

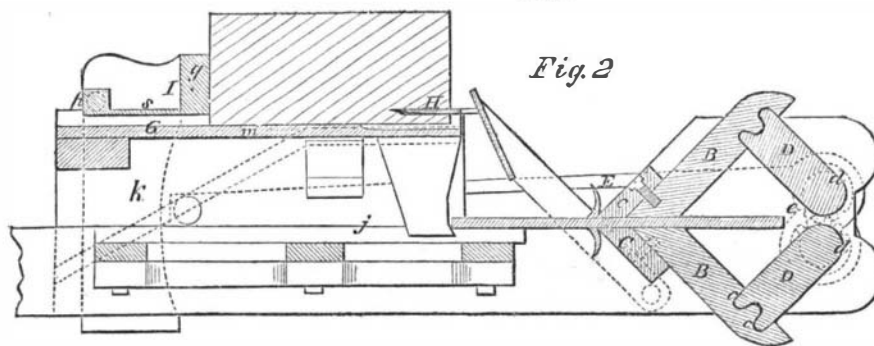
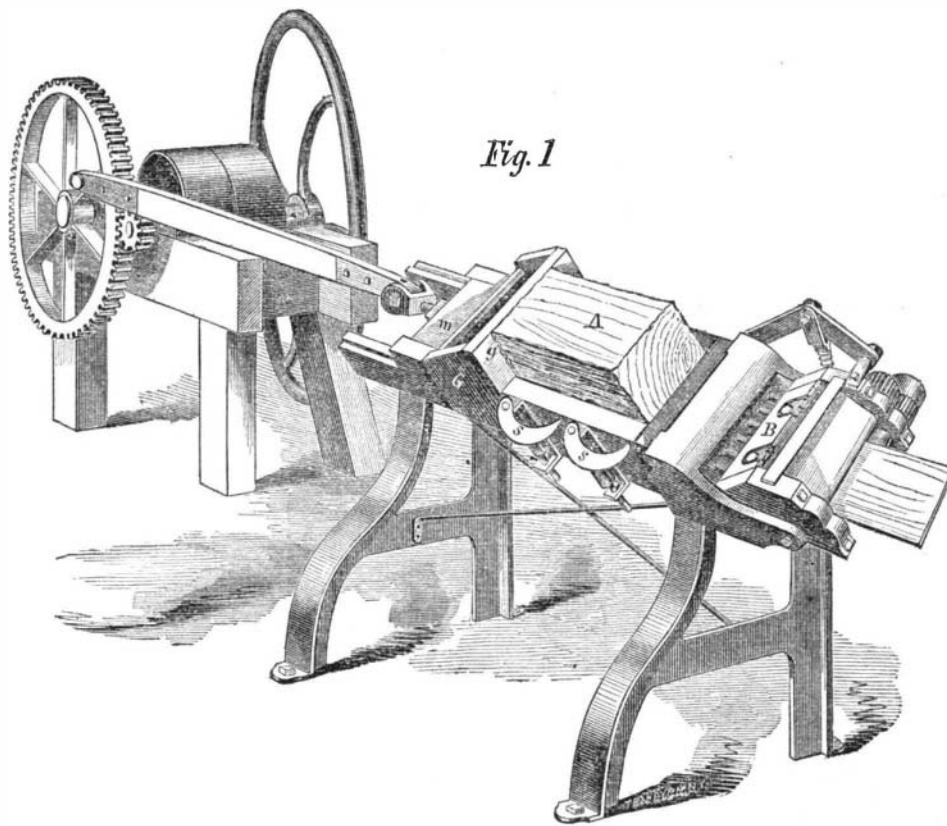
IMPROVED SHINGLE MACHINE.

The well-established superiority of rived and shaved shingles over those which are sawed, and the vast amount of manual labor which is annually expended in shaving shingles by hand, has called forth a great deal of inventive effort to devise some mode of accomplishing the same results by means of machinery. We have seen some large and expensive machines which made very handsome shaved shingles, but it is of course very desirable to supersede them by others smaller, cheaper and more simple. Such is the object of the invention which we here illustrate.

A is the bolt from which the shingles are to be rived, previously got out in proper size and form, now placed upon the inclined bed of the machine, as shown. The bolt remains stationary, merely dropping down as the shingles are rived from its lower side, while the knife, H, Fig. 2, is fastened to the right hand end of the bed, m, which receives a reciprocating motion from the crank, r, Fig. 2. The shingle is split off as the knife is being drawn back from the right to the left, dropping down upon the slats, j, ready to be pushed forward through the shaving knives on the return of the bed, m. The slats, j, are about an inch in width and an inch apart, and are stationary, while the reciprocating bed, m, is furnished with similar slats sliding freely between the slats, j. The square ends of the moving slats coming against the end of the rived shingle press it between the planing knives. As the bed, m, moves from the right to the left, the crescent-shaped plates, s s, turn in between the parting shingle and the remainder of the bolt, and support the bolt till the stroke is completed; when the bed, m, returns from the left to the right it presses the plates, s s, out from beneath the bolt, allowing it to fall down upon the bed, m, in front of the riving knife. In this motion of the bed from left to right, the shingle is planed in the proper wedge shape by being pushed between the knives, C C, which are gradually brought more nearly together during the passage of the shingle. This motion of the knives is effected by bolting them securely to the slides, B B, and imparting to these slides a short reciprocating motion by means of the cranks, D D. These cranks are secured to the axles, d d, which gear together, as shown at e, and receive a rocking motion from the lever, E, shown in dotted lines, which is attached to one of the axles, d. This lever has a forked elbow at its end which grasps the inclined ledge, g, which ledge is fastened upon the further side of the sliding bed, m, and as it moves along, raises and lowers the end of the lever, thus alter-

