

SCREWS

Devon Graham

Credit/Disclaimer



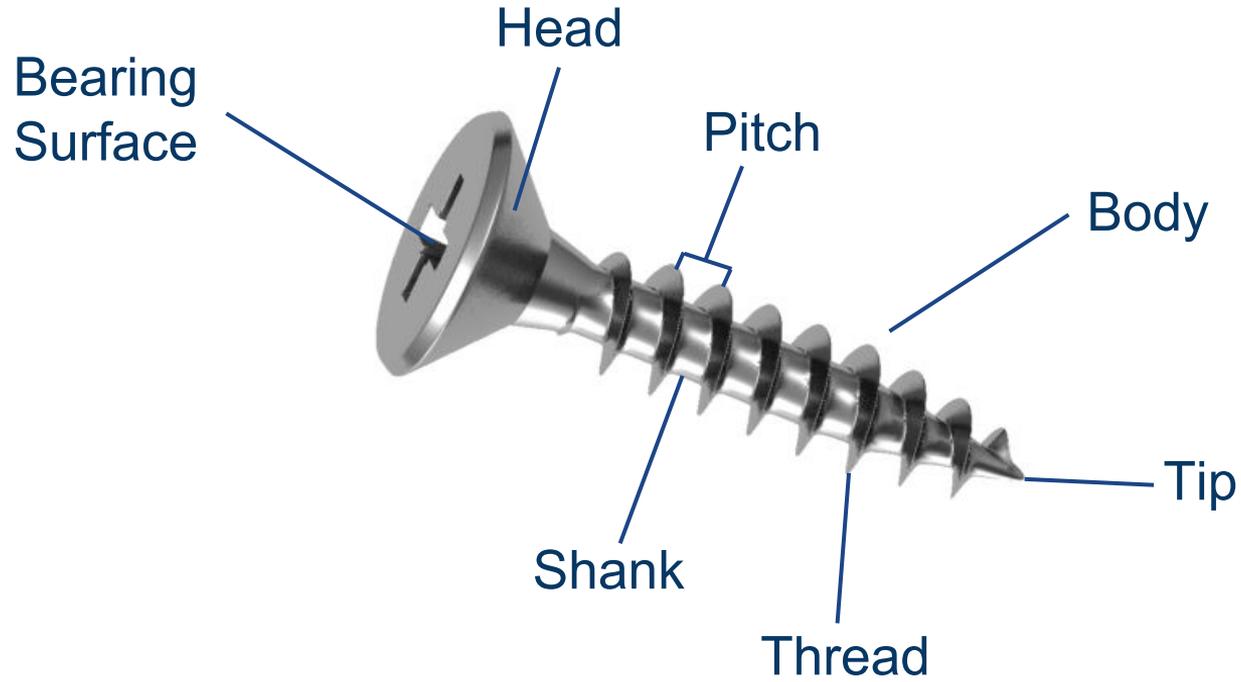
Sharon

Adapted from a presentation given by my girlfriend Sharon

What is a Screw?

An inclined plane wrapped around a nail

ANATOMY OF A SCREW



SCREW vs BOLT



Screw



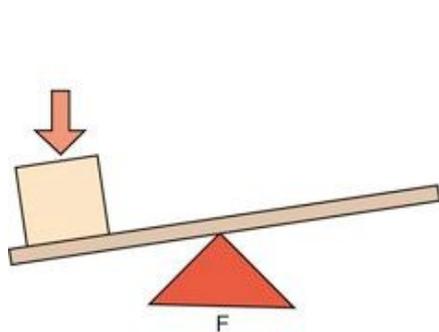
Bolt



Machine Screw

More info: [Distinguishing Bolts from Screws - US Dept of Homeland Security](#)

