The Three Marvelously-Designed Herseys

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S.S. HERSEY PATENTED JUNE 18 1861

Civil War Era Patented Parers

Civil War-era patents of labor-saving devices pale in comparison to their post-war counterparts in terms of sheer numbers. Perhaps that is one reason I have always had a deep appreciation for apple parers. To the best of my knowledge apple parers patented during the Civil War era are limited to three Herseys, two arcs by Jonathan White, two versions of Whittemore's Returntable, both the Leslie & Hudson and Hudson's Improved planetary models, the 1863 Monroe Eclipse in two models, Pratt's long-handle, and most probably Goodell's first arc, although it is impossible to pin down an exact date this went into production. I would venture that no collector has a full set of these parers. The earliest Hersey and both of the Monroe's are exceedingly scarce.

S. S. Hersey Parers

Three such parers all based on patents by S. S. Hersey of 6-18-61 and 8-30-64 found their way to production. All will be discussed in detail including the 1864 moderately common, the second 1861 model which is likely very rare, and the super-rare first model with an arc turntable that matches the 1861 patent drawing. We will explore these parers in reverse order of production date.

Double Action Apple Parer

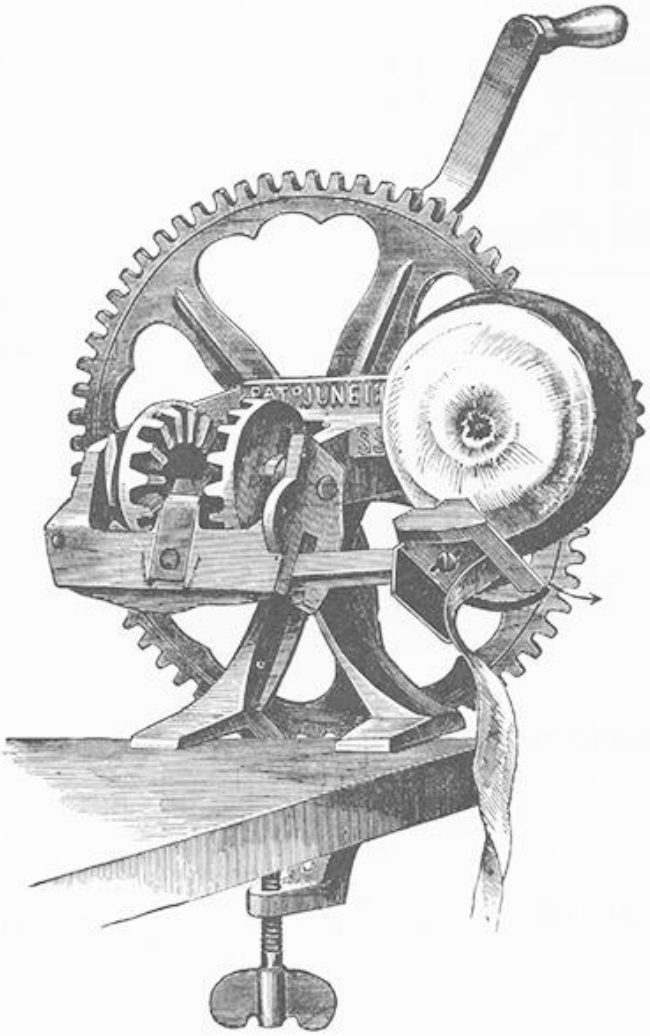
Hersey's 1864 model known as the Double Action Apple Parer, fig. 1, was lavishly advertised in an 1869 Dover Stamping Company Catalog with two full pages, figs. 2 and 3, touting the "Superiority of the Machine Over All Others", (Goodrich & Whitney 1994/1869, pp 112-113). When I first viewed Marion Levy's collection around 1981, I spotted this model on the shelf. He allowed me to hold and crank it to observe the "automatic transmission" and its 2-way paring action. I was immediately smitten. His calm reply was "Oh, you will find one of those." He was more confident than I was but within a year I was able to acquire one from the late Tom Wiggins in Billerica,

Massachusetts. I have had a number of these over the years and the price has actually come down, but I have never found one as good overall as the first one. I paid $150 for it in 1981 or 1982. Dover's wonderful illustration of this parer is included in *Apple Parers*, (Thornton 1997, p. 119).

