

(No Model.)

W. H. IVERS.
AGRAFFE FOR PIANO FORTES.

No. 448,046.

Patented Mar. 10, 1891.

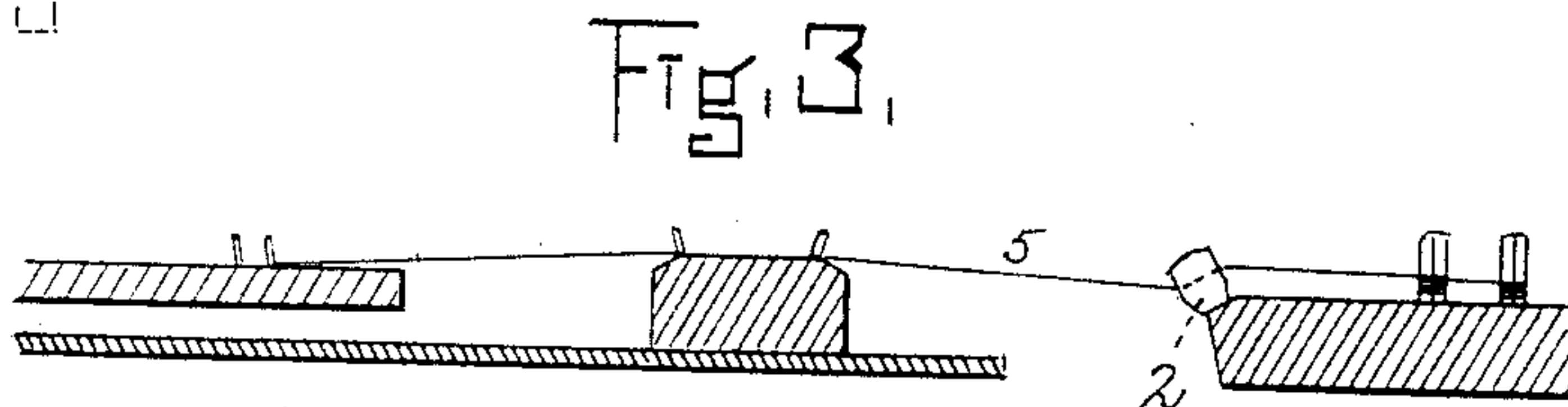
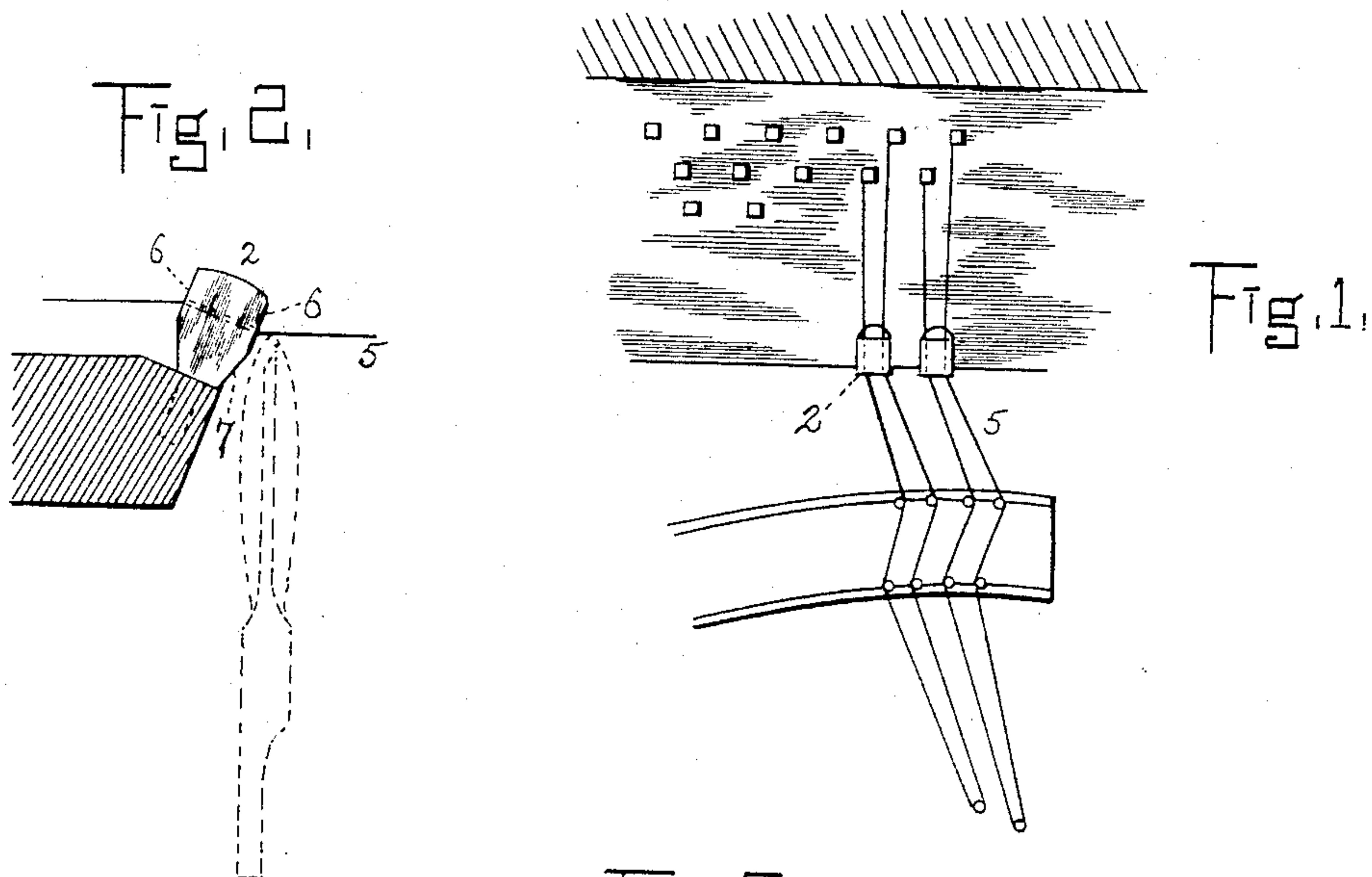


