

(No Model.)

F. C. KRIZ.
PITCHFORK.

No. 438,004.

Patented Oct. 7, 1890.

Fig. 2.

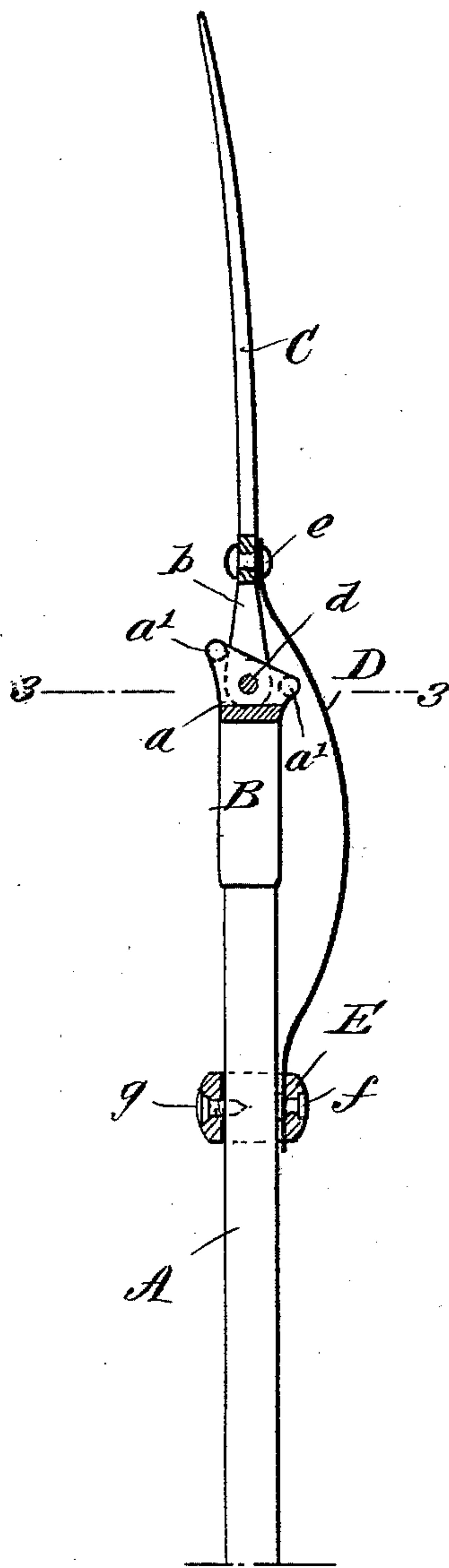


Fig. 1.

