

(No Model.)

2 Sheets—Sheet 1.

L. L. SAGENDORPH.

ROLLER DIE FOR STAMPING SHEET METAL.

No. 401,216.

Patented Apr. 9, 1889.

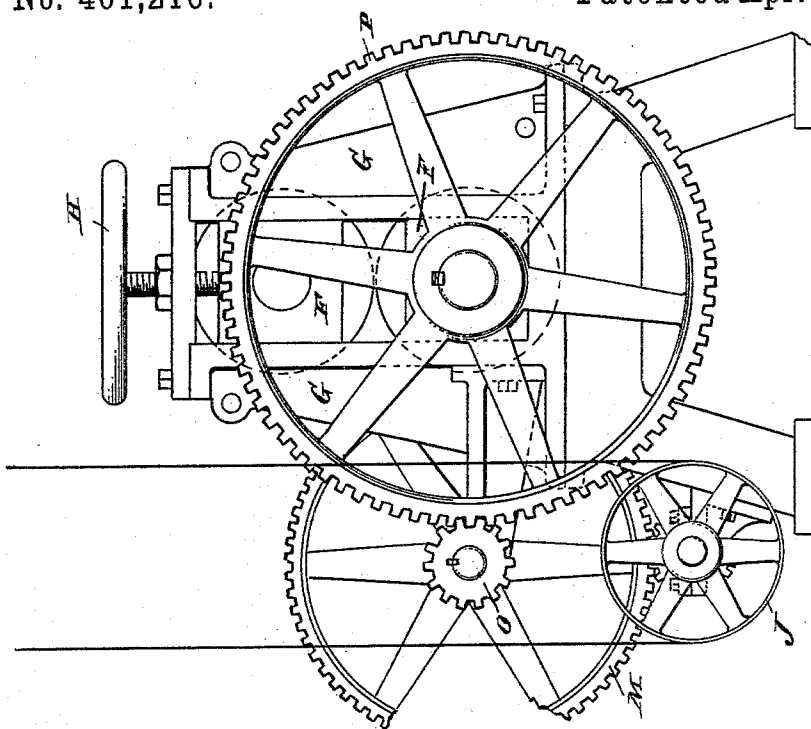


Fig. 2.

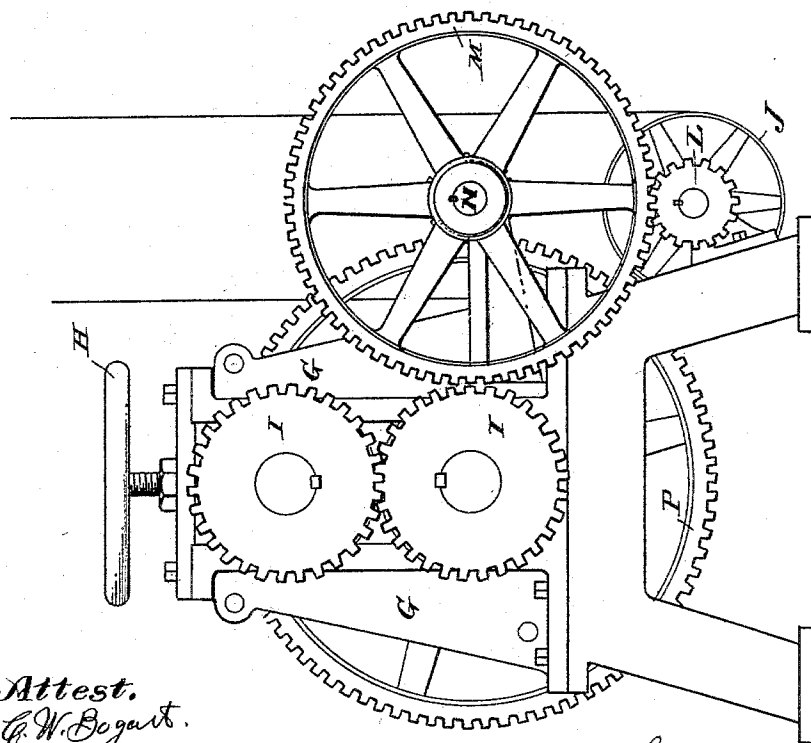


Fig. 1.

Attest.
G. W. Bogart.
Henry Wood

Inventor.
Longley Lewis Sagendorph
per Stuhli & Hill
Attys.

(No Model.)

2 Sheets—Sheet 2.

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ROLLER DIE FOR STAMPING SHEET METAL.

