H. P. McFARLAND.

SIDING OR STAVE FOR SILOS.

APPLICATION FILED MAY 10, 1915.

1,193,575. Patented Aug. 8, 1916.

Fig. 1.

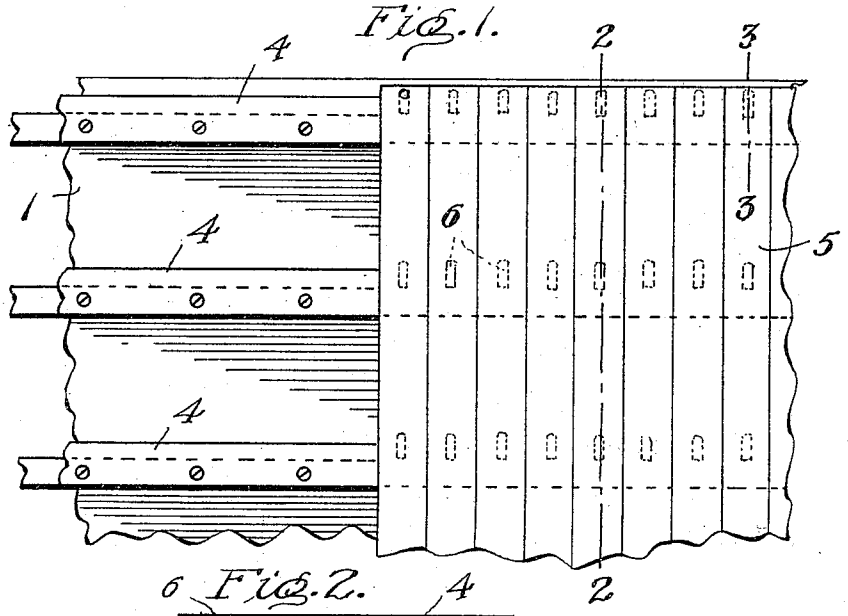


Fig. 2.

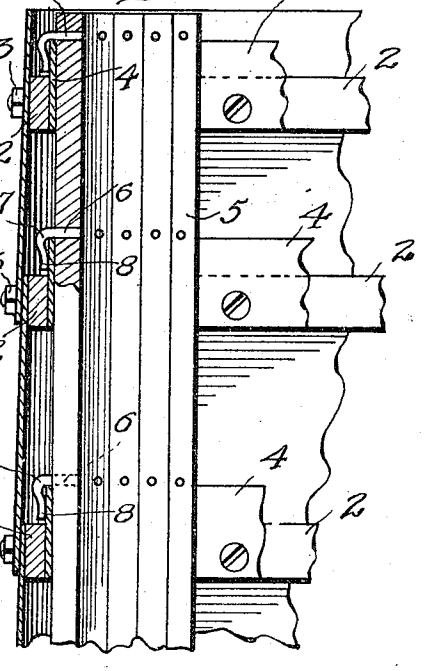


Fig. 3.

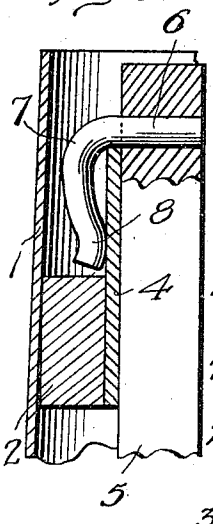
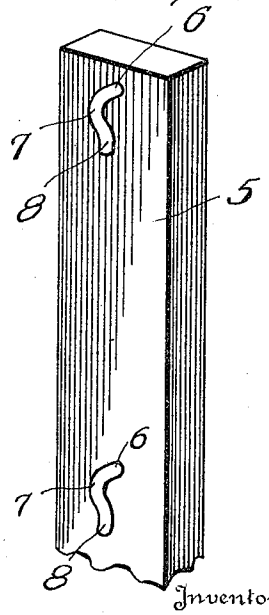


Fig. 4.



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SIDING OR STAVE FOR SILOS.

1,193,575. Specification of Letters Patent. Patented Aug. 8, 1916.

Application filed May 10, 1915. Serial No. 27,160.

