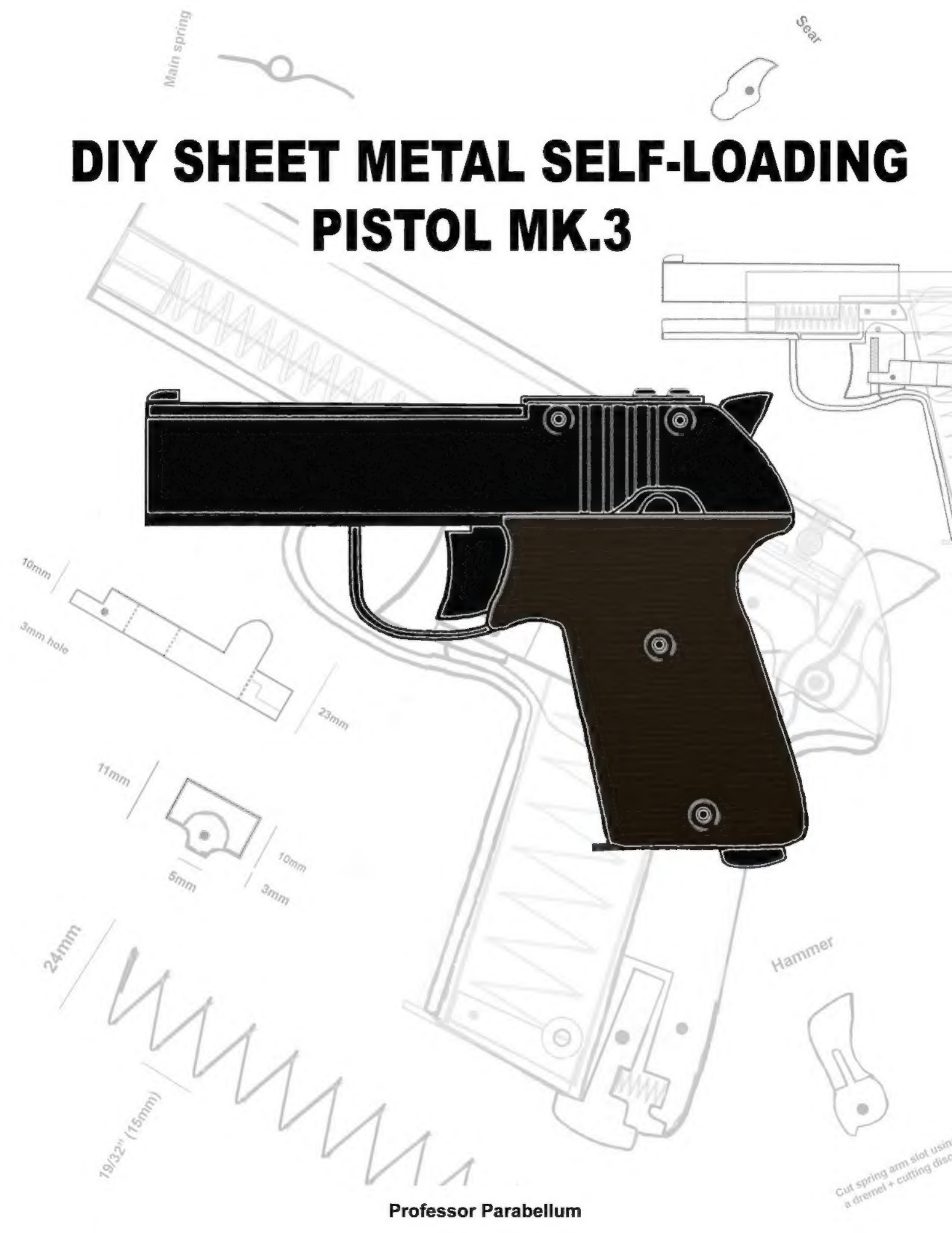
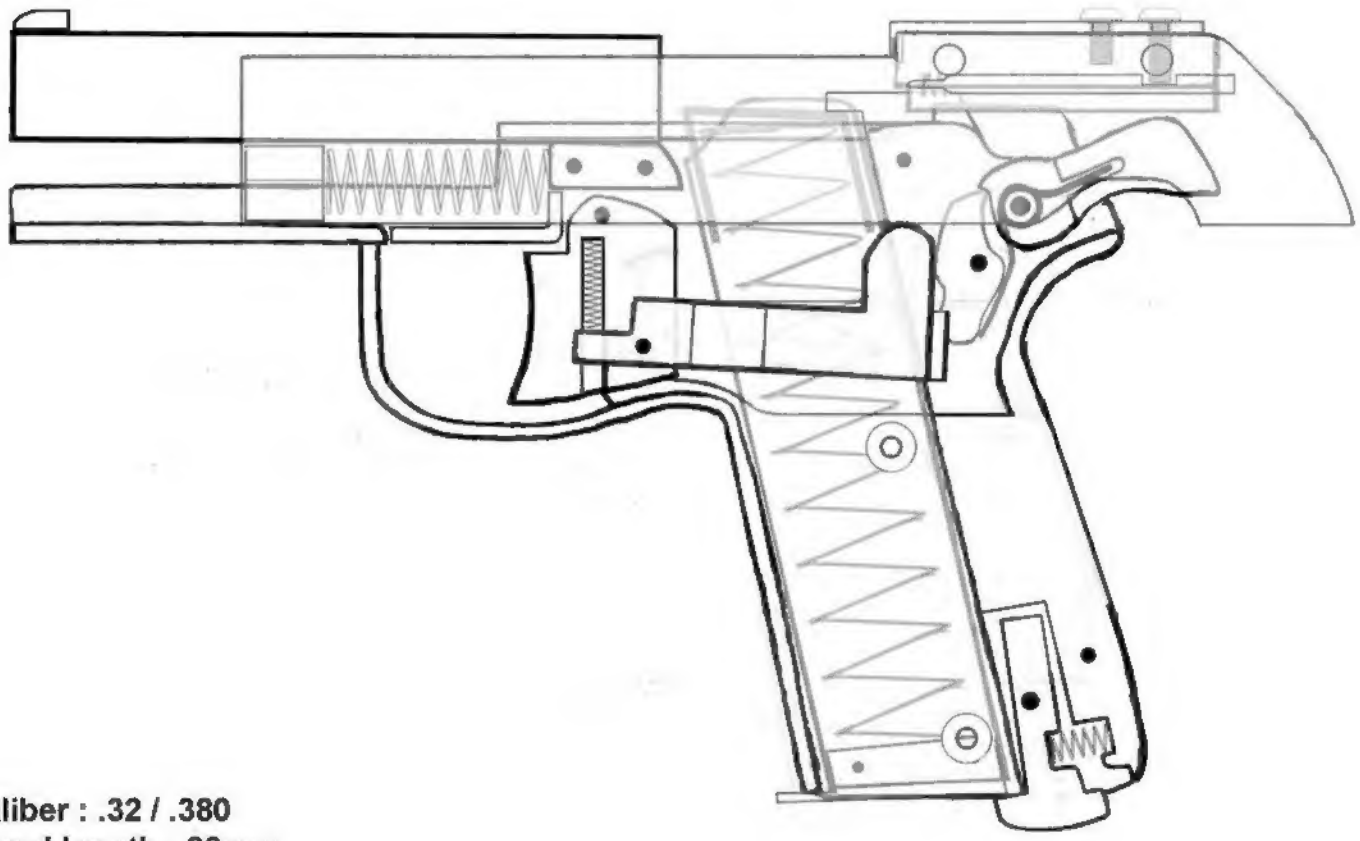
# DIY SHEET METAL SELF-LOADING PISTOL MK.3




**Professor Parabellum**

# SMSLP MK3 construction plans



**Caliber : .32 / .380**
**Barrel length : 96mm**
**Overall length : 164mm**
**- Compatible with 8 round Makarov PM magazines**

**All pages included should be printed out on 8.5 x 11 US letter paper. Each component template is drawn to scale and can be cut out and glued to their respective thickness of material or used as a reference for measurements. Make sure the ruler at the bottom left of each sheet is 2 inches in length. Alternatively, take a screen-shot and enlarge the plans using a computer program until the ruler is the correct length, then trace the parts needed onto a sheet of paper taped over your computer's screen.**

