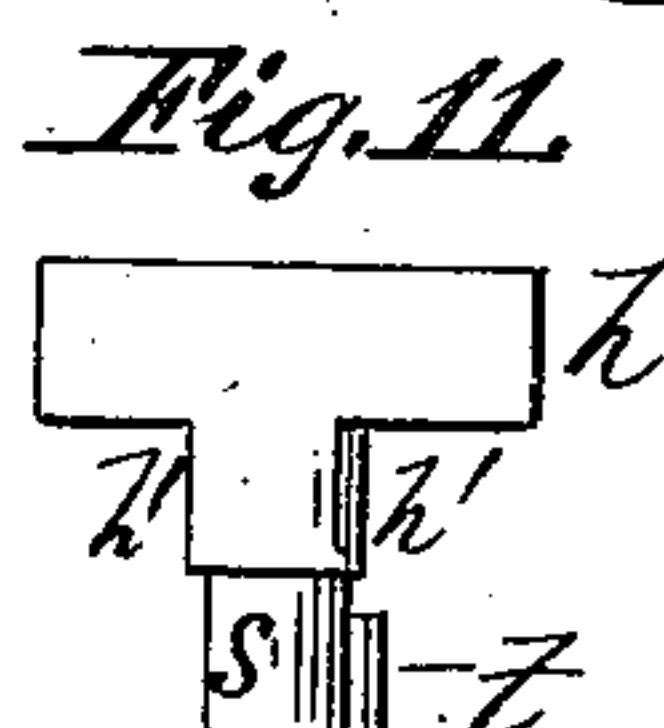
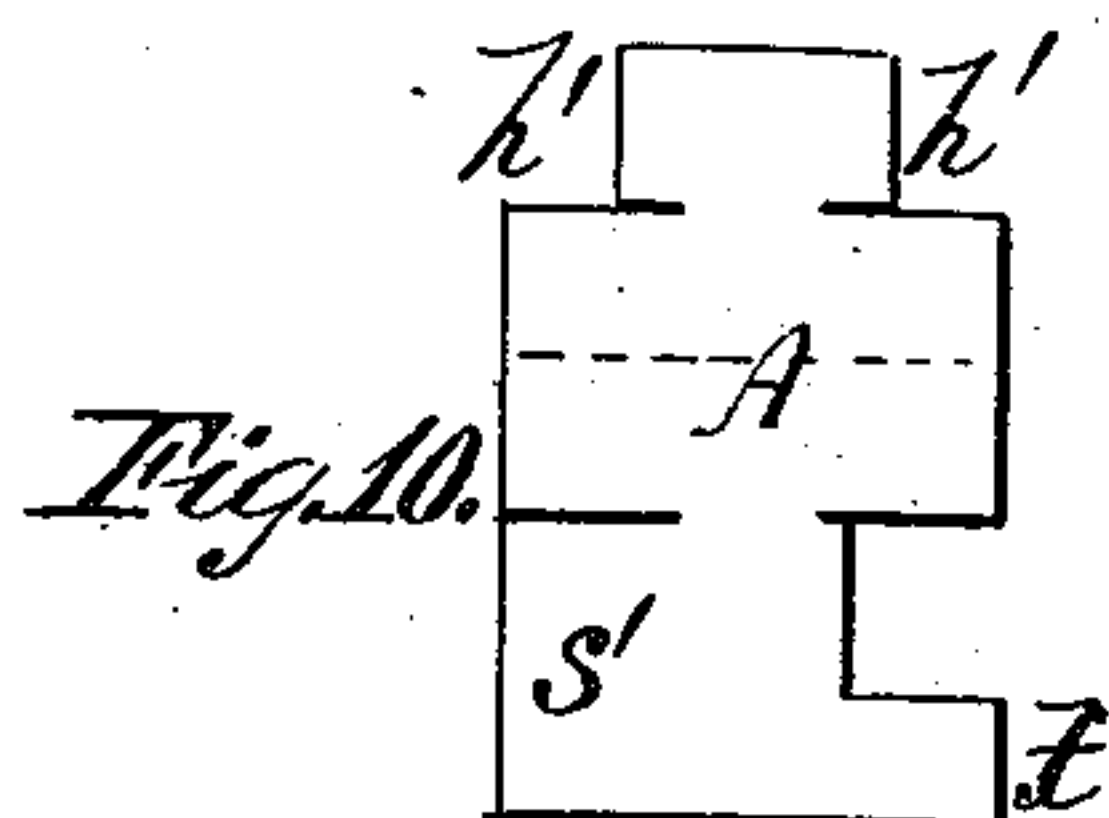