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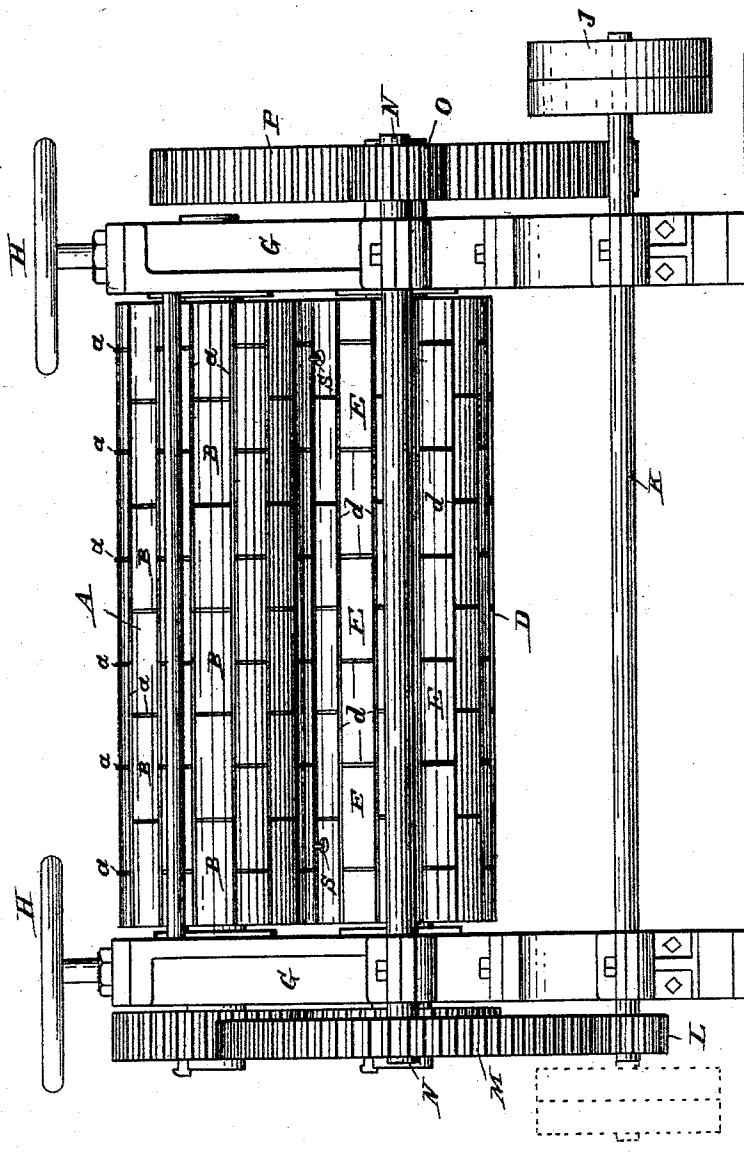


Fig. 3.

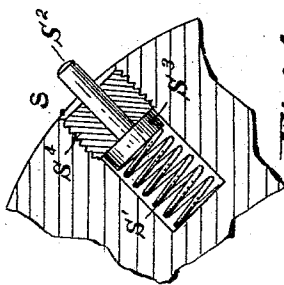


Fig. 4.

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UNITED STATES PATENT OFFICE.

LONGLEY LEWIS SAGENDORPH, OF CINCINNATI, OHIO, ASSIGNOR OF ONE-HALF TO HARLAN P. LLOYD, OF SAME PLACE.

ROLLER-DIE FOR STAMPING SHEET METAL.

SPECIFICATION forming part of Letters Patent No. 401,216, dated April 9, 1889.

Application filed June 15, 1888. Serial No. 277,251. (No model.)

To all whom it may concern:

Be it known that I, LONGLEY LEWIS SAGENDORPH, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton, State of Ohio, have invented certain new and useful Improvements in Roller-Dies for Stamping Sheet-Metal Sidings, of which the following is a specification.

In the drawings accompanying this specification and forming a part thereof, Figure 1 is a view in elevation of the left-hand end of the machine shown in Fig. 3, and Fig. 2 is a view in elevation of right-hand end of said machine. Fig. 3 is a front elevation of the roller-dies and operating mechanism, showing two of the improved spring-gages in position on the lower roller-die. Fig. 4 is a sectional view through a portion of the lower roller-die, showing in detail, on an enlarged scale, one of the spring-gages in position therein.

