

No. 871,677.

PATENTED NOV. 19, 1907.

F. C. DAWES & J. W. FORREST.
SPROCKET.

APPLICATION FILED JULY 1, 1907.

Fig. 1.

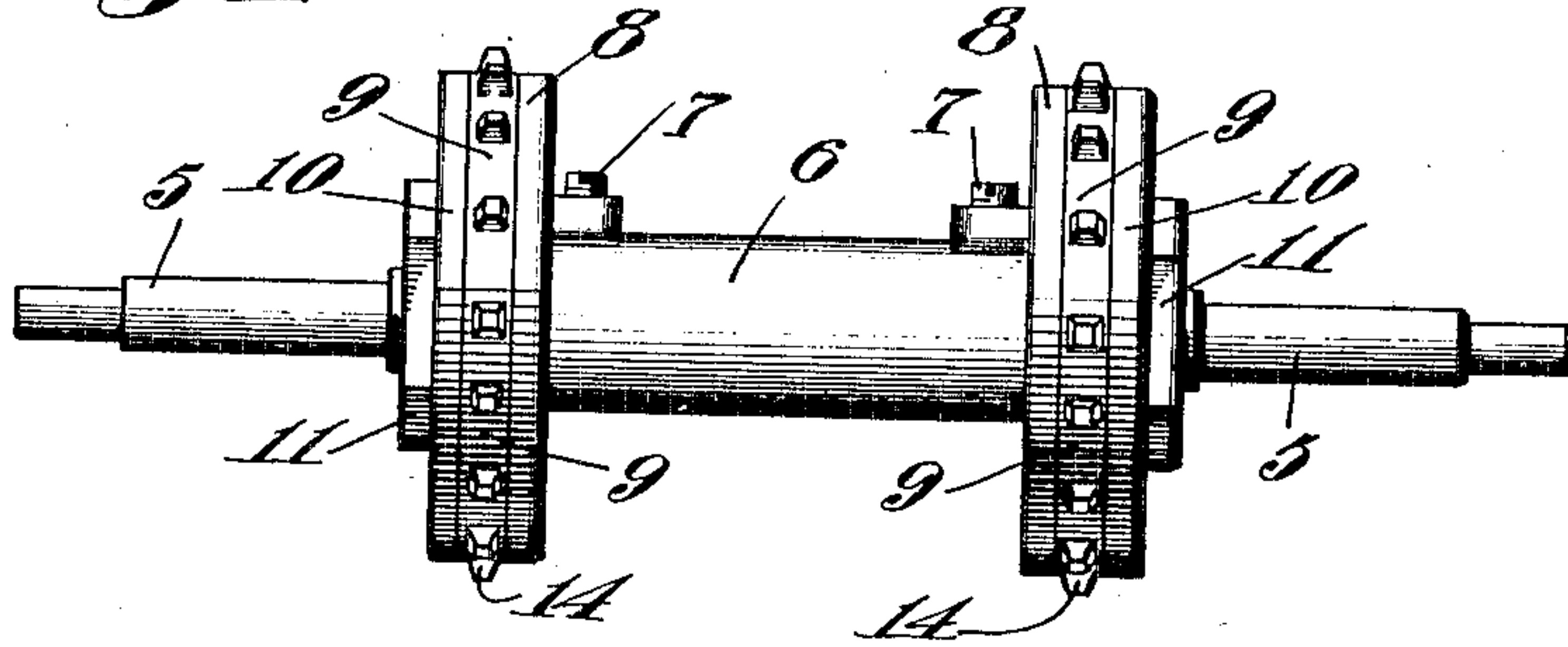


Fig. 2.

