

(No Model.)

W. C. BELL.
ROOFING MACHINE.

No. 487,361.

Patented Dec. 6, 1892.

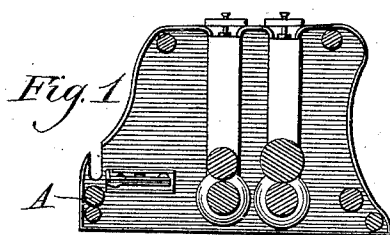


Fig. 2.

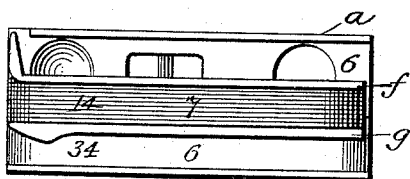


Fig. 4.

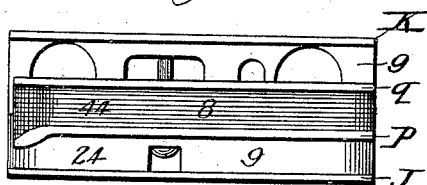


Fig. 3.

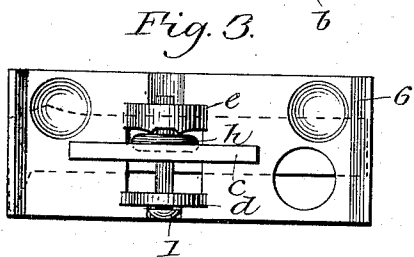
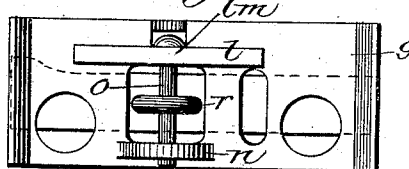


Fig. 5.



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ROOFING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 487,361, dated December 6, 1892.

Application filed April 30, 1890. Serial No. 350,034. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. BELL, a citizen of the United States, residing at Syracuse, in the county of Onondaga and State of New York, have invented a new and useful Improvement in Roofing-Machines, of which the following is a specification.

My invention relates to the gages which give direction to metallic roofing-strips as they are fed into the machine; and the objects of my improvement are, first, to provide means for a reversal of the height of the side edges to metallic strips; secondly, to provide means for the introduction of two or more metallic roofing-strips at one operation, one nested within the other, and producing said strips in right and left hand pairs. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal vertical section of the machine. Fig. 2 is an interior face view of the right-hand gage. Fig. 3 is an exterior back view of the right-hand gage. Fig. 4 is an interior face view of the left hand gage. Fig. 5 is an exterior back view of the left-hand gage.

In Fig. 2 is shown an interior face view of the outer case 6, having face-flanges *a b*, at the back exterior a flange *c*, (shown in Fig. 3,) and the back projecting lugs *d e*, Fig. 3. Flange *c* rests upon the side frame of the machine and is provided with means for being clamped rigidly thereto, provision being made for side variation and adjustment on said machine-frame.

Between flanges *a b* there is a loose section 7, also facing inward, having face-flanges *f g*. Section 7 is provided at the back exterior with a projecting lug *h*, Fig. 3, through which and intersecting with lugs *d e*, Fig. 3, a pin *I* is inserted. Pin *I* is an oval-head rivet of sufficient length to reach through lugs *d h e* and clinch at the base of lug *e*, Fig. 3, by means of which section 7 is held in place against the interior face of case 6 and is also enabled to rise and fall on its bearing-pin *I*. A channel 14 is formed in section 7 by the projecting flanges *f g* and is designed for a passage-way for one side edge of metallic roofing-strips as they are drawn over the roller *A*, Fig. 1, into and between the system of flanging-rollers of the machine. Channel 34 (for the same pur-

pose) is formed by the face-flange *g* of section 7 and face-flange *b* of case 6. As the metallic strip in the latter case passes under the flange *g* of section 7, it will be seen that the side edge of said strip is carried to the right and finds a side bearing against the interior face of case 6. Section 7 by means of its bearing on pin *I* is capable of a reciprocating motion, and it can rise and fall upon said pin *I*, such provision being made to accommodate the irregular motion of metallic roofing-strips as they pass into and along channel 14. Section 7 is so adjusted upon pin *I* that its mouth or entrance-way is adapted to the height of the roller *A*, Fig. 1, in order that metallic strips may receive support from the roller *A* while passing over it. The opposite or left-hand gage (shown in Figs. 4 and 5) faces inward toward the other and is provided with outer case 9. Case 9 is provided with face-flanges *J K* and a back exterior flange *l*, Fig. 5. Flange *l* serves two purposes—first, to rest upon the side frame of the machine receiving support therefrom, with means for clamping rigidly thereto and with provision for side variation and adjustment, substantially as in case 6 of Figs. 2 and 3; secondly, the projecting flange *l* accommodates and supports pin *o*, hereinafter described. Case 9 is also provided with a back exterior lug *n*, Fig. 5.

