No. 808,000. PATENTED DEC. 19, 1905.

T. BRENNAN, JR.

DISK DRILL.

APPLICATION FILED JUNE 5, 1905.

Fig. 1.

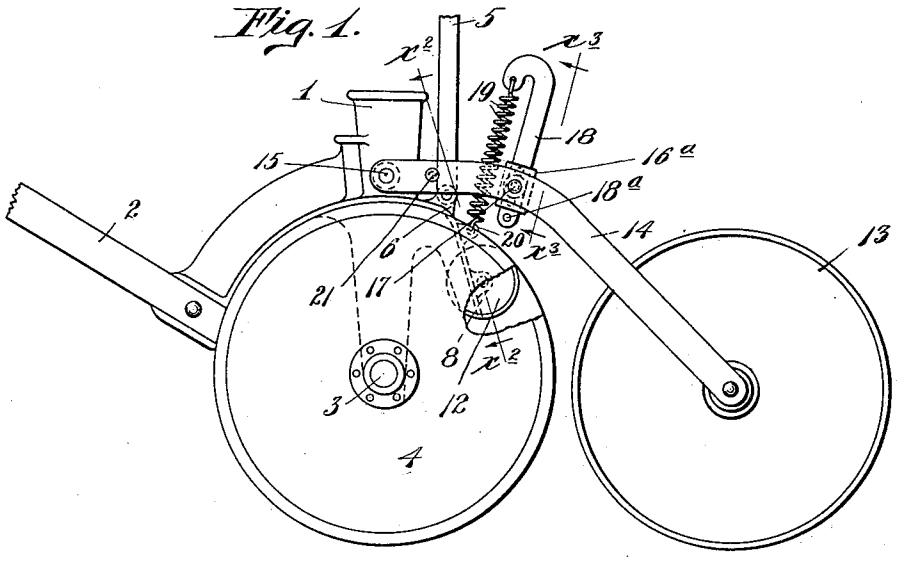


Fig. 2

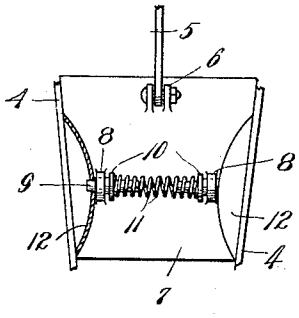
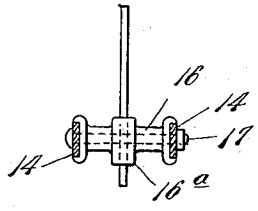


Fig. 3.



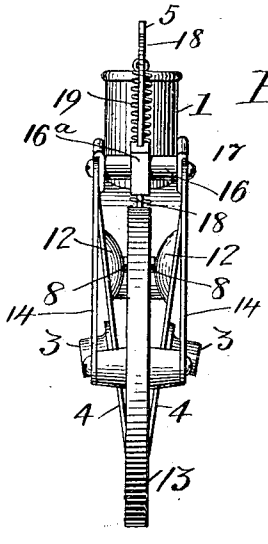


Fig. 4.

Witnesses.
E. W. Jeppesen.
H. M. Renshaw

Inventor:
Thomas Brennan Jr.
By his Attorneys
Williamson & Merchant

UNITED STATES PATENT OFFICE.

THOMAS BRENNAN, JR., OF ST. LOUIS PARK, MINNESOTA, ASSIGNOR TO THE MONITOR DRILL COMPANY, OF ST. LOUIS PARK, MINNESOTA, A CORPORATION OF MINNESOTA.

DISK DRILL.

No. 808,000. Specification of Letters Patent. Patented Dec. 19, 1905.

Application filed June 5, 1905. Serial No. 263,733.

To all whom it may concern:

Be it known that I, THOMAS BRENNAN, JR., a citizen of the United States, residing at St. Louis Park, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Disk Drills; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to seeding-machines, and is particularly directed to the improvement of disk drill attachments thereto.

The invention consists of the novel devices and combinations of devices hereinafter described, and defined in the claims.

In the accompanying drawings, which illustrate my invention, like characters indicate like parts throughout the several views.

Figure 1 is a view in side elevation with some parts broken away, showing the several features of my invention applied to the disk attachment of a drill. Fig. 2 is a transverse section taken on the line x^2 x^2 of Fig. 1, and Fig. 3 is a transverse section taken on the line x^3 x^3 of Fig. 1. Fig. 4 is a view being taken from the rear of Fig. 1 looking forward.

The numeral 1 indicates a seed-boot of usual construction, the same being rigidly connected to a drag-bar 2 and having laterally-projecting trunnions 3 extended at an angle to each other and on which the furrow-opening disks 4 are journaled in the usual way.