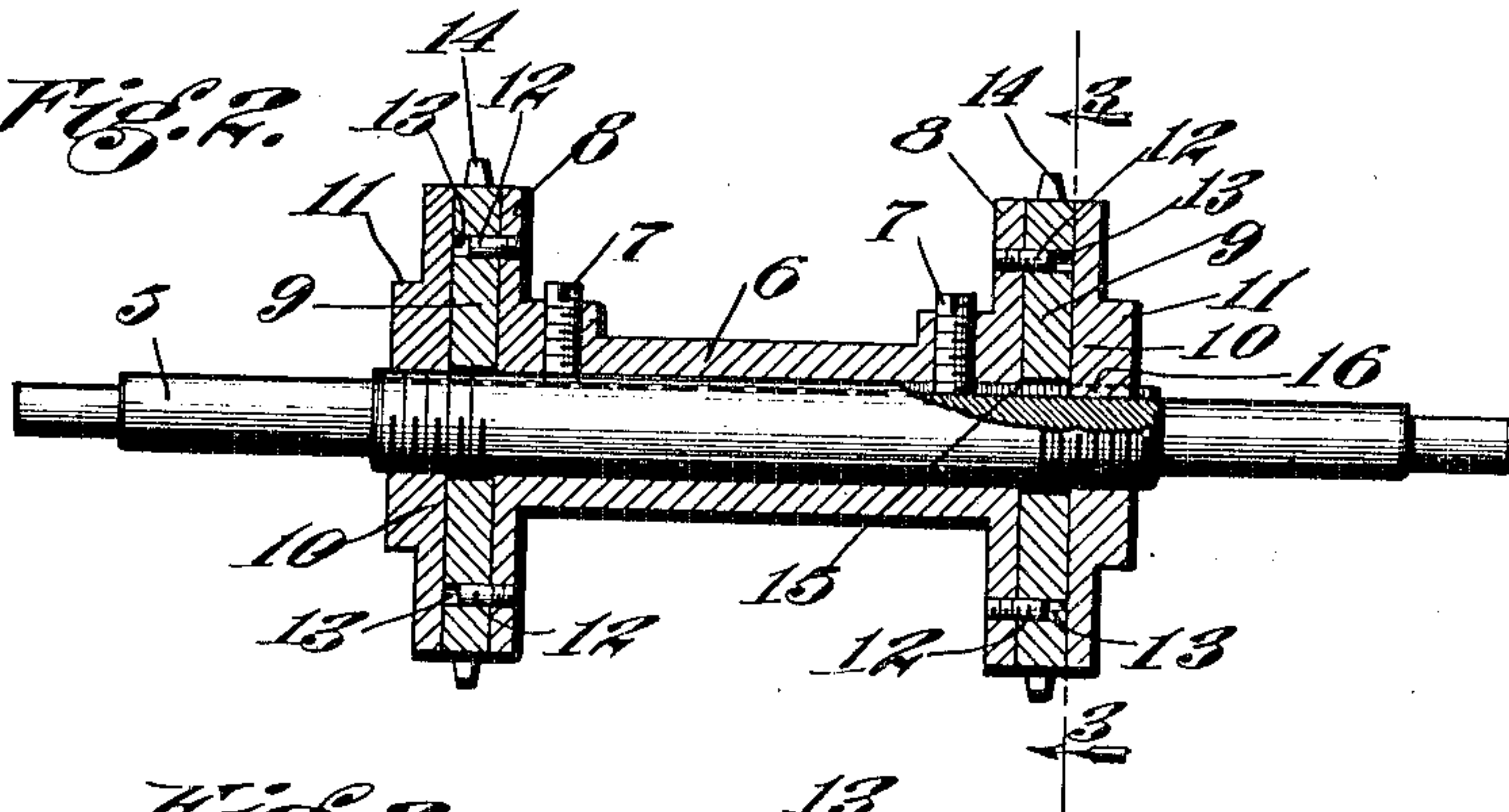