Fig. 1 S. S. Hersey's Double Action Parer

There is virtually no wasted motion in the Hersey models. One and a half turns of the crank completes paring in either direction for the Double Action Apple Parer. It is beyond this article to describe in engineering terms the intricacies of the gearing. Suffice it to say, the differential gears carry the blade to and fro as the paring arm action is shifted between the two bevel gears clearly visible when observing from the rear or opposite the large drive gear, fig 4. All three Herseys had large drive gears and high

HERSEY'S PATENT
DOUBLE ACTION APPLE PARER.



This Cut represents the Machine paring the apple from the POINT of the Fork.

The ONLY MACHINE ever Patented which pares an Apple with the reverse movement of the Knife!

Awarded the FIRST PREMIUM by the New England Agricultural Society, 1864.

Fig. 2 Dover Stamping Company Hersey Advertisement Page 112

SUPERIORITY OF THIS MACHINE

OVER ALL OTHERS!

1st It is the most rapid worker.

By one and a half turns of the crank it pares the apple and carries the knife out of the way, so that the apple may be removed without danger of cutting or bruising the hand by coming in contact with any part of the machine. By another turn and a half of the crank the knife is *reversed* and *pares back to its original position*, and this *without reversing* the movement of the crank; thus paring *two* apples with *only three* turns of the crank, which is several times less than is required by any other machine.

2d. It is the most cleanly Machine.

By the peculiar construction and position of the knife, it is impossible for the parings and juice of the apple to come in contact with the bearings and gear of the machine, thereby avoiding the disagreeable gumming up and dirt incident to all other machines, and no oil can come in contact with the fruit. By placing the machine on the corner of the table or bench *all the parings* will fall clear of the machine into any recepticle which may be placed for them.

3d It is the most durable Machine.

There are no short bearings that are subject to much friction, as is almost universally the case in other machines. Every bearing can be thoroughly and easily oiled, and as the juice of the apple cannot get to the bearings to destroy the oil, a large proportion of the friction incident to all other machines is avoided.

Fig. 3 Dover Stamping Company Hersey Advertisement Page 113

gear ratios to achieve the paring with the fewest revolutions of the crank. In this version, it took 1 ½ turns. On the two earlier versions that will be discussed later in this article, it only took one turn. They were ahead of their time and it is a surprise we don't find more of these incredible earlier models. The 1864 model is found in most collections of 50 or more but that in no way reduces its appeal. It remains one of my favorites to use and demonstrate; to this day my appreciation for its precise movements has never diminished.

Fig. 4 Differential Gearing Mechanism of the Double Action Apple Parer

S. S. Hersey Rotating Turntable with Quick Return Arm

The second Hersey is seldom seen. I know of fewer than 10 of these and they all rest in large collections, figs. 5 and 6. It is a quick-return parer. The turntable itself does not

Fig. 5 S.S. Hersey Quick Return with Rotating Turntable Front View

return. It always rotates, but as the paring arm is slightly lifted off the turntable, the paring arm snaps back and the turntable continues to turn. There are two small raised castings (ears) on the turntable, equally spaced so that they are 180 Degrees apart. This permits the paring of two apples per turn of the turntable. It is a bit unnerving to use because the paring arm snaps back with authority. For this reason, I seldom demonstrate it. I made an exception one year ago at a local gathering. I set up 21 speedy parers for the crowd, and having never actually practiced, I attempted to pare 20 apples in one minute; figuring one would be a dud. The Hersey only used one second and that helped me to beat my target paring 20 apples in just 48 seconds. I held my breath the whole time. But the crowd was mesmerized.

Fig. 6 S.S. Hersey Quick Return with Rotating Turntable Back View

S. S. Hersey Quick Return with Arc Turntable

Hersey's earliest parer, the exceedingly scarce 1861 model with an arc turntable has only surfaced in three collections. A photo of it does not appear in Don Thornton's book. To my knowledge, this is the first time a photo of one has appeared anywhere, figs. 7 and 8. Its drive gear is a bit more ornate and it retains the double action spring of the second model. This unique spring is used to put tension on the paring arm and at the same time activates the return-action on the turntable.

