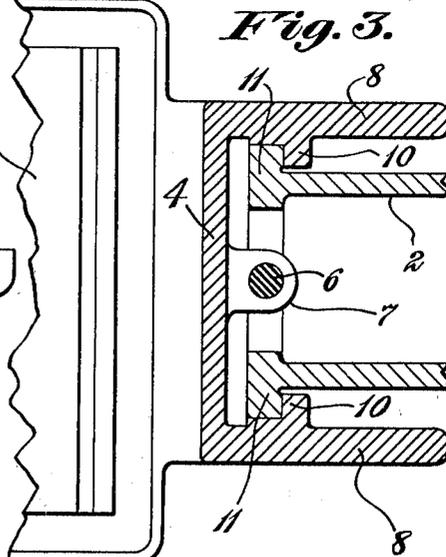
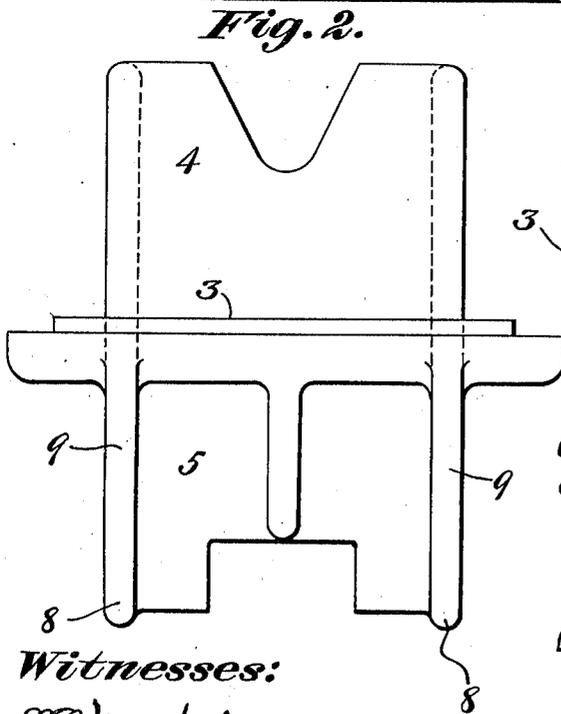
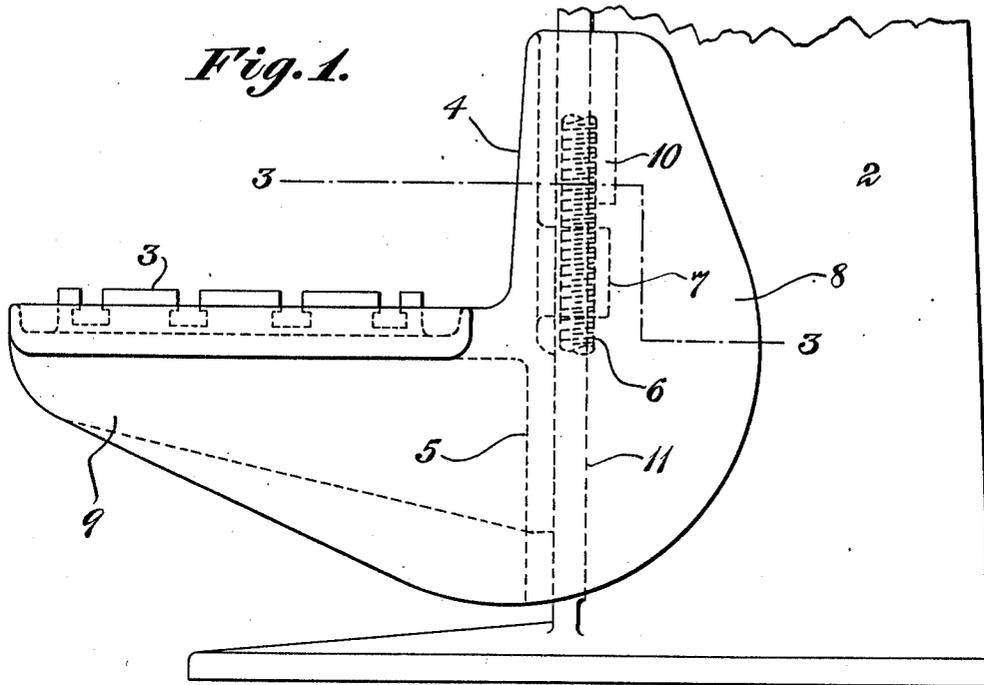


W. T. SEARS.  
 VERTICAL DRILL.  
 APPLICATION FILED JAN. 12, 1914.

1,096,516.