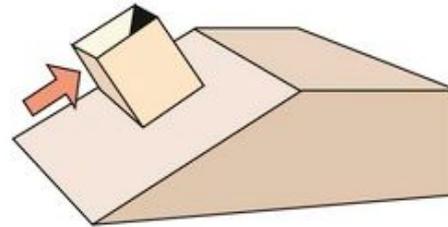
Simple Machines



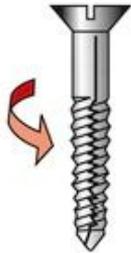
Lever



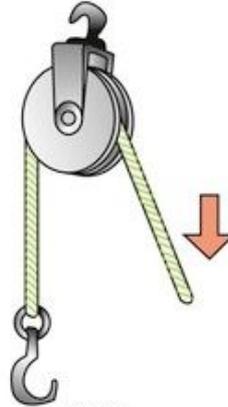
Wedge



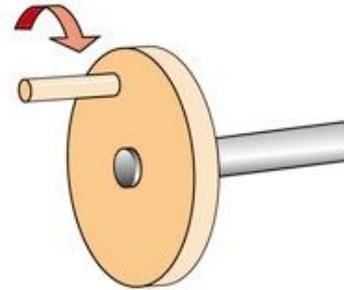
Inclined plane



Screw



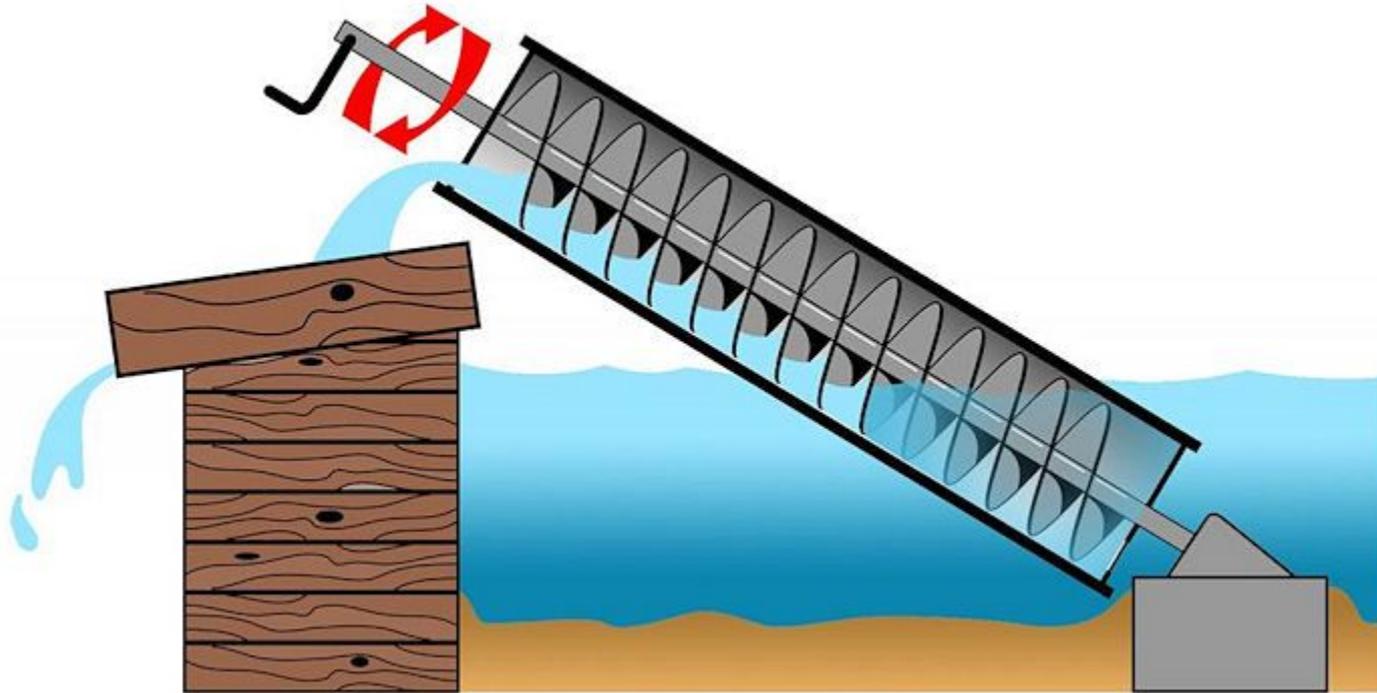
Pulley



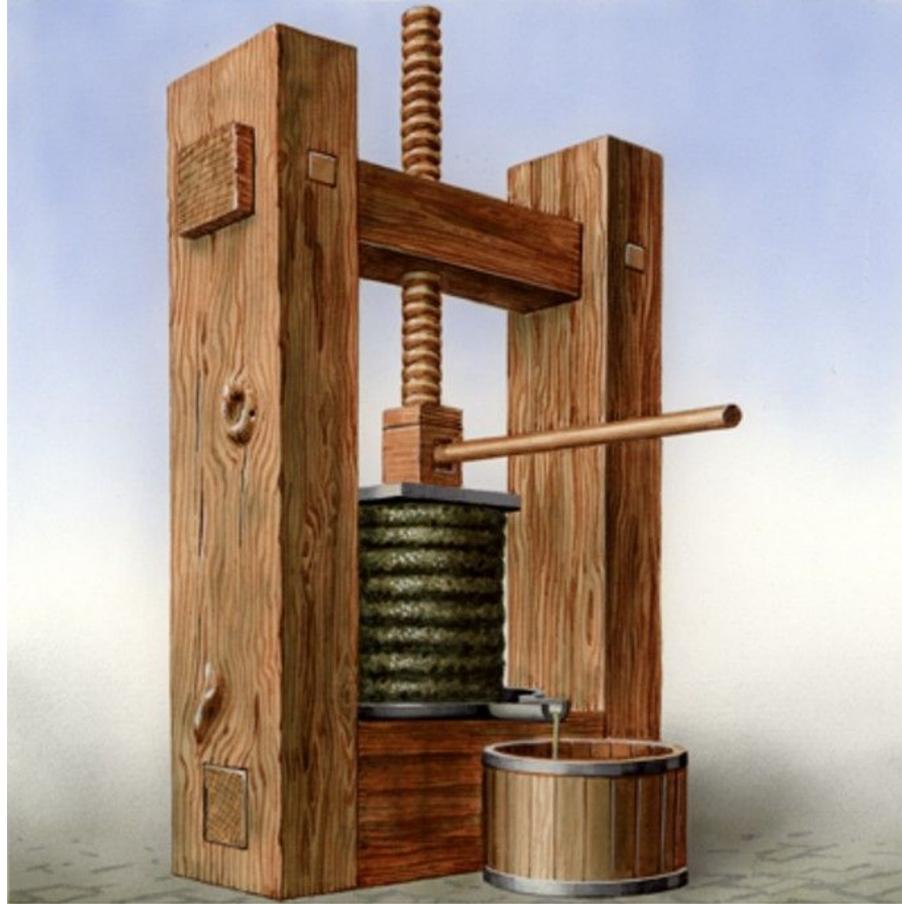
Wheel and axle

