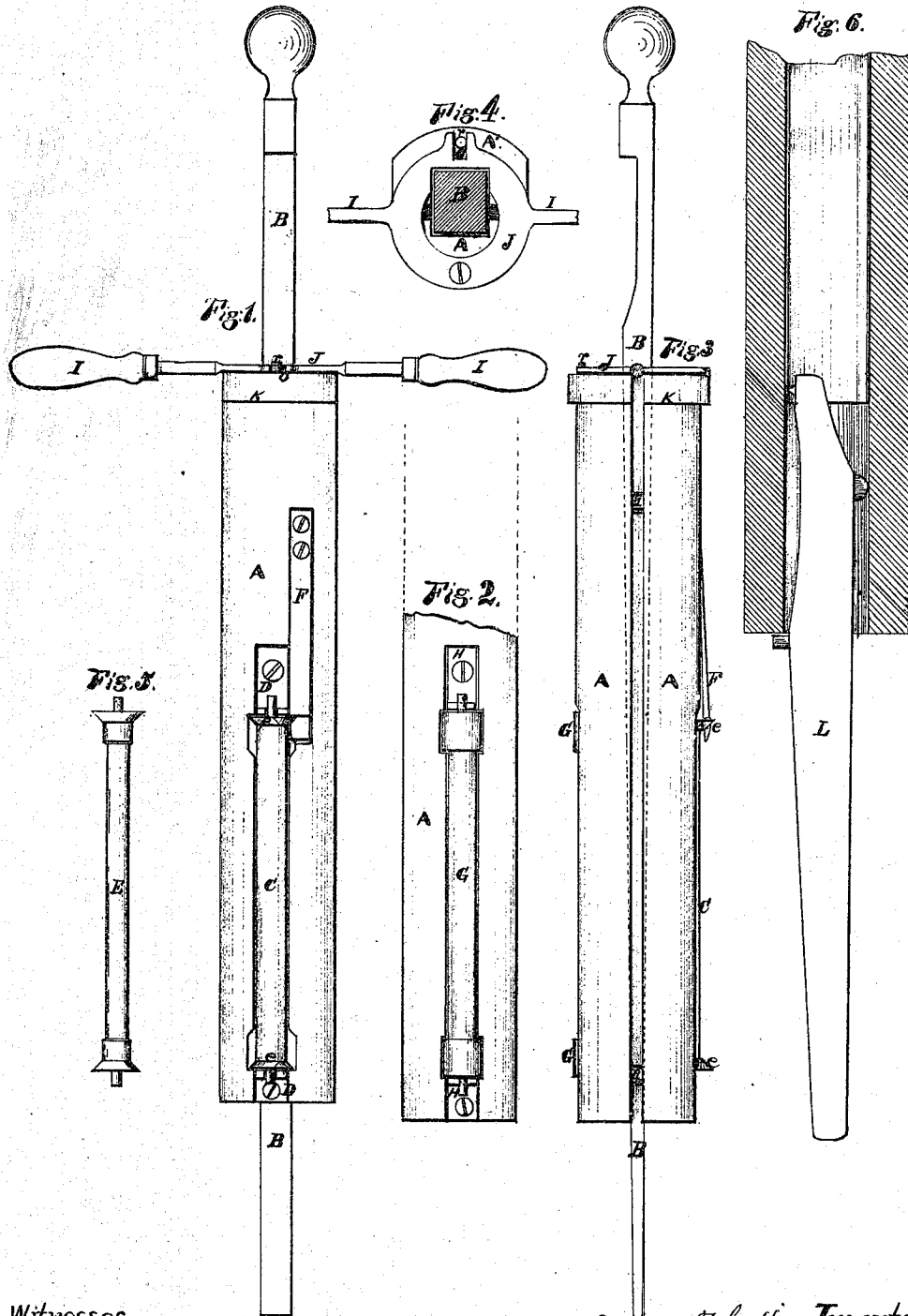


N. T. Coffin,
Lining Cylinders.

No. 105,912.

Patented Aug. 2, 1870.



Witnesses,
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NATHAN T. COFFIN, OF KNIGHTSTOWN, INDIANA.

