

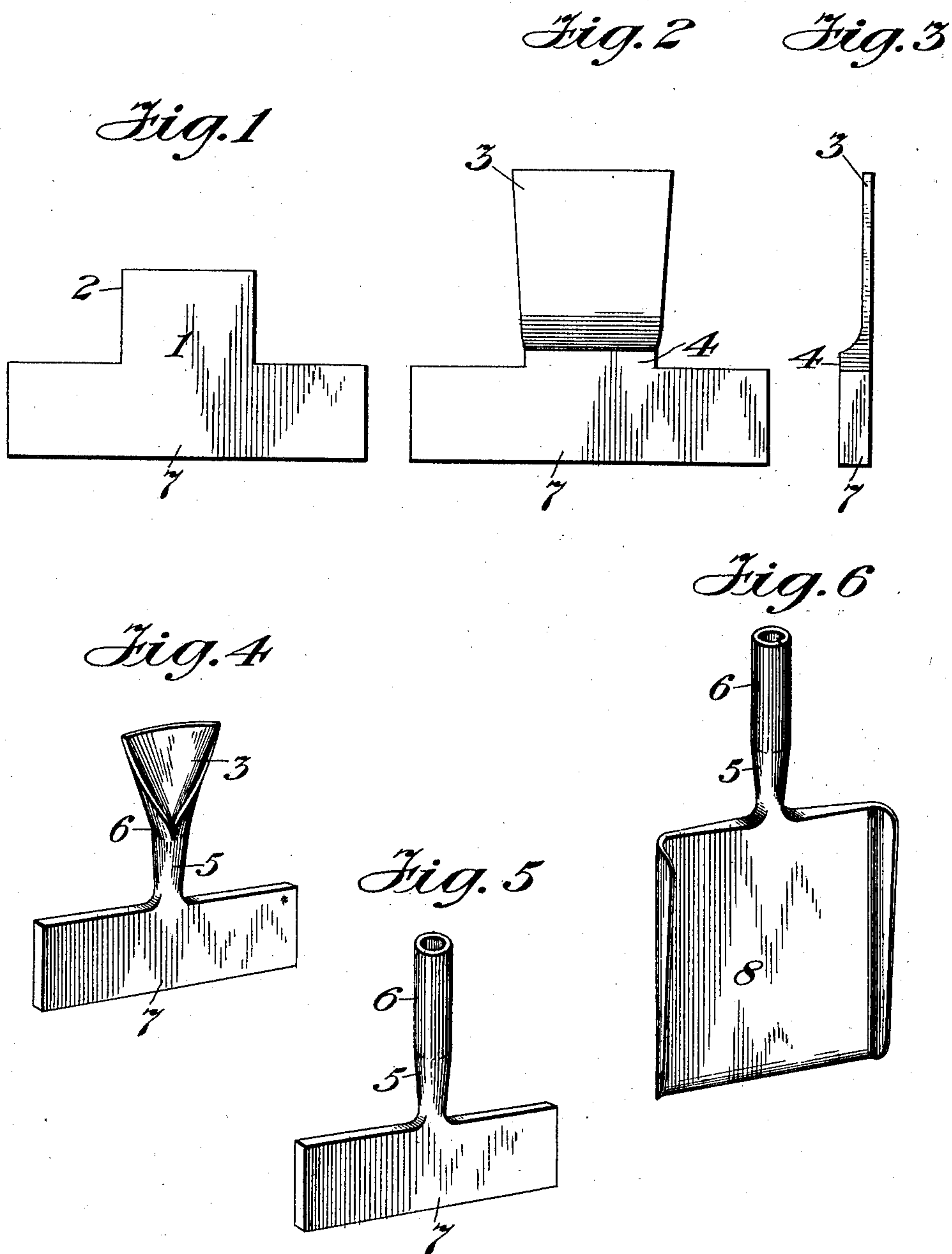
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F. SKELTON.  
METHOD OF MAKING SHOVELS.

APPLICATION FILED DEC. 7, 1903.

NO MODEL.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## METHOD OF MAKING SHOVELS.

SPECIFICATION forming part of Letters Patent No. 757,783, dated April 19, 1904.

Application filed December 7, 1903. Serial No. 184,116. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK SKELTON, a citizen of the United States, residing at Martins Ferry, Belmont county, Ohio, have invented a new and Improved Method of Making Shovels, of which the following is a specification.

My invention resides in an improved method of making shovels and other like tools, the object of the same being to provide for the production of a shovel from a bar or sheet of steel having an integral blade, socket, and solid shank and in which the shank merges smoothly and without abruptness into the socket and in which a lateral opening in the socket is dispensed with.

The details of my invention will be more readily understood by reference to the accompanying drawings, in which—

Figure 1 is a face view of one of the blanks from which the shovel is made. Fig. 2 is a similar view of the same with the right-angled fang thereon rolled out into a thin sheet. Fig. 3 is an edge view of the blank in the condition in which it is shown in Fig. 2. Fig. 4 is a perspective view showing the thick portion of the fang reduced and the socket partially formed. Fig. 5 is a similar view showing the socket completely formed, and Fig. 6 is a view of the shovel in its completed condition with the exception of the handle.

In carrying out my improved method I start with a blank 1, of bar or sheet steel or other suitable metal, the same being formed on one side with a right-angled fang 2. A portion of this fang is first rolled out, as shown at 3 in Figs. 2 and 3 of the drawings, leaving a part 4 of the fang at its point of juncture with the body of the blank in its original thickness. The next step of the method is to reduce or compress, by forging, the thick portion 4 of the fang 2 to form the solid shank 5 and to simultaneously turn or coil the lower end of the part 3 of the fang to partially form the socket 6. Afterward the part 3 of the fang is turned or coiled throughout its entire length

to complete the formation of the socket. The body portion 7 of the blank is then plated or rolled out to form the blade 8 of the shovel, as clearly shown in Fig. 6.

It should be stated that in order that the lower end of the thin portion 3 of the fang may be coiled to partially form the socket at the time when the compression or forging of the thick portion 4 takes place it is necessary to slightly curve or bend or give a lead to said thin portion 3 adjacent to the part 4 prior to the starting of the forging or compressing step; otherwise there would be danger of said thin portion 3 turning or coiling in the wrong direction or of not turning at all and buckling up into a lump. Uniform and satisfactory results can be obtained only by giving this curve or lead to said thin portion of the fang. It is not necessary, however, that the curve be a deep one.

The feature of my invention as above described is the partial formation of the socket 6 by the coiling or turning of the fang simultaneously with the compression or forging of the thickened portion 4 of said fang to form the solid shank. In this way the socket and shank are caused to merge smoothly and without abruptness into each other and, further, the formation of a lateral opening in the socket which tends to weaken the tool at that point is dispensed with.

As thus constructed it will be seen that the completed shovel is made from a single piece of bar or sheet steel, with the blade, shank, and socket all integral with each other and with the parts strengthened at those points where the most strain is met with and where the most strength is desired.

Having now described my invention, what I claim is—

The method of making shovels and the like, which consists in rolling out into a thin sheet a portion of a right-angled fang of a blank of metal, leaving that portion of the fang adjacent to the body of the blank in a thickened condition, then forging or compressing the

thick portion of the fang to form a solid shank  
and simultaneously turning the edges of the  
lower end of the thin or rolled portion thereof  
to partially form a socket, and afterward turn-  
5 ing the remaining part of said fang to com-  
plete the formation of the socket.

In testimony whereof I have hereunto set

my hand in presence of two subscribing wit-  
nesses.

FREDERICK SKELTON.

Witnesses:

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