J. Stever,

Planing Metals.

No. 12,076. Patented Dec. 12, 1854.

Fig: 1.

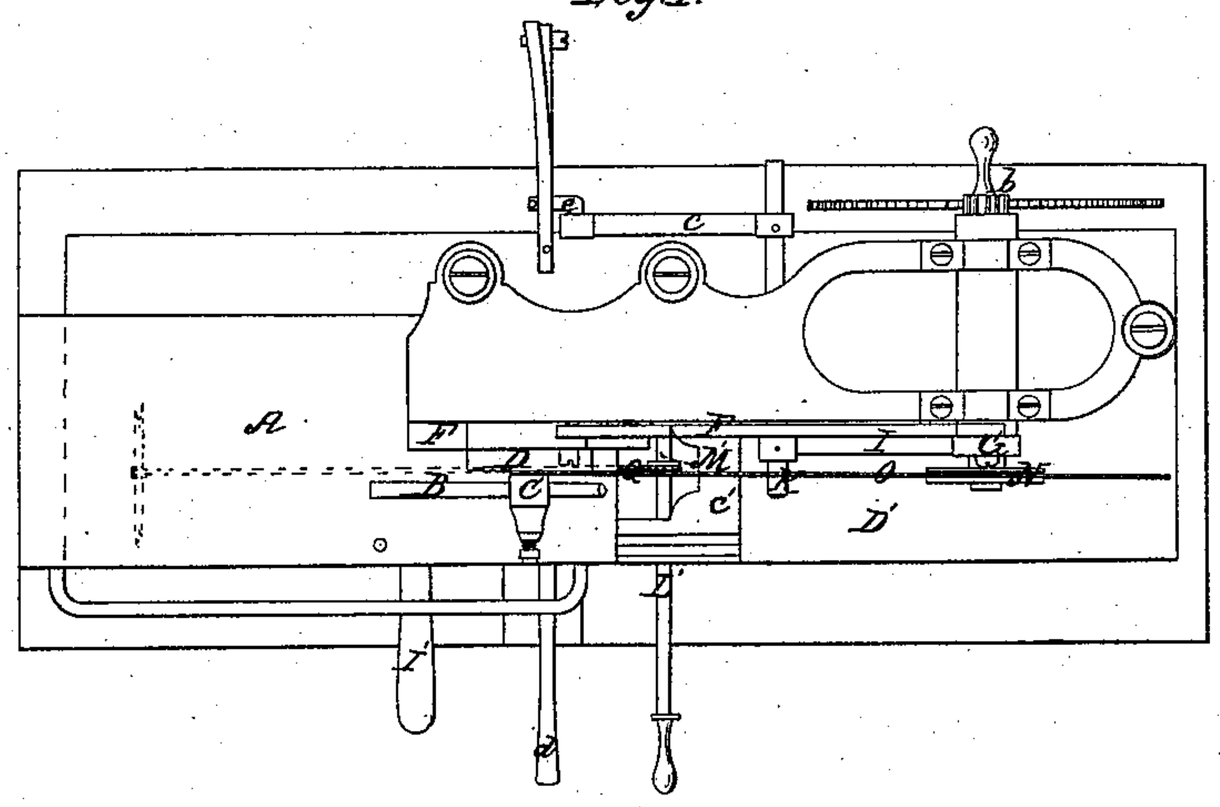


Fig: 2.