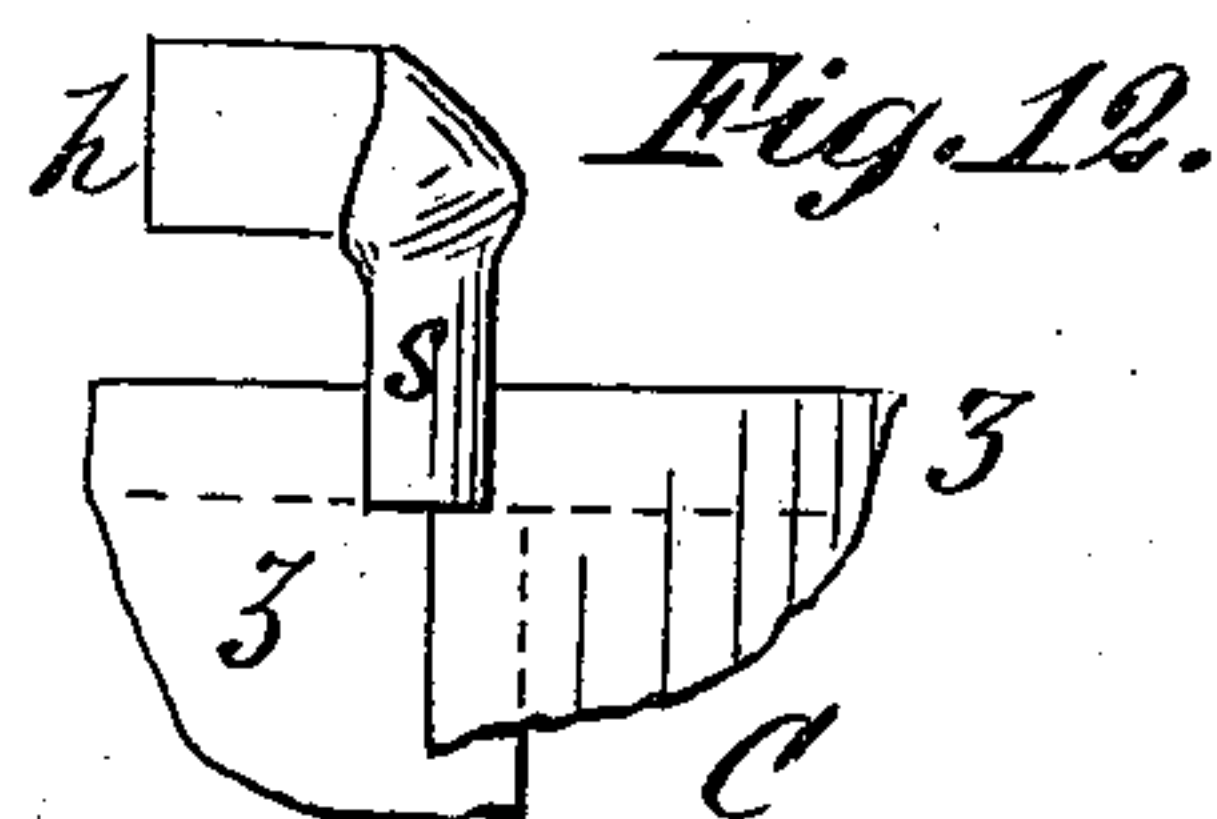
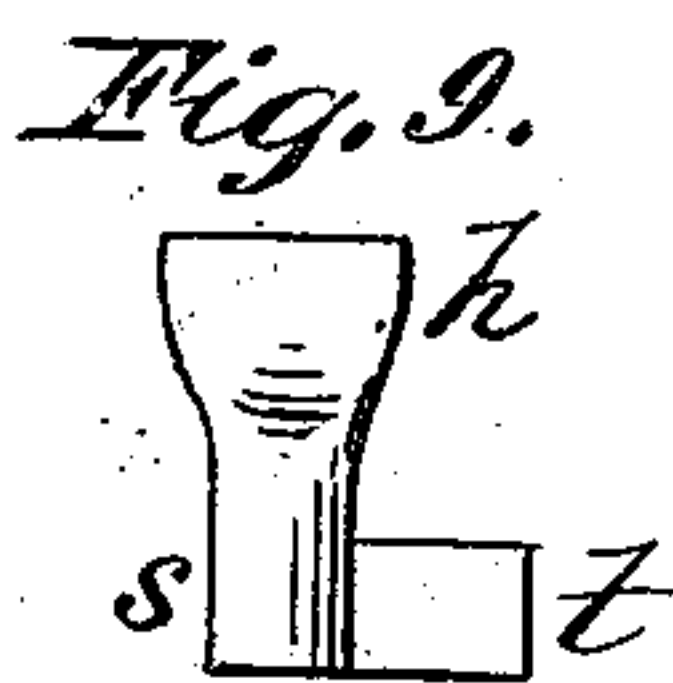
