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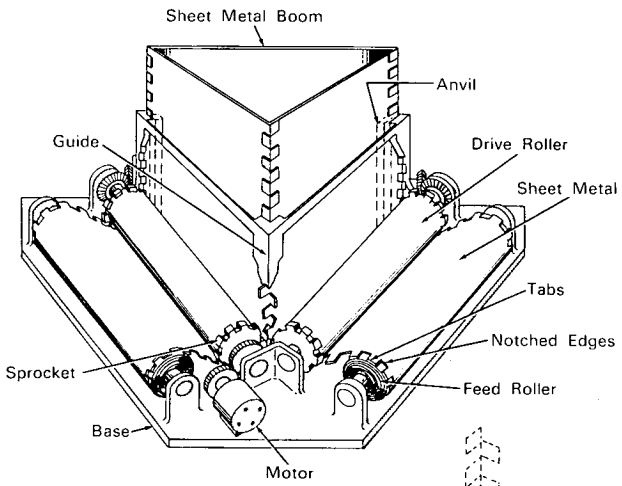
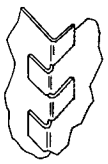
Brief 63-10200

# NASA TECH BRIEF

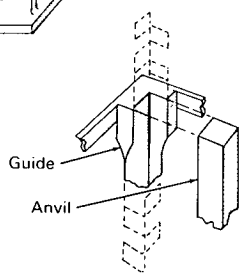


## Apparatus of Small Size Can Be Extended Into Long, Rigid Boom



CORNER DETAIL




DETAIL OF GUIDE AND CLINCHING ARRANGEMENT

**The problem:** To design an apparatus of relatively small size that can be extended into a rigid boom, or mast, of considerable length.

**The solution:** An apparatus that erects three sheets of metal into a structure having prenotched edges that are interlocked as the metal sheets are unrolled from feed rollers.

**How it's done:** Three feed rollers forming the sides of a triangle contain the metal sheets, which are unrolled and interlocked to provide an erect boom of triangular cross section. The boom is shown partially extended in the perspective drawing. Three drive rollers are provided with sprocket ends which engage the notched edges of the metal sheets from the feed rollers into the vertical guides. The tabs on the edges of the sheets are clinched as they pass off the drive rollers into the cammed areas of the three guides.

**Patent status:** NASA encourages commercial use of this innovation. No patent action is contemplated.

Source: Jack V. Miller
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