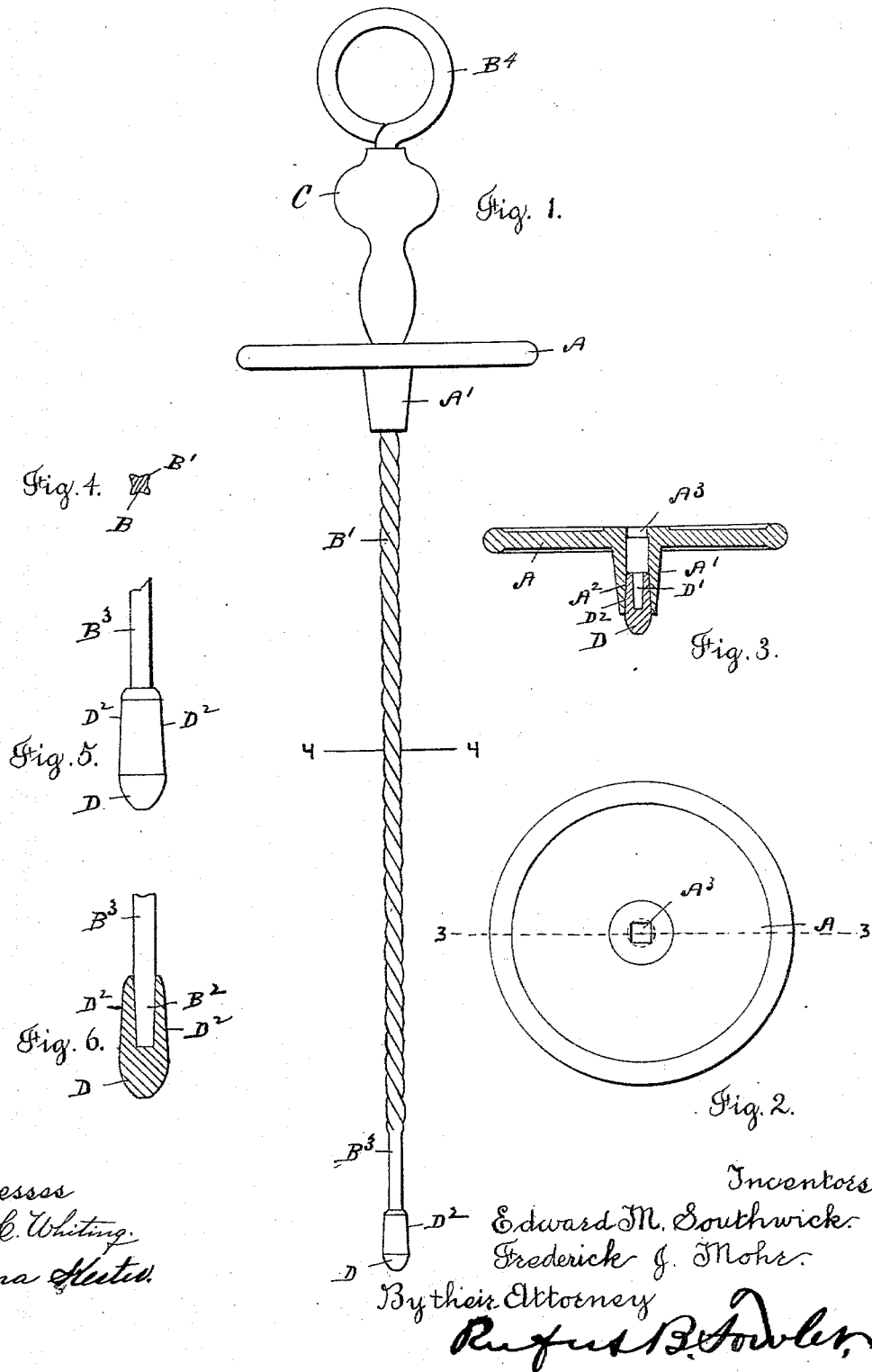


(No Model.)

E. M. SOUTHWICK & F. J. MOHR.
TOP.

No. 510,998.

Patented Dec. 19, 1893.



Witnesses
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UNITED STATES PATENT OFFICE.

EDWARD M. SOUTHWICK AND FREDERICK J. MOHR, OF WORCESTER,
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TOP.

SPECIFICATION forming part of Letters Patent No. 510,998, dated December 19, 1893.