nately drawing the knives, C C, apart and pressing them together with great force. By varying the inclination of the different portions of the ledge, g, the shape of the

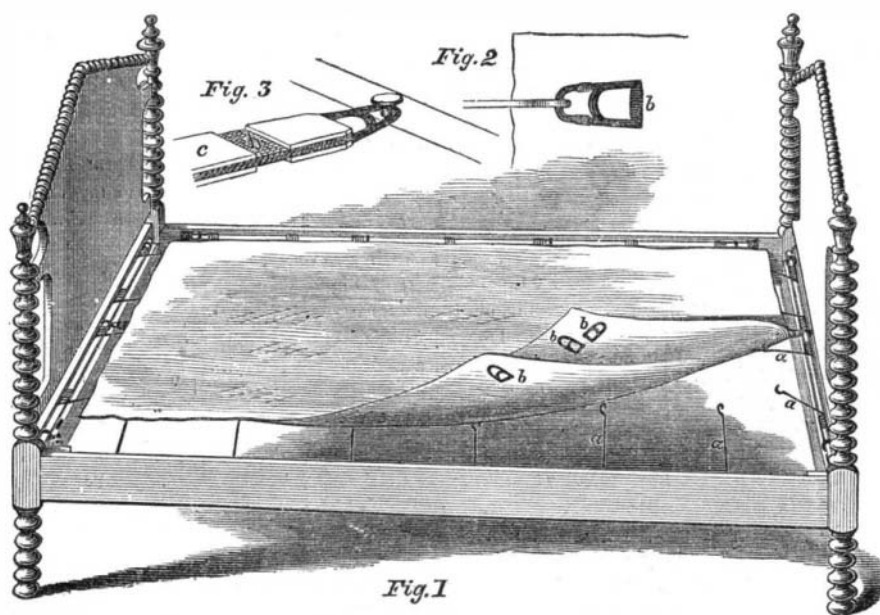
Scientific American Patent Agency, Dec. 13, 1859. The inventor is E. R. Morrison, who assigned the invention to S. C. Hills, to whom the patent was granted and who may be addressed for further information in relation to the matter at No. 12 Platt-street, this city.



NEW PATENT SHINGLE MACHINE.

shingle may be regulated at pleasure. These combinations make a compact, simple machine which produces a very handsome shaved shingle. It is complete in

loops upon the hooks. Fig. 3 shows the end of the middle bar, C, which is stretched longitudinally below the sacking to prevent the sagging of the bed in the middle.



HATCH'S IMPROVED BED BOTTOM.

itself, requiring no engineering skill to place it, and the several motions are effected by such arrangement as to make them very certain in their relations to each other. The patent for this invention was issued through the

Scientific American Patent Agency, to Royal Hatch, Aug. 30, 1859, and persons desiring further information will please address the manufacturers, Henry C. Hatch & Co., Stafford, Vt.

HATCH'S BED BOTTOM.

This is a bed bottom of sacking or canvas, attached to the bedstead by elastic spiral springs, and supported in the middle by an elastic bar, with an improved mode of attaching the sacking to the springs.

In the annexed cut, Fig. 1 represents an ordinary bedstead with strips of wood secured firmly to the insides of the side and end rails. To these strips small cylindrical rods are fastened by means of screws with solid ring heads, through which the rods pass. Wrapped around these rods are the spiral springs, a a a, one end of which is pushed into the strip beneath to keep the rod from turning, and the other end projects upward and inward towards the middle of the bed, and is bent to form a hook. To these hooks the sacking is attached by means of the metallic loops, b b b, illustrated on a larger scale in Fig. 2. These loops may be made of malleable iron, and fastened to the lower side of the sacking with thread or twine. A hand hook is used to stretch the sacking in placing the loops upon the hooks of the spiral springs, and when the sacking becomes stretched by use, it may be tightened by catching the cross bars of the

Elastic canvas or sacking bed bottoms are particularly adapted to warm climates or hot seasons, especially for invalids who are confined for a long time to their beds. It will be seen that the mode of connection here described renders it very easy to attach this bottom to berths in ships and steamers, and to bedsteads of any width. We have seen a child's crib, constructed after Mr. Hatch's patent, and we consider is well adapted to such an application.

The patent for this invention was issued, through the