History of the Screw

Archimedes Screw



Screw Press



Dark Ages of Screws

No progress is made

Screw Standardization

Craft Produced



Intra-company Standards

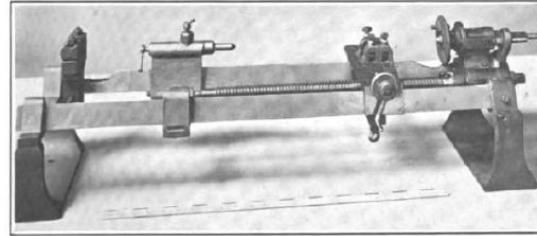


FIGURE 15. MAUDSLAY'S SCREW-CUTTING LATHE
ABOUT 1797

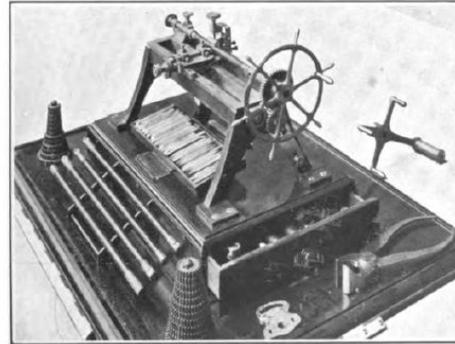
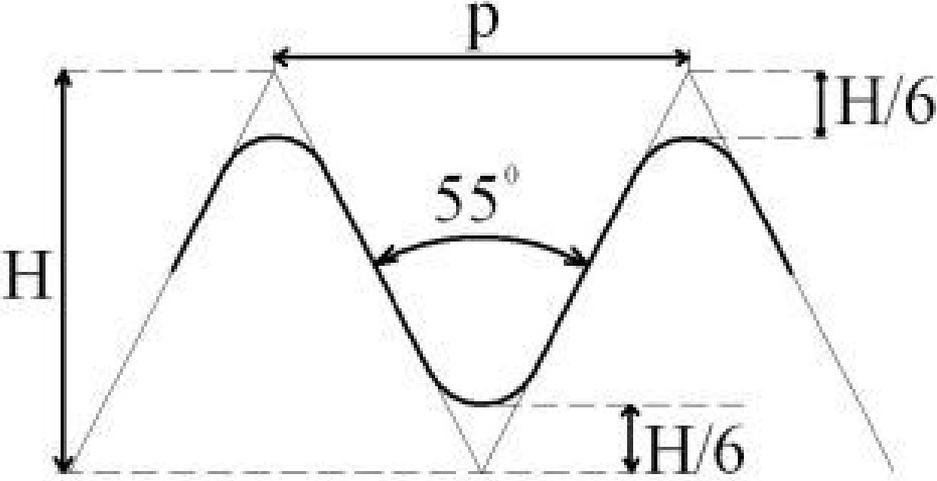