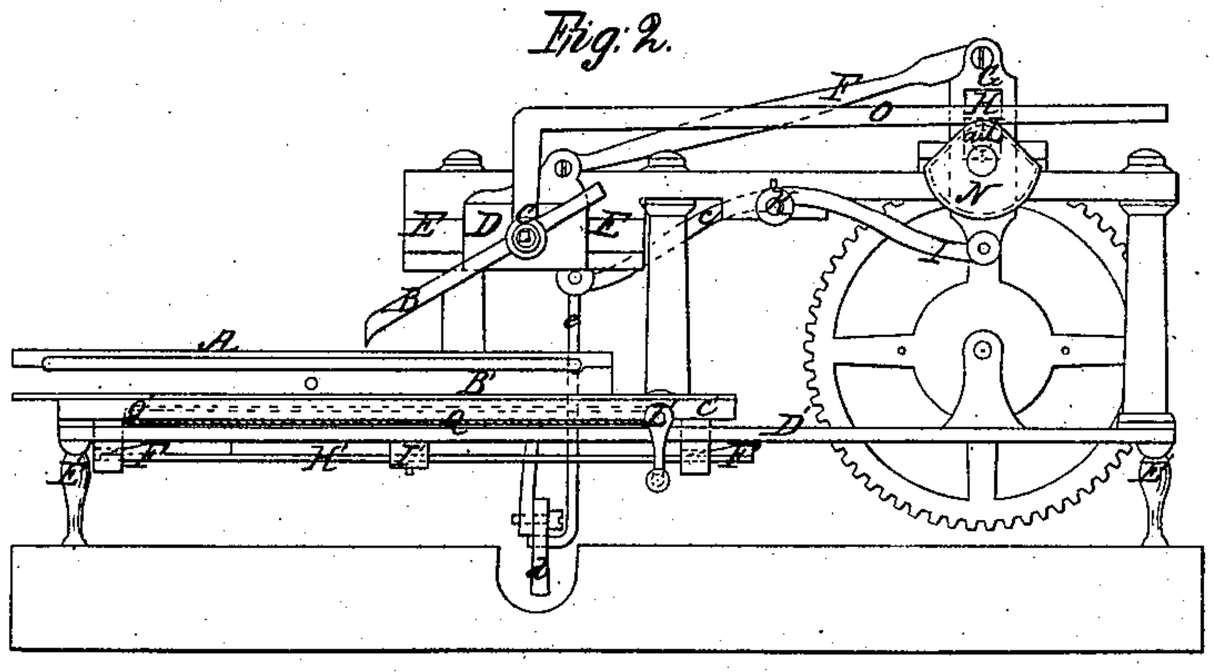


Fig: 3.

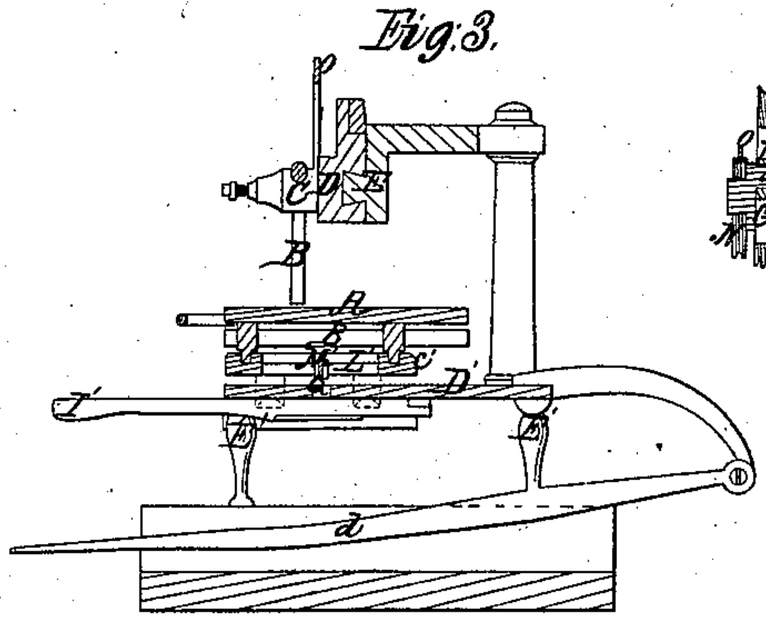
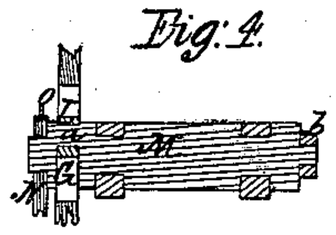


Fig: 4.



UNITED STATES PATENT OFFICE.

JEREMIAH STEVER, OF BRISTOL, CONNECTICUT.

MACHINE FOR SCRAPING METALS.

Specification of Letters Patent No. 12,076, dated December 12, 1854.

To all whom it may concern:

Be it known that I, JEREMIAH STEVER, of Bristol, in the county of Hartford and State of Connecticut, have invented a new and useful Machine for Scraping Metals; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, letters, figures, and references thereof.

Of the said drawings, Figure 1, represents a top view of my said machine. Fig. 2, is a front elevation of it. Fig. 3, is a transverse section of it.

