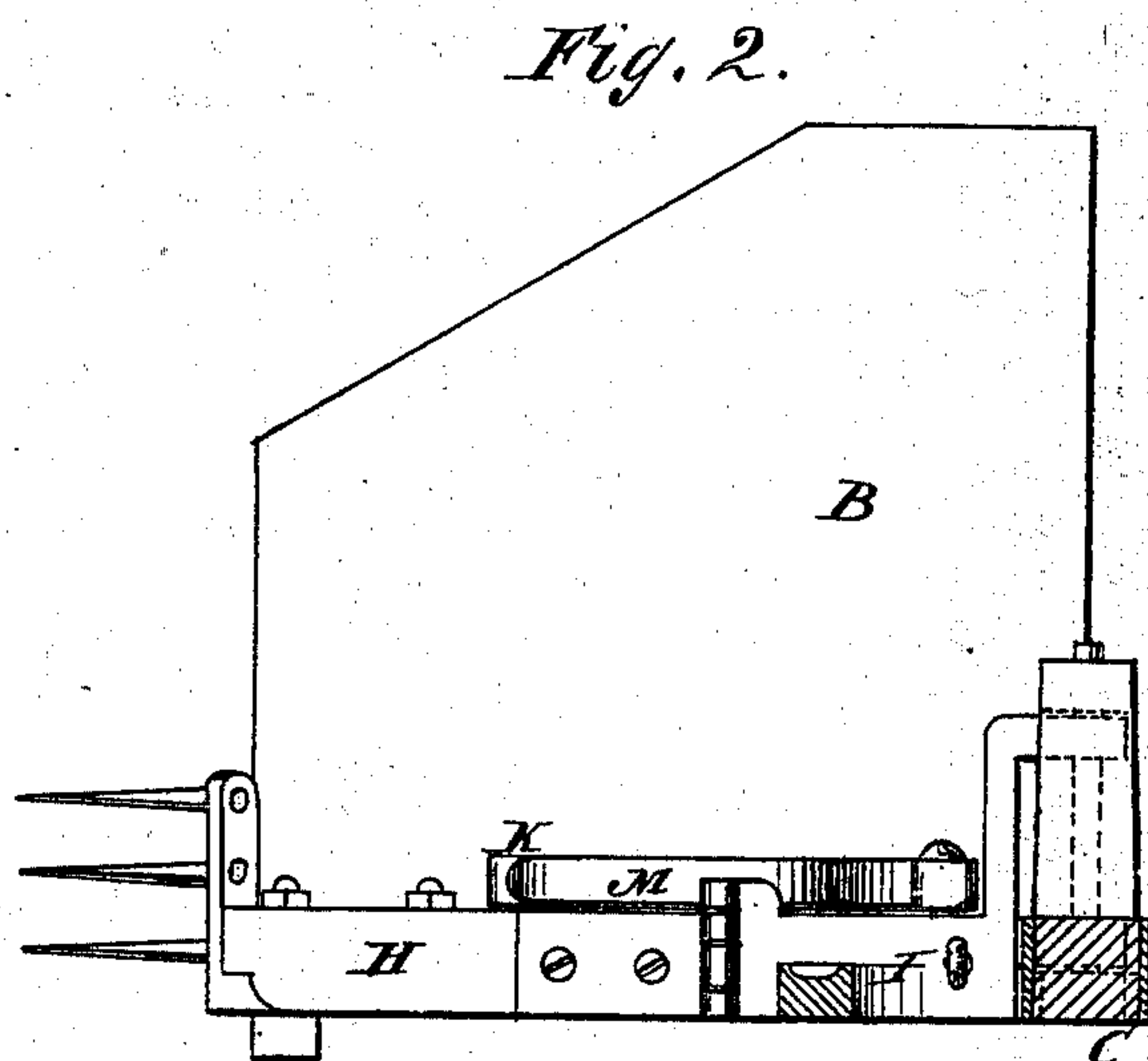
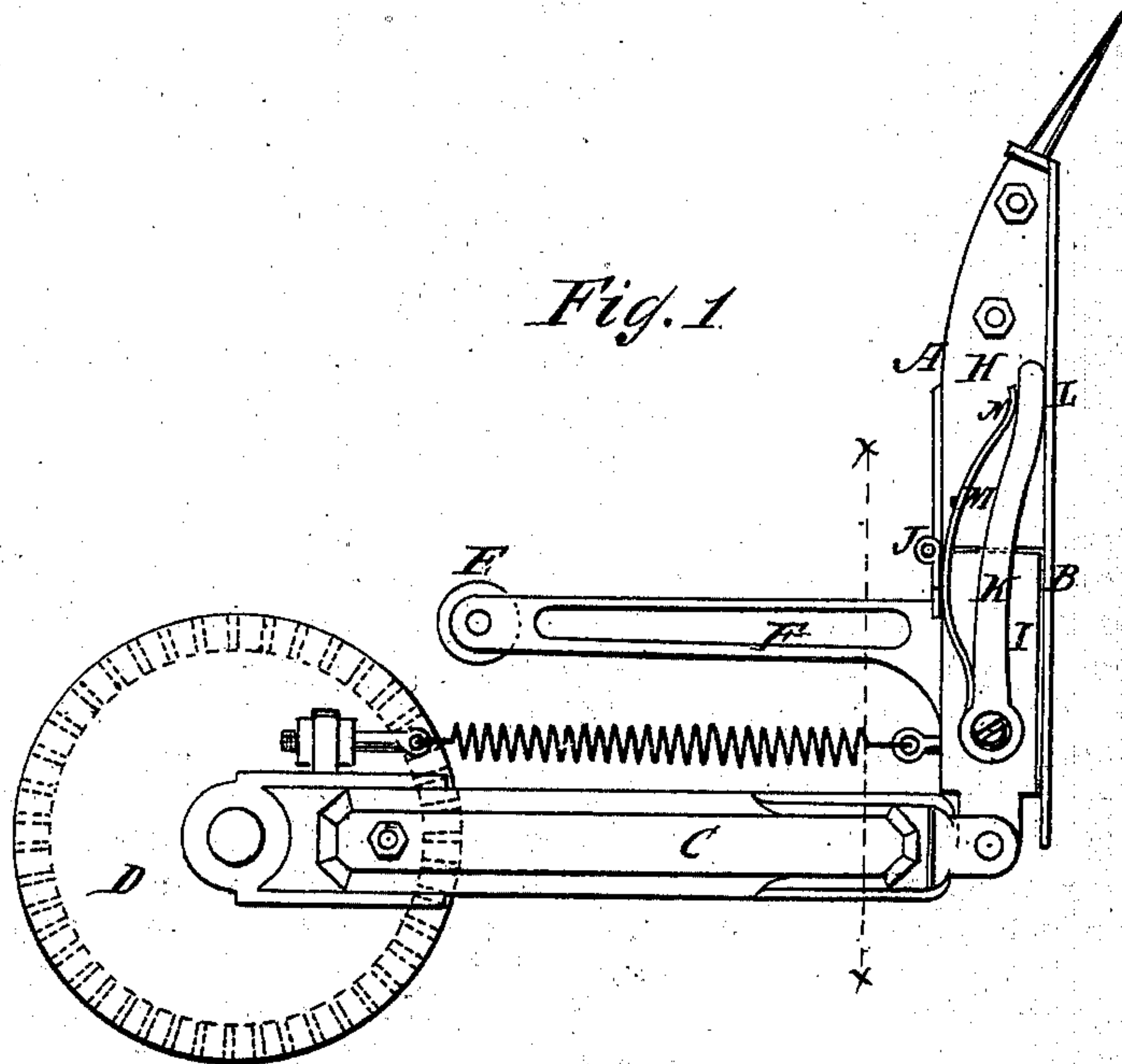


