(No Model.)

C. B. WESSELL.

DOUBLE EDGING MACHINE.

No. 511,312. Patented Dec. 19, 1893.

Fig. 1.

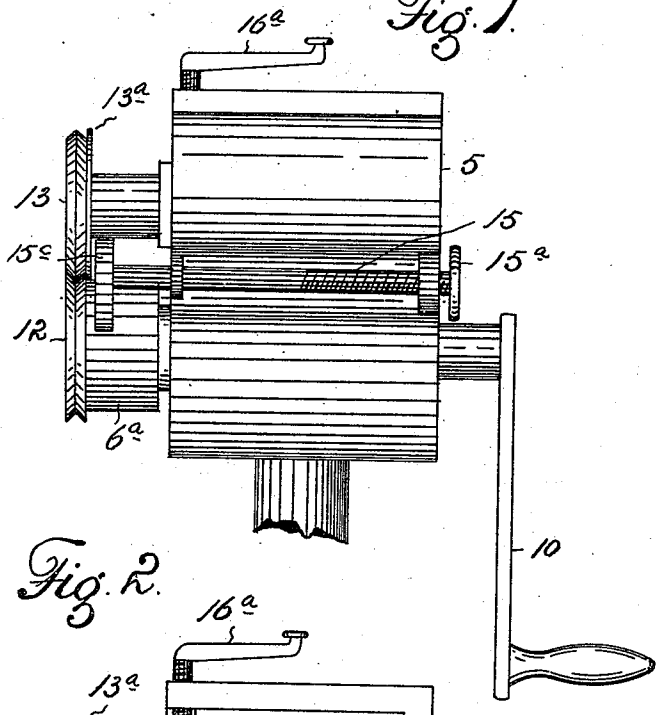


Fig. 3.

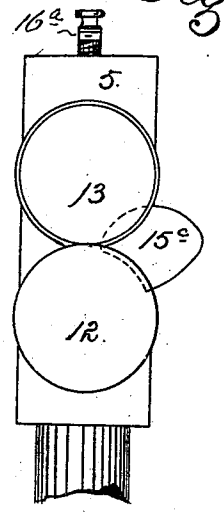


Fig. 2.

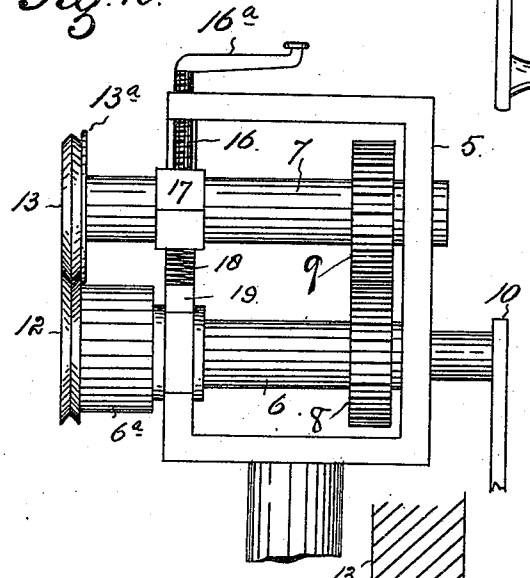


Fig. 5.

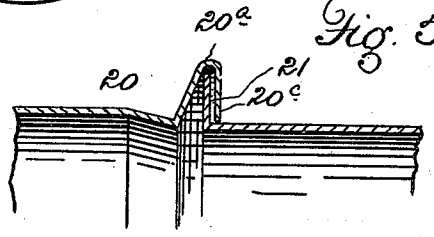


Fig. 6.

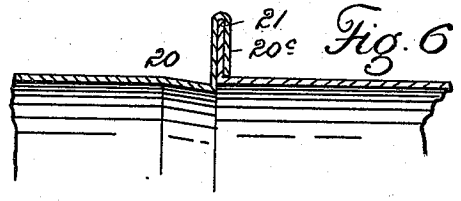


Fig. 7.

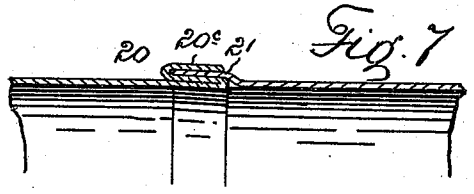
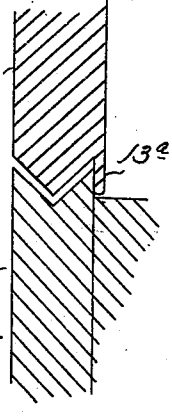


Fig. 4.