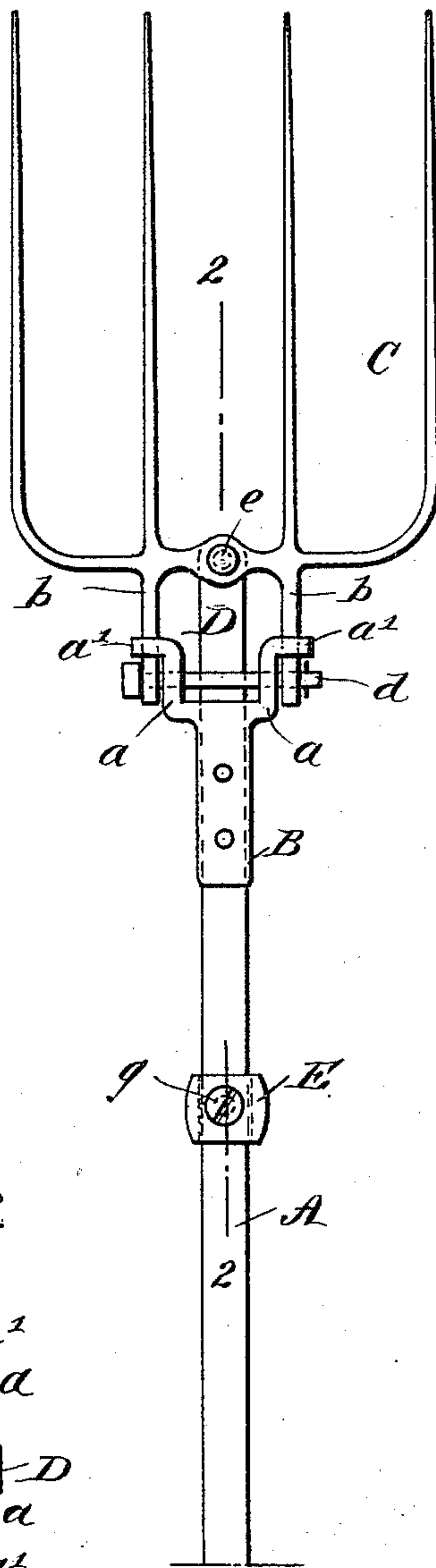
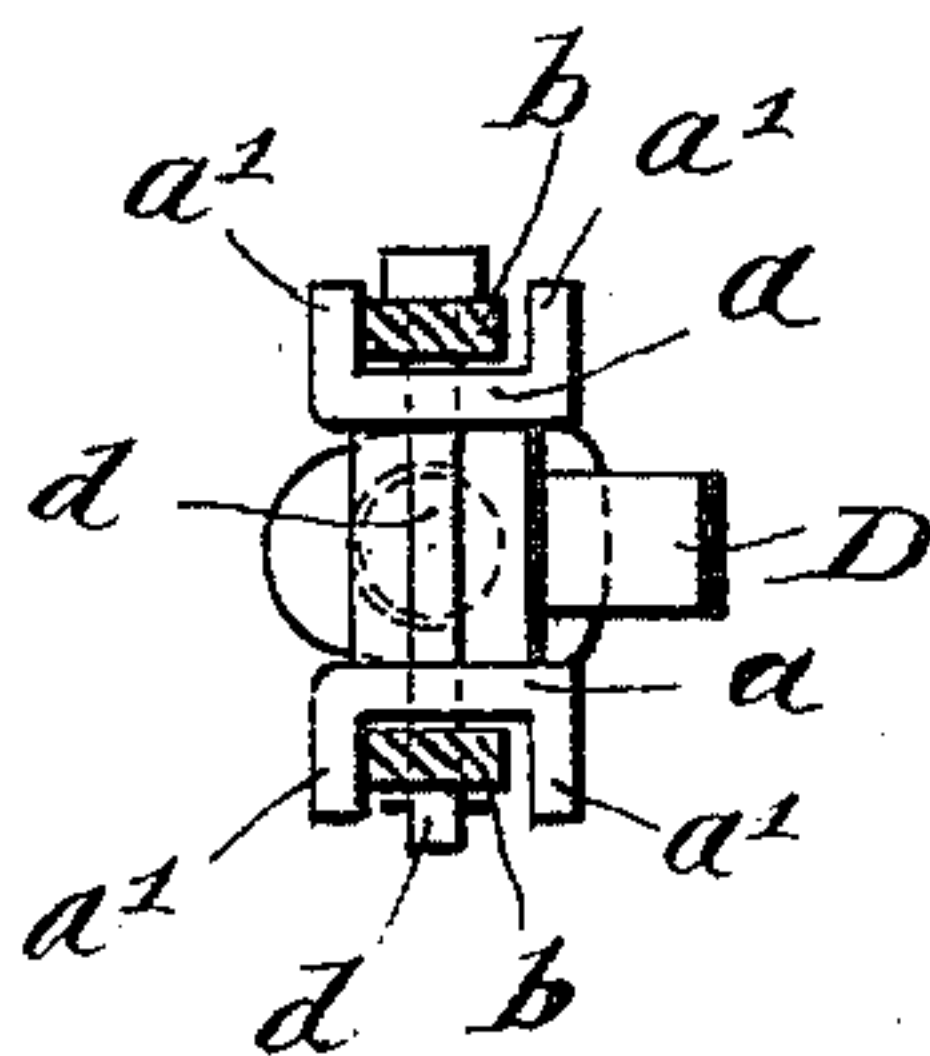


Fig. 3.