Section 8, Fig. 4, is similar to section 7 in Fig. 2, but opposite therefrom, and is provided with face-flanges *p q* and with a back exterior lug *r*, the latter projecting sufficiently to reach through an opening in case 9 to be in line with flange *l* and lug *n*. Pin *o* is an oval-head rivet of sufficient length to reach through flange *l*, lug *r*, and lug *n* and clinch at the base of lug *n*, Fig. 5. Section 8 of Figs. 4 and 5 is capable of the same elevation and depression, and also of the same reciprocating motion on pin *o* substantially as that described in section 7, Figs. 2 and 3. Section 8 when at rest lies at the base of case 9 in order that the side edge of a metallic strip may pass above its upper flange *p*, in which case the side edge of such strip is carried to the left and finds a side bearing against the interior face of case 9. The channels provided by the flanges are, first, the upper (between flange *J* of case 9 and flange *p* of section 8, as channel 24,) and channel 44 is formed be-

tween flanges *p q* of section 8. It will be seen that the gages are provided with two channels each, one set being over the other, into and along which metallic roofing-strips may pass, and in either channels said strips receive substantially the same supports upon the roller A, Fig. 1, the upper channels being 14 and 24, the lower channels being 34 and 44.

The side variation desired is equal to the thickness of section 7 or section 8 and is effected by using alternately either section 7 or section 8 for one side of the metallic strips, while the opposite side edge of such strips passes into and along a channel having for a side bearing the interior face of either case 6 or case 9 alternately. Hence the position of the metallic strip is varied either to the right hand or left hand a distance equal to the thickness of section 7 or section 8. When metallic strips are passed through the upper set of channels and enter the system of flanging-rollers of the machine, right-hand roofing-strips are thereby produced, or roofing-strips having the taller flange on the right side, and when passed through the under set of channels left-hand roofing-strips are produced, or strips having the taller flanges on the left side. The position of the strips determines the product. Two strips therefore entering in different positions may be run through the machine at once, forming a pair consisting of a right-hand roofing-strip and left-hand roofing-strip, or two or more strips may be run through the machine at once, forming a set of two or more right-hand or two or more left-hand roofing-strips, as they may be required for roofing purposes.

I am aware of my prior invention and Letters Patent No. 231,982, dated September 7, 1880, for improvements in roofing-machines; but

What I claim is—

1. In a roofing-machine, double gages arranged in front of and in combination with a system of flanging-rollers, said gages having sections capable of a reciprocating motion, adapted to receive two or more plain metallic strips and guide them into position between

the rollers, whereby by the continuous action of the rollers thereon the strips are simultaneously nested one within the other and their side edges flanged to any required angle and height, substantially as described.

2. In a roofing-machine, right and left hand gages arranged in front of and in combination with a system of flanging-rollers, said gages having sections capable of a reciprocating motion, adapted to receive plain metallic strips and guide them into position between the rollers, whereby by the continuous action of the rollers thereon the strips are simultaneously nested one within the other and their side edges flanged to any required angle, but differing in height, substantially as described.

3. In a roofing-machine, reversible gages arranged in front of and in combination with a system of flanging-rollers, said gages having sections capable of a reciprocating motion, adapted to receive two or more metallic strips and guide them into position between the rollers, whereby by the continuous action of the rollers thereon the side edges of the roofing-strips are simultaneously flanged to any required angle and height, producing them in right-hand and left-hand pairs, substantially as described.

4. In a roofing-machine, gages having different sets of channels arranged one over the other in front of and in combination with a system of flanging-rollers, said gages having sections capable of a reciprocating motion, adapted to receive a metallic roofing-strip and guide it into position between the rollers, whereby by the action of the rollers thereon the side edges of the strip are simultaneously flanged to any required angle, producing flanges differing in height and a reversal of the height of flanges effected by using alternately either set of channels and with means for greater side variation in flange *c* and flange *l*, substantially as described.

WILLIAM C. BELL.

In presence of—

HOMER WESTON,

CHAS. B. GOODRICH.