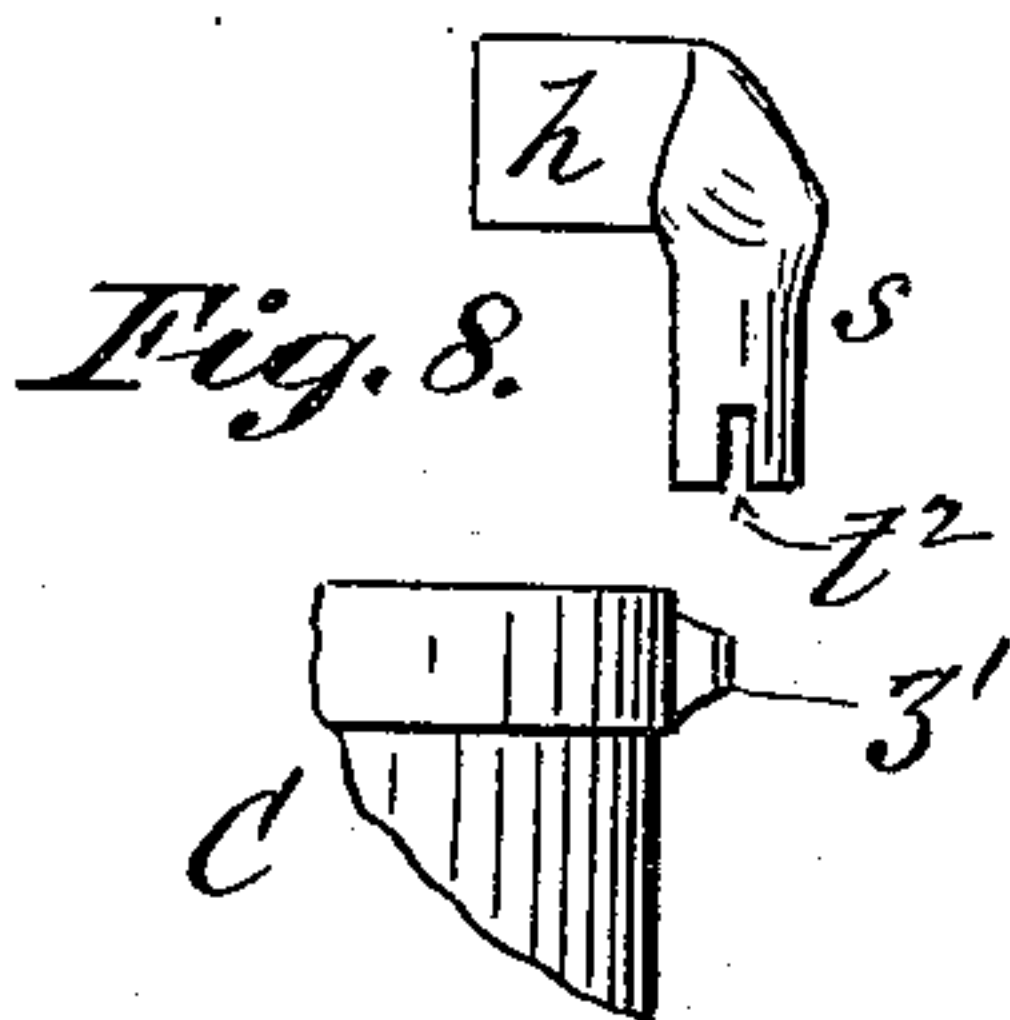
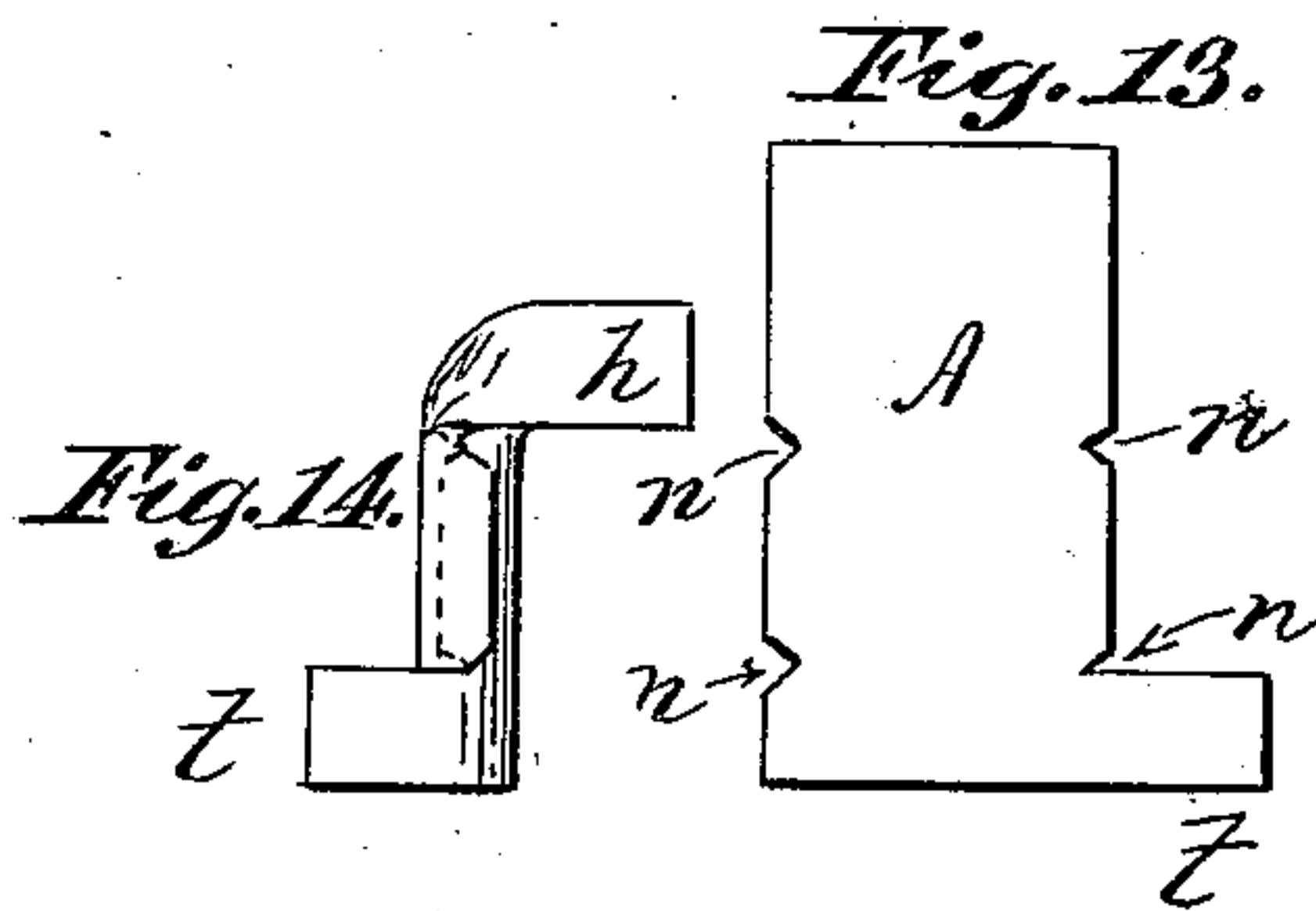
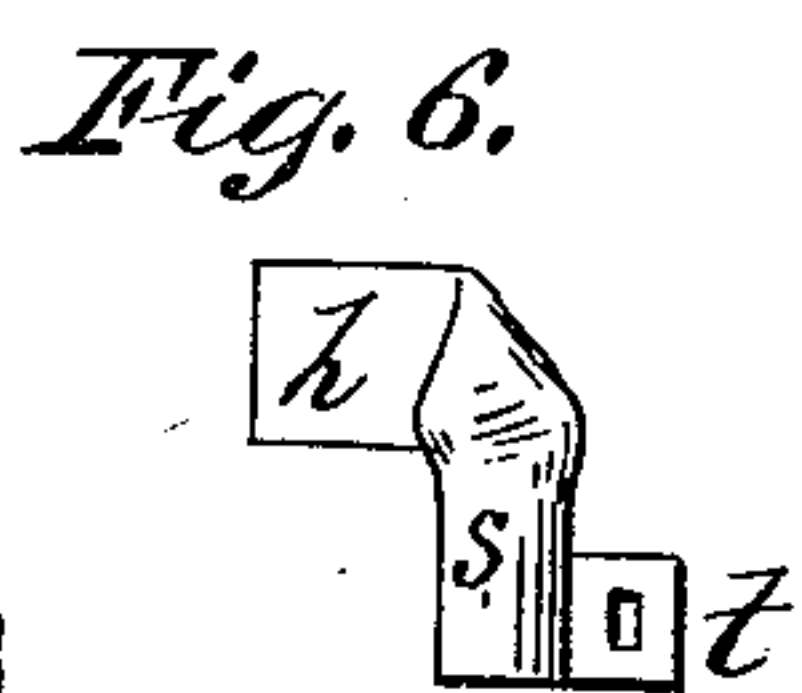