# Materials:

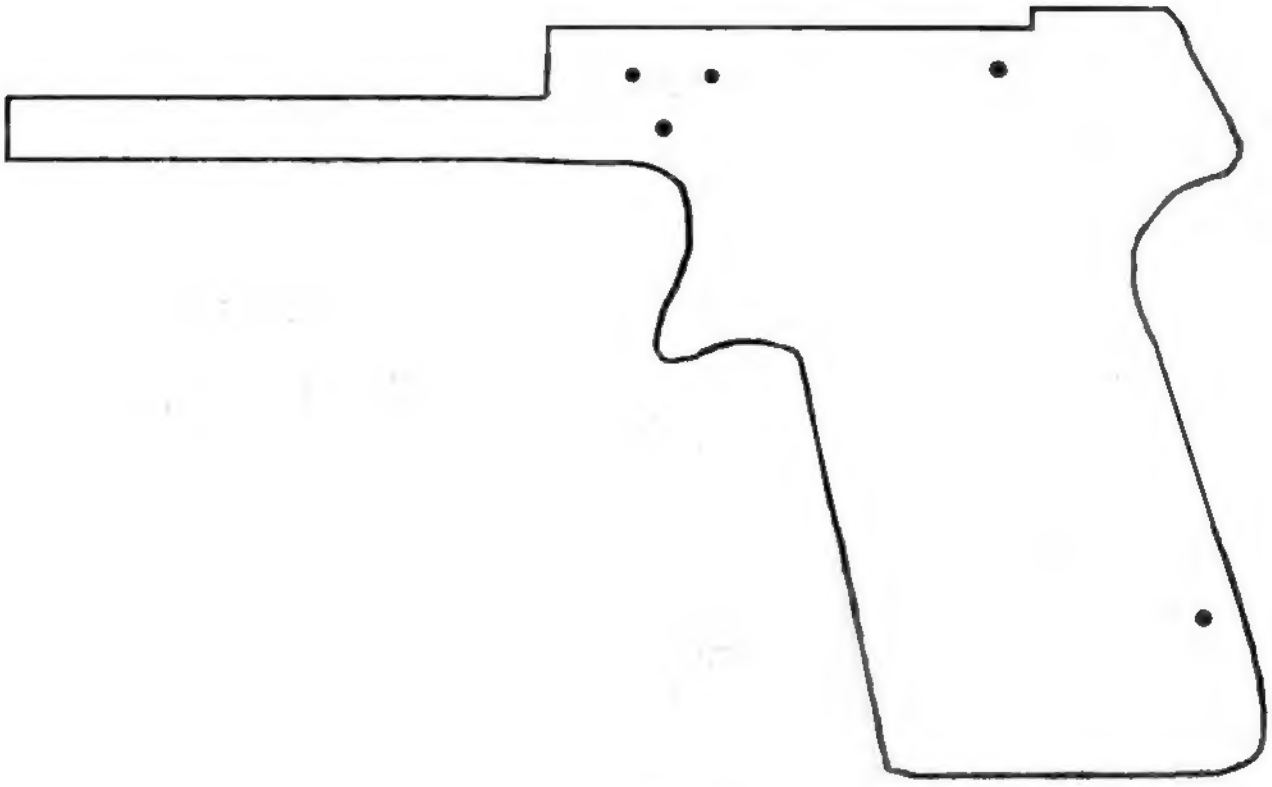
1mm thick mild steel sheet
2mm thick mild steel sheet
2.5mm thick mild steel sheet
6mm (1/4") mild steel plate
8mm thick mild steel plate
12mm thick mild steel plate
16mm (5/8") diameter mild steel square bar
16mm (5/8") diameter mild steel round bar
4mm (1/6") silver steel bar
Spring steel music wire, 19 and 20 gauge
M4 button head bolts, 13mm long
M6 button head bolts, 10mm long
3mm diameter pins, 18mm long

# Tools:

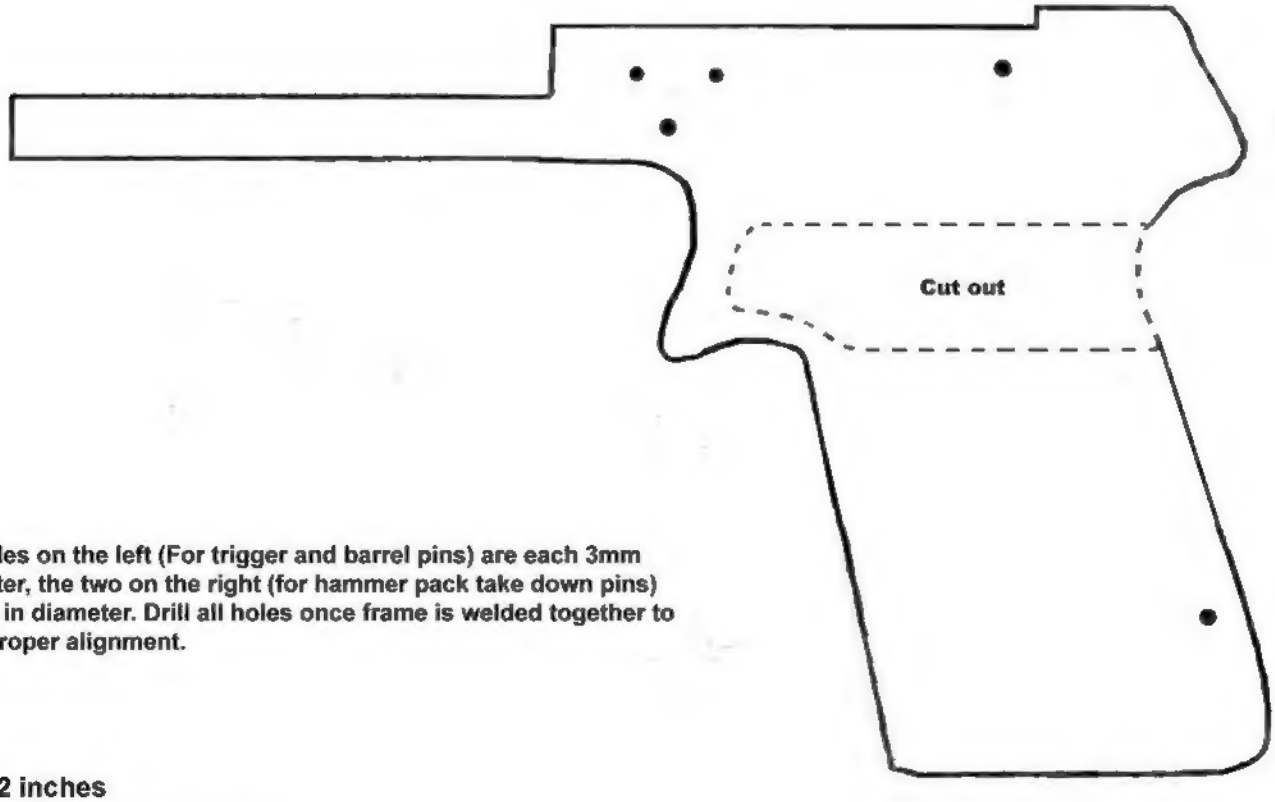
Hacksaw
Hand files
Electric drill or drill press
Angle grinder
Dremel type rotery tool
Hand taps, 4mm - 0.7 and 6mm - 1.0
Arc welder

# Frame plates

Right plate



Left plate



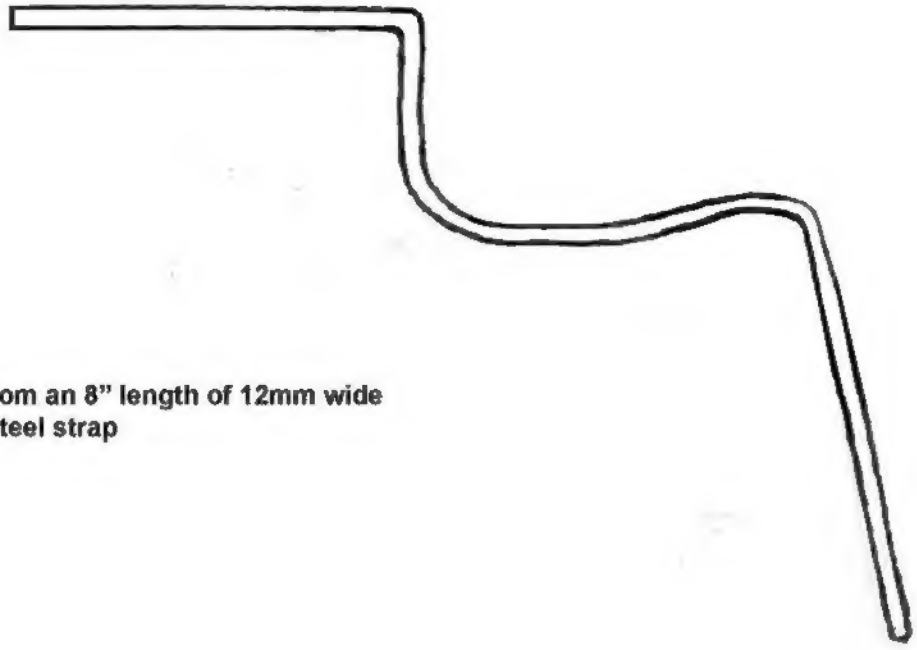

The 3 holes on the left (For trigger and barrel pins) are each 3mm in diameter, the two on the right (for hammer pack take down pins) are 4mm in diameter. Drill all holes once frame is welded together to ensure proper alignment.

