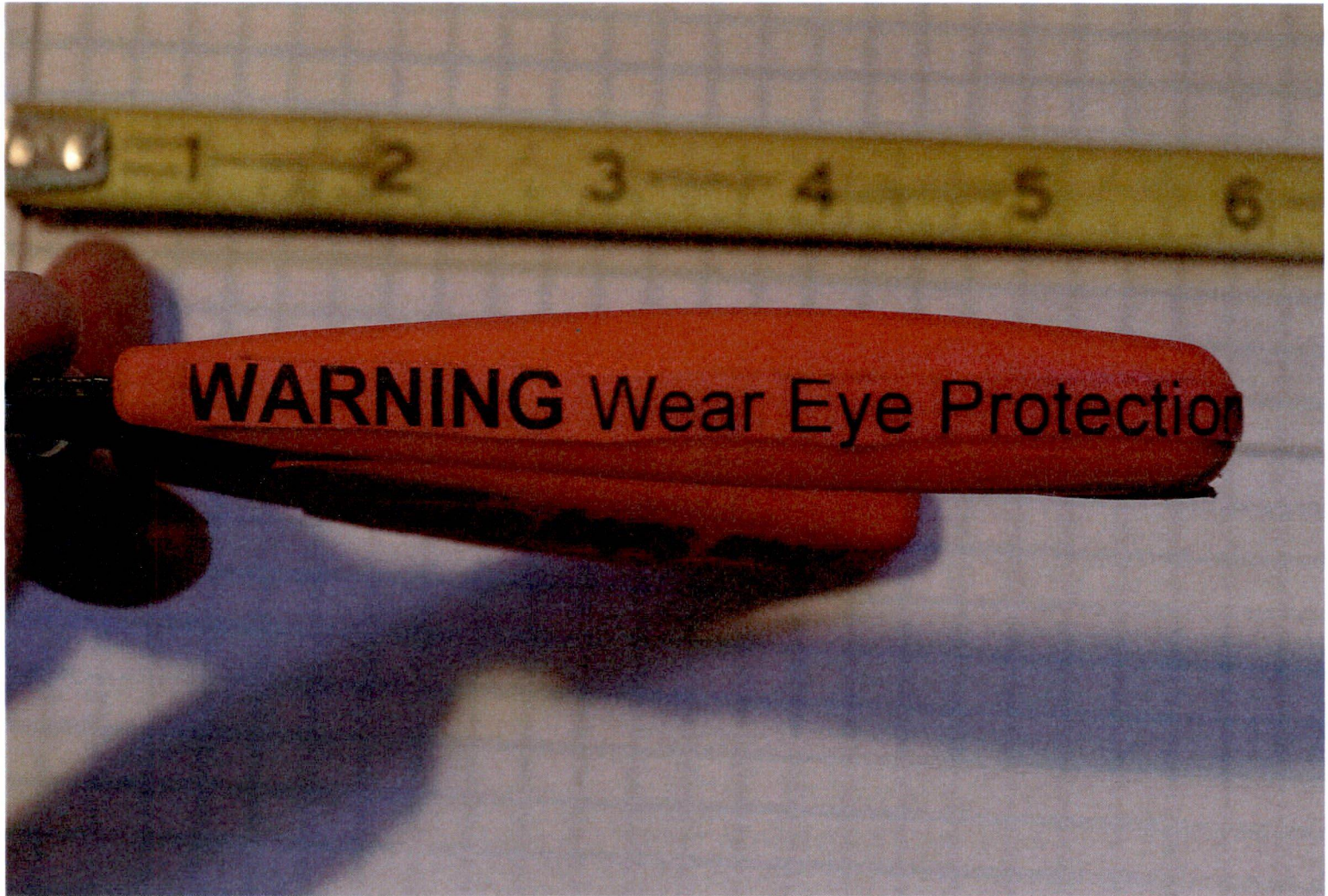




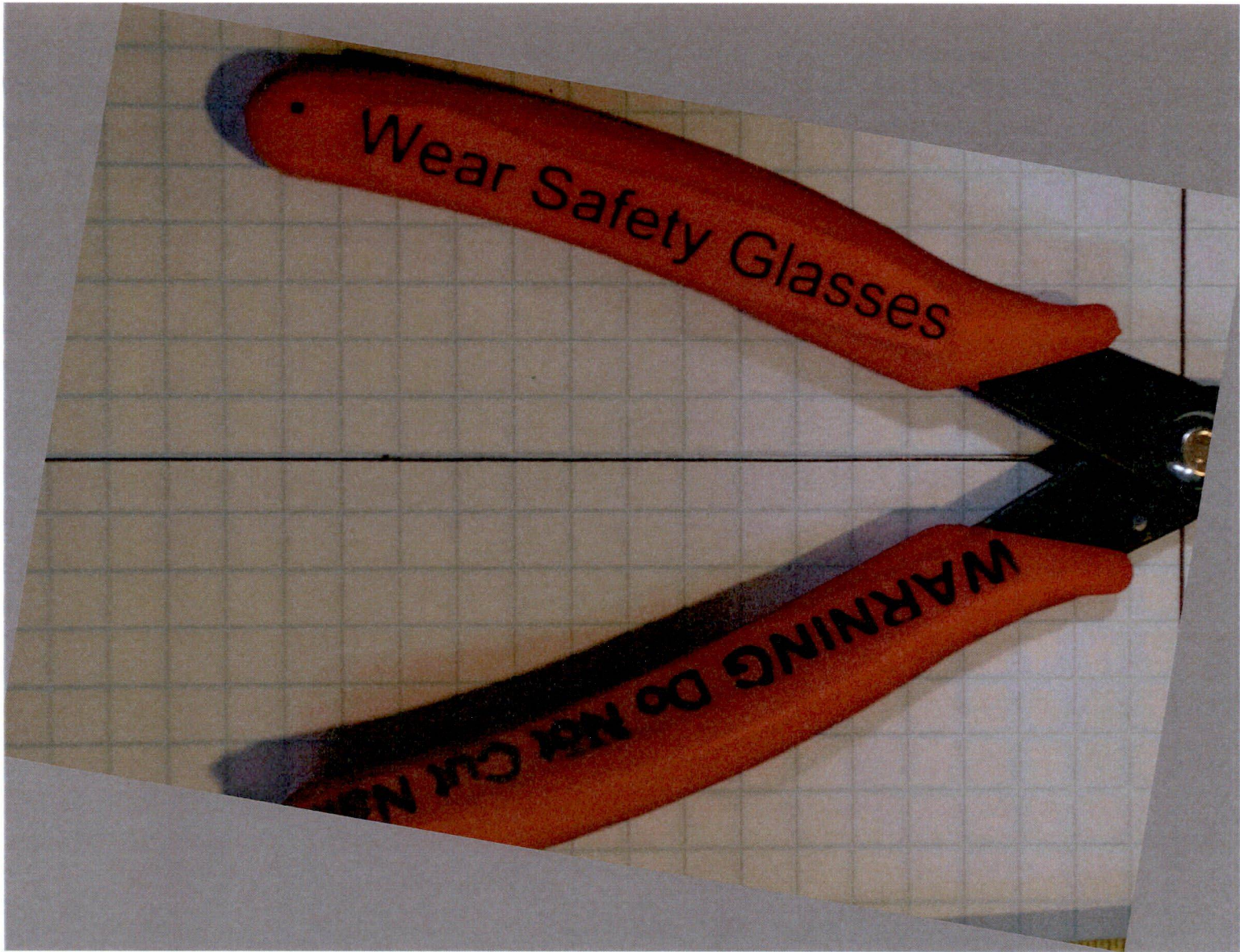




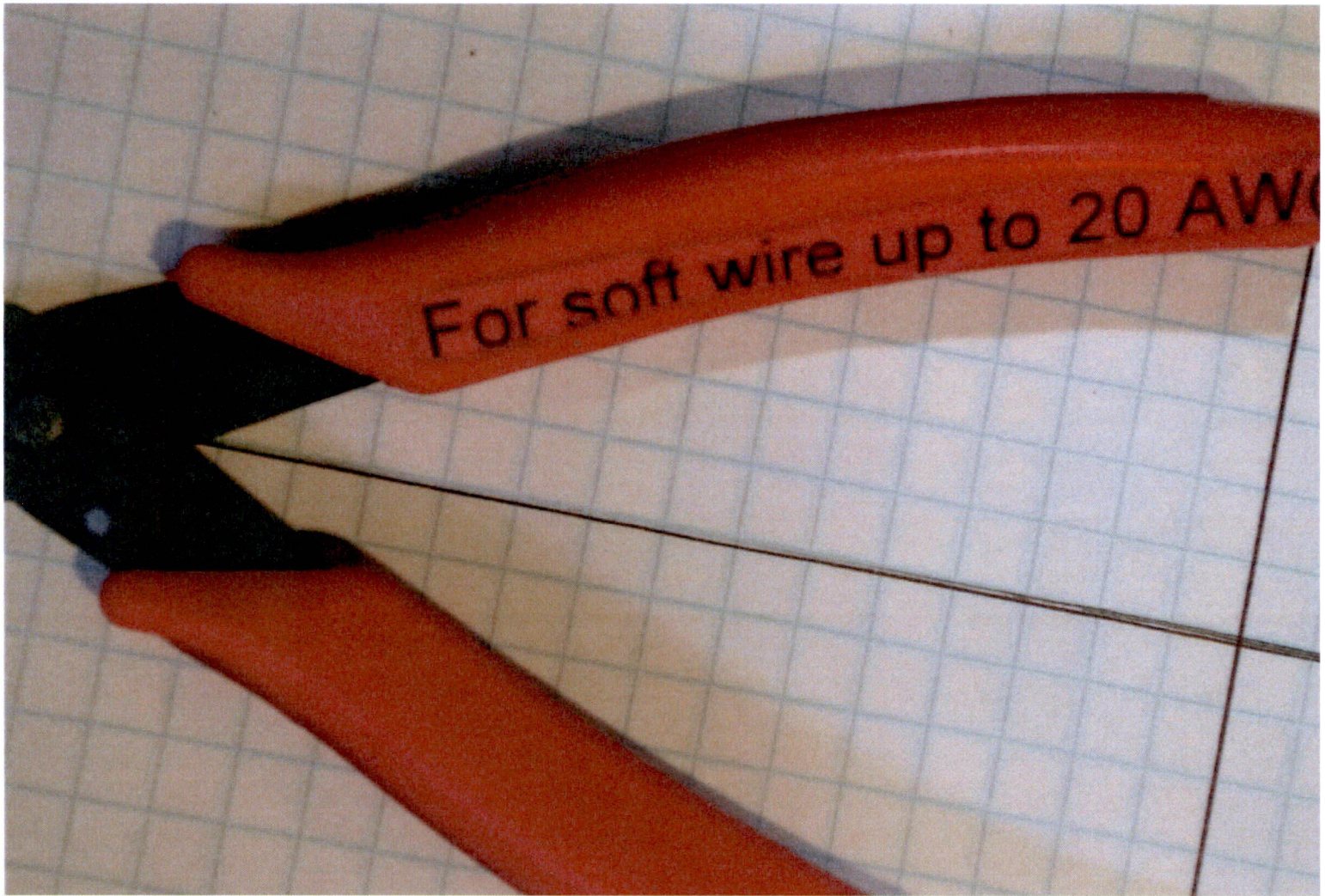


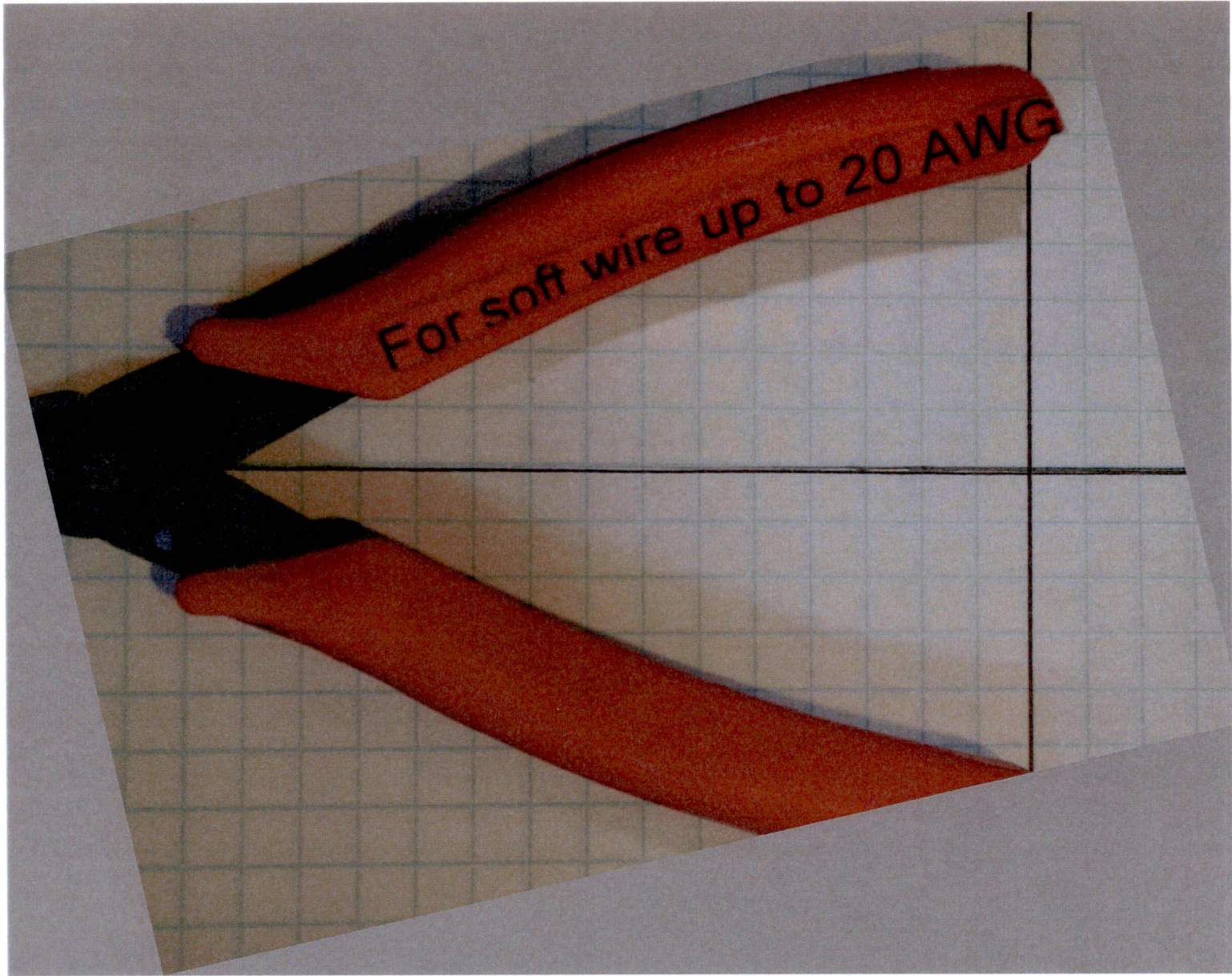


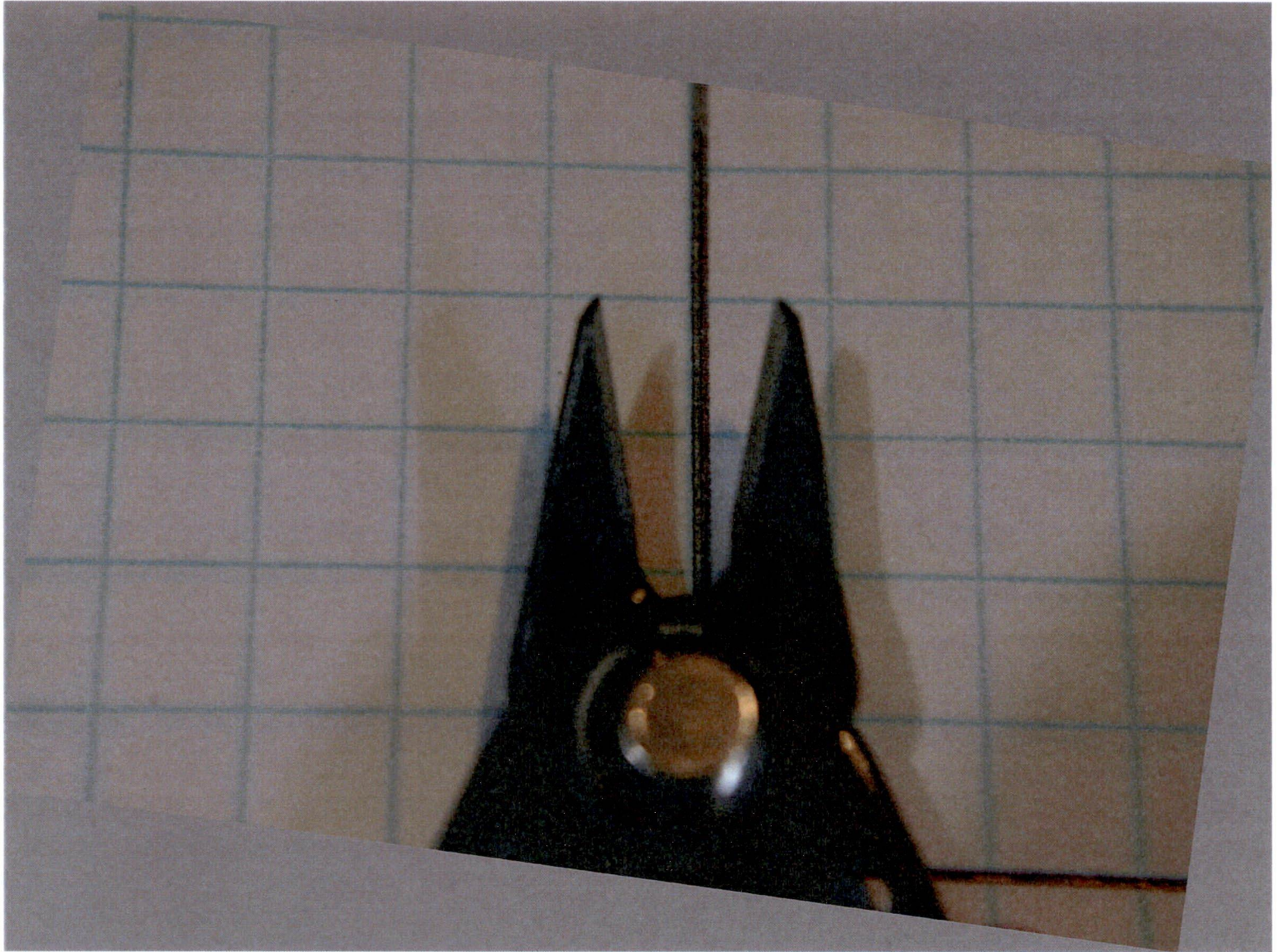


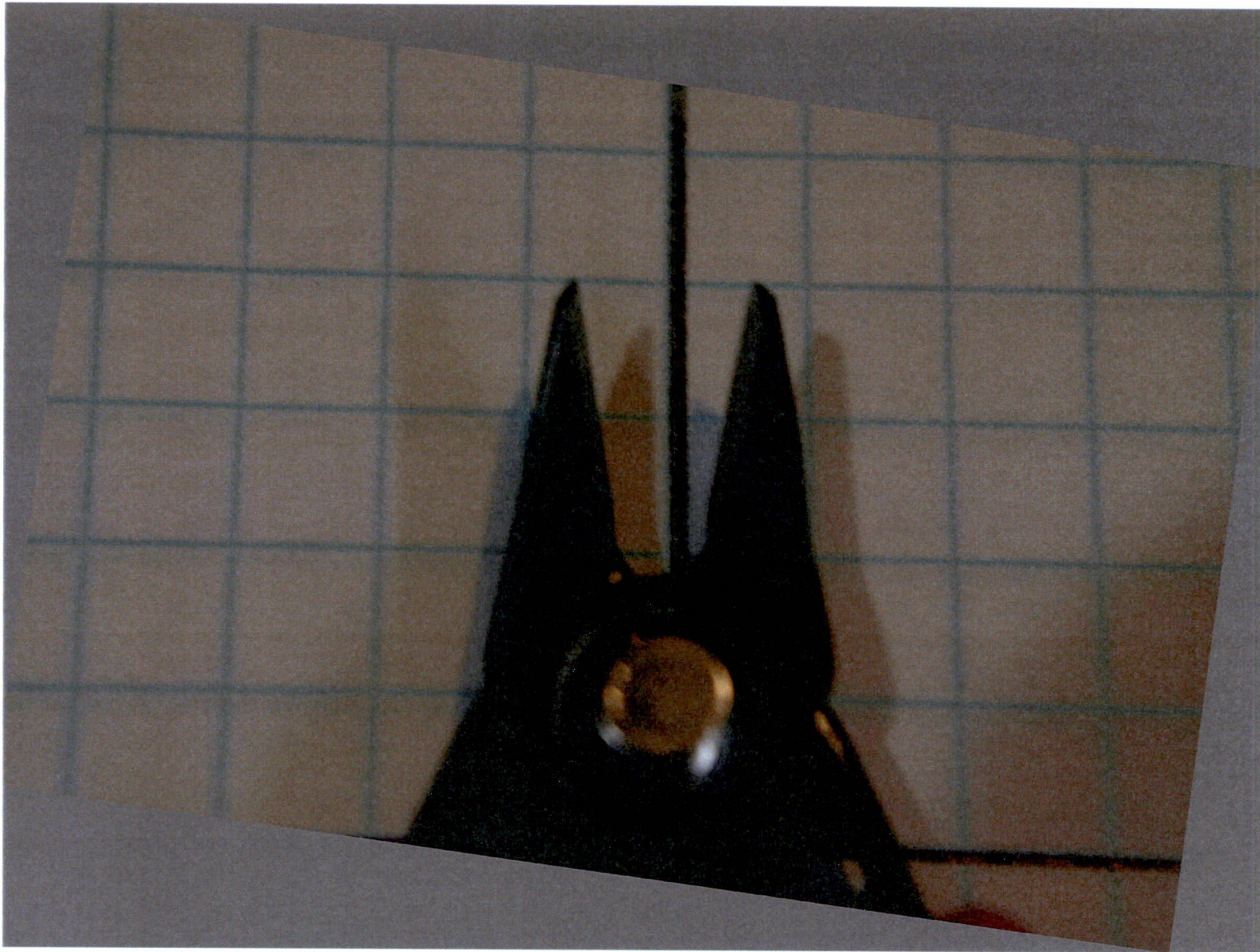


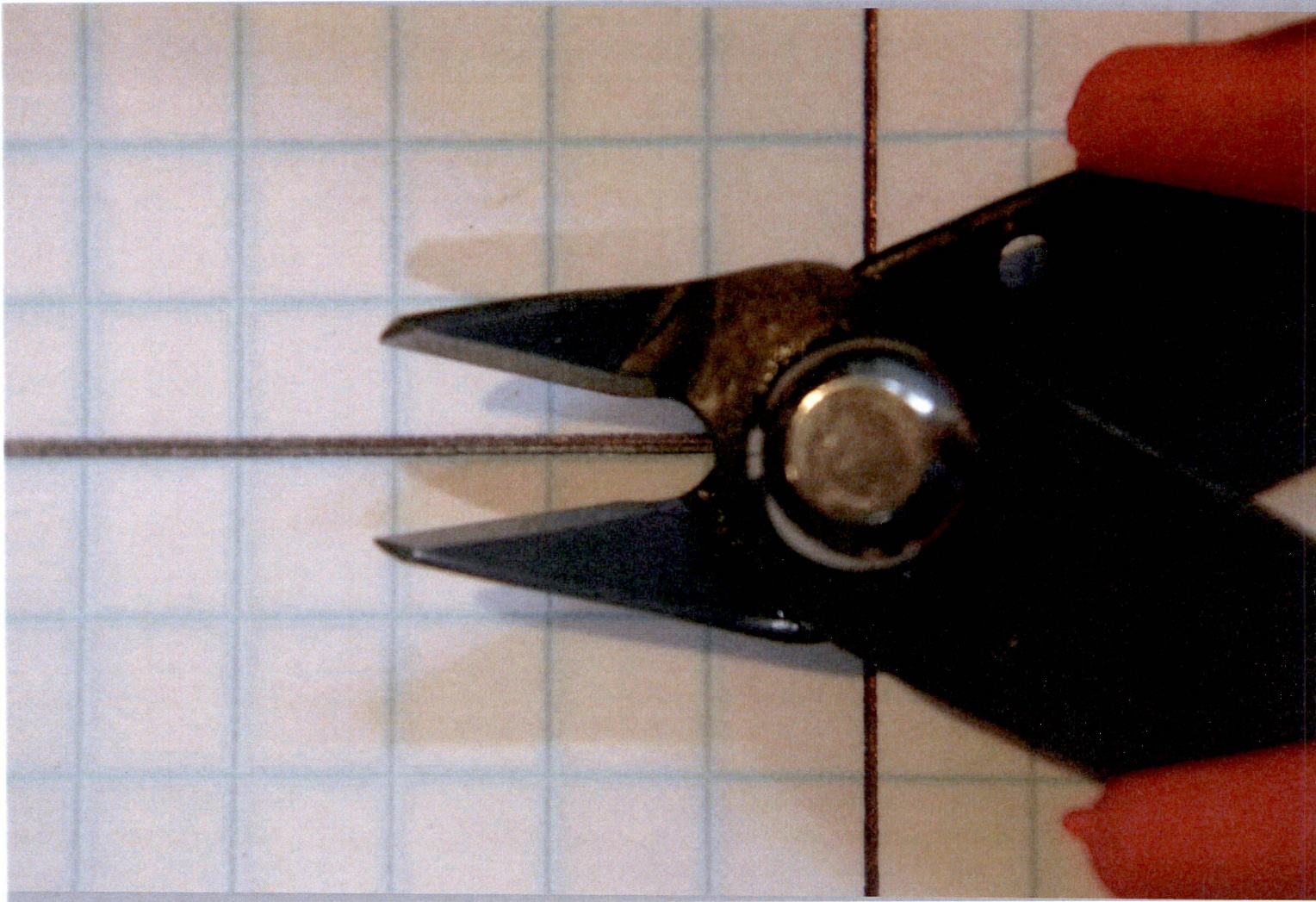


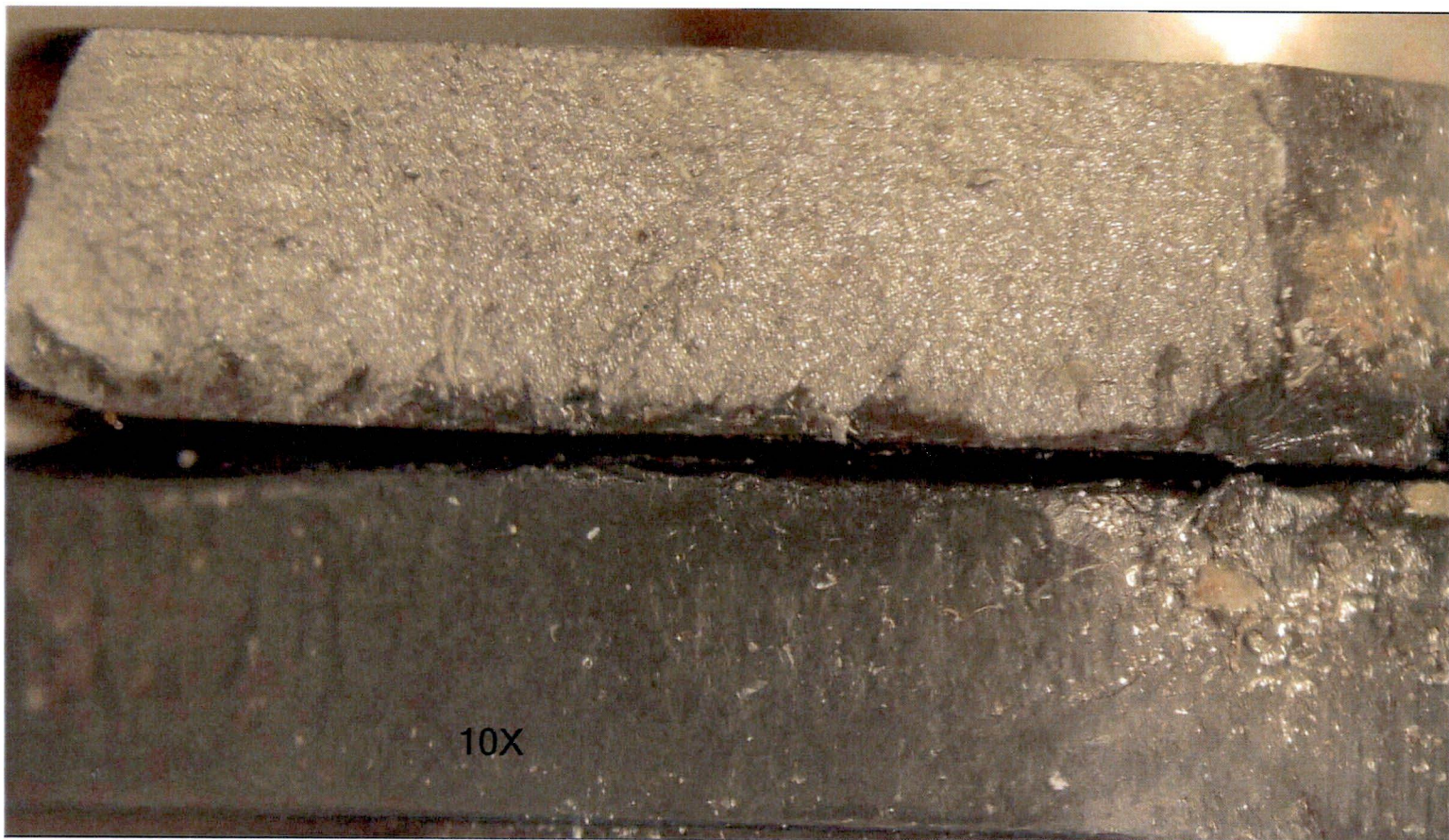












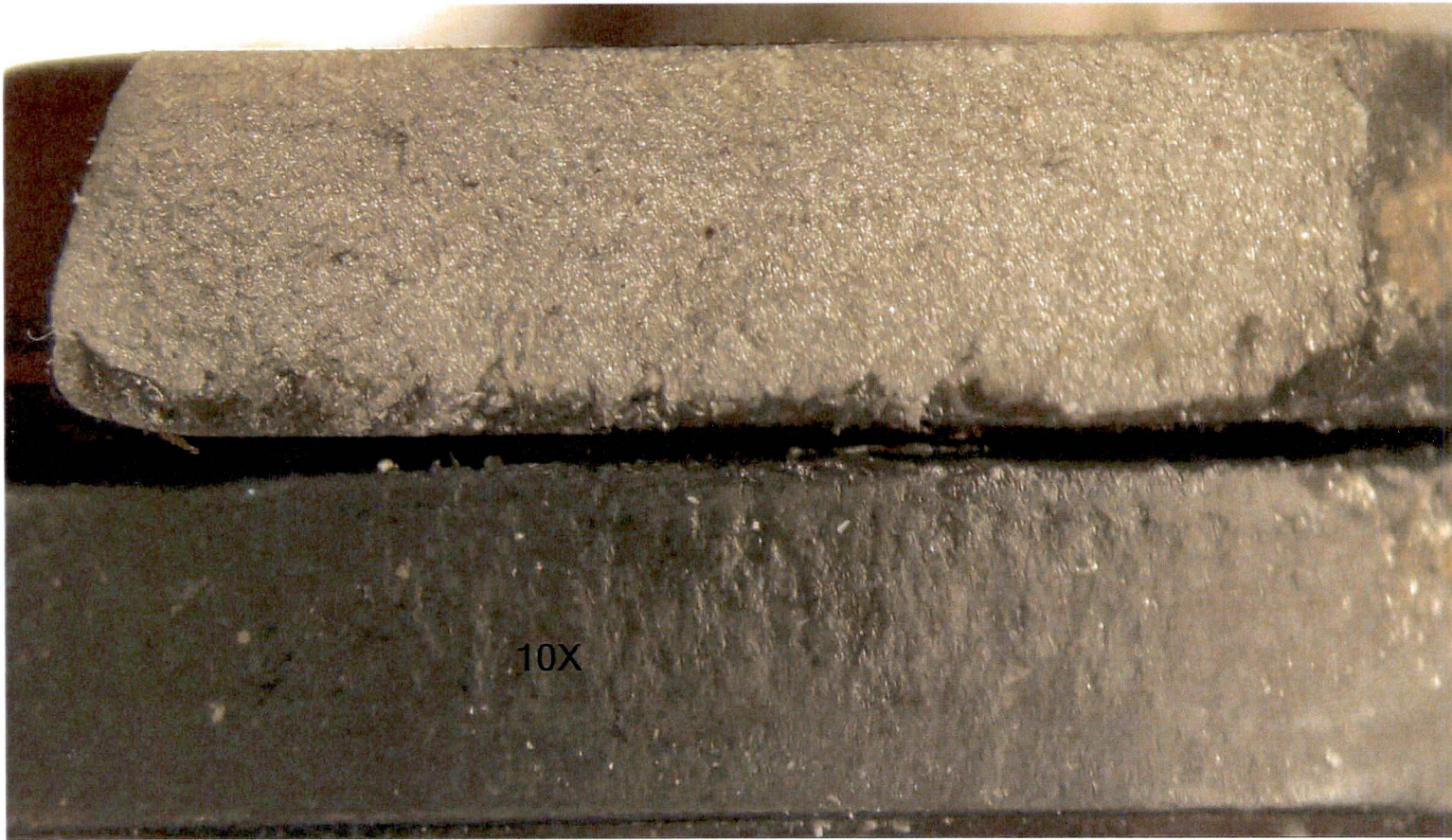










EXHIBIT “B”

Neal A. Growney & Assoc., L.L.C.

265 Steves Lane

Franklin Lakes, New Jersey 07417

(201) 891-2768

Neal A. Growney, P.E.**Mechanical Engineer**

Investigations, technical analysis, research, reports and testimony regarding: industrial, construction, commercial and workplace