WITNESSES:

Donn Twitchell
W. Sedgwick

INVENTOR:

F. C. Kriz
BY *Munn & Co.*
ATTORNEYS

UNITED STATES PATENT OFFICE.

FRANCIS C. KRIZ, OF MILWAUKEE, WISCONSIN.

PITCHFORK.

SPECIFICATION forming part of Letters Patent No. 438,004, dated October 7, 1890.

Application filed January 27, 1890. Serial No. 338,194. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS C. KRIZ, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and Improved Pitchfork, of which the following is a full, clear, and exact description.

My invention relates to improvements in pitchforks such as are ordinarily used for pitching hay, straw, &c.

In the pitchforks in ordinary use the fork is rigidly attached to the handle, which makes the implement clumsy and awkward to use. The object of my invention is to obviate this difficulty by providing a pitchfork with a spring-connection between the fork and the handle, so that the fork will be much more easily handled.

To this end my invention consists in a pitchfork having the fork pivotally attached to the handle and supported in position thereon by a suitable spring, the fork-handle being provided with suitable stops which may engage the shanks of the fork and prevent the fork from being tilted too far. This construction will be hereinafter fully described, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all of the figures.

Figure 1 is a broken front elevation of a pitchfork embodying my invention. Fig. 2 is a longitudinal section of the same on the line 2 2 of Fig. 1, and Fig. 3 is a cross-section of the same on the line 3 3 of Fig. 2.

The handle of the fork is of the usual construction, and is provided at its lower end with a ferrule B, which is suitably attached thereto, and which is provided upon each side with projecting ears *a*, to which the shanks *b* of the fork C are pivoted.

The fork C is provided with two shanks *b*, extending rearwardly therefrom, and the shanks are such a distance apart that they will slip over the outer sides of the ears *a*, to which they are pivoted by a suitable bolt *d*. The bolt *d* passes through the ends of the shanks *b* and ears *a*, and is provided with a suitable head and pin by which it is retained in position. The ears *a* have elongated arms or stops *a'*, which extend above and below each

of the shanks *b* of the fork, so that the shanks may strike against said stops and prevent the fork from tilting too far in either direction.

The fork C is supported normally in proper position in relation to the handle A by a spring D, one end of which is riveted to the head of the fork by a rivet *e*, and the other is attached by a rivet *f* to the sleeve E, which may be moved longitudinally upon the handle A. The sleeve E may be retained in a desired position upon the handle A by means of the screw *g*, which passes through the sleeve and impinges upon the handle, so that the pressure of the spring D upon the fork may be regulated by the sleeve E. When the sleeve is pushed toward the fork, the spring D will be more sharply bent and the pressure upon the fork will be increased, and when the sleeve is moved in the opposite direction the spring will be straightened and the pressure upon the fork lessened.

I do not confine myself to the particular form of spring shown, as it is evident that other forms might be substituted.

In practice, when a quantity of hay or other material is lifted upon the fork, the spring D will yield and the load will be more easily raised, and when the material is pitched from the fork the pressure of the spring will cause the fork to tilt upon the bolt *d* and the load will slide easily off the fork. The stops *a'* will not usually come into play; but should an excessively-heavy load be lifted or great strength used in pitching they will engage the shanks *b* of the fork and prevent the fork from tilting too far.

From the foregoing description it is evident that it is not necessary that the fork should be provided with two shanks, as it might have one shank pivoted in the ferrule and be supported by a suitable spring with the same effect.

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

1. The combination, with a fork and handle pivotally connected, as shown, of a spring having one end attached to a sleeve longitudinally adjustable upon the fork-handle, substantially as described.

2. In a pitchfork, the combination, with the

handle A, having ferrule B, with ears *a* and stops *a'*, and the sleeve E, longitudinally adjustable upon said handle, of the fork C, having shanks *b*, pivoted to the ears *a*, as shown,
5 and the spring D, having one end attached to the back of the fork and the other to the adjustable sleeve E, whereby the pressure of

the spring upon the fork may be regulated, substantially as described.

FRANCIS C. KRIZ.

Witnesses:

WARREN B. HUTCHINSON,
C. SEDGWICK.