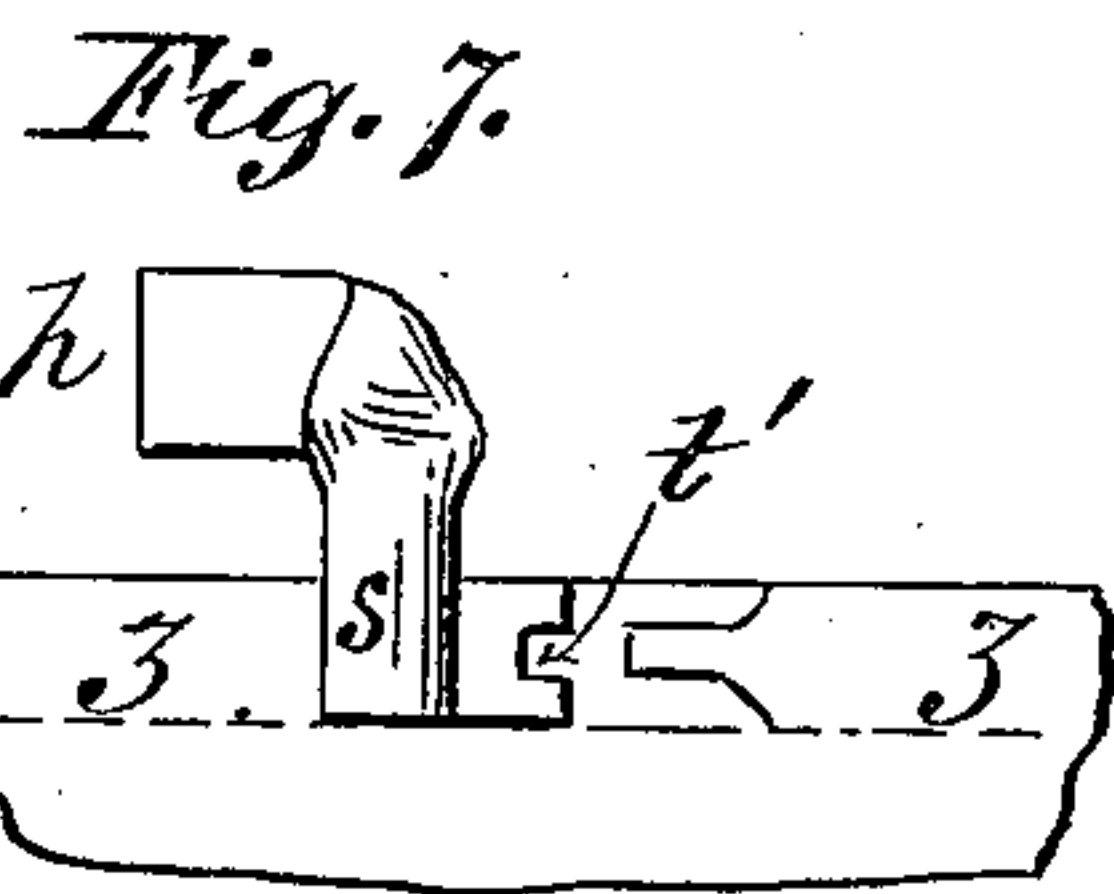
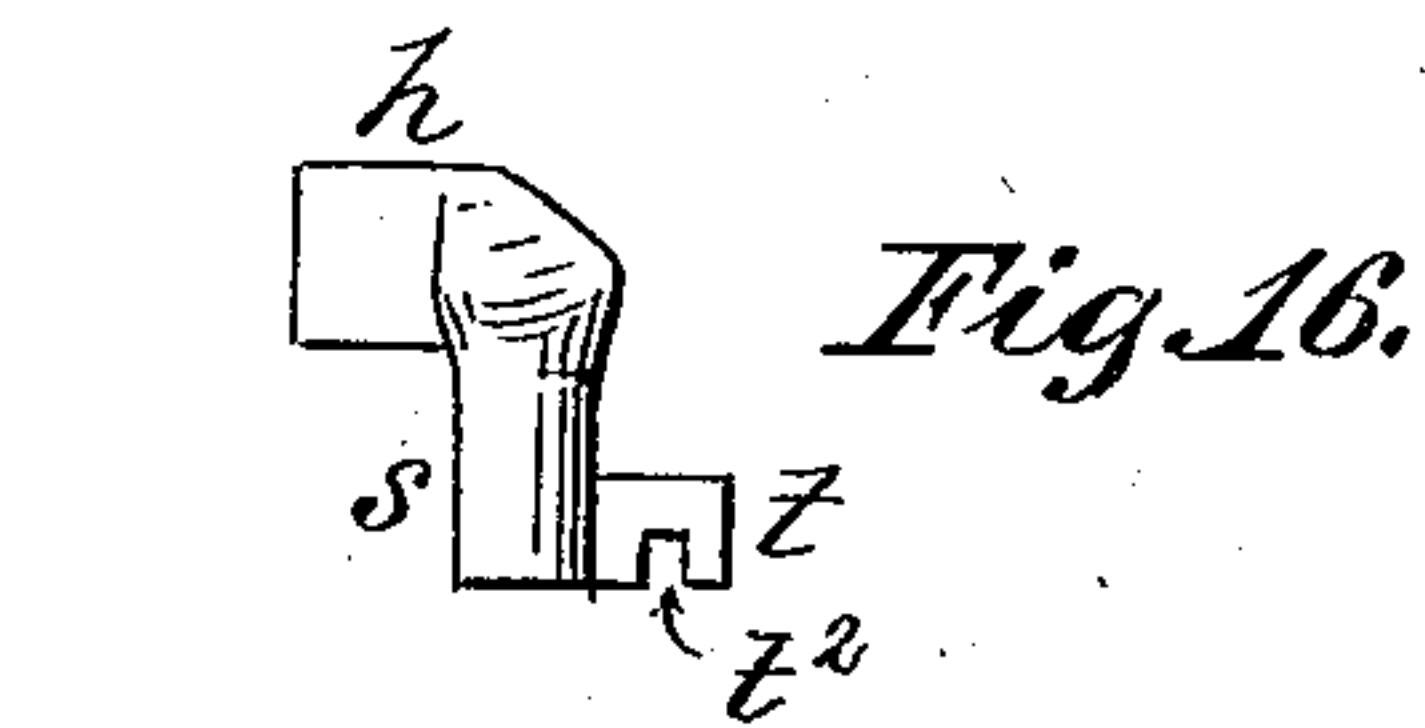