FIGURE 16. MAUDSLAY'S SCREW-CUTTING LATHE
ABOUT 1800

British Standard Whitworth



Whitworth Threadform

Sellers Thread

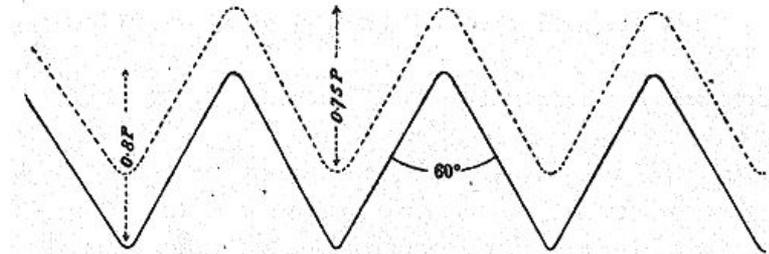


Fig. II. Usual Form of Threads best Workshop practice.

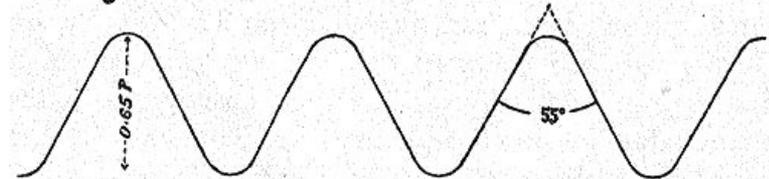


Fig. III. Form of Thread introduced Mr. Whitworth.