Application filed June 4, 1892. Serial No. 435,570. (No model.)

To all whom it may concern:

Be it known that we, EDWARD M. SOUTHWICK and FREDERICK J. MOHR, citizens of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Tops, of which the following is a specification, reference being had to the accompanying drawings, representing a top embodying our improvement and forming a part of this specification, and in which—

Figure 1 is a view of our improved top. Fig. 2 is a top view of the rotating disk. Fig. 3 is a sectional view of the rotating disk on line 3, 3, Fig. 2. Fig. 4 is a sectional view of the spiral spindle on line 4, 4, Fig. 1. Fig. 5 is an enlarged view of the lower end of the spiral spindle and detachable tip and Fig. 6 is a central sectional view of the end of the spindle and detachable tip.

Similar letters refer to similar parts in the different figures.

Our invention relates to that class of tops, which embody a weighted rotating disk arranged to be pushed off the end of a spindle by which a rapid rotary motion is imparted to the disk and it consists in providing a detachable tip upon the spindle, which is taken by the rotating disk as it is delivered from the spindle, and forms a tip upon which the top spins.

In the accompanying drawings, A denotes a rotating disk of metal provided with a hub A' and having a central hole A², inclosing a spindle B provided with a spiral thread B'. The upper end of the hole A² is made square as shown at A³ to fit the spiral thread B', the size of the square hole A³ being the same as the rectangle inclosing the tips of the threads in cross section, as shown in Fig. 4, preventing the disk A from turning upon the spindle B, except when it is moved longitudinally upon the spindle when a rotary motion will be imparted to the disk by the spiral threads B'. A wooden sleeve C capable of sliding along the spindle B is placed above the disk A by which the disk A is pushed down the spindle, causing it to be rotated a complete revolution for every turn of the spiral thread and causing a rapid rotary motion to be imparted

to the disk as it is pushed off the lower end of the spindle. The lower end of the spindle is made smooth for a distance slightly greater than the length of the disk A and hub A' as at B³ and the extreme end of the spindle is made slightly tapering at B² to receive the metallic tip D, which has a tapering hole D' fitting closely upon the end of the spindle. The outside of the tip D is made tapering in the opposite direction to the central hole as at D² to fit closely the tapering hole A² in the hub A' of the metallic disk A.

In order to spin the top, the disk A and sleeve C are placed upon the spindle B in the position shown in Fig. 1. The tip D is placed upon the tapering end B² of the spindle upon which it is driven so as to fit closely and not be readily removed except by the force of the metallic disk A as it is pushed downward upon the spindle B'. The operator holds the spindle by the ring B⁴ and with the other hand pushes down the sleeve C, forcing the disk A, along the spiral thread B', which is engaged by the square section A³ of the hole through the disk, so as to cause a rotary motion to be imparted to the disk by its longitudinal movement along the spindle. When the disk reaches the lower end of the spindle the tapering hole A² incloses the tapering side D² of the tip D, causing the tip to be removed from the spindle and firmly held within the hub A² in the position shown in Fig. 2 forming a tip upon which the top is supported while spinning. When the tip D is transferred from the hub A' to the end of the spindle B the smooth section B² allows a longitudinal movement of the disk on the spindle without causing it to rotate.

We are aware that tops, having a weighted disk, which are rotated by being forced along a spirally threaded spindle have been in use heretofore and we do not claim such as our invention; but

What we do claim as our invention, and desire to secure by Letters Patent, is—

1. In a top, the combination with a rotating disk and a spirally threaded spindle carrying said disk, of a detachable tip held on the end of said spindle and arranged to be removed therefrom by the longitudinal movement of

the disk along the spindle, substantially as described.

2. In a top, the combination with a rotating disk and a spirally threaded spindle engaged
5 by said disk, of a detachable tip held on the end of said spindle and provided with a tapering outer surface by which it is received and held by said disk as it is delivered from the spindle so as to form a tip for the disk
10 while spinning, substantially as described.

3. The combination of a disk A, provided with a hub A' having a tapering hole A², a

spindle B having a spirally threaded section B' engaged by said disk and a tip D held on the end of said spindle and having a tapering
15 outer surface D² fitting the tapering hole A², substantially as described.

Dated the 31st day of May, 1892.

EDWARD M. SOUTHWICK.
FREDERICK J. MOHR.

Witnesses:

RUFUS B. FOWLER,
EMMA KESTER.