accidents involving personnel, property, and equipment. Experienced in the: design, installation, startup, safe operation, maintenance, modification, upgrade and repair of industrial machinery, equipment and systems; operation and repair of construction machinery.

Accidents relating to Manufacturing: Documentation, standards, methods, procedures. Materials: specifications, selection, testing. Training, operations, processes, production and safety. Repairs and maintenance.

Manufacturing Processes: Metal stamping, shearing, slitting, cutting, sawing, bending, forming, riveting, grinding, milling, drilling, tapping, roll forming, forging, heat treating, soldering, welding, fabrications, assembling, erecting, degreasing, polishing, buffing, tumbling, finishing, plating, painting, mixing, extruding, calendaring, drying, palletizing, filling, bagging.

Accidents relating to Machine Design: Guarding: point-of-operation, pinch points, inrunning nips, power transmission guarding. Controls: fail-safe, interlocks, component failure. Products. Instructions and warnings.

Material Handling: Raw material, in-process, finished goods, shipping, receiving. Truck unloading and loading, dock plates, pallet jacks, carts, hand trucks, forklifts, overhead hoists, monorails, storage racks, lifts, jacks, garbage trucks.

Machinery: Industrial - forklifts, power presses, press brakes, shears, roll formers, feed reels and cradles, tooling, dies, fixtures, steels, pull backs, sweep guards, gate devices, forge hammers and presses, ovens, dryers, furnaces, gas generators, lead pots, induction and resistance heaters, grinders, drills, tappers, saws, lathes, milling machines, boring mills, planers, shapers, buffers, tumbling barrels, vibratory finishers, shot blasters, wheelabrators, parts washers, de-greasers, sludge separators, plating machines, rectifiers, silos, gates, chutes, conveyors, bucket elevators, shaker screens, fans, blowers, dust collectors, bag houses, bin vents, scrubbers, precipitators, sprockets, chain drives, V-belts drives, slings, chains, wire