Fig. 5.

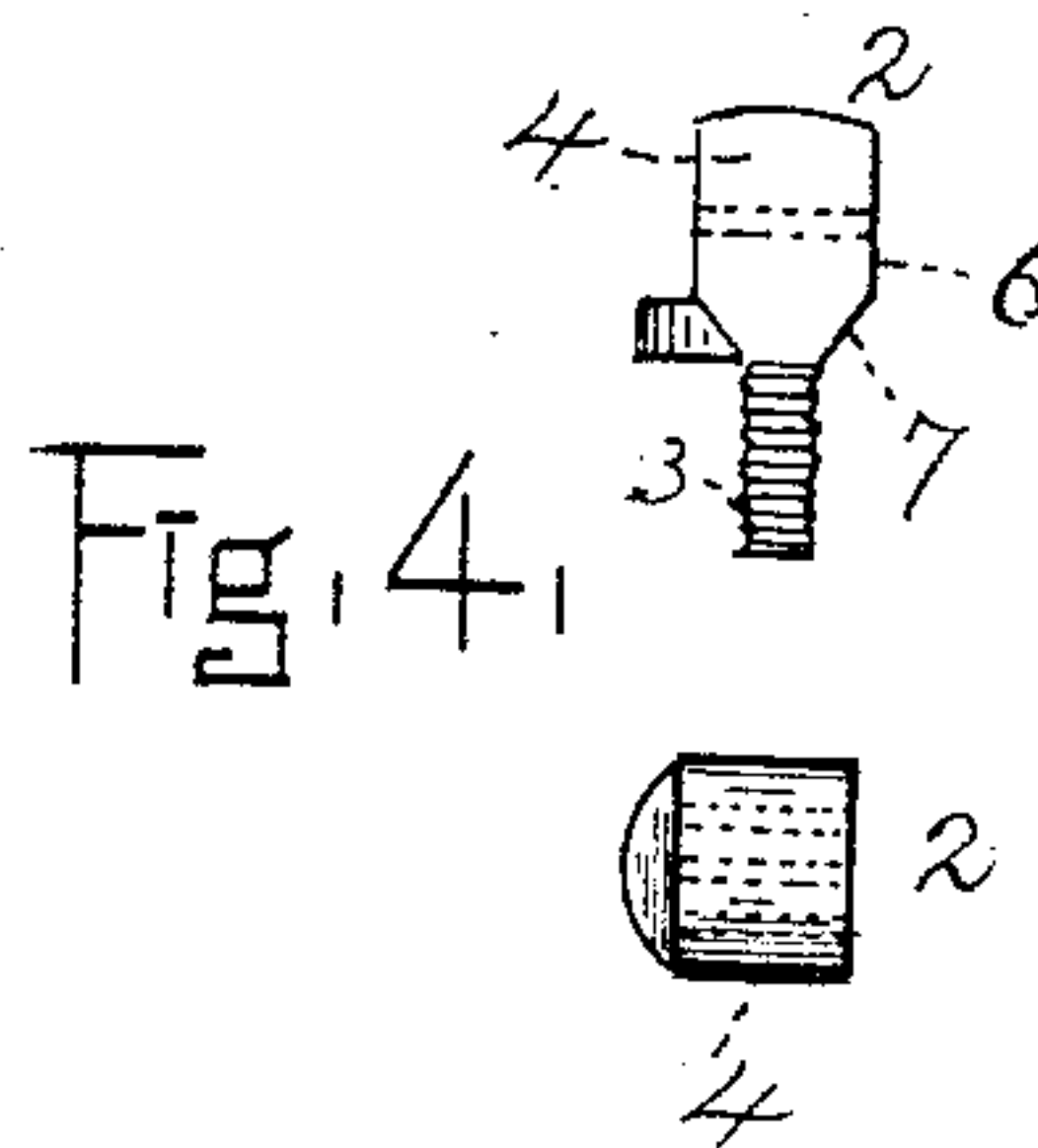


Fig. 4.

Witnesses.
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by H. E. Lodge - Atty.

UNITED STATES PATENT OFFICE.

WILLIAM H. IVERS, OF DEDHAM, ASSIGNOR TO THE IVERS & POND PIANO COMPANY, OF BOSTON, MASSACHUSETTS.

AGRAFFE FOR PIANO-FORTES.

SPECIFICATION forming part of Letters Patent No. 448,046, dated March 10, 1891.

Application filed October 6, 1890. Serial No. 367,157. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. IVERS, a citizen of the United States, residing at Dedham, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Agraffes for Piano-Fortes; and I do hereby 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 figures of reference marked thereon, which form a part of this specification.

This invention relates to piano-fortes; and it consists in certain improvements in the construction of "agraffes," so called, with which this class of musical instruments are equipped.

The drawings accompanying this specification represent, in Figure 1, a plan in part of a piano-forte, to which is applied an agraffe embodying my invention. Fig. 2 represents an enlarged view of my improved construction, showing the hammer in dotted lines and illustrating the advantages in its use. Fig. 3 is a vertical section of that part of the piano shown in Fig. 1. Fig. 4 is a plan and elevation of my agraffe. Fig. 5 shows similar views of a form now in very general use.

My invention is particularly adapted for use in grand or square piano-fortes, and this particular style of agraffe is intended to be applied in the upper treble. In this part of the instrument the length of the wires is very short, and accordingly the space is limited. Hence it is very desirable to have the hammer strike the string as near as possible that point where said string enters the head of the agraffe.

It will be understood by those skilled in the art that the agraffe is used as a bridge or support for such wires as pass through it, and its function is to prevent the vibrations of the wire when struck by the hammer from extending beyond the agraffe, which determines the active part of the wire at this end; but, as before premised, since the space in the upper treble is so very limited, it becomes necessary to have the hammer strike the wire in close proximity to the agraffe. To this end I have materially changed the shape of the agraffe-head.