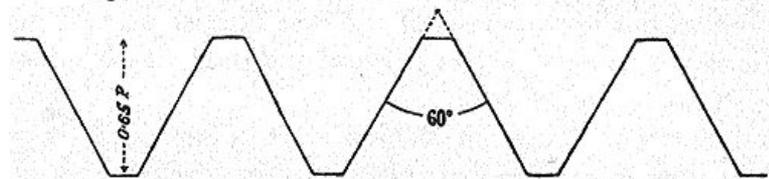
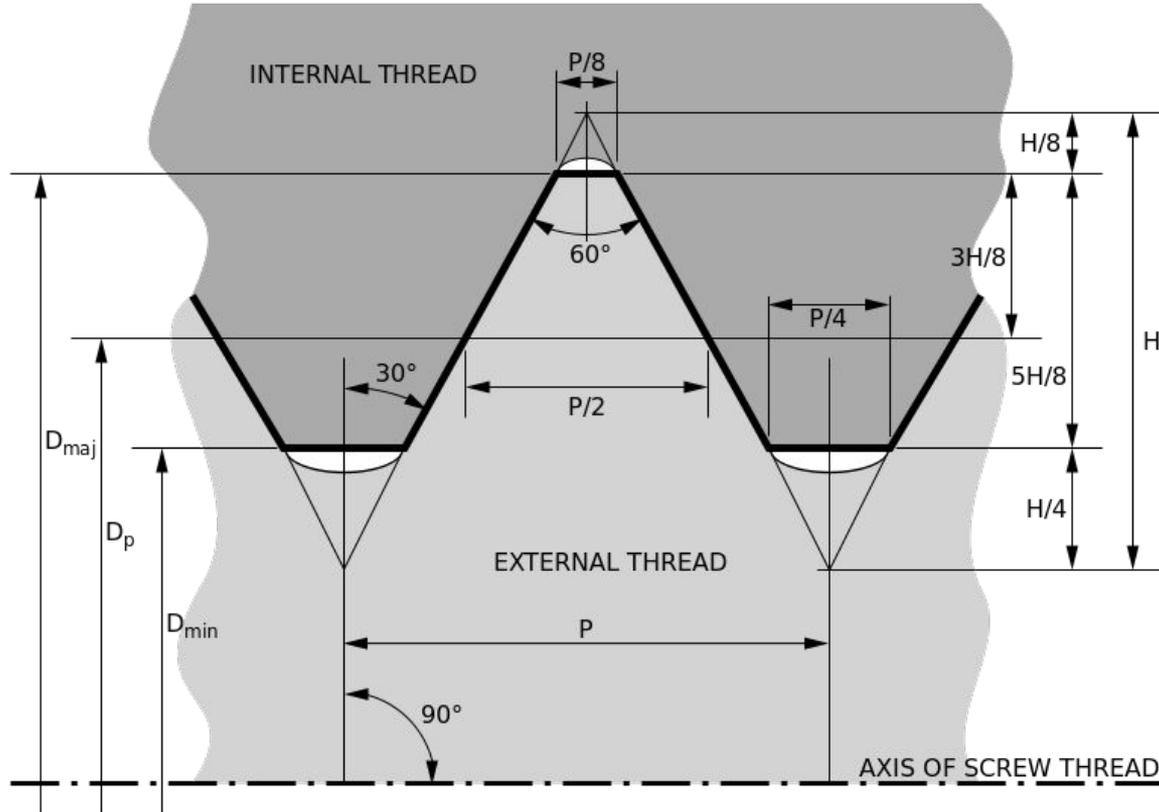


Fig. IV. Form of Thread proposed by Mr. Sellers.

ISO Metric Screw Thread



Screw Drive Types

Cam Out





Slot





Phillips



■ Robertson (square, Scrulox)



Combination Drives



Slotted and
Phillips

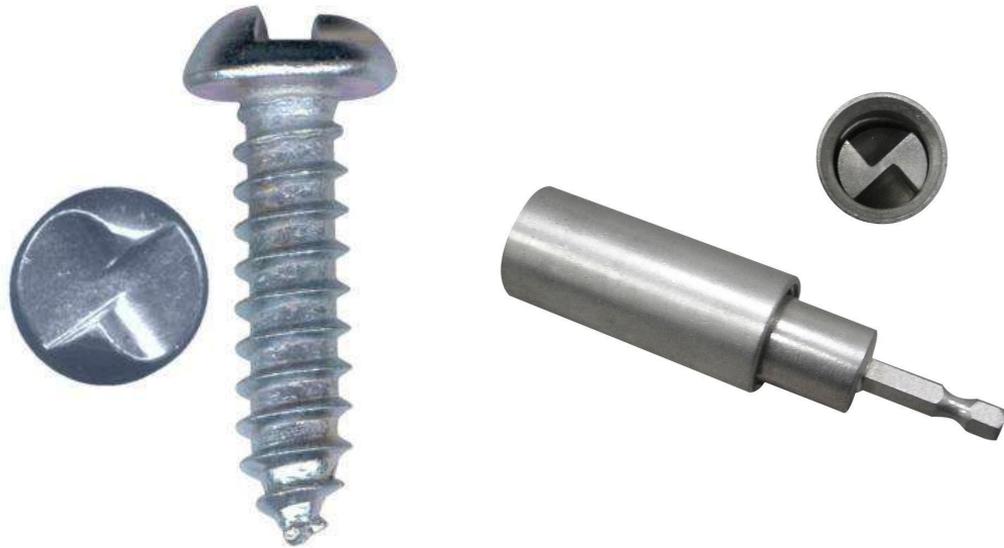


Phillips and Square
(Quadrex, Pozisquare)



Tamper Resistance

⊕ One Way





Pentalobe



Questions?

THANK YOU