E. LIPPODT.
Harvester-Rakes.

No. 144,683.

Patented Nov. 18, 1873.



Witnesses:

E. Wolff.
C. Sedgwick.

Inventor:

E. Lippoldt
Attorneys.

Per

UNITED STATES PATENT OFFICE.

EDWARD LIPPOLDT, OF BRIGHTON, ILLINOIS.

IMPROVEMENT IN HARVESTER-RAKES.

Specification forming part of Letters Patent No. **144,683**, dated November 18, 1873; application filed September 6, 1873.

To all whom it may concern:

Be it known that I, EDWARD LIPPOLDT, of Brighton, in the county of Macoupin and State of Illinois, have invented a new and useful Improvement in Harvest-Machine Rakers, of which the following is a specification:

The invention will first be fully described and then pointed out in the claim.

In the accompanying drawing, Figure 1 is a top view. Fig. 2 is a section of Fig. 1 taken on the line *x x*.

Similar letters of reference indicate corresponding parts.

The main features of the rake, its form and manner of operation, do not differ from rakes already in use, and the invention applies exclusively to the rake-arm A, which is made to sweep over the apron or platform of the machine in the usual manner. The common rake arm is ordinarily so rigid that it is very liable to be broken, and thereby occasion trouble and delay.

The arm A, with the wing B, is hinged to the end of the bar C, which bar is rigidly fastened to the gear-wheel D, and receives a rotating motion from a pinion which engages with the gear. The friction-roll E, at the end of the arm F, works in a cam-groove, and governs the motion of the raker. This arm A, from where it is hinged to the bar C, is usually made rigid or in a single piece. It consequently has no flexibility, and the strain is so great upon it that it frequently breaks and causes delay.

I remedy this difficulty by making it in two parts, H and I, and connecting the parts together by the joint or hinge J, the wing B being attached to the part H. K is a spring-bar pivoted to the part I of the arm at one end, with its other end bearing against the wing at the point L. M is a bow-spring attached to the pivot end of bar K, with its middle resting against a projection in the hinge J, and its other end resting against the bar at the point N.

When the part H of the arm A is forced back by the strain upon it, it is forced against the power of the spring, and the back motion ceases, when the spring becomes straightened, so that its center strikes the spring-bar. When the pressure against the arm A ceases the spring-bar throws it to its normal position. To cause this flexibility in the rake-arm is the object I have in view.

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

A rake-arm formed of two parts, H and I, connected together by the hinge J, and having a spring, M, and spring-bar K, and wing B, arranged substantially as and for the purposes described.

EDWARD LIPPOLDT.

Witnesses:

H. G. STALL,
AMY ROETGERS.