

# A Theory on the Cause of Misplaced Dates

by

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MPDs are radically misplaced dates that often show up as faint impressions in the denticles and main devices just above or below the primary date on US coins. There is a growing interest in this field of collecting that is wide open for new discoveries. MPDs have in the past been thought of as a blunder, or act of stupidity. Being an engraver and die sinker, I was delighted that Marvin Erickson defended engravers and die sinkers in a recent letter in *Coin World* by saying there must be a better explanation of why there are so many of these MPDs on 19th century US coins. Mr. Erickson writes "... die makers are very intelligent, talented and ingenious people who have produced many excellent works of art on our coinage and thus deserve better credit than to be called stupid."

There is a growing number of people who are questioning the stupid mistake explanation, and along with it, a growing number of theories on why MPDs occur on about 500 die varieties of all denominations of US coinage. MPDs started as early as 1840 and continued until 1908 when the mint incorporated full dates into the hubs, thereby eliminating the possibility of misplaced dates altogether.

The general pattern and regularity of where MPDs show up on the coins strongly suggest that there is some sort of method to their appearance. They usually show up directly north or south of the primary date with an almost mechanical consistency. These patterns might point to something inherent to the equipment used to sink the dates, which would in turn lead to a date alignment jig theory. This is not an unreasonable notion.

Die sinking jigs were used all the way back to the first year of production at the US mint. We know this from a receipt dated 1793 for a die sinking device built by Jacob Craft. However, that is about all we know about it. The few descriptions of early die sinking techniques that I have read are vague and generalized. I have never seen or read anything that describes production date sinking.

I use a jig all the time to sink individual letters and digits into the dies for our 18th century coin reproductions at Gallery Mint. I find it absolutely essential for accurately placing letters. It is just a simple guide to keep the letters, digits and denticles aligned in a uniform circle. I use another jig for free hand punching. This is really a simple tool that just holds the punch perpendicular to the die. There is no guide, and I use it to place leaves, and other ornamental devices. I use three hammers of different weights. There are small hammers for small letters, and bigger hammers for bigger letters.

It is no secret that the mint also used hammers to sink individual letters into all of the working dies prior to 1836. After that, they started the practice of sinking one master die, and then cloning all of the working dies from this one master, and adding the date in a separate operation.

Beginning in 1836, the hubs for these master dies were cut on a portrait lathe. After hardening, the hub was then used to sink the main device on the master die. This was done on a screw press. The individual letters were then added to the master die with a hammer, using a die sinking device as a guide.

I know through experience that full dates can be pounded into a die with a hammer. But, I have to hit the punch so hard, and so many times, that it truly is frightening. With this kind of impact, you risk breaking or chipping the punch if you don't hit it squarely. I'm also scared of damaging the punch holding jig by hitting it so hard.

A full date really does have enough surface area to warrant the use of a small, bench mounted screw press. For sinking full dates and other medium size punches here at Gallery Mint, we use an adaptor that fits into the ram of the screw press. This adaptor has a hole that accepts a square punch. Before tightening the set screw that holds the punch secure, I like to rest the ram on a piece of copper or soft steel to seat the punch all the way up to the top of this adaptor where it has solid steel backing it up. This doesn't take much pressure, and the punch can leave a light impression similar to what we see on MPDs.

There is something inherent to screw presses that makes me believe that the use of the screw press combined with some bad habits of its operator, are the main reasons why MPDs exist. The ram on a screw press always wants to come down.