IMPROVEMENT IN MACHINE FOR SECURING SHEET-METAL LINING IN PUMP-STOCKS.

Specification forming part of Letters Patent No. **105,912**, dated August 2, 1870.

I, NATHAN T. COFFIN, of Knightstown, in the county of Henry and State of Indiana, have invented a certain Implement for Securing Sheet-Metal Lining in Pump-Stocks, of which the following is a specification:

Nature and Object of the Invention.

My invention relates to securing the sheet-metal lining forming the valve-chamber of wooden pump-stocks; and it consists in a device or implement so constructed as to enable me to permanently secure the lining by turning flanges on the ends of the tubular lining into grooves cut in the stock, thereby avoiding the use of nails or other objectionable means whereby the piston will be worn.

Description of the Accompanying Drawing.

Figure 1 is an elevation of an implement embodying my invention. Fig. 2 is a view of the opposite side of the same. Fig. 3 is a side view of the same. Fig. 4 is an end view of the machine. Fig. 5 is a detached view of the flanging-roller. Fig. 6 is a section view of a portion of pump-stock, showing the sheet-metal lining and the implement employed to prod the lining near the end, to keep it from turning when using the flanging implement.

General Description.

The implement is composed of two semi-cylindrical pieces of wood, A A', having a tapering groove cut in the middle of their flat surfaces to receive a wedge, B, as shown. The pieces are also provided with dowel or steady pins *a* on each side, to keep them properly together when using the implement.

The piece A has a recess in the convex surface to receive a square bar of iron, C, having cutters *e* at each end by which to cut grooves in the stock to receive the flanges to be turned on the ends of the sheet-metal lining, as hereafter described.

The ends of the cutter-bar C are furnished with projections to rest in the notches in the recessed bearings D, so that it and the flanging-roller E, Fig. 5, may be readily substituted for each other, as hereafter described. A spring-stop, F, is also attached to the same piece, having a shoulder near the lower end, and on a line with the upper cutter, against

which the end of the tube rests, for the purpose of being guided to the exact place for the flanges on the end to be turned into the grooves cut by the cutters *e*.

The cutter-bar C is made a little shorter than the flanging-bar E, so that, as the tubular lining is slightly shortened by turning the flanges, the ends of the lining will bear firmly against the upper edge of the upper groove and the lower edge of the lower groove, thereby holding it securely in place.

The piece A has a recess in the convex surface (being opposite the cutter-bar in piece A) to receive a roller, G, running in recessed bearings H, for the purpose of holding the opposite side of the tube while the flanging-roller E is turning the flange, and also to allow the implement to be more easily turned, as the roller serves as an anti-friction roller, to keep the implement from rubbing against the lining.

The implement is operated by means of levers or handles I, extending from a casting, J, that is attached to the piece A, and is provided with a notch, *o*, on the opposite side, to receive a pin, *r*, in the end of piece A', this arrangement admitting of a ready separation of the pieces A A', and also their expansion by means of the wedge B.

To insert the lining, I take the implement, as shown in Fig. 1, having the cutter C in place, and insert it in the bottom of the stock up to the collar K. Then, by forcing in the wedge B, the pieces A A' are expanded, so that by turning the implement the cutters *e e* form grooves in the stock. The wedge is then withdrawn, letting the pieces A A' come together, when the whole implement can be withdrawn. The cutter-bar C is then removed and the flanging-roller E put in its place. The tubular lining is now placed on the implement, with the end resting against the shoulder of spring F. The wedge B is then driven in, expanding the pieces A A', which indents the lining at two places by means of the flanges of roller E. This places the lining in proper position and secures it sufficiently to withdraw the implement. Now, to keep the lining from being turned while flanging it, I insert the prodding-lever L and punch through the lining into the wood. The instrument is now

again inserted, and expanded by the wedge, as before, and then, being turned, the flanges of the flanging-roller E turn the ends of the lining into the grooves made by the cutters e, as before described.

Claim.

I claim as my invention—
The groove-cutting and flanging device

composed of the semi-cylindrical pieces A A', wedge B, cutter-bar C, flanging-roller E, shouldered spring F, anti-friction roller G, and levers or handles I, all constructed and arranged substantially as and for the purpose set forth.

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Witnesses:

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