WITNESSES:

E. J. Dollanell.

Wm. McConnell

INVENTOR

Chas B. Wessell

BY

A. J. O'Brien

ATTORNEY.

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES B. WESSELL, OF DENVER, COLORADO, ASSIGNOR OF ONE-THIRD TO ALEXANDER McDONALD, OF BOYD, WISCONSIN.

DOUBLE-EDGING MACHINE.

SPECIFICATION forming part of Letters Patent No. 511,312, dated December 19, 1893.

Application filed February 6, 1893. Serial No. 461,295. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. WESSELL, a citizen of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Double-Edging Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in machines for turning what is called a "double edge" upon the extremities of sheet metal pipe sections. It is employed in preparing the sections of furnace and other similar pipes for connection. The double edge is formed only on one extremity of each section, the other extremity having a single edge adapted to connect with the double edge of the opposite section.

My improved machine consists of the features, arrangements and combinations hereinafter described and claimed, all of which will be fully understood by reference to the accompanying drawings in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a side elevation of the machine, the supporting leg being partly broken away. Fig. 2 is a similar view, the outer casing being removed to show the mechanism within. Fig. 3 is an end view of the same. Fig. 4 is an enlarged detail view of the disks which form the double edge, the same being shown in operative relation. Figs. 5, 6 and 7 illustrate the use of the machine, two pipe sections being shown in the three different stages of forming the joint.

Similar reference characters indicate corresponding parts or elements of the mechanism in the several views.

Let the numeral 5 designate the framework in which are journaled the two shafts 6 and 7 carrying the meshing gear wheels 8 and 9. To one extremity of the shaft 6 is attached the crank 10 for actuating the shafts. The extremity of shaft 6 opposite that to which the crank is attached, is provided with a disk 12, the edge of which is grooved to receive the counter-part projecting edge of another disk 13 made fast to the corresponding extremity of shaft 7, and carrying the vertical circumferential flange 13^a. The shaft 6 carries the hub or sleeve 6^a engaging the inner face of the disk. In the frame 5 is also journaled the screw shaft 15 carrying a hand wheel 15^a at one extremity and a gage plate 15^c at the opposite extremity. This gage plate is curved to engage the hub 6^a of the shaft.

In using the machine one extremity of the pipe is slipped over the disk 12 and pressed against the gage plate, the disks being first separated sufficiently to permit this by the use of the vertical screw shaft 16 bearing against the vertically movable box 17 in which shaft 7 is journaled. This box rests upon a coil spring 18. The opposite extremity of this spring engages the block 19 bearing upon shaft 6. Shaft 16 is provided with a crank arm 16^a. Hence as shaft 16 is raised the disk 13 is made to move away from disk 12 since spring 18 is under tension when the two disks engage. After the extremity of the pipe section is placed in position shaft 16 is screwed down causing disk 13 to engage the outer surface of the pipe section while disk 12 engages its inner surface. Then as the shafts 6 and 7 are rotated by turning the crank 10, the extremity of the pipe section is fashioned as shown at 20 in Fig. 5, forming the exteriorly projecting edge 20^a and the interiorly projecting edge 20^c. This double edged extremity of the pipe is adapted to receive the flange 21 formed on the opposite pipe section. The next two steps in completing the joint are illustrated in Figs. 6 and 7, but with these steps my improved machine has nothing to do. They are, however, illustrated to make clear the object of the initial step in forming the double edge on the pipe section. After the double edge is formed the flange 21 of the opposite section is pressed or forced into place as shown in Fig. 5.

Heretofore, so far as I am aware, two machines have been employed to form this double edge, thus greatly increasing the time and labor necessary to accomplish the result

sought, as compared with my improved machine, which completes the work at a single operation.

Having thus described my invention, what I claim is—

The combination with a suitable frame of two shafts journaled therein, one above the other, and carrying meshing gears, the lower shaft being provided at one extremity with an enlarged hub and a disk having a V-shaped grooved periphery, the upper shaft having a disk with a V-shaped projecting periphery adapted to enter the counterpart groove of the disk on the lower shaft, the upper disk being also provided with a vertical flange adapted to engage the hub of the lower shaft in close proximity to the disk, and a screw shaft mounted on the frame and carrying an adjustable gage-plate engaging the hub of the lower disk, the engaging edge of the gage-plate being fashioned to conform to the shape of the hub and adapted to occupy a position in engagement with the flange of the upper disk, when the two disks are in operative relation, and means for separating the two shafts to permit the insertion or removal of the pipe section, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES B. WESSELL.

Witnesses:
WM. MCCONNELL,
H. KNIGHT.