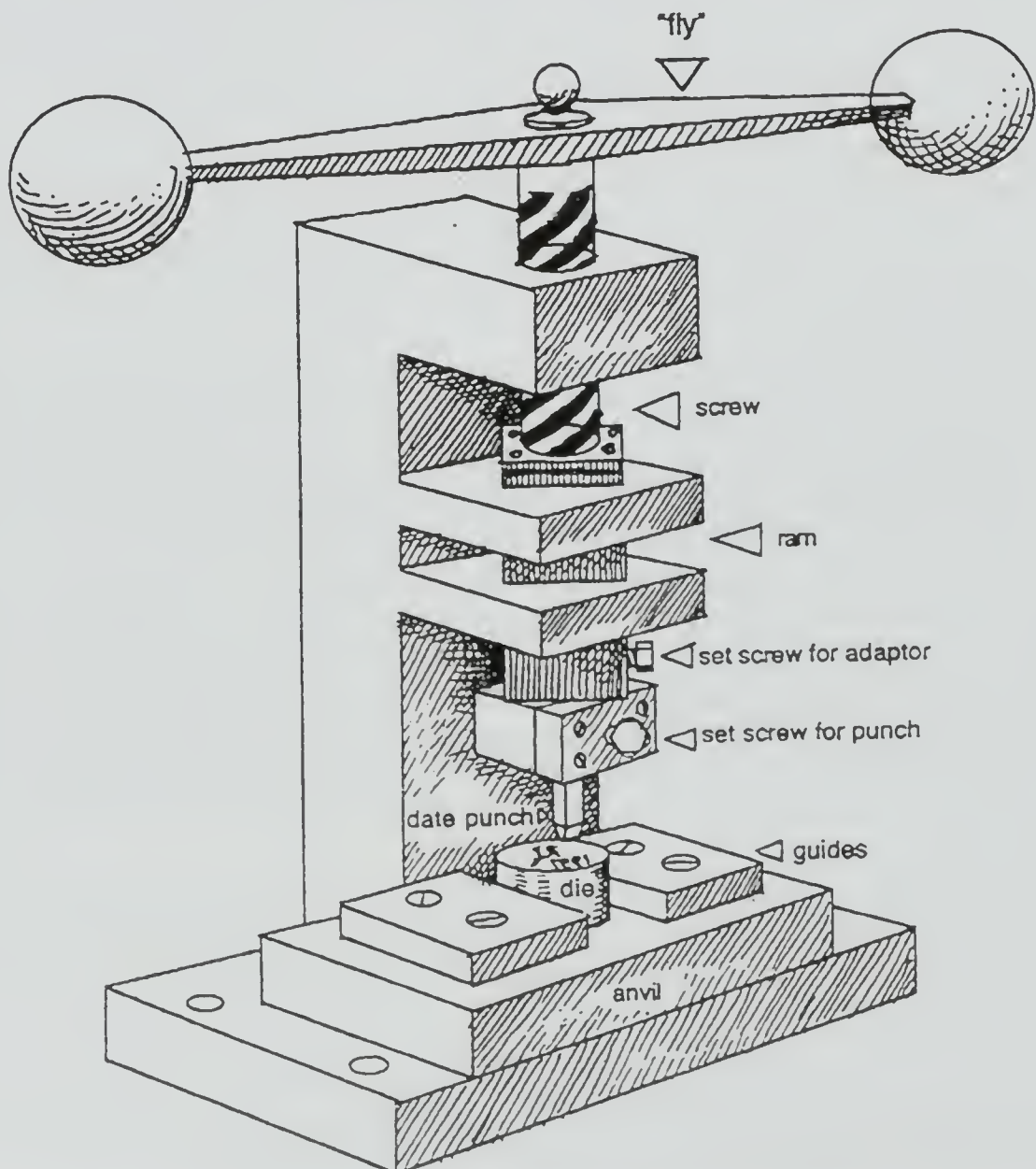


Diagram for Operational Screw Press

If you don't block it up, hold it back, or tie it back, it will just screw itself down on its own weight, gaining momentum as it falls. More modern presses sometimes come equipped with a heavy spring to hold the ram up.

I designed a simple guide system that might be used to convert a screw press into an efficient and versatile production dating machine. With this system, the guides will keep the date punch perpendicular to the center of any die. With this important tangent guided, it would be easy for the die sinker to position the height and rotation by eye. A back stop could be added to set the radius, but the very existence of MPDs indicates that this was not done.

Now that our press is tooled up, let us put it in the hands of an assistant die sinker and explore a number of ways that an MPD could be created, keeping in mind that the nature of this press is that the ram always wants to come down.

Case #1. It is not a bad idea to seat the punch all the way up into the adaptor before tightening the set screw. Could an assistant have used the edge of a die to rest the punch while tightening the set screw? After all, he is not putting a lot of pressure on it, and even if he did make a little mark, who is going to notice it way down in the denticles?

Case #2. Assume that an assistant is dating a batch of dies and gets called away from his bench for some reason. Instead of taking a few seconds to wind the screw up and tie it off, he lets the ram come down, and carefully rests the punch in some inconspicuous place where any mark would be hidden and no one would notice. This would be quicker and safer than resting the punch on the hard anvil below where the punch could be damaged. I would guess that this tool was at least as valuable as any single die it dated.

Case #3. Something urgent is happening and the assistant accidentally releases the fly and the ram comes down and punches a full date where it doesn't belong.

The possibilities are limitless when you have a human being in charge of the process, even if he is a trained technician. The expected mistakes and accidents in the course of set up alone could account for many MPDs. I still think the majority of the MPDs are created by inadvertent punch rest marks created from the bad habits of the die sinkers as described in Case #2. It could be that the die sinker himself didn't notice the damage he left behind. In more severe cases caused by an accident that he did notice, he could send the die back to the engraver for repairs.

The use of a screw press could also explain why you don't see stray mintmarks in the denticles on the reverse. Mintmarks are very small. A screw press would not have been used to sink them. A two ounce hammer is all that would be needed to tap in a small, single letter. Perhaps the device Del Romines describes in his date alignment jig theory was actually used to sink mintmarks.

I contend that MPDs didn't happen intentionally. Usually, these are so light, they don't appear to have been a serious attempt to sink a date. I don't believe the chief engraver was doing the production dating at the mint at this time. Perhaps the person responsible had his own quality standards. Once bad habits get started, they can be passed right along with all of the other tricks of the trade. Mint employees may have thought that a little mark on the obverse die would not be noticed. And indeed, who did notice during the 19th century? But a hundred years later, numismatists with 10x and 20x loupes are still discovering new MPD varieties on all denominations of 19th century US coinage.