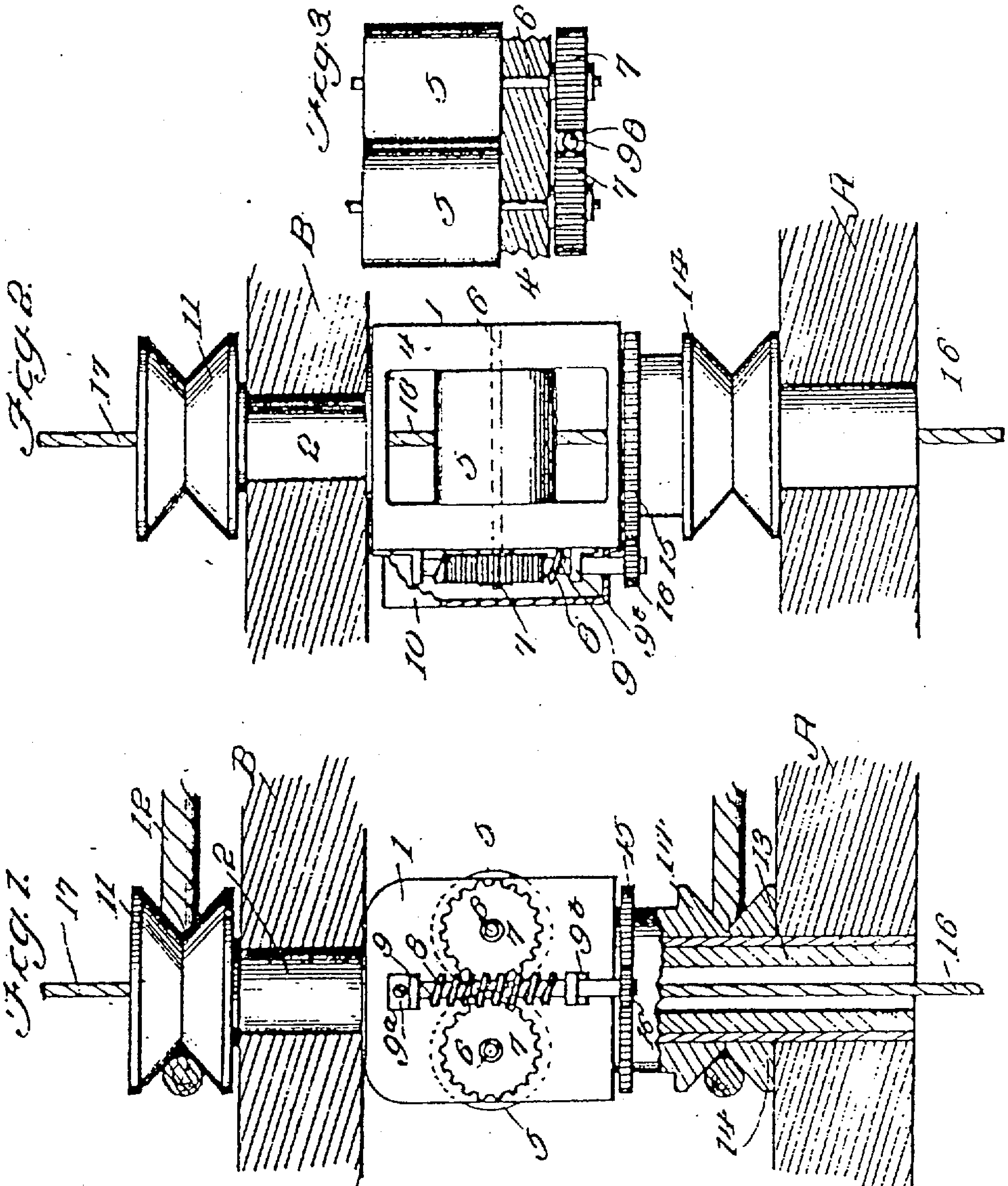
J. BUCKLEY.

SPINNING HEAD.

APPLICATION FILED JAN. 28, 1910.

988,306. Patented Apr. 4, 1911.



Inventor

John Buckley.

Witnesses

By Attorneys.

988,306. SPINNING-HEAD. JOHN BUCKLEY, Franklin, Idaho. Filed Jan. 28, 1910. Serial No. 540,651.

To all whom it may concern:

Be it known that I, JOHN BUCKLEY, citizen of the United States, residing at Franklin, in the county of Oneida and State of Idaho, have invented certain new and useful Improvements in Spinning-Heads, of which the following is a specification.