2 inches

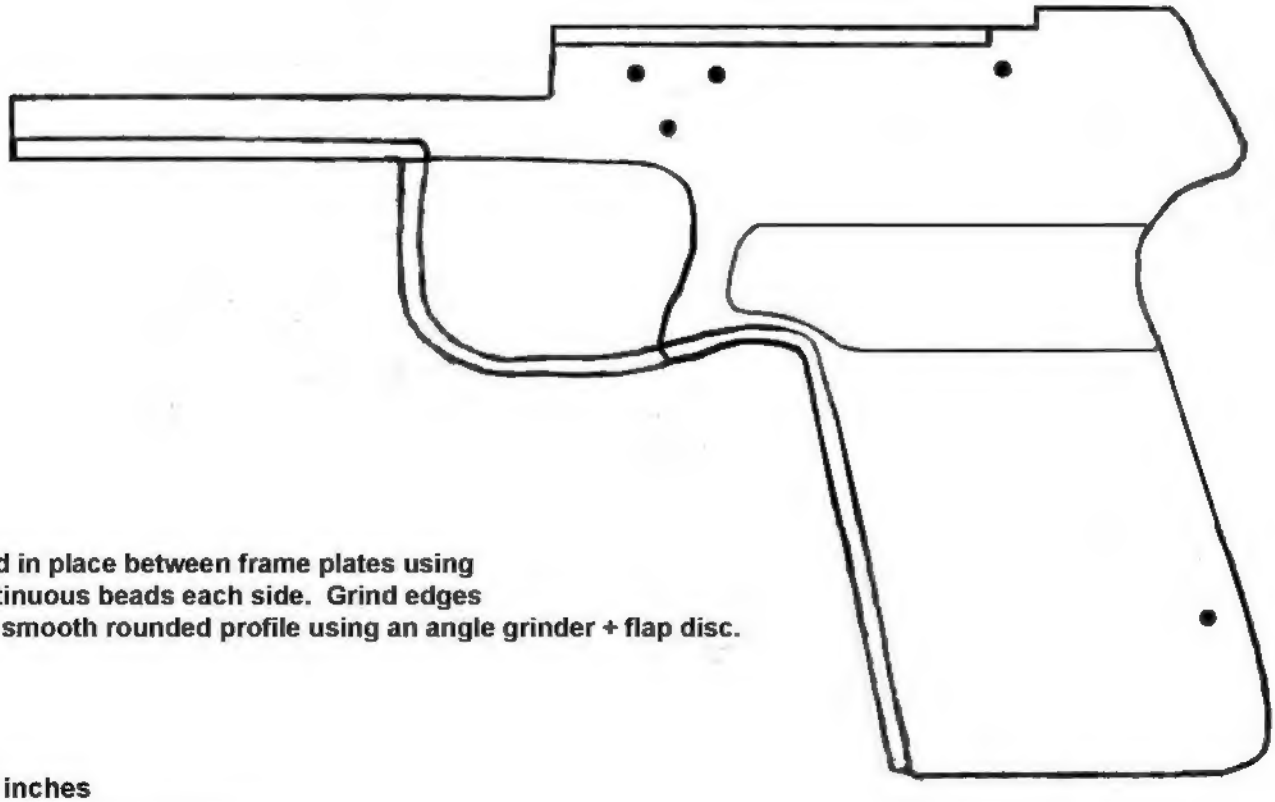
Print on 8.5x11 US letter paper

2.5mm mild steel plate

# Trigger guard / frame wall



Bend to profile from an 8" length of 12mm wide
2mm thick mild steel strap



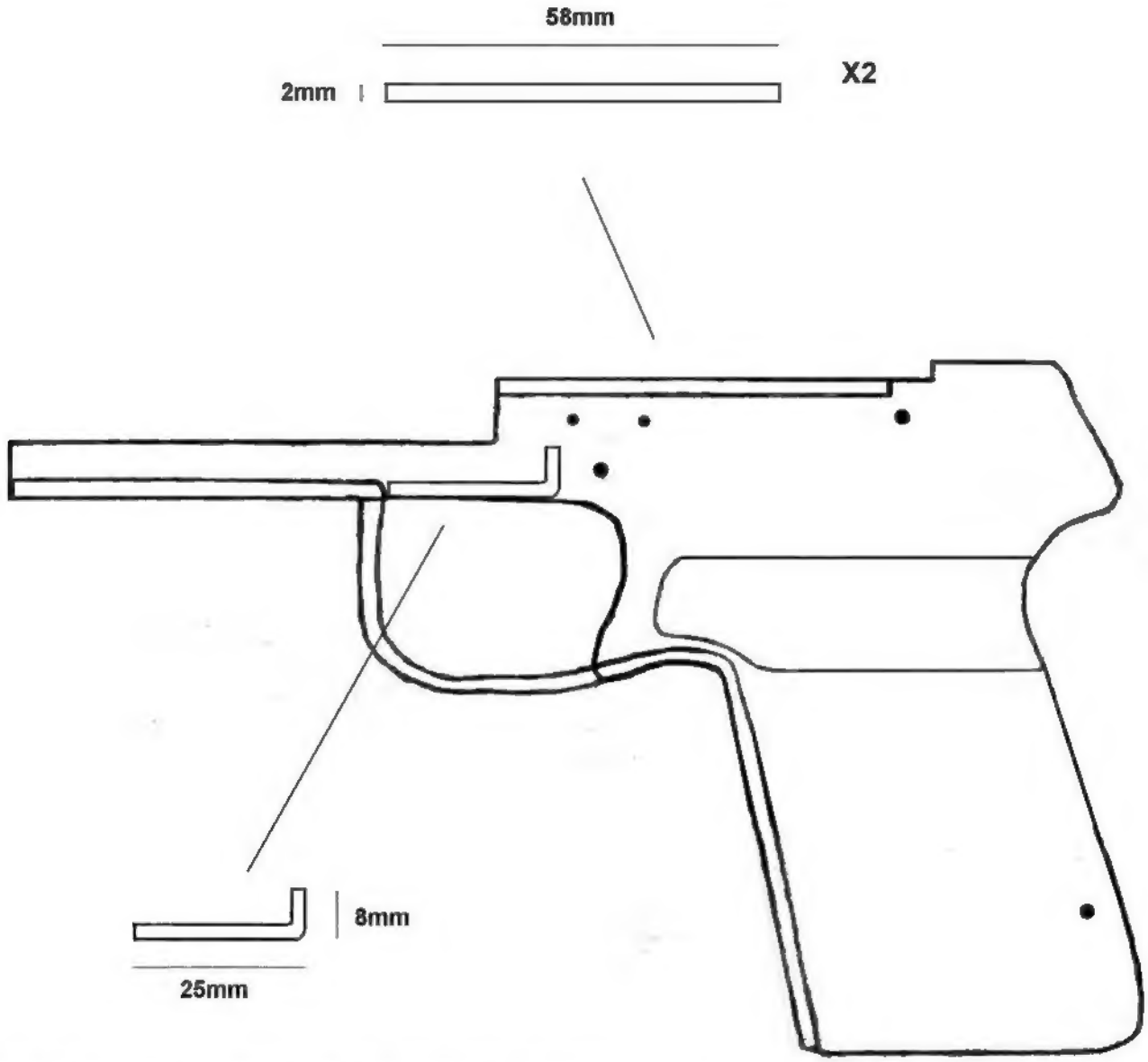
Weld in place between frame plates using
continuous beads each side. Grind edges
to a smooth rounded profile using an angle grinder + flap disc.

