

No. 725,337.

PATENTED APR. 14. 1903.

C. H. HAESELER.  
PNEUMATIC TOOL.

APPLICATION FILED SEPT. 18, 1902.

NO MODEL.

*Fig. 1.*

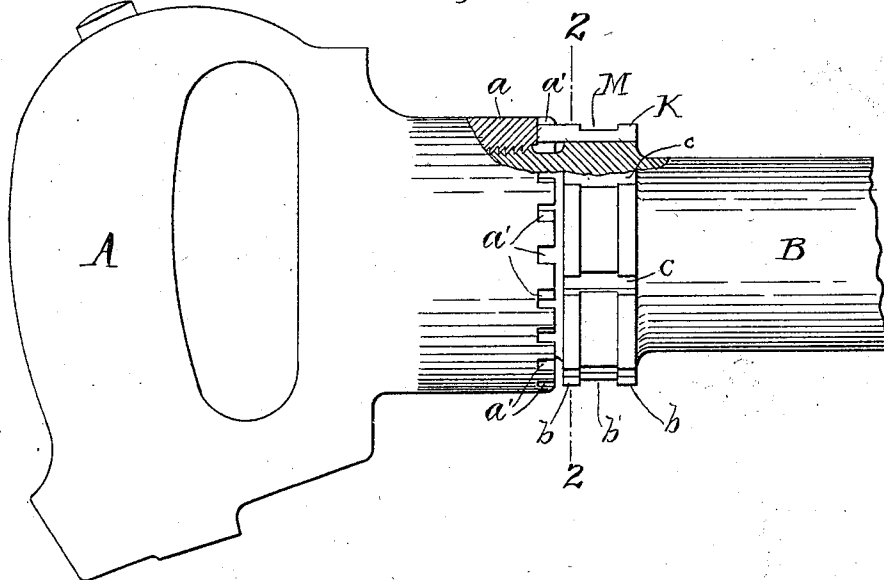


*Fig. 3.*

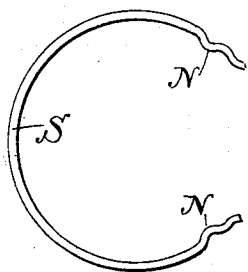


*Fig. 2.*

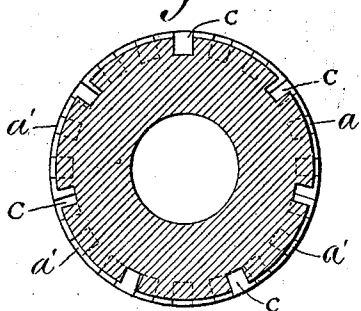


*Fig. 4.*



WITNESSES:

*M. M. Hamilton*  
*G. S. Hutton*

INVENTOR

*Charles H. Haeseler*

BY

*Harding & Harding*  
ATTORNEYS

# UNITED STATES PATENT OFFICE.

CHARLES H. HAESELER, OF EASTON, PENNSYLVANIA, ASSIGNOR TO THE  
HAESELER-INGERSOLL PNEUMATIC TOOL COMPANY, OF NEW YORK,  
N. Y., A CORPORATION OF WEST VIRGINIA.

## PNEUMATIC TOOL.

SPECIFICATION forming part of Letters Patent No. 725,337, dated April 14, 1903.

Application filed September 18, 1902. Serial No. 123,833. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES H. HAESELER, a citizen of the United States, residing at Easton, county of Northampton, and State of Pennsylvania, have invented a new and useful Improvement in Pneumatic Tools, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention has for its object the production of a construction which will insure a fixed connection between the separable parts of a pneumatic tool. The ordinary construction for securing the connection between the handle and the cylinder is to provide a thread upon the end of the cylinder which meshes with an internal thread upon the handle. Various locking means have been used to prevent the handle from turning when screwed down. The main difficulty with these devices is caused by the difficulty of turning the handle to the same point at all times, due to the wearing of the thread or other causes. By my improved construction I am enabled under all conditions to provide a lock between the handle and the cylinder proper, so that the position of the handle may be varied and yet a fixed lock obtained.

The invention is of course applicable to any two separable parts of a pneumatic tool; but I have shown it as applied to the cylinder and handle, where the invention will have its most usual application.

I will first describe the embodiment of my invention described in the accompanying drawings and then point out the invention in the claims.

In the drawings, Figure 1 is a side elevation, partially in section, of the handle and a portion of the cylinder. Fig. 2 is a section on the line 2 2, Fig. 1. Fig. 3 is a detail view of the clamping-ring. Fig. 4 is a detail view of the key.