ropes, valves, mixers, controllers, feeders, packers, sealers, palletizers, scales, shrink wrappers, compressors, pumps, gearmotors, reducers, mills, extruders, calendars, ladders, racks, platforms, railings, strut, metal framing systems, pipe hangers, cable trays, concrete inserts, welders, torches, hand and power tools, pneumatic conveying systems, pressurized containers.

Construction - forklifts, log stackers, log splitters, stump grinders, loaders, back hoes, scrapers, hoists, cranes, conveyors, compressors, pumps, welders, torches, generators, lifts, ladders, scaffolds, hand and power tools.

Safety: OSHA - codes, standards, training, inspections, personal protective equipment, confined space permits, fall protection, Material Safety Data Sheets (MSDS), Hazardous Materials Communications (Hazcom), emergency evacuation plans, hearing conservation, sound level measurements, warning signs, railings.

Fire Protection: Installations, code conformance, inspections, repairs, upgrades. Operations: wet and dry sprinklers, CO2, dry powder, Halon systems; SCBA, valves, doors.

Buildings: Industrial and commercial construction, maintenance, repairs, alterations, inspections, code conformance, egress, security. Gas, electric, water utilities, oil; plumbing, HVAC.

Code, Regulatory Compliance: OSHA, ANSI, ASTM, NFPA, MSHA, BOCA, DOT drivers' logs.

Neal A. Growney & Assoc., L.L.C.