2 inches

Print on 8.5x11 US letter paper

# Slide rails

**The slide rails are made by cutting two strips of 2mm thick mild steel sheet which are welded either side in the position shown. Alternatively these can be formed from a thick weld bead ground to shape.**



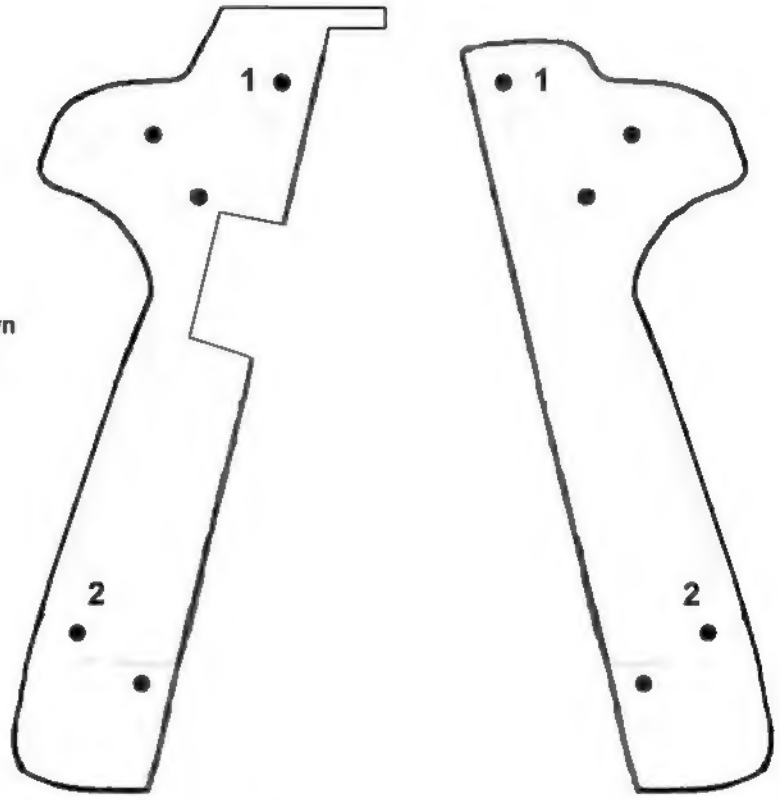

**A length of 2mm thick, 12mm wide steel strip is bent to shape and welded in place to complete the recoil spring channel**

2 inches

Print on 8.5x11 US letter paper

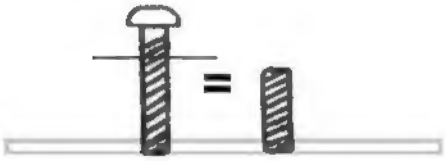
# Hammer pack side plates

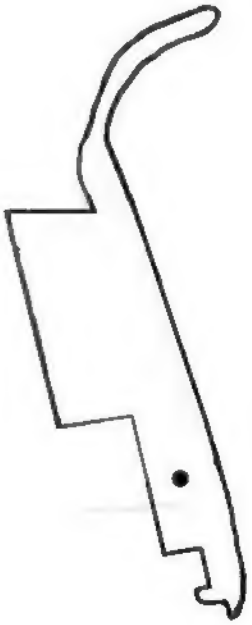
**Ejector** - File down and bend to allow for mag clearance




Holes 1 and 2 accept a 12mm long, 4mm dia take-down pin.

The three remaining holes on the right side plate are drilled with a 3mm bit then threaded to accept an M4 bolt each, sealed in place with high stength epoxy applied to the threads.These are then cut down to 12mm in length to create three fixed pivot posts.





**Back strap**

Weld or pin in place

2 inches

Print on 8.5x11 US letter paper

Side plates : 2.5mm thick mild steel plate
Back strap : 8mm thick steel, aluminum or plastic plate

# Hammer pack components

**Hammer**

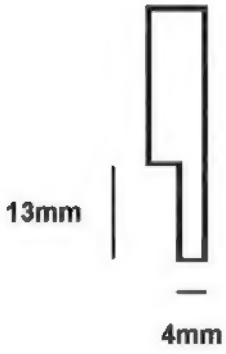
Cut spring arm slot using a dremel + cutting disc

**Main spring**

Bend to profile from heavy 19gauge+ spring steel music wire around a 5mm bar - 2 turns

**Sear**

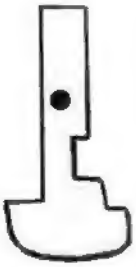
**Back profile**




**Latch spring**

(5mm x 13mm compression spring)

**Magazine latch**



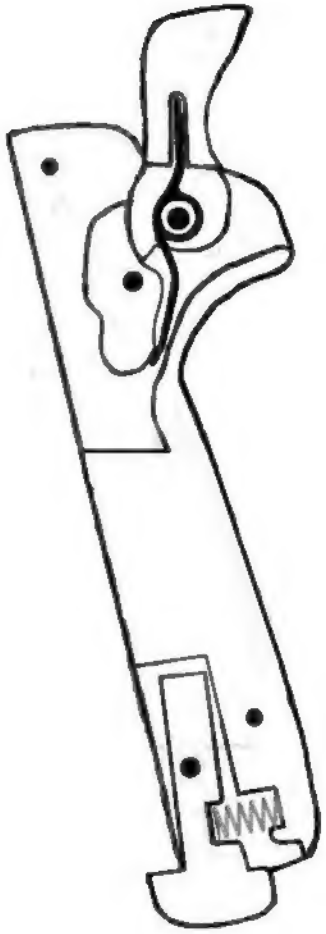
**All holes are drilled with a 4mm dia bit**

