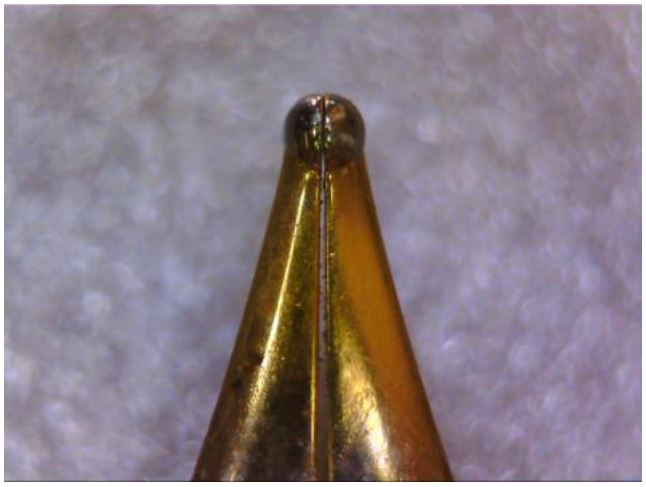
The Metrix Scientific Digital Microscope is extremely versatile – use it as a camera for large objects, a magnifier for smaller objects, and a microscope at high magnification for miniature objects such as nib tines. It can be used to inspect surface weld quality and shape of the tip. Internal features of pens can be inspected in line with the axis of the .32" (8.2mm) X 5.5" (14 cm) housing of the imaging sensor and LEDs . Difficult to evaluate features such as internal lever mechanism and barrel threads and cracks stand out in their clarity when using the 90 degree mirror which slips onto the housing and will fit into areas with .375" (9.6mm) clearance. A Built-in adjustable lighting intensity control on the USB cable provides illumination at the point of focus. Included software provides image processing capabilities. Capture still images at up to 1600 x 1200 pixels resolution, resulting in full resolution printed image of 5.3 inches by 4 inches at 300 dpi (dots per inch). Full resolution video capture up to 30 frames per second.

Use it in handheld mode to view large object surfaces and access tight spaces or use the included adjustable stand for smaller objects. View the images from the Metrix Scientific Digital Microscope directly on your PC using the provided software and save the 5MP images or 30fps video to your hard drive. You can adjust the point of focus lighting using the in-line thumbwheel control on the USB cable.

