

(No Model.)

T. H. MALONE & G. A. WHITING.

CAR SEAL.

No. 292,499.

Patented Jan. 29, 1884.

Fig. 1.

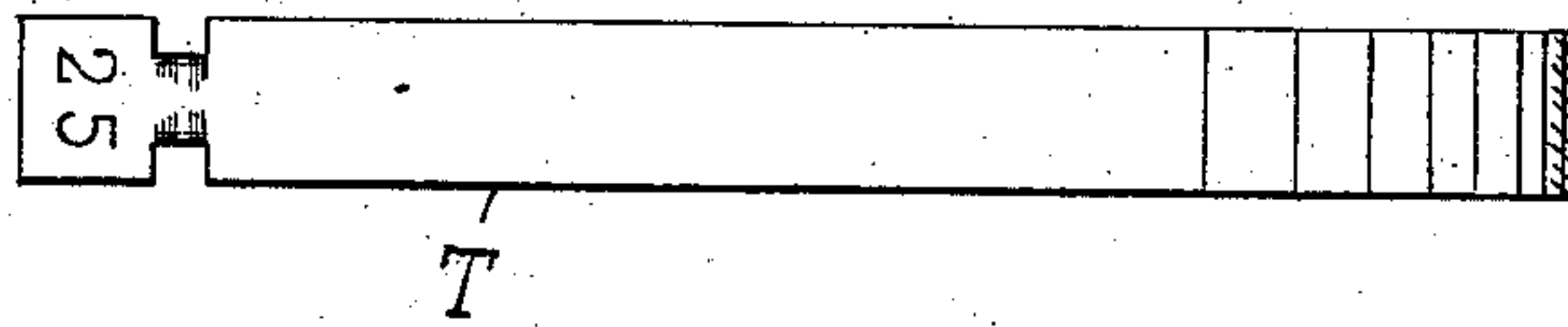


Fig. 2.

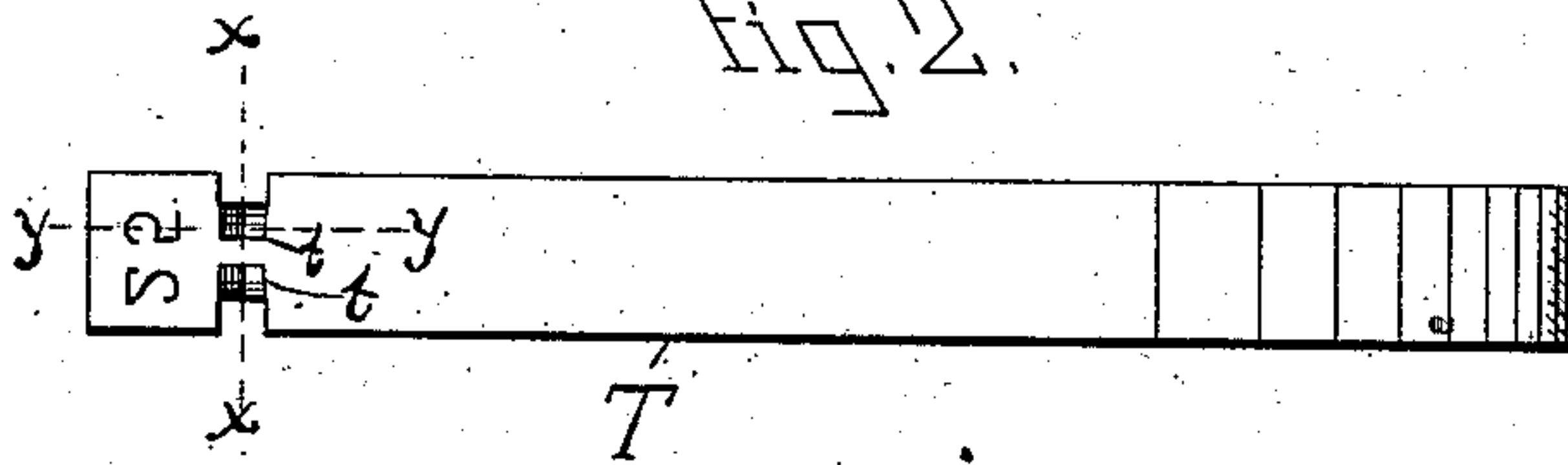


Fig. 3.