Fig. 7 S.S. Hersey Quick Return with Arc Turntable Front View

No other paring device ever copied this and it works perfectly. My own apparently unused example is missing the spring as was the only other example I have seen. This is not unusual for these early models that used brass springs. They are often broken or missing entirely. I hope I never hear of a collector who passed up one of these because of a missing spring! Perhaps one of the cleverest features on this prized device is a small first class lever teeter-totter mechanism. The teeter-totter mechanism, located on the right side of the base just behind the drive gear, is a safety feature to prevent gear tooth breakage, fig. 9. On almost all return parers, there has to be some missing teeth in

the drive-line to allow the geared turntable to snap back and clear other gears. One problem is that aggressive cranking might allow the rotating drive gears to come into contact with the rapidly reversing turntable teeth.

Fig. 8 S.S. Hersey Quick Return with Arc Turntable Back View

To overcome this, the clever designer of this first Hersey built it so that as the arc turntable begins to rotate, it contacts one end of the teeter-totter, forcing the other end to rise. An ear on the back side of the large drive gear hits the high end of the teeter totter and stops rotating just after the last drive tooth and turntable tooth have meshed. Thus, the drive gear stops, the turntable snaps back releasing the pressure on the teeter-totter, the teeter-totter goes back down and the drive gear is free to rotate again. It is

quite fun to watch this simple but ingenious application of a first class lever to prevent the inevitable harm that would occur in its absence.

Fig. 9 S.S. Hersey First Class Lever Teeter-Totter Mechanism

Regarding my own original 1861 Hersey, I paid an enormous price for it on eBay three years ago but I do not believe I will ever see another one for sale. The seller told me he had just picked it up at a yard sale in Connecticut. He was a happy guy.

I would like to include one side note here regarding this purchase. I had it sent UPS to my office. I instructed the seller to pack it like it was a Ming Dynasty vase and he assured me he would have it professionally packed. When our favorite UPS driver arrived, he held out a completely crushed, thin, flimsy box. My heart sank. It sank even more when he said "I want to stand here while you open that to see if it got

damaged." I really hated to do that because I did not want anyone there if I cried. But open it I did, and despite almost no packing in this small box, a miracle had brought it through unscathed. I cried anyway.

Conclusion

In evaluating the line of Herseys, one must conclude that whatever individual or individuals designed these perfectly efficient machines deserve immense praise for their end result. It would be impossible not to be in awe of these three very special parers. Owning even the most common of the three should give any collector a sense of satisfaction.

I will pass along something Marion Levy told me over 30 years ago when I confessed I only had 15 parers and he had 55, including the Star. He told me "You can have a great deal of fun regardless of how large your collection is." Those were kind words from a man of superior intellect and financial means. I hope anything I share with readers and fellow collectors will spread the sentiment of his generous statement.

Happy Collecting.