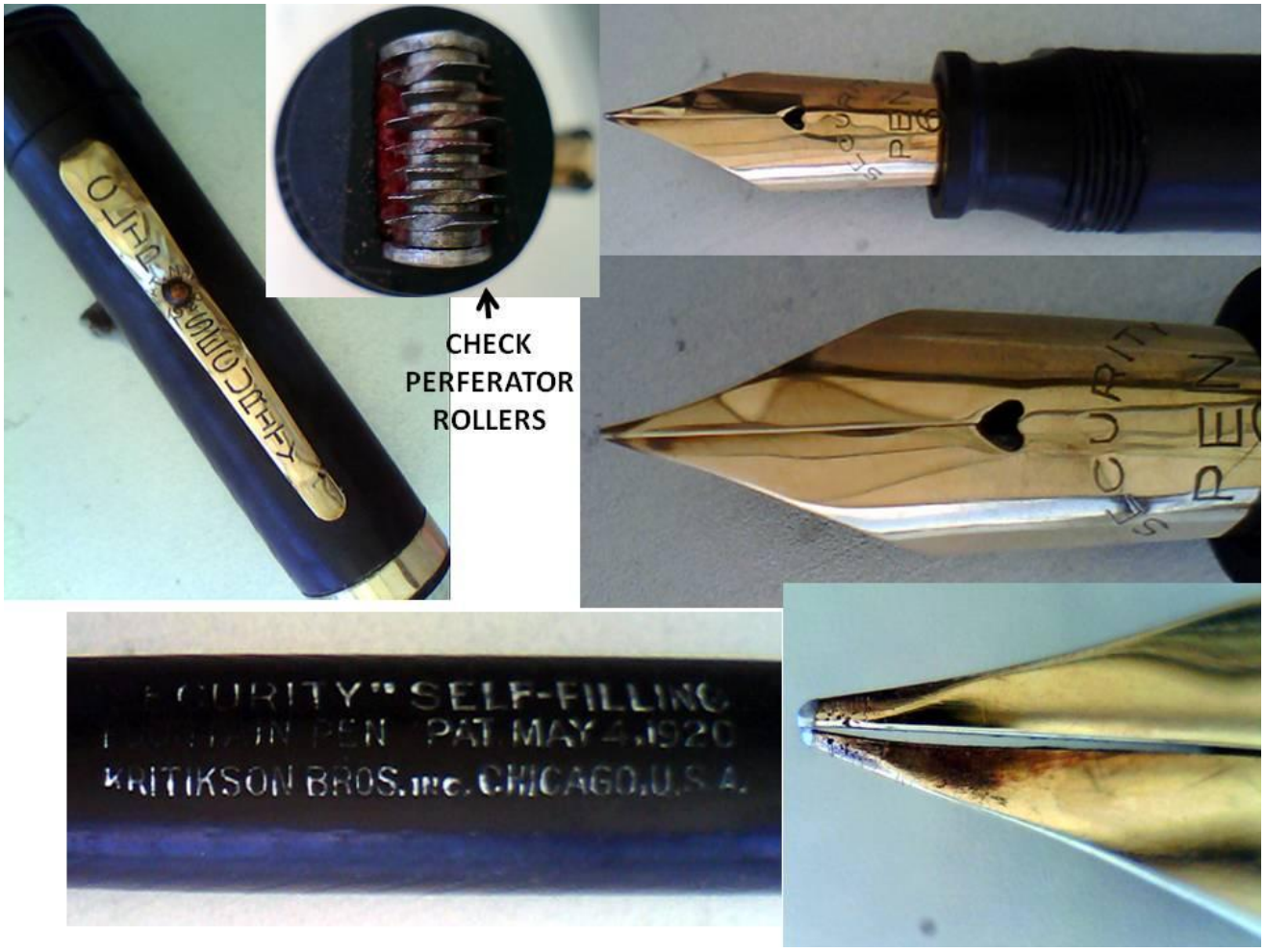


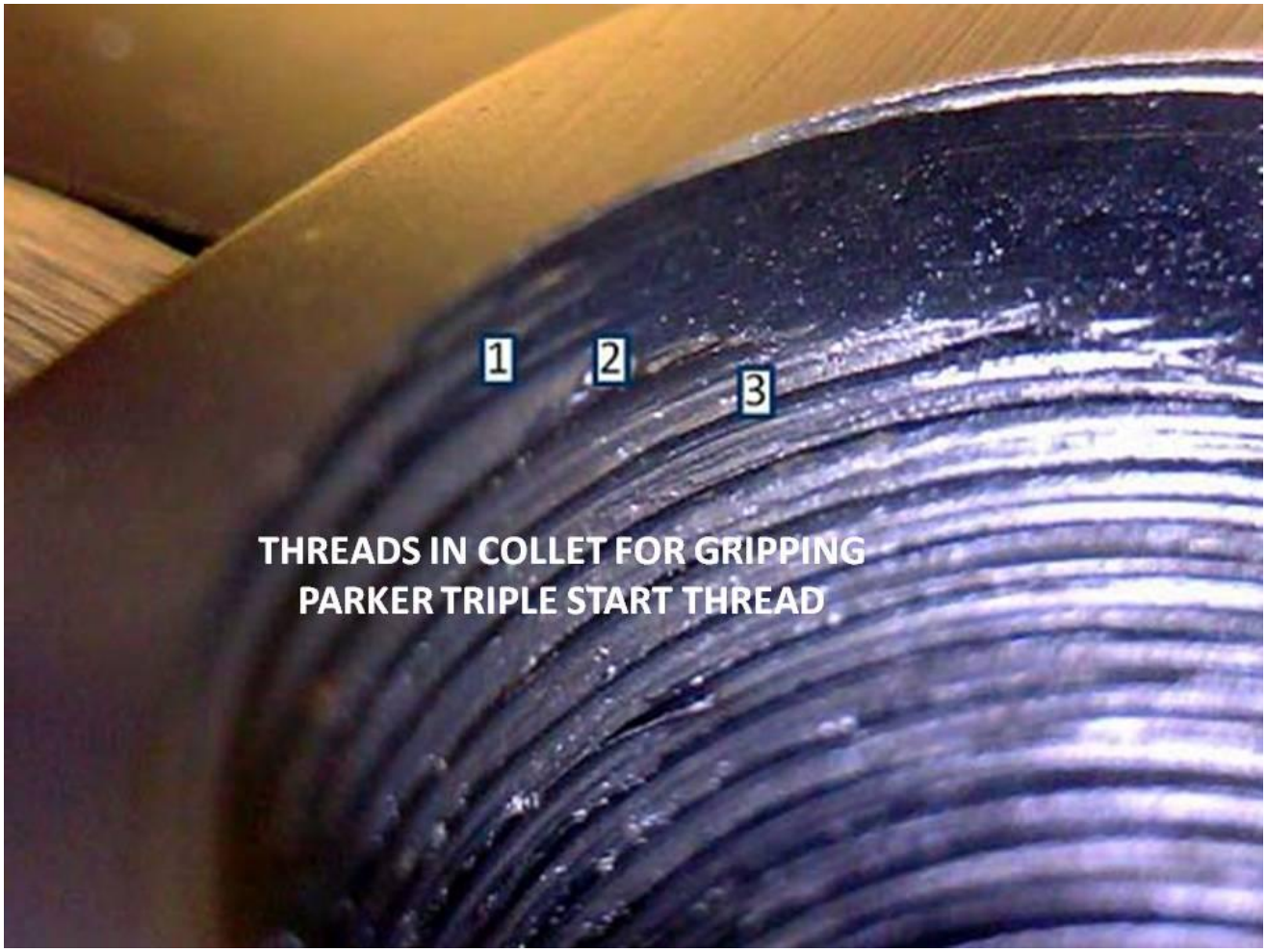
A word about image format;