2 inches

Print on 8.5x11 US letter paper

Hammer, sear and magazine latch : 8mm thick steel plate

# Hammer pack assembled

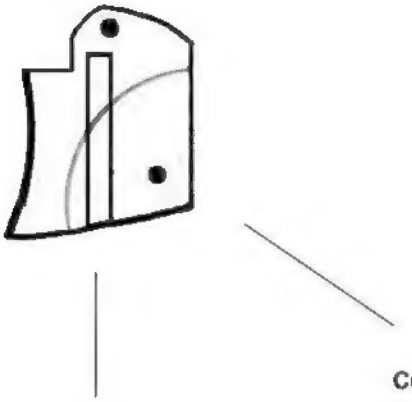


2 inches

Print on 8.5x11 US letter paper

# Trigger

**Compression spring**
**(Can be taken from a retractable pen)**

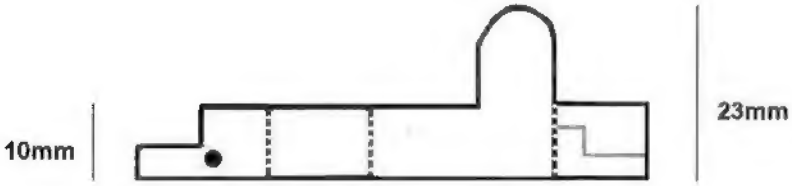



**Cut a slot for the trigger bar using an angle grinder fitted with a 1mm slitting disc**

**Drll from below using a 4mm bit to create a spring channel**

## Trigger bar

**Cut from a 68mm length of 2mm thick steel plate**




**3mm hole**

**Sear contact point profile**
**(Mirrored)**

**Bend on lines to profile below:**

**Cut to profile once bent**

**2 inches**

**Print on 8.5x11 US letter paper**

**Trigger : 12mm thick aluminum, plastic or steel plate**

# Barrel assembly and recoil spring

**.32: 7.5mm inner dia, 2.75 wall**
**.380: 9mm inner dia, 3.5mm wall**

*Round or square stock*

**3 3/4”**

**16mm (5/8”)**

**Weld lug in place - grind smooth**

**Cut 6mm wide slot at top of barrel entrance to accommodate front of extractor**

**Bevel entrance with 16mm + drill bit - form slight ramp profile on lower wall**

## Barrel lug

**12mm thick mild steel plate**


## Recoil spring

**3.5”**

**10mm**

**Wire dia: .043 (1mm)**

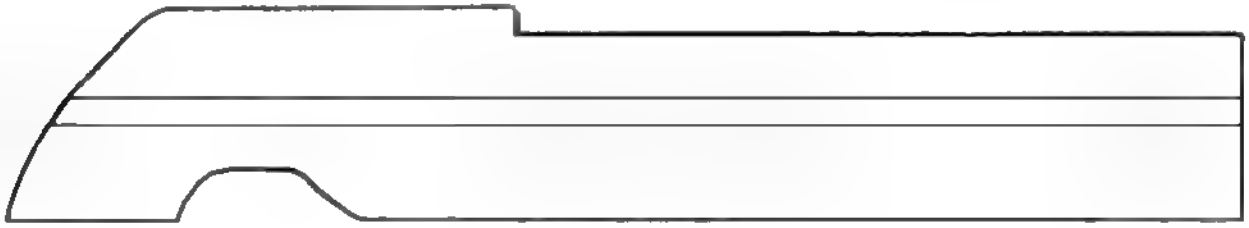
**2 inches**

**Print on 8.5x11 US letter paper**

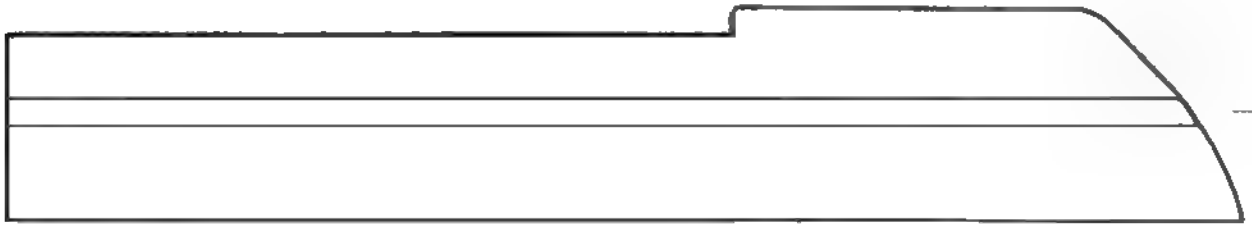
# Slide side plates

Cut from 6mm (1/4") thick mild steel plate

164mm

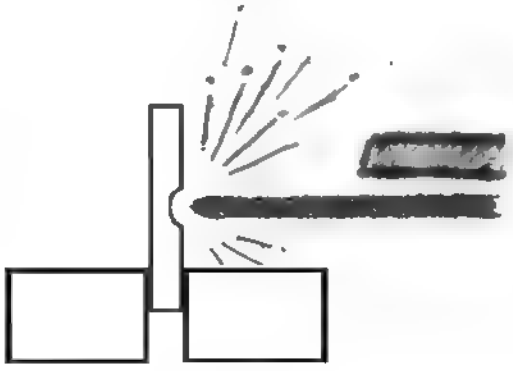


28mm



14mm

The slide rail cuts are formed on the inside of each plate by carefully using an angle grinder fitted with a 2mm grinding disc to form a shallow channel across the the plate's entire length. Use a dremel and hand-file to neaten.



2 inches

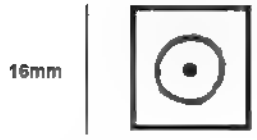
Print on 8.5x11 US letter paper

# Bolt piece

**The bolt piece is made from a 48mm long length of 16mm (5/8") mild steel square bar.**

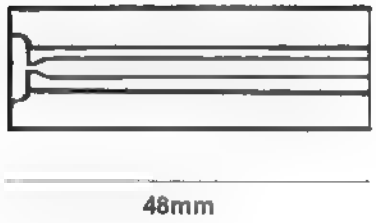
- **Drill center with a 9.5mm drill bit until 3mm deep.**
- **Level hole flat using a 9.5mm drill bit having had its tip removed using an angle grinder**
- **Drill firing pin hole from front with a 3mm drill bit**
- **Drill from back using a 4.2mm drill bit, 43mm deep**
- **Cut feed channels using an angle grinder fitted with a 1mm slitting disc until matching the profile on the right:**

**Front face**





**Bottom**

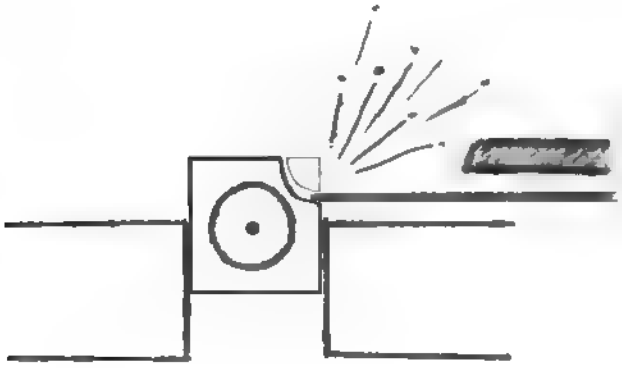



**Top**


**File notch for extractor**

**Firing pin retainer hole**
**- Drill 3.3mm and tap for m4 bolt**

*Angle grinder 'milling'*



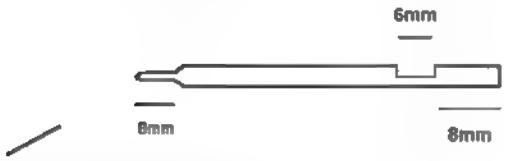
**2 inches**

**Print on 8.5x11 US letter paper**

# Firing pin & extractor

## Firing pin

1/6" (4mm) dia silver steel bar. 48mm long.




Reduce tip to 2.5mm dia
(Can be spun in a drill and turned down using a file)

The firing pin return spring can be made from 3 or 4 coils cut from a small dia compression spring found inside a retractable pen.

## Extractor

(Optional)

Bend from 55mm long, 5mm wide, 2mm thick steel strip.


Round off tip

Hand fit extractor so that front of claw is in contact with a cartridge rim when centered on bolt face. A cartridge should be able to slip under with ease. Retain using a 6mm long M3 bolt plus the firing pin retention bolt to the rear.

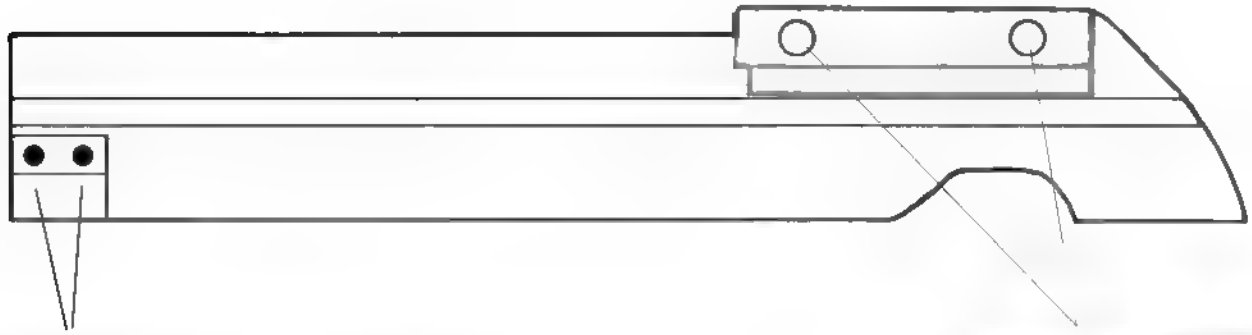
2 inches

Print on 8.5x11 US letter paper

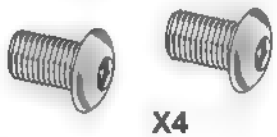
# Slide assembly

*Assemble together once alignment with frame and barrel has been established*

**Drill two 5mm holes each side and tap to accept four M6 allen head bolts.**
**Bolt piece should be positioned centrally inline with barrel - can be temporarily tack welded to align before bolting in place.**



**Drill two 4mm holes through slide panels and lug to accept two 26mm long, 4mm dia steel roll pins. Seal over holes with weld and grind flush. Weld at front where in contact with slide plates to permanently secure lug.**