A represents the handle, having at its lower end the internally-threaded portion *a*. The bottom edge of this handle is provided with notches *a'*, cut therein, twenty of such notches being shown. The upper portion of the cylinder B has the flanges *b b*, between which is formed the groove *b'*. Through these flanges

and the groove are formed the vertical slots or grooves C, seven being shown. When the handle is screwed as far down as possible, one of the notches *a'* will come in alinement with one of the slots or grooves C, and the key (shown in Fig. 4) is then inserted, so that the portion K is in the groove or slot C and the portion M in the groove *b'*, while the upper portion rests in a notch *a'*. If for any reason it should subsequently be possible to force the handle farther down than before, one or the other of the notches will be in alinement with a slot or groove, and this will practically follow with considerable variation between the position of the handle and cylinder. While I have found in practice twenty notches in the bottom edge of the handle and seven slots in the cylinder give good results, still I do not intend to limit myself to any particular number, nor do I intend to limit myself to any particular character of notches or grooves. My invention may be carried out provided the number of notches differs from the number of grooves and one is not the multiple of the other. By this construction I am practically enabled with any relation of position of handle and cylinder to have a slot and notch in alinement with each other and to insert the key. In order to hold the key in position, I use a band S, of spring metal, which is passed around the groove *b'* and in the notched portion M of the key. This band is held in place by the crimped projections N engaging each side of the inserted key with the grooves C in the cylinder.

Having now fully described my invention, what I claim, and desire to protect by Letters Patent, is—

1. In a pneumatic tool, the combination with the separable parts thereof, one part having a threaded end, the other part provided with a threaded portion adapted to engage the thread upon the first-mentioned part, there being notches or grooves in the parts respectively adapted to register with each other, the number of notches or grooves in the respective parts differing one from the other and not being multiples of each other, of means through the medium of said notches and grooves to hold the parts together.

2. In a pneumatic tool, the combination with

the separable parts thereof, one part having a threaded end, the other part provided with a threaded portion adapted to engage the thread upon the first-mentioned part, there  
5 being notches or grooves in the parts respectively adapted to register with each other, the number of notches or grooves in the respective parts differing one from the other and not being multiples of each other, of a key  
10 adapted to be inserted in the registering notches or grooves.

3. In a pneumatic tool, the combination with the separable parts thereof, one part provided with a threaded end and vertical grooves, the  
15 other part provided with an internally-threaded portion at its end adapted to mesh with the threaded end of the first-mentioned part, and notches in its end adapted to register with the vertical grooves in the first-men-  
20 tioned part, the number of notches and grooves in the respective parts differing from each other and not being multiples of each other, of means through the medium of said notches and grooves to hold the parts together.

4. In a pneumatic tool, in combination with the separable parts thereof, one part provided with a threaded end and vertical grooves, the other part provided with an internally-threaded  
25 portion at its end adapted to mesh with the threaded end of the first-mentioned part and notches in its end adapted to register with the vertical grooves in the first-mentioned part, the number of notches and grooves in the respective parts differing from  
30 each other and not being multiples of each other, of a key adapted to be inserted in the registering notch and groove.

5. In a pneumatic tool, the combination with the separable parts thereof, one part provided  
40 with a threaded end and projecting flanges forming an annular groove between them, vertical grooves in said flanges and annular groove, the other part provided with an internally-threaded portion adapted to mesh  
45 with the threaded end of the first-mentioned part and provided with notches in its edge, the notches and grooves in the respective parts differing in number and not being multiples of each other, of means through the  
50 medium of said notches and grooves to hold the parts together.

6. In a pneumatic tool, in combination with

the separable parts thereof, one part provided with a threaded end and projecting flanges forming an annular groove between them, 55 vertical grooves in said flanges and annular groove, the other part provided with an internally-threaded portion adapted to mesh with the threaded end of the first-mentioned part and provided with notches in its edge, 60 the notches and grooves in the respective parts differing in number and not being multiples of each other, of a key adapted to be inserted in the registering notch and groove.

7. In a pneumatic tool, the combination with 65 the separable parts thereof, one part provided with a threaded end and projecting flanges forming an annular groove between them, vertical grooves in said flanges and annular groove, the other part provided with an in- 70 ternally-threaded portion adapted to mesh with the threaded end of the first-mentioned part and provided with notches in its edge, the notches and grooves in the respective parts differing in number and not being mul- 75 tiples of each other, of a key having a cut-away portion adapted to be inserted in the registering notch and groove, the cut-away portion resting in the annular groove and a locking device adapted to encircle said key 80 at its cut-way portion.

8. In a pneumatic tool, the combination with the separable parts thereof, one part provided with a threaded end and projecting flanges forming an annular groove between them, 85 vertical grooves in said flanges and annular groove, the other part provided with an internally-threaded portion adapted to mesh with the threaded end of the first-mentioned part and provided with notches in its edge, 90 the notches and grooves in the respective parts differing in number and not being multiples of each other, a key having a cut-away portion adapted to be inserted in the registering notch and groove, the cut-away por- 95 tion resting in the annular groove, and a resilient band adapted to encircle said key at its cut-away portion.

In testimony of which invention I have hereunto set my hand.

CHARLES H. HAESELER.

Witnesses:

A. H. TAYLOR,

CHAS. COBB VAN RIPER.