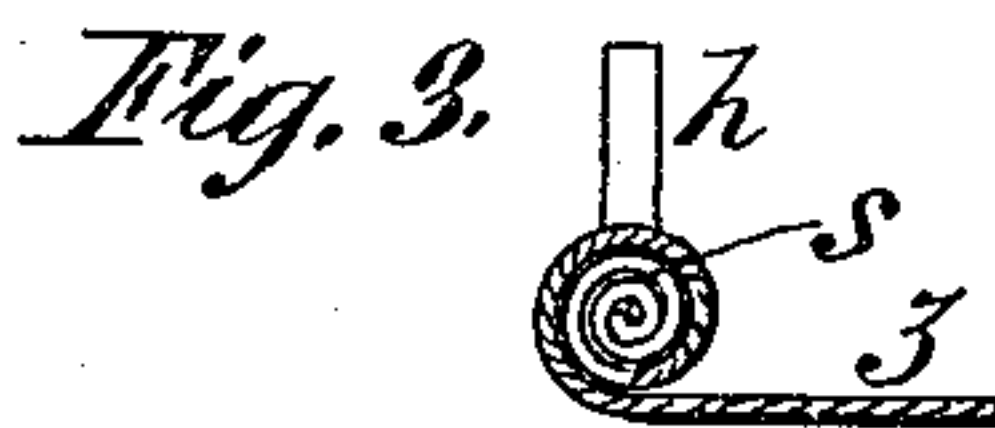
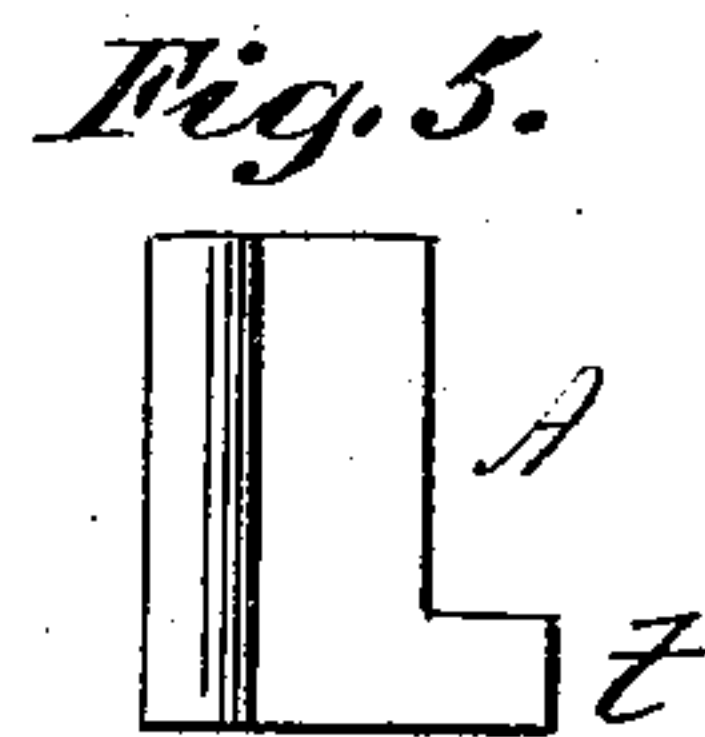