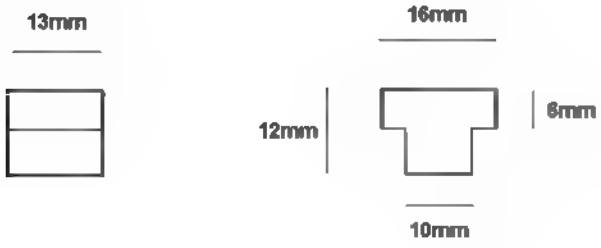


**X4**

**10mm long M6 button head bolts**

**Removal will allow for slide disassembly from frame.**

## Slide front lug

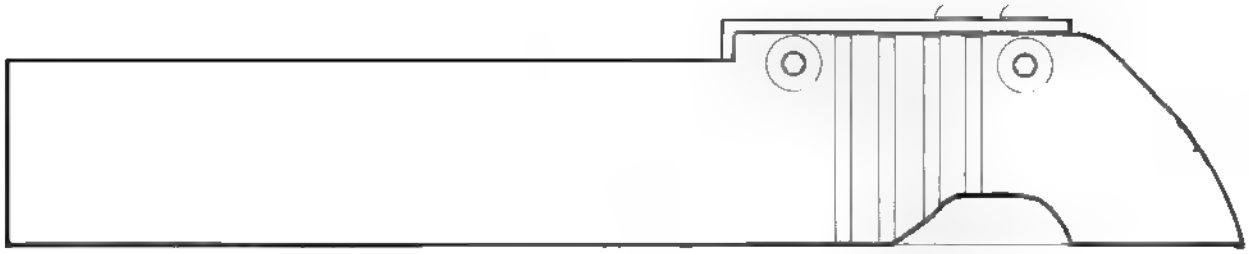



**2 inches**

**Print on 8.5x11 US letter paper**

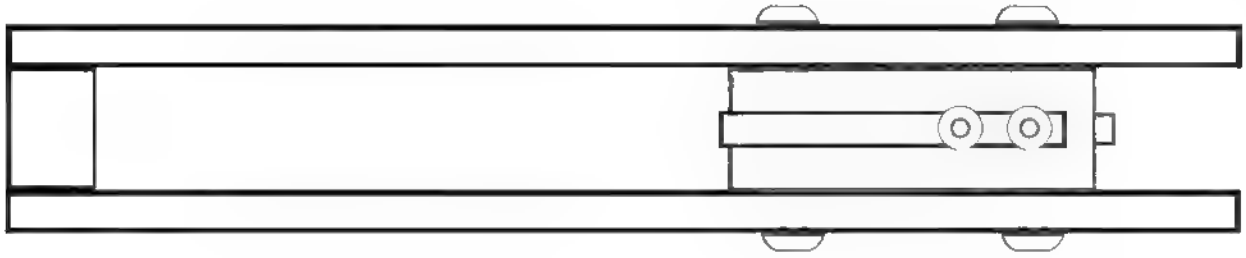
# Completed slide

*Side:*

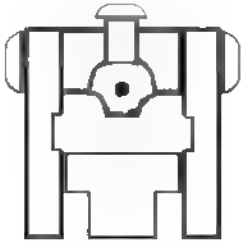


*Add serrations to each panel using a jewelers saw*

*Top:*



*Front:*



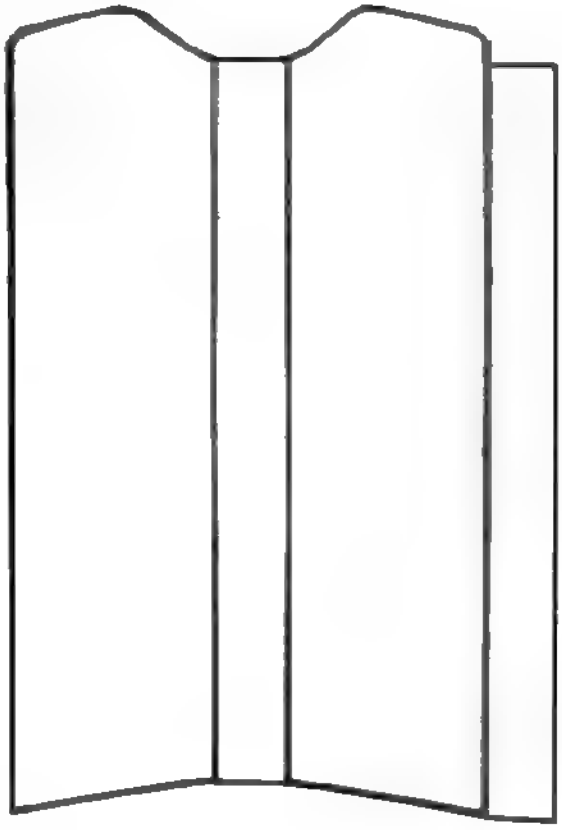
**2 inches**

**Print on 8.5x11 US letter paper**

# Magazine template

Cut template out from 1mm thick mild steel sheet. Score on bend lines slightly using a dremel disc.

Form around a 10mm thick, 1" wide, 12" long steel block. Carefully weld together in spots along rear fold. Form feed lips around top of forming block to profile.



Feed lips

8mm

Magazine follower

Bend to profile from a 60mm long, 9mm wide steel strip

Forming block

(Shape to profile)

Secure magazine flat to block via two bolts at either end. Hammer magazine lips to match block profile.

Base plate

(Cut from 10mm thick aluminum, plastic or steel)

Secure using two 11mm long pins

*Heat formed magazine lips until cherry red and quench using kasenit or motor oil to harden.*

*- Standard Makarov PM magazines may also be used*

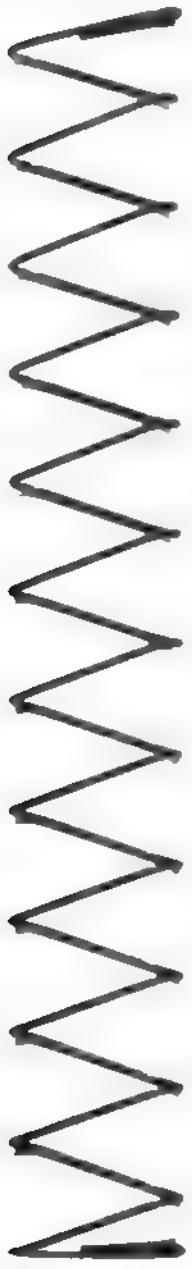
2 inches

Print on 8.5x11 US letter paper

# Magazine spring

24mm

19/32" (15mm)



Make a forming mandrel from a length of 4mm thick plate, 15mm wide, 12" long. Drill a hole at one end to tie a knot through.

Tightly form spring from 20 gauge spring steel music wire. Leave 15mm between coils.

Once complete, use pliers to form each coil into the correct rectangular shape.