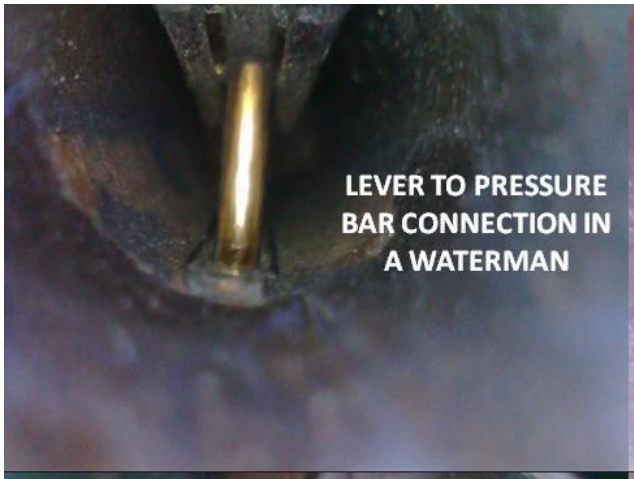
This device captures images and stores them in a bitmap (.bmp) format; most people and their cameras are more familiar with the JPEG (.jpg) format.

JPEG (Joint Photographic Experts Group) is a compression scheme while .bmp (bitmap) is full resolution. That is, in bitmap, every pixel has full information without reference to other pixels. It is therefore the highest fidelity image you can get, that's why this format is used. When you convert to JPEG you lose information that cannot be recovered. For example if the sky is blue, the entire patch gets assigned the same value and that's how you get a smaller file (the amount of compression can be specified by programs like Photoshop for example). The good news is that it's really easy to convert to .jpg by using many available image processing applications. Once you've captured the .bmp image you want to look at it so you open it. For PC users, the default is the "Windows Picture and Fax Viewer", (but most any other photo handling standard will do). Then, if you want to save it as .jpg you just specify (click on the save icon that looks like the old floppy disk) and specify file name, and type in the dialogue windows. You will likely resave it anyway since you will want to convert a name like 1435908503461.bmp to mywidget.jpg. Again, if you want full image fidelity you should keep it in .bmp.

A LOT OF THE FOLLOWING IMAGES BELOW ARE OF THE INSIDE OF A CAP OR BARREL. The images taken of the outsides of pens were included to show the resolution obtainable using this device.


CHECK
PERFERATOR
ROLLERS
SECURITY" SELF-FILLING
PAT. MAY 4, 1920
KRITIKSON BROS. Inc. CHICAGO, U.S.A.