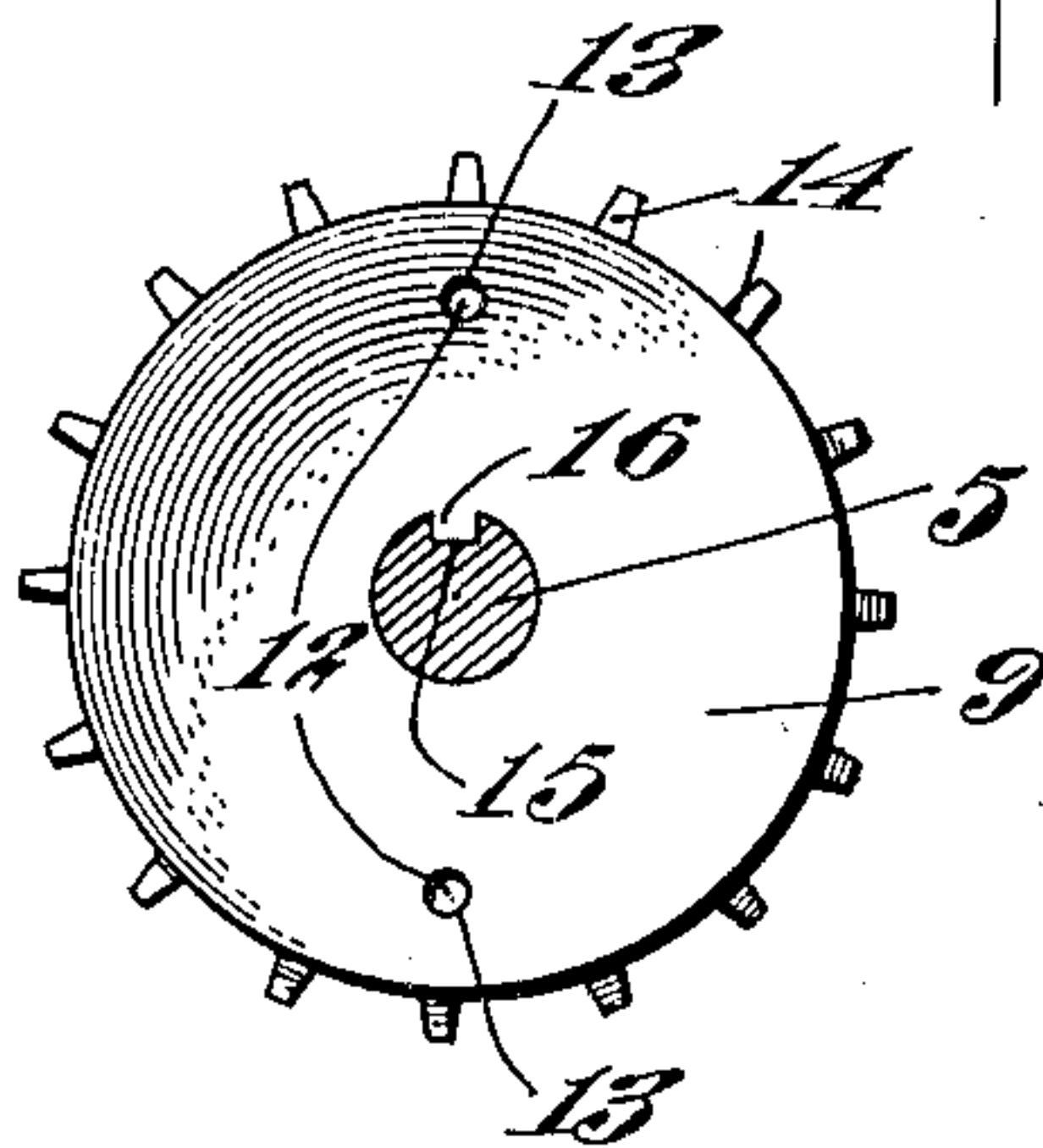