6.5" long

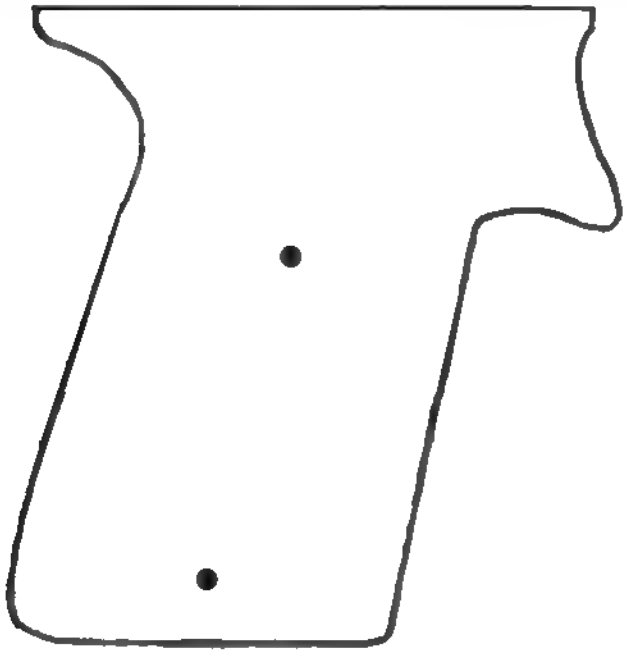
2 inches

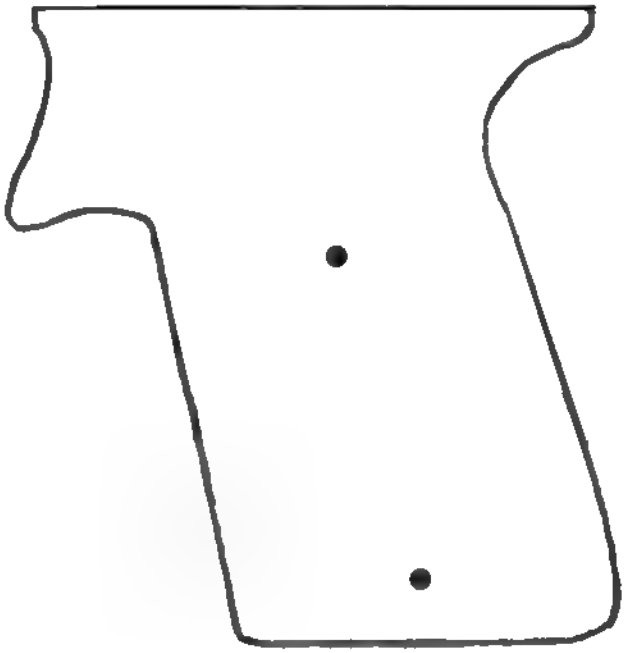
Print on 8.5x11 US letter paper

# Grip panels

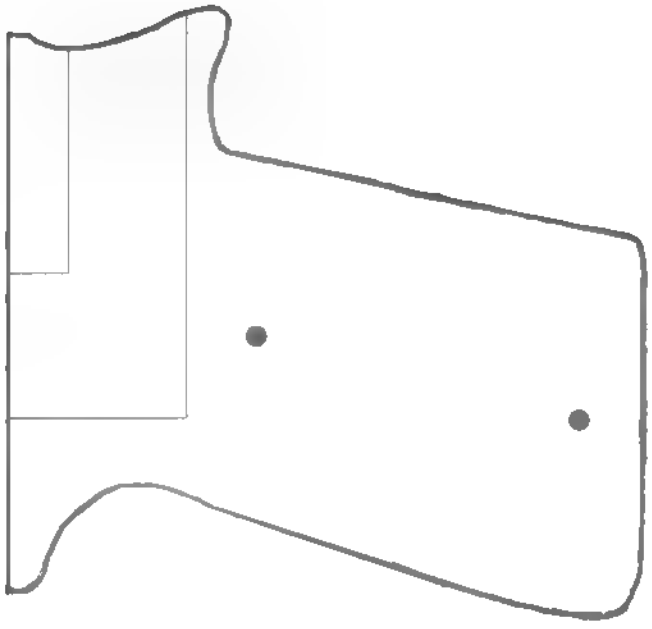
**Cut from 1/2" plastic, aluminum or hardwood**

**Drill and tap through frame to accept four M4 button head bolts.**
**Ensure surfaces inside magazine channel remain flush.**