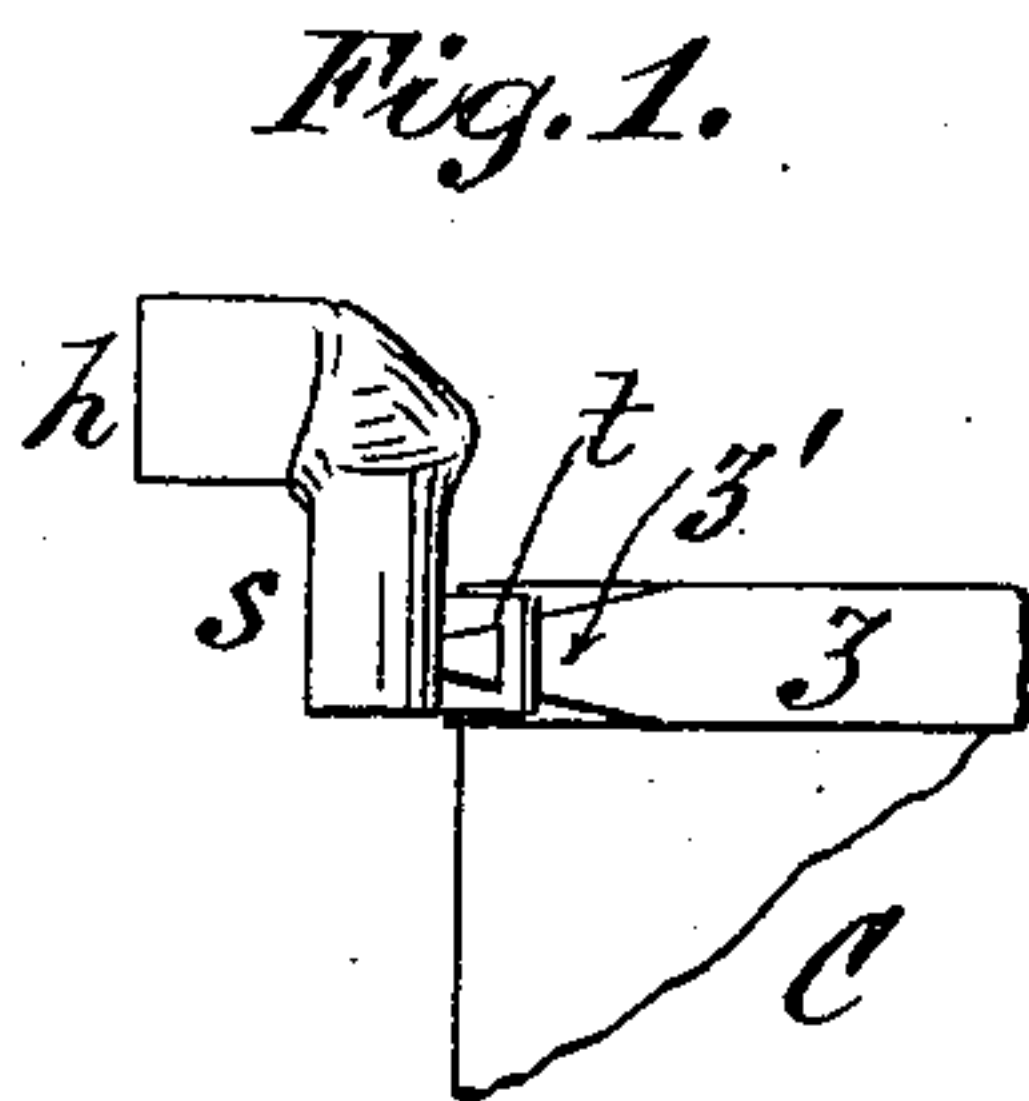
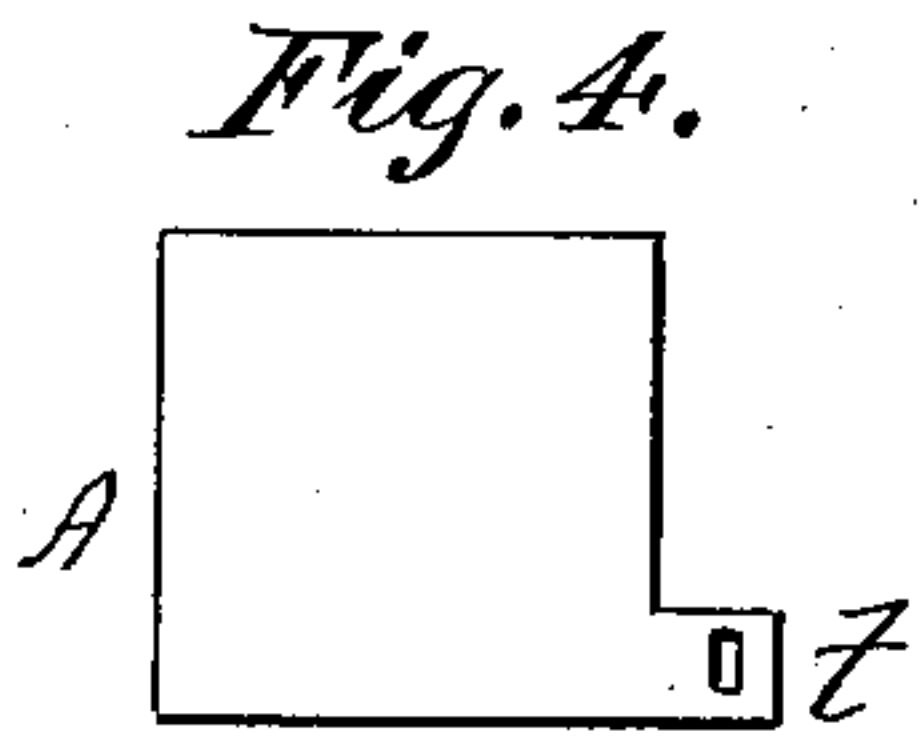