Patented May 12, 1914.



*Witnesses:*

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 By his Attorneys,  
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# UNITED STATES PATENT OFFICE.

WILLARD T. SEARS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO NILESBEMENT POND COMPANY, OF JERSEY CITY, NEW JERSEY, A CORPORATION OF NEW JERSEY.

## VERTICAL DRILL.

1,096,516.

Specification of Letters Patent.

Patented May 12, 1914.

Application filed January 12, 1914. Serial No. 811,570.

*To all whom it may concern:*

Be it known that I, WILLARD T. SEARS, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Vertical Drills, of which the following is a specification.

This invention relates to vertical-drills, the object of the invention being to provide a construction wherein the table is strong and capable of effectually and thoroughly resisting strains and stresses and transferring them to its support.

In the drawings accompanying and forming part of the present specification I have shown in detail one of the several convenient forms of embodiment of the invention, which to enable those skilled in the art to practice the same will be set forth fully in the following description. I do not restrict myself to this particular disclosure; I may depart therefrom in several respects within the scope of the invention defined by the claims following said description.

Referring to said drawings; Figure 1 is a side elevation of the lower portion of a vertical-drill involving my invention. Fig. 2 is a front elevation of the table. Fig. 3 is a transverse section on the line 3—3 of Fig. 1.

Like characters refer to like parts throughout the several views.

The vertical drill shown in Fig. 1 comprises in its organization a vertical column or upright as 2 and a table as 3 which as to the body or work supporting portion thereof may be and is of the usual character. The column or upright 2 is also familiar in this art. Associated with and forming part of the table is a support therefor and although this support may in a measure vary as to construction, it is shown as consisting of an upwardly extending flange 4 and a downwardly extending flange 5. As illustrated the upper flange is slightly in front of the lower flange and is out of contact with the column 2, the lower flange having a sliding engagement with said column. There is shown mounted within the column 2 a feed screw 6 connected with a nut 7 on the upward extension or flange 4 of the table, this being one of several convenient ways of vertically adjusting the table.

There may be cases where no adjustment of any kind need be provided, and others where means of a different kind than those shown may be utilized.

The table is provided with ribs or wings 8 of duplicate construction which are connected with and extend rearwardly from the opposite sides of the two flanges 4 and 5. As represented these ribs 8 extend from the top of the upper flange 4 to the bottom of the lower flange 5 and as a consequence are of considerable length and thus serve to take the thrust from the table and distribute it over approximately the maximum length of the table support. By thus distributing the thrust and locating the extreme resisting points, which in the present case are at the terminals of these webs or ribs 8, and some interval from each other, the actual maximum pressure per square inch or amount of section is materially reduced. This effect is obtained without unduly lengthening the depending flange 5 or its equivalent which would not be the case if the upper extreme resisting point were not above the surface of the table 3 or body thereof.

It will be noted that the webs or wings 8 are widest approximately at the junction of the table 3 with the upward extension 6 and that they are of progressively decreasing thickness in an upward and downward direction from this point. The webs 8 are shown provided with forwardly extending branches 9 which are in vertical line with the respective bodies and which depend from the body of the table 3, thus stiffening the table and providing an exceedingly simple construction in that the branches 9 constitute practically angular extensions or continuations of the two webs 8.

As already stated the table 3 is shown as capable of vertical adjustment and as illustrated the parallel wings or ribs 8 may be provided on their inner sides with vertically extending ways 10 having a slidable bearing engagement against complementary ways 11 on the column 2 at or near the front thereof.

What I claim is:

1. A vertical drill table comprising a bed provided with upwardly and downwardly extending flanges, and ribs connected with the sides of said flanges, extending approxi-

mately from the top of the upper flange to the bottom of the lower flange and projecting rearwardly from them both.

2. A vertical drill table comprising a bed  
5 provided with upwardly and downwardly extending flanges, and ribs connected with the sides of said flanges, extending approximately from the top of the upper flange to the bottom of the lower flange and project-  
10 ing rearwardly from them both, said ribs

having forwardly extending branches at their lower ends connected with and depending from the body of the table.

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

WILLARD T. SEARS.

Witnesses:

W. G. PARSONS,  
GEORGE J. HINES.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."