

INNOVATION

SOLUTIONS



E & E Manufacturing Company
Stampings and Fasteners



QUALITY AND EXCELLENCE SINCE 1962

E&E was established in Plymouth, Michigan in a 5,000 square-foot facility and produced small to medium size stampings for the automotive industry. Now with more than 250,000 square-feet of production capability in Plymouth, and another 200,000 square-foot Tennessee facility, we provide our customers with application specific solutions offering the best

value and quality through a detailed APQP and launch process.

Our emphasis on engineering resources enables us to offer value and quality through innovation in design and process. E&E devotes over 20,000 hours of product engineering and development assistance to our customers annually. Through our

design ingenuity, we hold multiple patents, and have several more pending. From manufacturability and feasibility reviews, all the way up to complete black box design, we offer full design analysis using the latest CAD and simulation software tools available.

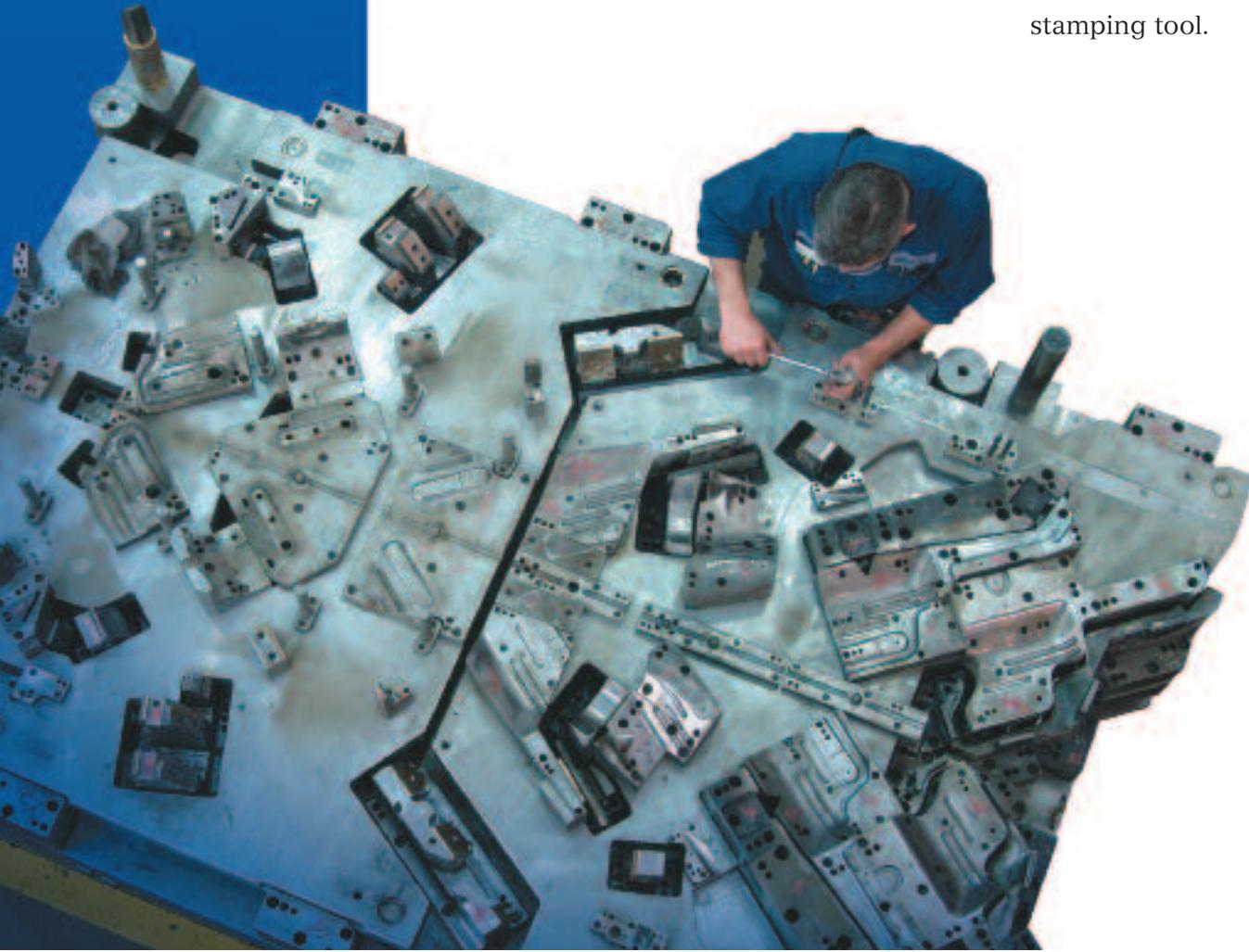
E&E's process engineering team designs and builds manufacturing and assembly systems that are efficient and effective. The bottom line is superior performance against quality, delivery and cost targets for our customers.