(No Model.)

O. S. FELLOWS.  
KEY FOR OPENING SHEET METAL CANS.

No. 557,369.

Patented Mar. 31, 1896.



Witnesses:  
Edith Pratt  
D. W. Gardner

Inventor:  
Oliver S. Fellows  
By his Attorney  
George William Smith



# UNITED STATES PATENT OFFICE.

OLIN S. FELLOWS, OF MIDDLETOWN, NEW YORK.

## KEY FOR OPENING SHEET-METAL CANS.

SPECIFICATION forming part of Letters Patent No. 557,369, dated March 31, 1896.

Application filed May 10, 1895. Serial No. 548,828. (No model.)

*To all whom it may concern:*

Be it known that I, OLIN S. FELLOWS, a citizen of the United States, residing at Middletown, in the county of Orange and State of New York, have invented certain new and useful Improvements in Keys for Opening Sheet-Metal Cans, of which the following is a specification sufficient to enable others skilled in the art to which the invention appertains to make and use the same.

My improvements relate to strip-winding keys for opening sheet-metal cans by winding a stripping-section from the can around the shank of the key. In my Patent No. 543,004 I show and describe such a key made from sheet metal doubled upon itself to form a transverse head having a shank formed of two longitudinal members.

In my concurrent application, Serial No. 548,827, bearing even date with this, I show a key in which the shank of the key consists of thicknesses of the metal folded inward upon itself to form longitudinal layers held together by the folds.

My present invention consists, essentially, in forming a sheet-metal key for the purpose designated by coiling the metal longitudinally upon itself to form the shank. By rolling or coiling the shank longitudinally I attain greater simplicity and strength of structure, the strain of use increasing rather than diminishing the rigidity of the shank, the form of the shank in cross-section being the best adapted for the winding of the stripping-section of the can evenly and with uniform strain.

My invention also includes certain other special features of construction hereinafter described and claimed.