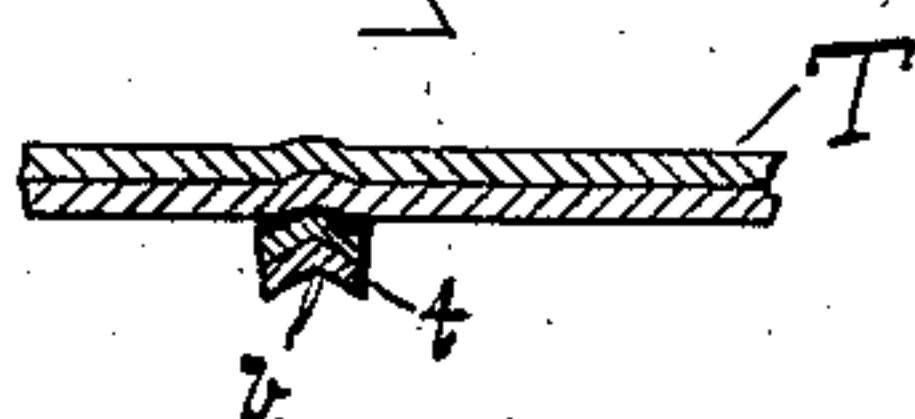
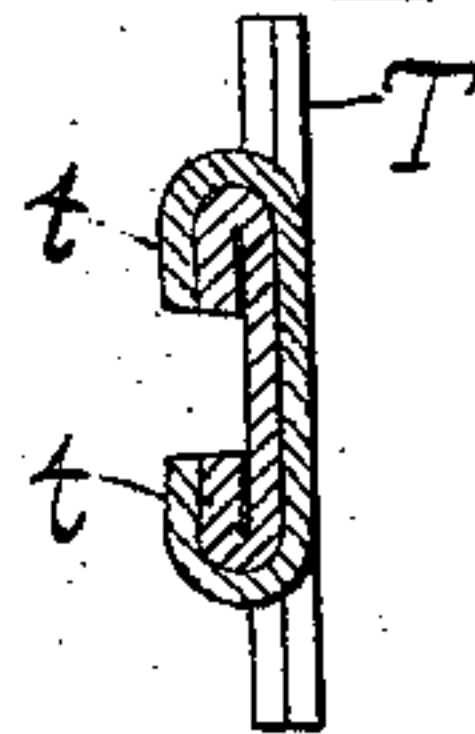


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

THOMAS H. MALONE, OF MILWAUKEE, AND GEORGE A. WHITING, OF
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CAR-SEAL.

SPECIFICATION forming part of Letters Patent No. 292,499, dated January 29, 1884.

Application filed July 16, 1883. (No model.)

To all whom it may concern:

Be it known that we, THOMAS H. MALONE, of the city of Milwaukee, State of Wisconsin, and GEORGE A. WHITING, of the city of Neenah, in said State, have invented a new and useful Improvement in Car-Seals, of which the following is a description, reference being had to the accompanying drawings, in which—

Figures 1 and 2 are side views of the sealed band, representing opposite sides thereof, and Figs. 3 and 4 are cross-sections upon the lines *y y* and *x x*, respectively.

Like letters represent like parts.

For sealing locked freight-cars and other depositories of valuable goods, one of the most convenient, cheap, and efficacious means yet devised consists in the employment of a sheet-metal band, the ends of which are designed to be so fastened together when in use that they cannot be separated without detection—that is to say, that if an attempt be made to separate and again secure them together the condition of the metal band or fastening device at its end will betray the attempt. In such “seals” the practical efficacy and value of the device depends, of course, upon the efficacy of the fastening, and the field of invention is substantially limited to that feature of the device and to the means for producing it. Various fastenings for the purpose referred to have been brought into use by the railroad companies—such, for example, as uniting the ends of the strip by upsetting the burrs formed by punching a hole with a pointed punch through the ends thereof; but up to the date of our invention none of them has been found in practice to be entirely satisfactory and secure, for the reason that, as heretofore constructed, it has frequently been possible to separate the sealed ends of the bands and again unite them in such a manner as to defy detection. After a thorough study of the difficulty, and a long course of experiments to completely overcome it, we have accomplished the object by the production of an improved seal, which forms the subject of the following specification, the method of forming such seal having been patented in Letters Patent of the United States No. 283,205. We have also invented a punch for applying said method to

practice, which is also patented in Letters Patent of the United States. The seal is constructed by bending together the ends of a somewhat brittle metal strap or band, so that said ends shall lie flat, one on the other, then cutting or punching the doubled metal to form two tongues, *t*, one at each edge of the band, each of the tongues *t* being doubled or formed of two thicknesses of metal, one thickness from each end of the strap *T*, then bending said tongues *t* inward toward each other as they lie flat on the metal, with their ends almost or quite touching each other, and then jamming or crushing them with such force as to completely upset the bend of the metal of which they are formed. Tongues cut from the sides of the band and bent over and upset in the manner described cannot afterward be bent out and again closed upon the body of the band without breaking off, and thus any attempt to tamper with the seal will be at once detected. Each band so sealed is designed to be permanently marked with letters, figures, or other symbols impressed into it to indicate the railroad which applies the seal and the station where it is applied, and to give any information by which the railroad authorities or shippers can correctly determine where the attempt to tamper with the seal was made, the symbol in such case depending upon the system of checks adopted by the road or shippers.

In bending and upsetting the tongues, an improved result will be obtained by employing a narrow edged or ribbed bending and upsetting instrument, so as to crush a well-defined groove or depression, *v*, longitudinally into each tongue, especially at the bend—an operation which so breaks up the continuity of the metal and alters its molecular arrangement that it will break off afterward with very slight bending.

The metal should be sufficiently brittle for the purpose; but with this method of sealing any common sheet-iron or tinned plate has been found to answer.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A seal formed of a sheet-metal band hav-

ing its ends doubled together and secured by transverse tongues upset from the sides thereof, and having identifying symbols, numbers, or letters impressed upon the metal, substantially as described.

5 2. A seal formed of a sheet-metal band having its ends doubled together, and secured by tongues upset thereon, said tongues being pro-

vided with grooves or depressions therein, substantially as described.

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Witnesses:

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