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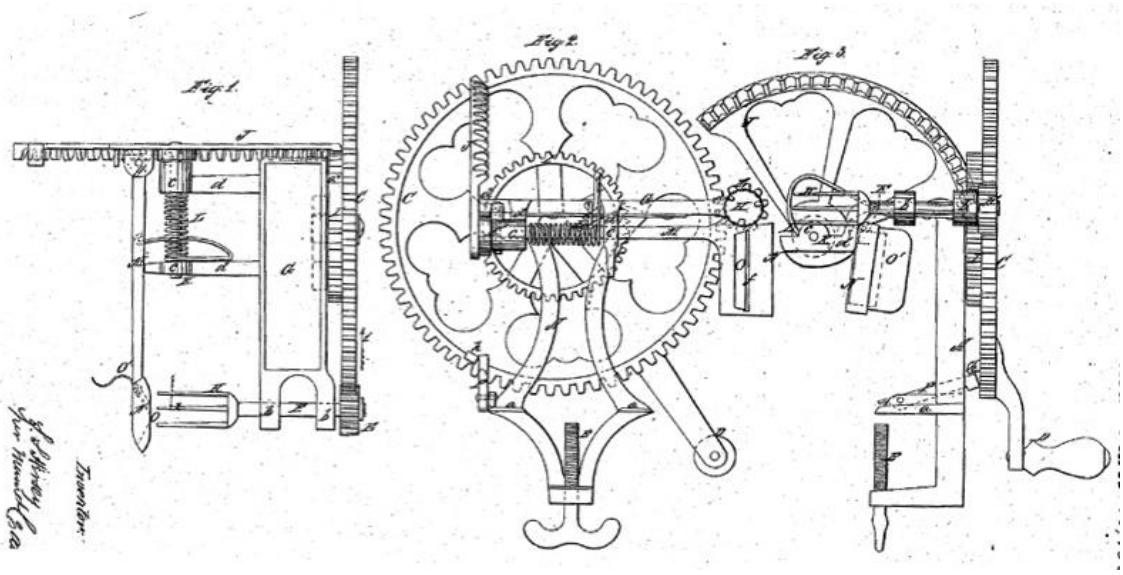
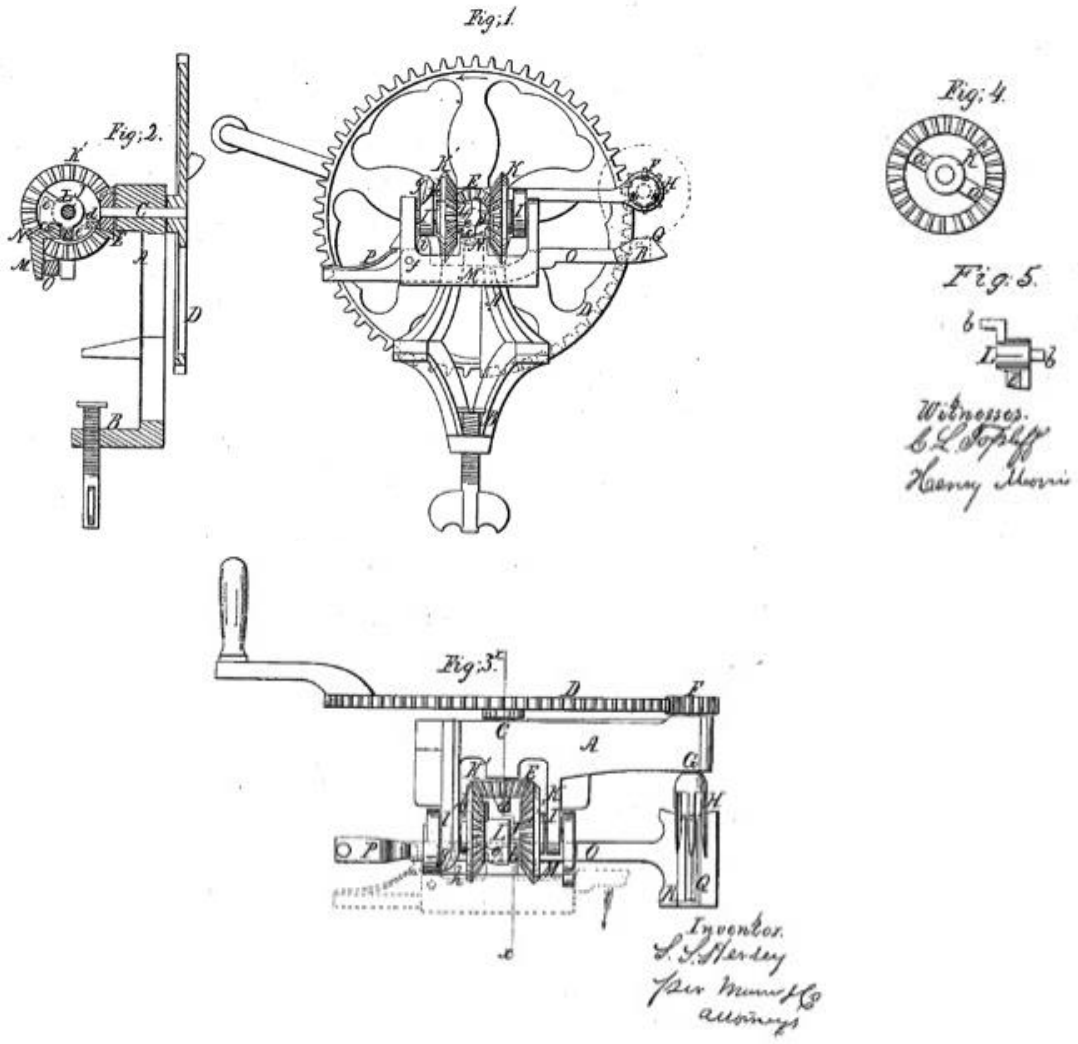


Hersey's 1861 Quick Return Apple Parer patent drawings *Fig. 1, 2,and 3*.



Hersey's 1864 Improved Apple Parer patent drawings *Fig 1, 2, 3, 4, and 5*.