The agraffe proper is shown at 2, and very closely resembles a machine-made bolt, consisting of a lower screw-threaded rod 3 or cylindrical portion to engage in the body of the piano-forte, while surmounting said rod is a head 4, rectangular in cross-section, through which pass one or more wires 5, generally two or more in the treble portion, owing to the small size of the wires.

In Fig. 5 the head of the agraffe is shown with an enlarged base, while that part which supports the wire and serves as a bridge has its sides located within the said base. As a consequence the hammer is prevented from striking the wire at a point in immediate proximity to said bridge. To overcome this difficulty I have enlarged the head 4 of the agraffe to cause the sides 6 of the head, where the wires enter, to project somewhat beyond the other and lower part of said agraffe. Furthermore, to avoid any interference with the hammer, I have undercut or beveled off, as shown at 7, the lower portions of said sides. In this way the hammers can be so placed that they strike the wires at that point which is nearest to the agraffe itself—a result which cannot be otherwise obtained with the old form of agraffe.

What I claim is--

1. An agraffe for piano-fortes, composed of an upper head portion and a lower screw-threaded portion, the side of the head at the point where the wires enter projecting laterally beyond any other part of said agraffe, substantially as stated and described.

2. In agraffes, the combination, with the lower screw-threaded holding portion, of a head provided with transverse holes for the passage of the wire or wires and undercut at the sides, substantially as and for the purposes herein set forth.

3. An agraffe composed of a head part and a lower holding portion, the head being provided with one or more transverse holes and with the sides converging from a point beneath the wires toward the longitudinal axis of the agraffe, substantially as described.

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

WILLIAM H. IVERS.

Witnesses:

H. E. LODGE,

FRANCIS C. STANWOOD.