265 Steves Lane

Franklin Lakes, New Jersey 07417

(201) 891-2788

Neal A. Growney, P.E.**Mechanical Engineer**

- 2000 **Neal A. Growney & Assoc., L.L.C.** Forensic Engineers
to **Manager**
Current Provide technical support for the resolution of litigation involving mechanical and industrial engineering questions.
- 1996 **Robson Lapina, Inc.** Forensic Engineers
to **Associate**
2000 Provide technical support for the resolution of litigation involving mechanical and industrial engineering questions.
- 1994 **Tri-State Quikrete** Dry Packaged Concrete Mix Manufacturer
to **General Manager**
1995 **Operations:** Oversee all efforts including: production, purchasing, materials, quality, personnel, safety, training, Bi-lingual communications, environmental, DOT regulatory compliance, equipment installations, maintenance, repairs, upgrades and distribution. Two shifts, 5 1/2 days, including in-house and contract truckers.
Training: Forklift Driver, Emergency Evacuation, Confined Space, Lock Out/Tag Out, First Aid, equipment startup, maintenance.
Safety: Specified safety equipment, procedures, inspections, and communications. Installed machine guarding, two-hand operator controls, upgraded exhaust venting, railings, ladders and platforms; upgraded electrical disconnects for code conformance. Administered: hearing, respirator and pre-employment testing, substance abuse policy.
Machinery Installations: Palletizer, compressor, air dryer, belt and chain conveyors, weighing scales, shaker screens, bin vents, pneumatic conveyors.
- 1977 **Versabar Corporation** Metal Framing Systems Manufacturer
to **Vice President of Engineering**
1994 **Engineering:** All engineering functions; methods; standards; quality assurance; equipment specifications and installations, engineering documentation for catalogs, design and maintenance of tooling, wrote claims for U.S. Patent of a concrete insert. Installed, power presses, a roll forming line, hoists.
Administered Underwriter's Laboratory (UL®) compliance program.
Facilities: Designed production layout and building alterations to accommodate layout. Oversaw alterations, electrical upgrades and repairs.
Safety: Directed OSHA. Designed, implemented: Power press, hoist and lifting sling inspections; Lock Out/Tag Out; Material Safety Data Sheets; NJ Right-To-Know. Machine Guarding - designed, specified and oversaw the installation of: point of operation guarding, including barriers and presence sensing (light beam) device; power transmission guarding. Specified and installed safety signs.
Products: Designed, developed, specified, tested and produced new products including: Riveted back-to-back channels, support brackets for cable trays, cast aluminum splices,

Neal A. Growney & Assoc., L.L.C.

new fittings, prepainted, stainless steel and custom parts.

Manufacturing: Directed: scheduling, production, receiving and shipping.

Processes included roll forming, stamping, punching, forming, welding, parent metal riveting, drilling, tapping, sawing and assembling of: carbon, stainless, pre-painted and galvanized steel, and aluminum, products.

Standards: Participated in writing the Metal Framing Manufacturers Association's standard, MFMA-1; the first metal framing industry standard.

- 1976 **The Pantese Company** Vinyl Plastic Manufacturer
to **Project Engineer**
1977 Provided engineering for facilities improvements, equipment installations, material handling and environmental control projects.
- 1969 **J. Wiss & Sons Company** Cutlery Manufacturer
to **Assistant Plant Engineer**
1976 Provided engineering services for factory and office operations, equipment installations, maintenance and repairs. Supervised electric, gas, water, oil, sewer utilities, and fire protection systems. Oversaw generation of endothermic gas and HVAC operations.
Facilities: Construction, repairs and alterations of heavy metalworking manufacturing plants and office facilities, including: HVAC, exhaust systems and pollution control.
Machinery and Equipment: Designed, specified and oversaw the installation, repair, maintenance of production equipment, and fabrication of repair parts. Equipment included: Power presses, forge hammers and press, electric induction and resistance heaters, heat-treating furnaces, pots and ovens, industrial washers, grinders, buffers, vibratory finishers, central grinding cooling systems.
Fire Protection: Wet and dry sprinklers; CO2, dry powder systems; emergency egress.
Safety: Chairman – Corporate Safety Committee. OSHA, Factory Mutual and Compensation Insurer: safety inspections. Administered Supervisor's Safety Training Program. Design, fabricate, specify and supervise installations of machine guards and devices for production equipment including: barrier guards, Possons Pullbacks, class "A" gates for power presses. Hearing conservation, personal protective equipment.
Environmental: Equipment: baghouse dust collectors, cyclones, oil mist separators, freon collectors, coolant clarifiers, sludge separators, electrostatic separators, smoke monitors. State and federal pollution control permits.
Industry Associations: Delegate to The Forging Industry Association, and The Hand Tools Institute.
- 1974 **Newark College of Engineering** - Part Time
Adjunct Professor
- 1969 **Hewitt-Robbins, Inc.** Bulk Material Conveyor Manufacturer
Design Engineer
Design structural and process components, subassemblies and complete bulk material conveyor systems.
- 1968 **Orange & Rockland Utilities, Inc.** Electric and Gas Utility
to **Associate Engineer**
1969 Inspection of power plant construction for conformance to plans and specifications.
Project engineer for a water main to power plant. Capital budget calculations.

Neal A. Growney & Assoc., L.L.C.

1964 **Bell Eastern Corporation** Construction Equipment Dealer
to **Field Service Technician**
1968 Service and repair of: hydraulic and mechanical cranes, forklifts and backhoes.
LeTourneau diesel/electric earthmovers, loaders, log-stackers and forklift trucks.
Member, International Union of Operating Engineers.

- Also - **Samplemaker, small consumer appliance motors-** Brevet Products Corp.
Electro-mechanical aircraft instrument technician- Bendix Corp.
Spot welder- Ford Motor Co.
Electric motor repair shop handyman- C.V. Hunt, Inc.
Parcel post and mail, delivery & pick up- U.S. Post Office.
Diesel/electric generator test technician- International Fernont Corp.

Standards Committees:

ANSI O1.1, Participated in writing Safety Requirements for Woodworking Machinery.
ANSI B65-177.1, Participated in writing Safety Requirements for Three-roll Printing Ink Mills.
ANSI B65-177.2, Participated in writing Safety Requirements for Printing Ink Vertical Post Mixers.

Metal Framing Manufacturers Association: Metal Framing Standards Publication, MFMA-1.

License: New Jersey Professional Engineer's License, # 20092.
New York City Fire Department Certificate of Fitness, G-95.

Education:

B.S., Mechanical Engineering -	Newark College of Engineering
Graduate Management Certificate -	William Paterson College
Supervisors Safety Program -	New Jersey Manufacturers Insurance Company
New Jersey State Fire College -	New Jersey State Safety Council
Industrial and Commercial Power Distribution -	The Electrification Council
Roll Forming Systems -	Fabricating Manufacturers Association
LeTourneau Construction Equipment Service -	R.G. LeTourneau
Lift Truck Operator, Train-the-Trainer -	New Jersey State Safety Council
Occupational Hearing Conservation -	The Council for Accreditation in Occupational Hearing Conservation

Academic Honors: The National Mechanical Engineering Honor Fraternity, *Pi Tau Sigma*.