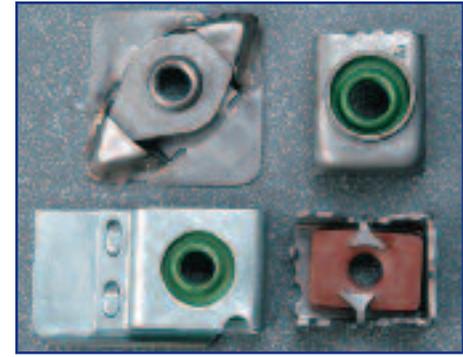




E&E has long been a leader in developing low-cost alternatives for tooling. Our working agreement with tool integrator Globe Tech gives us a competitive advantage by not only building tools for E&E, but by managing the sourcing of tools around the world.

Die protection is an integral part of our die design. Each tool is analyzed to determine the best method to ensure that any misfeed or incorrect alignment of a part in a tool is registered. This will stop the press before damage can occur to the part. Sensors can also verify the presence and correct placement of two piece components being assembled automatically in the stamping tool.





E&E is an industry leader in the field of drawn metal fasteners and related products, holding numerous patents for both product and process innovations. Our designs and products can be found on dozens of current automotive applications. E&E manufactures more than 30 styles of weld nuts, and ships over 21 million fastener products per month. Extrusion capabilities

range from simple light-duty extrusions to Property Class 10, deep drawn extrusions. Threading of fasteners is done "in-house" on E&E designed and built, high-speed, tapping equipment.

E&E has all the software, technical capability, and expertise to provide Value Added engineering for your design team, and our applications engineers will come

directly to your facility and help identify potential cost savings. With design, prototype, tool build, and testing capabilities under one roof, E&E can provide fast response time for your application needs. E&E utilizes Lean and Six Sigma practices to enhance product flow, and maintains the cutting edge in stamped fastener technology.

At all E&E facilities, the plant layout of equipment and workflow is designed for highly efficient manufacturing and optimum material flow. A central crane feeds the press lines, and finished goods are returned down the outer aisles for shipment.

Our CMM department provides prototype, PPAP, and production part inspection. We develop programs and perform capability and R&R studies. Other features include fixture certification, tooling verification, and surface and form analysis.



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Stamping presses have always been the core of our business. At our primary manufacturing facilities, we have more than thirty-five presses, ranging from 150 tons to an impressive 2500 tons. These presses have both progressive and transfer capability. Over one million parts a day are shipped from these facilities.

enable our customers to use our engineering expertise to their advantage. E&E provides the necessary structure and responsiveness to handle required customer needs for tracking and control during the launch process.

Assembly units designed and built at E&E range from simple grommet insertion to automated units for seat tray assembly. Plus, we offer over twenty welding cells with MIG, Projection, and Spot weld capability. E&E is also proud of our collaborative efforts that



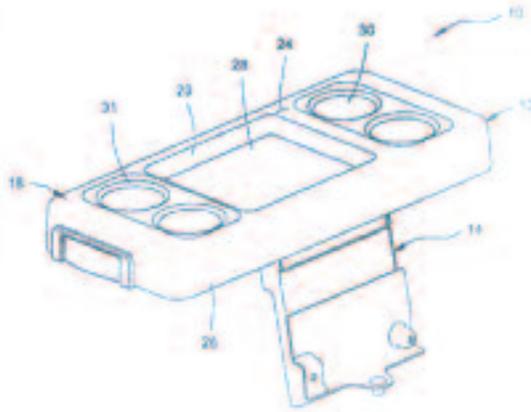
The
United
States
of
America

UNITED STATES PATENT
Granted on April 12, 2005

E & E Manufacturing Co., Inc.

6,877,806

FOLDING TRAY ASSEMBLY



A folding tray assembly is provided and includes a support member and a tray member, whereby the tray member is pivotally supported by the support member and movable relative thereto between an upright position and a stowed position. The folding tray assembly includes a locking mechanism operable to selectively lock the tray member to the support member in one of either the upright position or the stowed position. The locking mechanism is biased outwardly of the tray member such that the mechanism is not visible or accessible to the occupant, but rather remotely actuated by a handle on the support member. In addition, the tray assembly eliminates external support by providing support within the tray member, thereby providing an open, flat surface below the tray member and giving the tray assembly a rectangular shape in the use position.

The Director of the United States Patent and Trademark Office has received an application for a patent for a folding tray assembly, a useful invention. The requirements of this law have been examined with, and it has been determined that a patent for this invention shall be granted under the law. The following is the text of the patent.

United States Patent

Grants to the persons to whom such a title is given the right to exclude others from making, using, selling the invention throughout the United States, or importing the same into the United States, for the term of the years specified in the certificate of the Commissioner of Patents and Trademarks.



The automotive seat trays designed and manufactured by E&E are world class. The internally mounted release mechanism allows for a clean appearance, free of support struts beneath. This is a highly-engineered product that provides higher strength, yet yields a lower cost and weight than the competition.



Our patented release mechanism is an example of the innovation E&E routinely provides to our customers. Within this unique design, merely two lock pins are the only metal components.



- ISO/TS Certifications:
- Plymouth, Michigan
 - Athens, Tennessee



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