The form of roller-dies herein shown, and with which it is preferred to use the spring-gages hereinafter described, consist in a roller, A, provided with a series of longitudinal and vertical tongues, *a*, at regular intervals over the circumference of said roller, the vertical tongues being at right angles to the longitudinal tongues, the space B between said tongues being of a rectangular configuration. An additional roller, D, is provided to operate in connection with roller A, said roller having longitudinal and vertical grooves *d*, corresponding to the tongues *a* of roller A, said tongues meshing in said grooves when the rollers are rotated. The space E between said grooves *d* is rectangular in configuration, corresponding to the space B between the tongues *a*. The rollers are so mounted, as will hereinafter appear, that when rotated the tongues *a* of roller A will mesh in the grooves *d* of roller D, thus forming, respectively, a cylindrical male and female die. It will also be seen that the spaces B between the tongues *a* are depressed or lower than said tongues, and that the spaces E between the grooves *d* are correspondingly raised or elevated above the bottom of said grooves, and when viewed in this light the roller D would be the male and roller A the female

die. Properly speaking, each roller is both a male and female die. The edges of the tongues are preferably rounded slightly, so as not to cut or tear the metal when stamped into the grooves. The object of this construction of roller-dies is to stamp sheet metal in imitation of brick or stone work.

Each of the roller-dies is provided at each end with suitable spindles, which rotate in sliding blocks F, which latter are placed within suitable grooves (not shown) in the vertical end frames, G. The rollers and sliding blocks are held to place by means of hand-screws H, the latter passing through and operating in the top of frames G and bearing against the top of blocks F, as shown. To insure the uniform revolution of the roller-dies, I have provided the two gear-wheels I, the same being similar in size, and are keyed to the spindles of the rollers, as shown in Fig. 1.

The roller-dies are operated by suitable mechanism, one form of which I have shown, and is as follows: The band-wheel J is keyed to the shaft K, which latter operates in suitable journals attached to the frames. On the opposite end of said shaft is a pinion, L, which latter meshes with the gear-wheel M, attached to shaft N. This shaft N operates in suitable journals attached to the frame, and has a pinion, O, attached to one end thereof, which pinion meshes with the large gear-wheel, P, which is keyed to one end of the lower roller-die spindle.

The gears I, keyed to the spindles of the two roller-dies, are of same size and cause a uniform revolution of said dies.

The band-wheel J may be placed at either end of the shaft K, or may be dispensed with, if desired, to operate the machine by hand. If desired to operate the machine by hand, a suitable crank may be attached to the gear-wheel P.

The sheets of metal are fed to the roller-dies from a suitable table or platform in front of the machine. To gage the end of the metal with reference to said dies, I have provided a spring-gage, S, which is constructed and operates as follows: A suitable hole is bored or drilled into the lower roller, as shown

in Fig. 4, in the bottom portion of which is placed the spring S'. The gage-pin S² has a flanged head, S³, the spring S' bearing against said flanged head. The pin S² is held in place 5 in the roller by means of a suitable metallic stop, S⁴, placed around said pin between the flanged head S³ and the outer surface of the roller, as shown. Any desired number of these spring-gages may be placed within the 10 roller in a longitudinal line, to accommodate varying widths of siding.

The gage-pins S² project above the surface of the roller-die about one-half an inch and are in a longitudinal line with reference to 15 said die. The end of the sheet to be stamped is fed up against said pins, in which position the sheet is at right angles to the roller-dies and ready for insertion between them. As the sheet is fed forward, and when the rollers have made one revolution, the pins S² 20 strike against the sheet of metal, causing them to be forced in against the springs and on a level with the surface of the roller, in which position the pins are held until the 25 revolution of the roller-die relieves the pins from contact with the sheet, at which time they are again forced out from the roller-die through the resiliency of springs S'. By this construction of gage I am enabled to feed any 30 length of sheet to the dies, the gages being ready for operation so soon as the sheet is all fed to the dies.

The tongues and grooves on the roller-dies may be varied in distances apart, so that the sheet of metal when passed between said 35 dies will imitate stone or brick work, as desired.

While my invention is primarily intended for stamping sheet metal in imitation of brick or stone work, any other form of male and 40 female dies may be connected to the rollers for stamping varying figures or designs.

What I claim as new and of my invention, and desire to secure by Letters Patent, is—

1. In a machine for stamping sheet metal, 45 the two roller-dies adapted to mesh, and journaled in suitable sliding blocks in the end frames, in combination with the gears I, keyed to the spindles of said dies, and the spring-gages S in one of said roller-dies, and suitable 50 mechanism for rotating said dies, substantially as set forth.

2. In a machine for stamping sheet metal, having two roller-dies, the spring-gages located in one of said dies and consisting of 55 the spring S', pin S², having the flanged head S³, and stop S⁴, substantially as set forth.

LONGLEY LEWIS SAGENDORPIL.

Witnesses:

JOSEPH W. WEBER,
E. S. HAVENS.