In the accompanying drawings, Figure 1 is an elevation of the key and a part of a can, illustrating one method of engaging the key with the stripping-zone of the can. Fig. 2 is a sectional view of a part of the can-body, showing an end view of the key-shank in engagement with the stripping-tongue. Fig. 3 is an end view of the shank when formed of a continuation of the stripping-zone, as in Fig. 12, the strip being partially wound around the shank. Figs. 4 and 5 illustrate the blank and the process of forming the key when made of one continuous longitudinal

roll; Figs. 6, 7, and 8, the key with different forms of tongues for engagement with the stripping-section of a can; Figs. 10 and 11, a modification of the key in which the head is formed by folding a portion of the blank. Fig. 12 shows the key as formed integral with the stripping-zone of a can. Figs. 13, 14, and 15 illustrate the formation of the shank of the key by rolling the sheet metal and interlocking the edges thereof. Fig. 16 shows a modification of the stripping-tongue slot.

The blank A is cut or stamped out of sheet metal in any convenient or well-known manner, the essential feature being the provision of sufficient metal for the formation of the shank *s* by rolling the metal longitudinally upon itself. Thus in all but Figs. 10 and 11 of the drawings the whole length of the blank is rolled longitudinally, and the head or handle *h* is then formed by bending one extremity over transversely, excepting in Fig. 9, in which the upper end of the shank *s* is simply flattened out by stamping or otherwise to form a flat finger-piece. In Figs. 10 and 11 the head *h* is formed by folding over the upper end of the blank above the portion *s'*, which is to be rolled longitudinally to form the shank *s*. In this construction lugs *h' h'* may be formed on the blank, which, when the upper portion of the blank is folded over transversely to form the head *h*, may be wrapped around the rolled shank, as in Fig. 11. This formation of the head is similar to that set forth in my concurrent application hereinbefore referred to, and is here shown and described as an illustration of the fact that the rolled shank *s* may be headed in various ways.

Provision for engagement with the stripping-zone *z* of the can C may be made in various ways, or the rolled shank may form a part of said strip *z*, being a continuation thereof, as shown in Figs. 3 and 12. Otherwise it may be formed with a tongue *t*, projecting laterally from the lower end of the key. This tongue *t* may be inserted underneath or otherwise attached to the stripping-zone in any well-known or convenient manner, or it may be notched or slotted, as at *t'*, Figs. 1, 2, 6, 7, and 16, for engagement with a stripping-tongue *z'*, projecting from the stripping-zone *z* of the can C. It will be noticed in this connection that the end of the



stripping-tongue  $z'$  will be covered and held by the shank  $s$  as soon as the latter has been turned a small fraction of the first rotation of the shank  $s$  upon its longitudinal axis.

5 Instead of rolling the sheet metal spirally upon itself to form the shank  $s$ , the latter may be formed with less metal by rolling it so that its edges overlap and interlock each other, as shown in Figs. 13 and 14, the shank being  
10 substantially cylindrical in form. The interlocking of the edges prevents the further rolling of the metal of which the shank is composed, and also prevents any slipping of the edges longitudinally. One or both edges of  
15 the blank may be formed with the notches  $n$  to effect this interlocking of the edges.

Where the tongue  $t$  is undesirable, the end of the shank may be formed with a notch  $t^2$  in any convenient manner, as by a nicking-  
20 saw where the shank is rolled into a close spiral, as would be the case in Fig. 8, or by forming the blank with slots, which are brought into coincidence when the key is formed and folded with interlocking edges,  
25 as in Figs. 13 and 14.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A key for opening sheet-metal cans, formed from a blank of sheet metal, the shank  
30 around which the stripping portion of the can is wound to open the can consisting of a spiral coil of the metal shaped substantially in the manner described.

2. A key for opening sheet-metal cans, formed from a blank of sheet metal, the shank  
35 around which the stripping portion of the can is wound to open the can consisting of a spiral coil of the metal formed with a handle, sub-

stantially in the manner and for the purpose described. 40

3. A key for opening sheet-metal cans, formed from a blank of sheet metal, the shank around which the stripping portion of the can is wound to open the can consisting of a longitudinal coil of the metal shaped to engage  
45 the stripping-tongue of a can, substantially in the manner and for the purpose described.

4. A key for opening sheet-metal cans, formed from a blank of sheet metal, the shank around which the stripping portion of the can  
50 is wound to open the can consisting of a spiral coil of the metal a portion of which is bent over transversely to form a handle, substantially in the manner and for the purpose described. 55

5. A key for opening sheet-metal cans, formed from a blank of sheet metal, the shank around which the stripping portion of the can is wound to open the can consisting of a coil of the metal, the overlapping edges of the coil  
60 being locked together by notching one edge so as to receive the other, substantially in the manner and for the purpose described.

6. A key for opening sheet-metal cans, formed from a blank of sheet metal, the shank  
65 around which the stripping portion of the can is wound to open the can consisting of a coil of the metal, the overlapping edges of the coil being formed with coinciding notches which interlock and prevent the edges from slipping  
70 longitudinally, substantially in the manner and for the purpose described.

OLIN S. FELLOWS.

Witnesses:

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