Fig. 3.



WITNESSES
Frank Jackson
Ollie Palmer.

INVENTORS
Frederick C. Dawes
James W. Forrest
By *Harold J. Thomas*
Attorney

UNITED STATES PATENT OFFICE.

FREDERICK C. DAWES AND JAMES W. FORREST, OF LOS ANGELES, CALIFORNIA.

SPROCKET.

No. 871,677.

Specification of Letters Patent.

Patented Nov. 19, 1907.

Application filed July 1, 1907. Serial No. 381,742.

To all whom it may concern:

Be it known that we, FREDERICK C. DAWES and JAMES W. FORREST, both citizens of the United States, residing at Los Angeles, in the county of Los Angeles and the State of California, have invented new and useful Improvements in Sprockets, of which the following is a specification.

Heretofore in moving picture machines and the like, sprockets and the sleeves therefor have been utilized which were stamped or otherwise formed of a single piece of metal and secured on a shaft by means of pins, which had to be removed in order to remove the sprockets. Sprockets of this class are used in pairs, one on each end of the sleeve, which spaces them the correct distance apart, and in the event of one of the sprockets becoming worn or broken, it has been necessary to purchase a complete new set of sprockets and the sleeve therefor in order to renew the worn or broken sprocket.

The object of our invention is to provide a construction which enables the removal of one sprocket or both sprockets from the sleeve holding the same without the necessity of removing the sleeve and replacing it by another.

A further object is to provide a construction which will admit of the longitudinal adjustment of the sprockets along the shaft.

A further object is to provide a simple construction so that the parts which need to be removed from time to time on account of wear, may be cheaply manufactured.

We accomplish these objects by means of the device described herein and illustrated in the accompanying drawing, in which:—

Figure 1.— is a plan view of my sprocket construction as applied to a moving picture machine. Fig. 2.— is a central longitudinal section of the same. Fig. 3.— is a cross-section taken on line 3—3 of Fig. 2.

Referring to the drawings, 5 designates a typical shaft of the general form used in moving picture machines for the sprockets therein, and on which shaft is mounted a sleeve 6 rigidly secured thereto by means of set screws 7 bearing in a groove 15 in the shaft. This means of attaching the sleeve to the shaft provides for the longitudinal adjustment of the sleeve so as to correctly place the sprockets in relation to the other mechanisms to which they connect. Sleeve 6 is provided with a flange 8 on either end against which flat sprockets 9 are adapted to

bear, being held in place by screw flanges 10 in screw threaded engagement with shaft 5 as shown in Fig. 2. Flanges 10 are provided upon their outer faces with nuts 11 by means of which they may be turned up tightly against sprockets 9 so as to hold the sprockets in rigid engagement with flanges 8. Flanges 8 are provided with screw threaded pins 12, which project into recesses 13 in sprockets 9, and thereby prevent any rotation of the sprockets on flanges 8. The shaft bores of sprockets 9 are further provided with lugs 16 which fit into groove 15 in the shaft and further prevent any rotation of the sleeve and sprocket thereon.

Sprockets 9 are preferably stamped out of sheet metal and provided with teeth 14 formed integrally therewith, the sprockets being shown greatly enlarged in the drawings. These sprockets are made in this form so that they may be stamped out of the sheet and therefore can be very cheaply manufactured.

It will be observed that the sprockets in my construction may be readily and quickly removed from the machine without the necessity of removing any other parts therefrom, and further, that they may be very easily replaced by new sprockets. It will further be noticed that my arrangement enables of a sprocket construction which is very cheap and therefore, permits the replacing of worn out sprockets at a minimum expense.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a sprocket construction, a sleeve; a flange on either end of said sleeve; sprockets adapted to bear against said flanges; and means to detachably secure said sprockets on said flanges.

2. In a sprocket construction, a shaft; flanges rigidly spaced upon and secured to said shaft; sprockets adapted to bear against said flanges, said sprockets being provided with recesses therein; lugs on said flanges adapted to engage said recesses in said sprockets; and nuts in screw threaded engagement with said shaft, said nuts adapted to hold said sprockets in rigid engagement with said flanges.

3. In a sprocket construction, a shaft; a sleeve rigidly mounted on said shaft; a flange on either end of said sleeve; said flanges being provided with projecting pins on their

outer faces; sprockets adapted to bear against the outer faces of said flanges, said sprockets being provided with recesses adapted to be engaged by the pins in said flanges; and nuts
5 in screw threaded engagement with said shaft adapted to bear against the outer faces of said sprockets and hold said sprockets in engagement with said flanges.

4. In a sprocket construction, a shaft pro-
10 vided with a longitudinal groove therein; a sleeve mounted on said shaft and provided with set screws adapted to bear in the groove in said shaft, said sleeve being further provided with a flange on either end; projecting
15 pins on the outer faces of said flanges; sprockets adapted to bear against the outer faces of said flanges, said sprockets being

provided with recesses adapted to be engaged by said pins, said sprockets being further provided with lugs adapted to enter the
20 longitudinal groove in said shaft; and nuts in screw threaded engagement with said shaft adapted to bear against the outer faces of said sprockets and hold said sprockets in engagement with said flanges.

25 In witness that we claim the foregoing we have hereunto subscribed our names this 24th day of June, 1907.

FREDERICK C. DAWES.
JAMES W. FORREST.

Witnesses:

EDMUND A. STRAUSE,
OLLIE PALMER.