The numeral 5 indicates the rod of a disk raising and lowering device, which in practice includes a yielding pressure device. (Not shown.) The lower end of this bar 5 is pivotally attached to lugs 6 on the rearwardly-extended and downwardly-turned web 7, that fits closely between the diverging surfaces of the two disks 4. On the lower portion of this web 7 is a pair of laterally-spaced guide-lugs 8, through which work axially-alined plungers or short bolts 9, having stop-collars 10 located between the said lugs 8. The coiled spring 11 surrounds the inner ends of the plungers 9 and reacts against the stop-collars 10 thereof with a force tending to push the said collars against the adjacent lugs 8. The outer ends of the plungers 9 are reduced in diameter to form shoulders and afford trunnions upon which concavo-convex scrapers 12 are loosely journaled. The spring 11 yieldingly presses the scrapers 12 against the inner surfaces of the corresponding disks 4. These rotary scrapers are not herein broadly claimed, since they are subject-matter of United States Letters Patent No. 785,865, issued to Spencer E. Davis, of date March 28, 1905. My improved scraper-supporting device, however, I believe to be new. This scraper-supporting device is of small cost and may be very quickly applied in working position and removed therefrom. It is especially adapted for application to rotary scraper-disks that are applied for action on the inner surfaces of the disks.

The numeral 13 indicates what is sometimes called a "press-wheel" and sometimes a "covering-wheel." This press-wheel is loosely journaled in the rear end of a press-bar made up of a pair of laterally-spaced metallic straps 14, that are pivotally attached at 15 to the upper portion of the seed-boot 1. This press-wheel is yieldingly forced into contact with the ground by a spring-pressure device of novel construction, and which device is preferably constructed as follows: The numeral 16 indicates a spacing-sleeve which is placed between the straps 14, has flange engagement therewith at its ends, and is rigidly secured thereto by a nutted bolt 17. At its intermediate portion the sleeve 16 has a rectangular enlargement 16^a, that is formed with an approximately vertical slot, through which works an anchor-bar 18. This anchor-bar is provided at its lower end with several perforations 18^a, through any one of which the bolt 17 is adapted to be passed. The said anchor-bar 18 may therefore be set in different vertical positions or adjustments. The numeral 19 indicates a coiled spring which is attached at its upper end to the downturned upper end of the anchor-bar 18 and at its lower end is attached to a lug 20 on the web 7 of the boot 1. This spring 19, as is evident, yieldingly draws downward on the bars 14, and hence on the press-wheel 13. The tension of the said spring may, as is evident, be varied by vertical adjustments of the anchor-bar 18.

The numeral 21 indicates a pin extended through the straps 14 at the rear of the boot 1, and which pin engages with the web 7 when the boot 1 is raised into an inoperative position, thereby causing the press-wheel 13 also to be raised.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. The combination with a seed-boot and a disk journaled thereto, of a rotary scraper working against one face of said disk, and a spring-pressed plunger affording a journal for said scraper, substantially as described.

2. The combination with a seed-boot and a disk journaled thereto, of a concavo-convex scraper working against one face of said disk, and a spring-pressed shouldered plunger mounted for straight-line movements on a part carried by said boot, and acting on said scraper, substantially as described.

3. The combination with a seed-boot and a pair of disks journaled thereto, of a pair of rotary scrapers working against the inner face of said disks, a pair of axially-alined plungers mounted on a part carried by said seed-boot and affording journals for said scrapers, and a spring compressed between and acting on said plungers, substantially as described.

4. The combination with a seed-boot and a pair of disks journaled thereto, said seed-boot having a rear projection 7 formed with bearing-lugs 8, of plungers 9 mounted in said lugs 8 and provided with collars 10, a coiled spring 11 surrounding the inner ends of said plungers, and pressing against the shoulders 10 thereof, a concavo-convex rotary scraper journaled on the reduced outer ends of said plungers, substantially as described.

5. The combination with a seed-boot and a furrow-opening device applied thereto, of a press-bar pivoted to said seed-boot, a press-wheel journaled in the rear end of said press-bar, an upright anchor-bar applied to the intermediate portion of said press-bar, and a coiled spring connecting the upper end of said anchor-bar to a part rigid on said seed-boot, substantially as described.

6. The combination with a seed-boot and a furrow-opening device, of a pair of laterally-spaced straps 14 pivoted to said seed-boot and affording a press-bar, a press-wheel journaled in the ends of said bars 14, a sleeve 16 interposed between said straps 14 and provided with a vertical perforated enlargement 16^a and having several perforations at its lower ends, a bolt 17 passed through said straps 14, sleeve 16 and bar 18, and a coiled spring 19 attached to the upper end of said bar 18 and to a part rigid on said seed-boot, substantially as described.

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

THOMAS BRENNAN, JR.

Witnesses:
S. E. DAVIS,
E. R. HAYES.