In the manufacture of sheets of brass or other metal the irregularities of the metal produce during the rolling process or that by which the metal is reduced to sheets what workmen term "spilly spots" they are seen on the surface of the metal and have to be removed by scraping them out of it whenever they appear otherwise the metal when further reduced would not present an even and smooth surface. My machine is calculated to effect the removal of these spots and to enable a workman to accomplish the same with great rapidity, the process of taking out such spots from the metal as it has ordinarily been conducted, and particularly in large sheet metal manufactories has been one which consumed a great amount of time and labor, as it has been done by means of scrapers in the hands of workmen. Having thus premised I shall proceed to describe my invention.

In the drawings, A, represents a platform or bed on which the ingot or sheet of metal to be scraped is to be laid and confined in any suitable manner. This bed should be supported by a framing or suitable contrivances so as not only to enable it to be moved both longitudinally and transversely in a horizontal plane, but to be elevated or depressed as occasion may require, such contrivances as I use for the purpose and have represented in the drawings, will be hereinafter fully described.

B is a scraper applied to a rocker shaft, C, that is extended from a slide or carriage, D, so applied to a frame, E, as to be capable of a rectilinear reciprocating movement in a horizontal direction; this carriage has one end of a connecting rod, F, pointed to it, the other end of the said connecting rod being jointed to the upper end of a slotted lever, G; the said lever, G, is provided with an elongated slot, H, extending through it, the lever being jointed at its lower end to an elevating lever or bar, I, having its fulcrum on a shaft, K.

Within the slot of the lever, G, a slide, L, is introduced (the same being exhibited in Fig. 2, by dotted lines) into which slide a crank pin, *a*, (see Fig. 4, which represents a vertical and transverse section of the shaft and crank pin) from the end of the shaft, M, is applied; the said shaft, M, being the driving shaft of the machine, and being put in motion by a gearing as seen at, *b*, or in any other suitable manner. During the rotary movement of the shaft, M, a reciprocating movement of the lever, G, through the sector of a circle will be produced, and this movement will be increased in proportion as the lower end of the slot of the lever, G, is raised upward toward the crank of the driving shaft; thus by raising or lowering the lever, I, we may readily change the extent of the reciprocating rectilinear movement of the scraper.

The shaft, K, carries an arm, *c*, that projects from it in a direction opposite to that which the lever, I, extends therefrom: the said arm, *c*, is connected with a treadle or hand lever, *d*, by means of a connecting rod, *e;* during the operation of scraping a piece of metal the workman manages the said treadle or lever, *d*, with either his hand or foot as circumstances may render most convenient, he using the same to effect a vertical movement of the slotted lever, G.

There is on the outer end of the driving shaft, M, a cam, N, on which rests a lever or arm, O, that is extended from the rocker shaft of the scraper. By means of said cam and lever, the scraper during its horizontal movement in one direction is made to press and bear down upon the piece of metal to be scraped and has its pressure on the metal removed, while it (the said scraper) is moved in the opposite direction.

The platform, A, rests upon a movable platform or carriage, B′, to which it is applied in such manner as to be capable of being moved transversely with respect to the same. The said carriage or platform, B′, is supported on another platform, C′ that rests and moves longitudinally on ways or a third platform, D′, which is supported on four feet E′, E′, &c., on two wedges F′, F′, that are made to slide in longitudinal direction in the main frame or table, D′. and

are connected together by a rod or bar, H′, and simultaneously put in movement by means of a lever, I′, jointed to them and the frame; the movement of these wedges raises or lowers the platforms supported upon them and of course produce a similar motion of the bed, A.

The movable carriage, B′, is moved in a longitudinal direction by means of a windlass or crank shaft L′, which carries a pulley, M′, around which and another pulley, O′, arranged as seen in doted lines a belt, Q′, that is attached to the carriage, B′, is made to pass.

My machine to a certain extent, may be said to be an automatic scraping apparatus, the work to be scraped by it being guided to the scraping tool by an attendant. As such machine is for the production of a specific effect, viz, the scraping of metals or surfaces,

I claim—

The arrangement of the driving shaft, the connecting rod, F, the sloted lever, G, and its fulcrum lever, I, in connection with the rod, O, and its rocker shaft, C, the whole being for giving the scraper the double motion and regulating the same, essentially as specified.

In testimony whereof I have hereunto set my signature this twenty-sixth day of August A. D. 1854.

JEREMIAH STEVER.

Witnesses:

Wm. S. Hill,

Henry A. Mitchell.