To all whom it may concern:

Be it known that I, HARVEY P. McFARLAND, a citizen of the United States of America, residing at Burlington, in the county of Des Moines and State of Iowa, have invented certain new and useful Improvements in Siding or Staves for Silos, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to an improvement in the method of fastening staves upon the inner face of a silo or like structure and has for its object the production of a simple and efficient means whereby the staves may be quickly and easily attached to the inner wall of a silo and at the same time have free movement for sufficient expansion and contraction due to the swelling of the staves when acted upon by the silage placed within the silo.

Another object of this invention is the production of a simple and efficient clamping means for holding the staves against accidental removal from the stave supporting members.

With these and other objects in view this invention consists of certain novel combinations, constructions, and arrangements of parts as will be hereinafter fully described and claimed.

In the drawings: Figure 1 is an elevation of the inner face of a portion of the silo, showing the manner in which the staves are secured to the outer wall of the silo. Fig. 2 is a central vertical section taken on line 2—2, of Fig. 1 of the drawings. Fig. 3 is an enlarged sectional view taken on line 3—3, of Fig. 2 of the drawings. Fig. 4 is a detailed perspective view of the upper end of one of the staves used in connection with the present invention, showing the fastening hooks carried thereby.

By referring to the drawings it will be seen that a silo is provided with the usual outer metallic lining 1 to which lining is secured a plurality of reinforcing bands 2 securely fastened to the inner face of the outer lining 1 as illustrated clearly in Figs. 1, 2, and 3 of the drawings by means of bolts 3. The outer plates 1 are adapted to overlap as clearly indicated in Fig. 2, the overlapping joints being securely held in engagement with the bands 2 by means of the bolts 3. A metallic retaining plate 4 is secured to the inner face of the bands 2 as clearly illustrated in Fig. 2 of the drawings and this metallic retaining plate 4 projects above the upper face of the bands 2 as clearly illustrated in Fig. 2.

The staves 5 which are of the usual construction and preferably formed of wood are provided at properly spaced intervals with a plurality of hook members 6. These hook members 6 are outwardly bulged as indicated by the numeral 7 in Fig. 3 and are provided with inwardly projecting ends 8, which ends are slightly out-turned as clearly illustrated in Fig. 3 for facilitating the passing of the hooks 6 over the upper edge of the retaining plates 4. It should be understood that these hooks 6 are adapted to permit the staves to be securely and firmly held in engagement with the plates 4 and that the staves may be placed snugly against the plates 4 so as to have the hooks 6 overhang the upper edge of the plates 4 and by pulling downwardly upon the staves the hooks will firmly overhang or lock over the plates 4 and thereby firmly hold the staves in firm engagement with the plates.

It should be understood that by means of the fastening device above described the staves may have a free lateral expansible movement for causing considerable strain upon the securing pins as would be the case if the staves were permanently or fixedly secured to the bands 2.

From the foregoing description it will be seen that a very simple and efficient means has been produced for allowing the staves to be quickly placed upon the interior or inner wall of the silo when so desired.

It of course should be understood that the doors of the silo may be provided with the stave similar to that illustrated in the drawings but for the purpose of illustration the staves have merely been shown as placed upon the inner face of the silo as it would not depart from the spirit of the invention but place the staves in the same manner on the door or other portion of the silo.

It of course should be understood that these hooks 6 may be formed of spring metal for firmly holding the staves in engagement with the supporting or retaining plates 4.

What is claimed, is:—

In a silo the combination with a body provided with a plurality of stave supporting plates secured to the inner face thereof and held in spaced relation to the inner face thereof, a plurality of closely arranged

staves, each stave provided with a spring metal hook, each hook being provided with an outwardly bulged portion terminating in an inwardly extending spring end, said spring end being slightly outturned at the lower extremity thereof for facilitating the fitting of said hook over said plate carried by the inner face of said wall whereby said staves will be firmly and snugly held in engagement with the inner face of said plates and thereby held against accidental removal from said plates, and at the same time permitting the expansion and contraction of the staves due to the atmospheric conditions surrounding the staves, said outwardly turned lower end of said hooks being adapted to facilitate the lateral sliding movement of said hooks upon said plates under the expansion and contraction of said staves.

In testimony whereof I hereunto affix my signature.

HARVEY P. McFARLAND.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."