My invention relates to a spinning apparatus, and particularly to the rotating head in which the usual drawing rolls are journaled. In the ordinary devices for this purpose, the rotation of the drawing rolls about their own axes is effected by a gear wheel fast on one of the rolls and turning upon a fixed worm.

The object of my invention is to provide a spinnning head of an exceedingly simple construction, wherein the parts are carried upon the exterior of the head in such position as to be easily adjusted or replaced, and wherein the speed of the drawing rolls may be independently varied with relation to the speed of rotation of the head, and without the necessity of changing any gears which may be attached to the head.

For a full understanding of the invention and the merits thereof, and to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a side elevation of my improved spinning head, parts being in section; Fig. 2 is a front elevation thereof; and, Fig. 3 is a transverse section.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to these figures, 1 designates a head which, as shown, is square in section and is provided at its ends with the reduced journals 2 and 3 which are mounted in the opposed frame bars A and B. The head is formed intermediate of its ends with the longitudinally extending chamber or opening 4 in which are located the usual drawing rolls 5 which are mounted on shafts 6 journaled at their ends in those portions of the head at opposite sides of the opening 4. The shafts 6 are extended at one end beyond the head and are provided with the gear wheels 7 which mesh with a worm 8 carried by a longitudinal shaft 9. The shaft 9 is secured to the spinning head on one face thereof, and is therefore mounted eccentrically to said head. One end of the shaft is supported in a suitable bearing block 9^a, while the opposite end of the shaft has a bearing in a transverse plate 9^b

formed upon the head. Any suitable bearings for the shaft, however, may be used. The gears 7 and the worm 8 are housed by a casing 10 which is attached to one face of the head.

One of the journals, as the journal 2, carries fixed upon it the drive pulley 11 adapted to receive motion from any suitable source of power by means of a drive belt 12 or other power-transmitting means. The other journal has mounted loosely upon it the bearing sleeve 13 which is adapted to be secured to the frame of the spinning machine in any desired manner. A drive pulley 14 is loosely mounted upon the bearing sleeve 13 and is designed to be operated from any convenient moving portion of the spinning mechanism or from any suitable source of power. This driving pulley has thereon operating mechanism which will engage the shaft 9 and rotate it. Preferably a gear 15 is attached to the drive pulley 14 and rotates therewith, said gear meshing with a pinion 16 on the lower extremity of the shaft 9. The head 1 has a longitudinal opening which extends through the journals 2 and 3, through which the roving 17 passes.

The operation of my spinning head will be fully understood by those skilled in the art. Rotary movement is imparted thereto by the application of power to the drive pulley 11, the speed being such as to impart the required number of twists to the roving. At the same time, rotary movement is imparted to the driving pulley 14 and transmitted through the shaft 9 to the drawing rolls 5. Thus, the drawing rolls rotate about their axes independently of the rotation of the head 1 about its axis, and therefore it is possible to easily vary the relative speeds of the head and rolls, and thus to easily regulate the drawing and twisting of the roving to meet any requirements.

While I have shown my improved spinning head as being vertical, it will be of course obvious that it might be used in a horizontal position, without departing from the spirit of the invention.

Having thus described the invention, what I claim is:—

1. A spinning head having opposed tubular journals and bearings in which said journals are supported, a pulley attached to one of said journals for rotating the head, a loose gear wheel surrounding the other of said journals and rotatable therearound, a pulley connected to said gear wheel for rotating same, drawing rolls mounted within the head and provided with gears, and a longitudinal shaft having a gear thereon engaging said drawing roll, gears to rotate said rolls, said shaft having a pinion engaging said loose gear wheel.

2. In combination, a framework embodying spaced sides, a bearing on one side, a sleeve extending inwardly from one of the sides of the framework, a spinning head having journals at opposite ends, one of said journals being directly mounted in the bearing in one side of the framework, while the other is mounted in the sleeve aforesaid, co-acting drawing rolls mounted intermediate of the ends of the spinning head, a longitudinally arranged shaft secured to the spinning head, at one side thereof, and rotatable therewith, bearings attached to the spinning head to receive the shaft, worm gear wheels connected with the drawing rolls and arranged at one side of the head adjacent to the shaft above mentioned, a worm at one end of the shaft and in mesh with the worm gear wheels aforesaid, a pinion at the opposite end of the shaft, a pulley rotatable on the sleeve, carried by the framework, a gear attached to the pulley and in mesh with the pinion on the longitudinal shaft, a second pulley applied to the journal of the head, which is mounted directly in the framework, and means for imparting movement to the pulleys, whereby different speeds of rotation may be communicated to the head and the longitudinal shaft by which the drawing rolls are actuated.

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

JOHN BUCKLEY. [L.S.]

Witnesses:
George Kingsford,
Isabell Kingsford.