Professional Associations:

American Society of Mechanical Engineers
American Society of Safety Engineers
American Welding Society
Society of Automotive Engineers
Human Factors and Ergonomics Society
National Safety Council

Publications: "Safety Introduction", The Accurate Table Saw. Co-authored with Ian Kirby and Les Winter, P.E., Cambium Press, 1998.
Bridgewood TSC-10C Table Saw Instruction Manual. Co-authored with Ian Kirby and Les Winter, P.E., 1998.

(Our File: 115409-01)
Greene County Index No.: 18-0008

AFFIDAVIT OF SERVICE

STATE OF NEW YORK :
 :SS.:
COUNTY OF ORANGE :

DEBORAH TRONCILLITO, being sworn says: I am not a party to the action, am over 18 years of age and reside at Marlboro, New York.

On June 18, 2020, I served a true copy of the annexed Affirmation in Opposition and Affidavit of Neal A. Growney, P.E. in the following manner:

By mailing same in a sealed envelope, with postage prepaid thereon, in a post-office or official depository of the U.S. Postal Service within the State of New York, addressed to the last known address of the addressee(s), as indicated below:

SCHWAB & GASPARI, PLLC
Attorneys for Defendants
109 S. Warren Street, Suite 306
Syracuse, NY 13202

Deborah Troncillito

Deborah Troncillito
FINKELSTEIN & PARTNERS, LLP
1279 Route 300
P.O. Box 1111
Newburgh, NY 12551

Sworn to, before me, this 6/18/2020

Colleen Corizzo

Notary Public

COLLEEN CORIZZO
Notary Public
Orange County
State of New York
Commission Expires 12/11/2021

01c05053212

CC

Andrew G. Finkelstein, P.C. (NY & NJ)
Duncan W. Clark (NY)
Ronald Rosenkranz (NY)
Robert J. Camera (NY & NJ)
Joseph P. Rones (NY)
George A. Kohl, II (NY & MA)
Elyssa M. Fried-DeRosa (NY)
Kenneth B. Fromson (NY, NJ & PA)
Nancy Y. Morgan (NY, NJ & PA)
Andrew L. Spitz (NY)
James W. Shuttleworth, III (NY)
Lawrence D. Lissauer (NY)
David E. Gross (NY & NJ)
Victoria Lieb Lightcap (NY & MA)
Ann R. Johnson (NY & CT)

Edward M. Steves (NY)
Kara L. Campbell (NY, NJ & CT)
Marie M. DuSault (NY)
Melody A. Gregory (NY & CT)
Elizabeth A. Wolff (NY & MA)
Brian D. Acard (NY)
Vincent J. Pastore (NY)
Christopher Camastro (NY & NJ)
Jeffrey M. Brody (NY)

Michele M. Haber (CA)
Jonathan T. Engel (NY)
Ashlee R. Kelly (NY)
Kirsten Siegfried (NY, NJ & PA)
Patricia Rothstein (NY)
Alexandria Awad (NY)
James H. Halpin, Jr. (NY)
Jennifer Safier (NY & NJ)

Of Counsel
Cynthia M. Maurer (NY & NJ)
Michael Feldman (NY & NJ)
Raye D. Futerfas (NY)
Linda Armatti (NY)
David Akerib (NY)

Frances M. Bova, R.N. (NY & NJ)
Gustavo W. Alzugaray (NY)
Sharon A. Scanlan (NY & CT)
Marc S. Becker (NY)
Antonio S. Grillo (NY & NJ)
Jonathan Minkove (NJ & MD)
Daniel DeVoe (NY)
Cristina L. Dulav (NY & NJ)
Xavier Johnson (NY)
Michael B. Zaransky (NY)
Ryan Martinez (NY, NJ & PA)
Karyna Schnall (NY)
Vincent J. Rossillo (NY)
Pamela Thomas (NY)
Donald A. Crouch (NY & CT)

Karen O'Brien (NY)
David Stauber (NY)
Annie Ma (NY & NJ)
Howard S. Lipman (NY)
Noreen Tuller, R.N. (NY)
Justin M. Cinnamon (NY & CT)
Robin N. D'Amore (NY)
Rodrigo Arcuri (NY)
Kevin D. Burgess (NY)
Robert Seidner (NY)
Charlemagne Yawn (NY)
Georgianna Timal (NY)
Stephen R. Heath (NY)
Patricia Fontaine (NY)
Carl Raffa (NY)

Paul D. Walker (NY)
D. Greg Blankinship (NY & MA)
Jeremiah Frei-Pearson (NY)
Todd S. Garber (NY & CT)
Andrew White (NY)
John Sardesai-Grant (NY)
Chantal Khalil (NY)
Bradley Silverman (NY)
Ayana McGuire (NY)
W. Scott Terrell (NY)
Earl A. Kirkland III (MI)
David Stauber (NY)
Sami T. Ahmad (NY)
Olana Ball (NY)
Chantel Mills (NY)
Frank R. Massaro (NY)
Kenneth G. Bartlett (CT & NJ)

Senior Of Counsel
George M. Levy, P.C. (NY)
Marvin Anderman, P.C. (NY)

Founding Partner
Howard S. Finkelstein, (1933-2017)

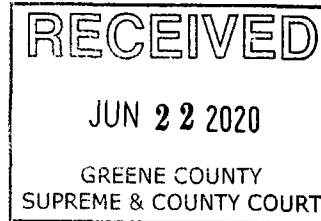


REFER TO OUR FILE #: 115409-01

June 18, 2020

HONORABLE RAYMOND J. ELLIOT, III
Greene County Supreme Court
320 Main Street
Catskill, NY 12414

Re: Alfeld v. Apex Tool Group, LLC, et al.
Index No.: 18-0008
RJI No.: 19-18-041



FILED
DEC 16 2022

GREENE COUNTY CLERK

Dear Judge Elliot:

Enclosed please find an Affirmation in Opposition to the defendants' Motion returnable before Your Honor on July 9, 2020.

A copy of this correspondence along with the opposition papers are being served on defense counsel this date.

Thank you for your courtesies in this matter.

Very truly yours,

FINKELSTEIN & PARTNERS, LLP

Handwritten signature of Lawrence D. Lissauer, Esq.

By: Lawrence D. Lissauer, Esq.
845-563-9446

/djd

Encs.

cc: Schwab & Gasparini, PLLC