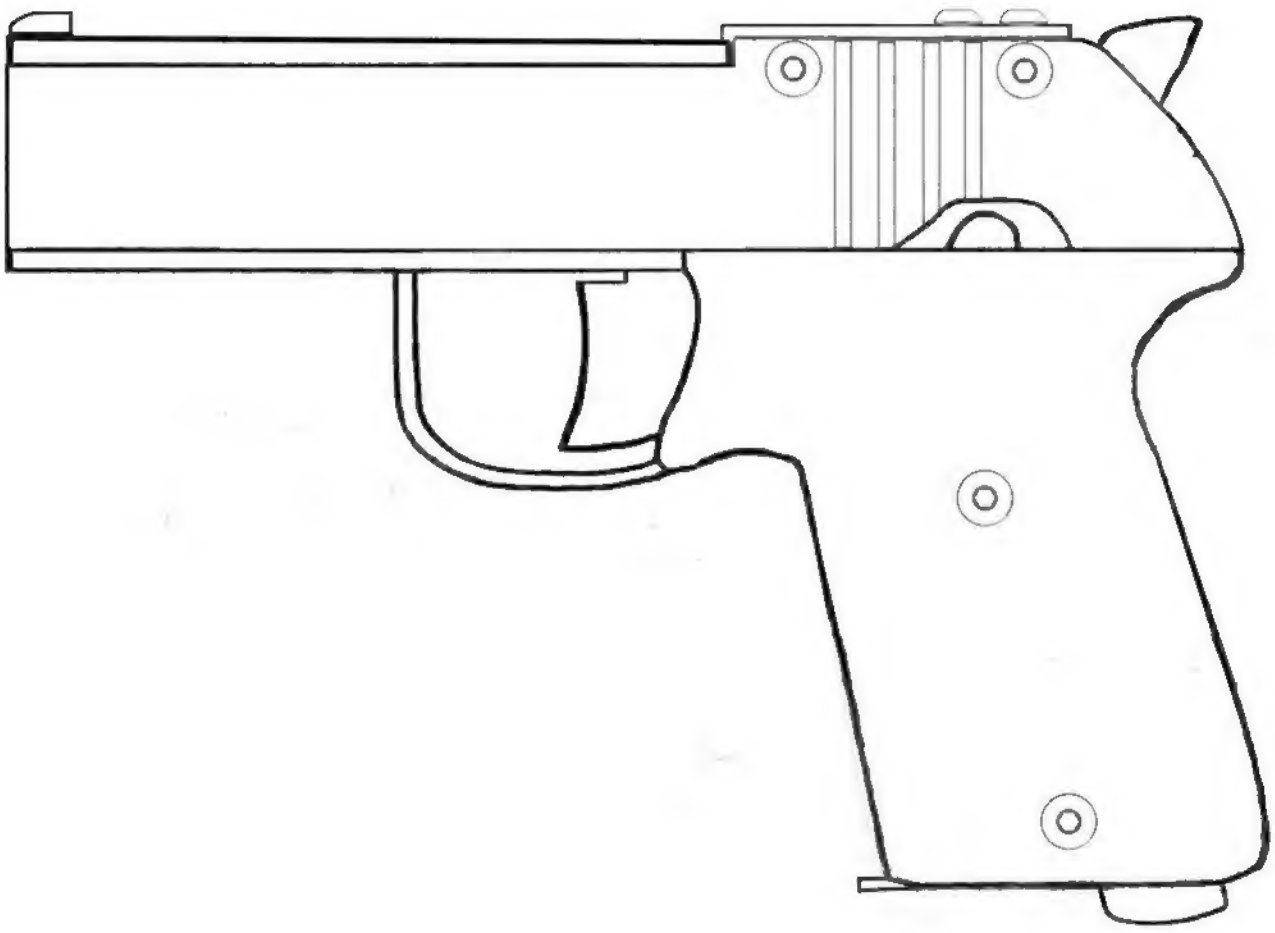


**(Left side panel)** Use a rotery tool + sanding bit to create a shallow channel to allow clearence for trigger bar.



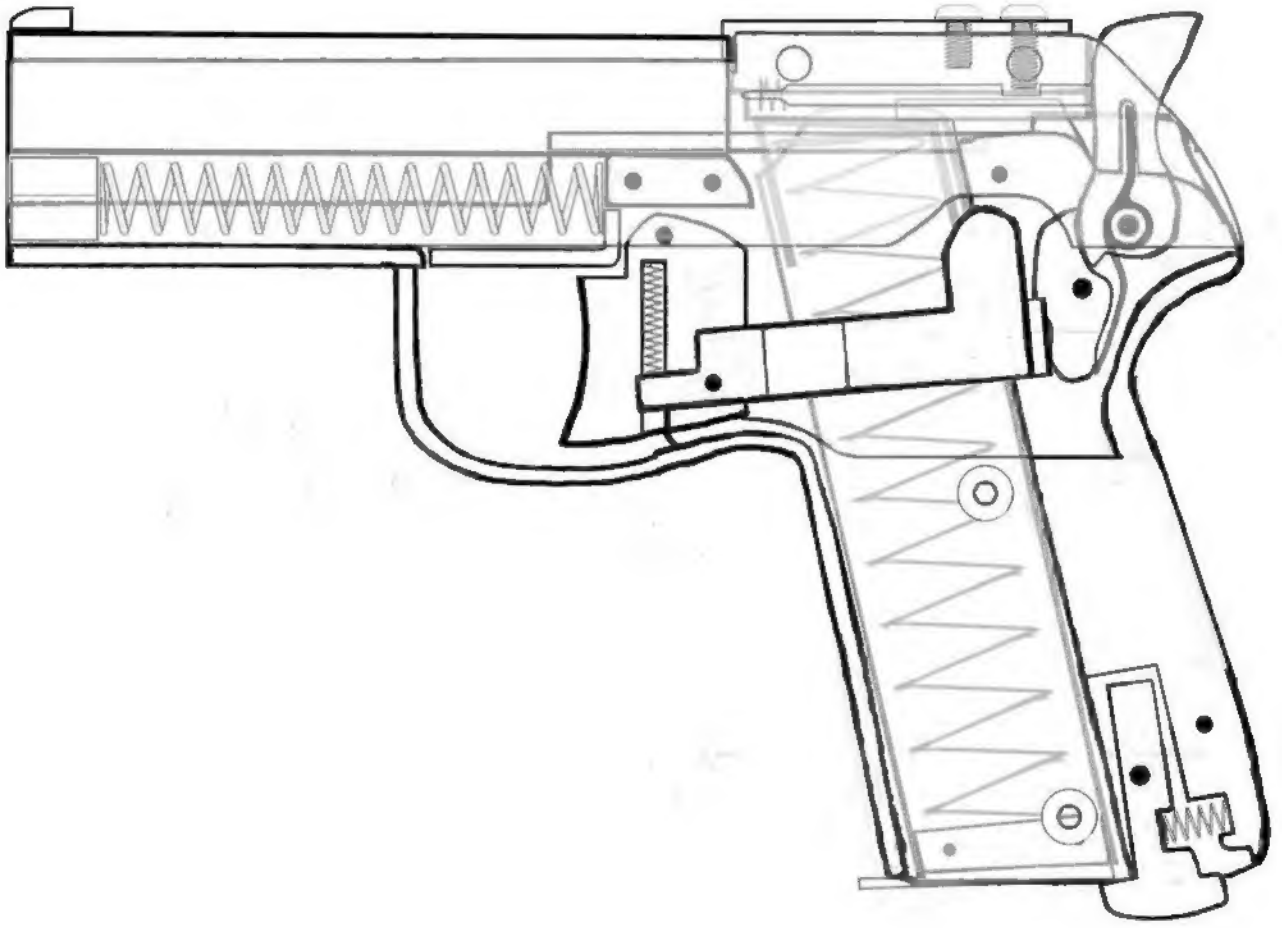
2 inches

**Print on 8.5x11 US letter paper**



2 inches

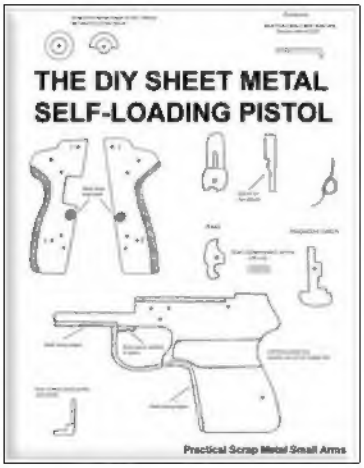
Print on 8.5x11 US letter paper

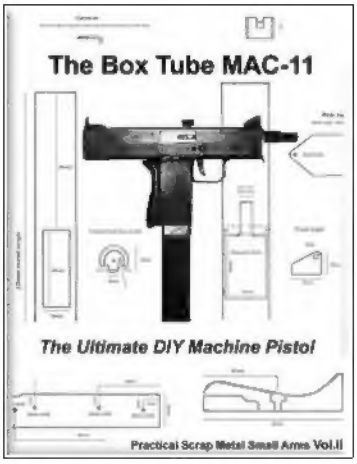


2 inches

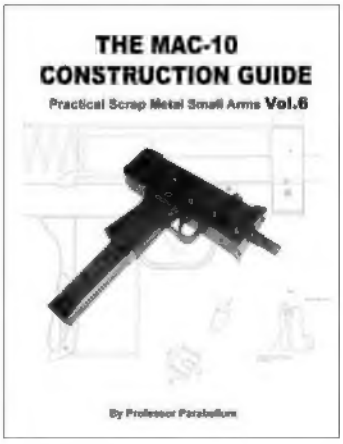
Print on 8.5x11 US letter paper

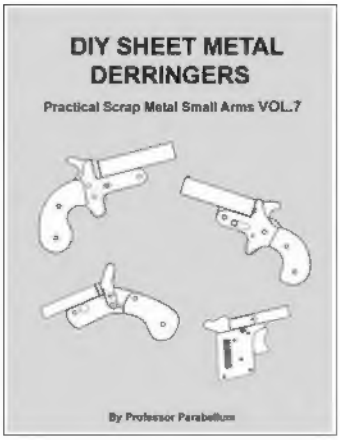
**A MK1 .25 ACP sheet metal pistol successfully built and fired, photos courtesy of Clinton (USA)**

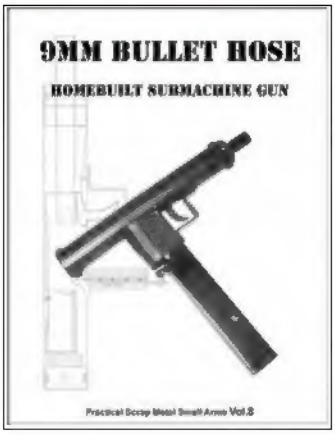

THE DIY SHEET METAL
SELF-LOADING PISTOL
Practical Scrap Metal Small Arms

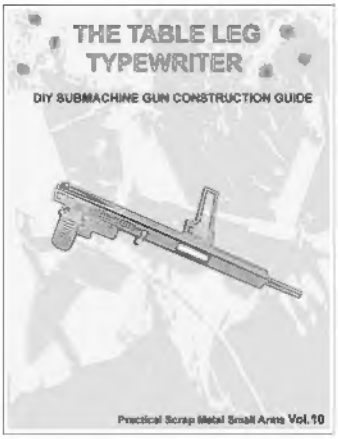

The Box Tube MAC-11
The Ultimate DIY Machine Pistol
Practical Scrap Metal Small Arms Vol.II

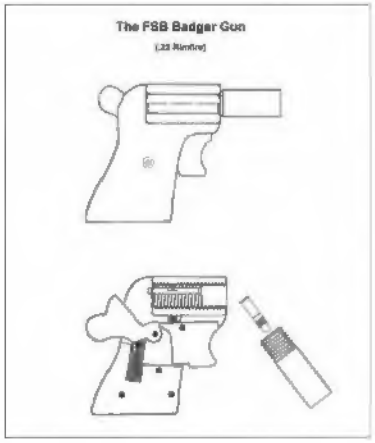

THE DIY STEN GUN
NO LATHE OR MILLING MACHINE REQUIRED!
Practical Scrap Metal Small Arms Vol.3

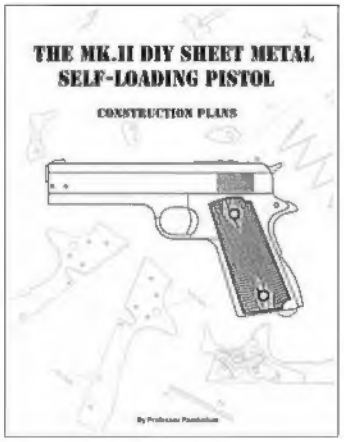

THE MAC-10
CONSTRUCTION GUIDE
Practical Scrap Metal Small Arms Vol.6
By Professor Parabellum

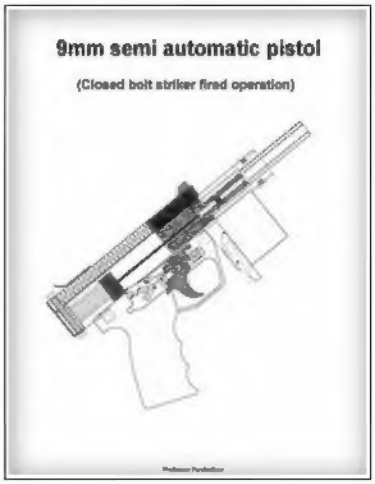

DIY SHEET METAL
DERRINGERS
Practical Scrap Metal Small Arms VOL.7
By Professor Parabellum

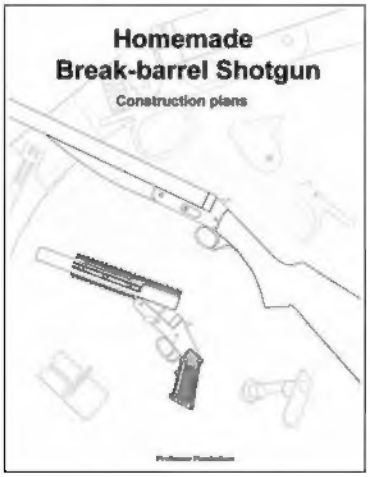

9MM BULLET HOSE
HOMEBUILT SUBMACHINE GUN


THE TABLE LEG
TYPEWRITER
DIY SUBMACHINE GUN CONSTRUCTION GUIDE
Practical Scrap Metal Small Arms Vol.10


The FSB Badger Gun


THE MK.II DIY SHEET METAL
SELF-LOADING PISTOL
CONSTRUCTION PLANS


9mm semi automatic pistol
(Closed bolt striker fired operation)


Homemade
Break-barrel Shotgun
Construction plans