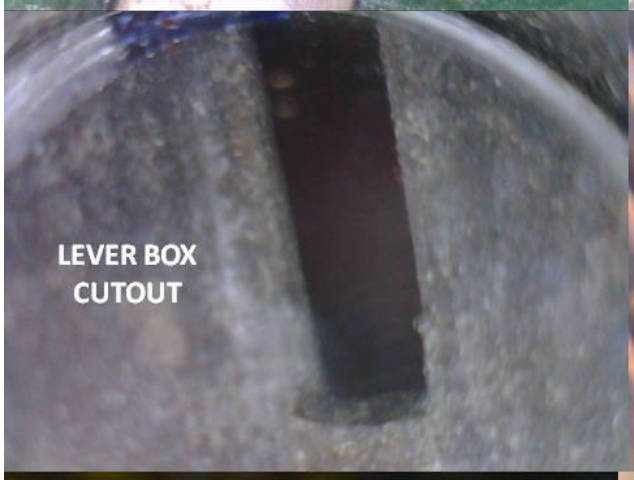

1
2
3
THREADS IN COLLET FOR GRIPPING
PARKER TRIPLE START THREAD


LEVER TO PRESSURE
BAR CONNECTION IN
A WATERMAN


WATERMAN CLIP
"U" SHAPED RIVET


SHEAFFER FLAT TOP
CLIP ANCHORING

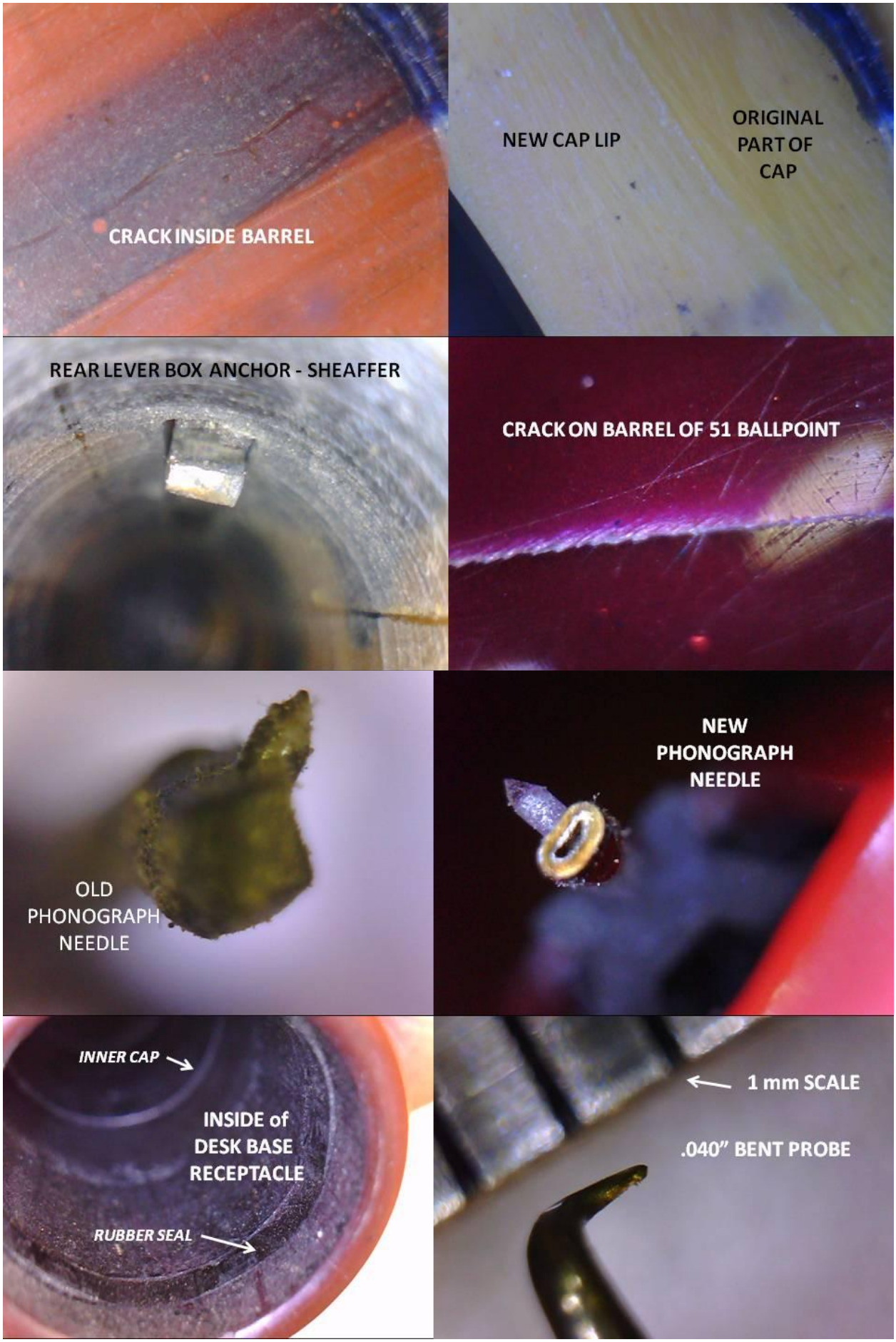

WATERMAN CLIP
DISCRETE RIVETS


LEVER BOX
CUTOUT


BARREL INNER
THREADS


SHEAFFER
PLUNGER
SEAL


EARLY SHEAFFER
PRESSURE BAR
END ANCHOR


CRACK INSIDE BARREL
NEW CAP LIP
ORIGINAL PART OF CAP
REAR LEVER BOX ANCHOR - SHEAFFER
CRACK ON BARREL OF 51 BALLPOINT
OLD PHONOGRAPH NEEDLE
NEW PHONOGRAPH NEEDLE
INNER CAP
INSIDE of DESK BASE RECEPTACLE
RUBBER SEAL
1 mm SCALE
.040" BENT PROBE