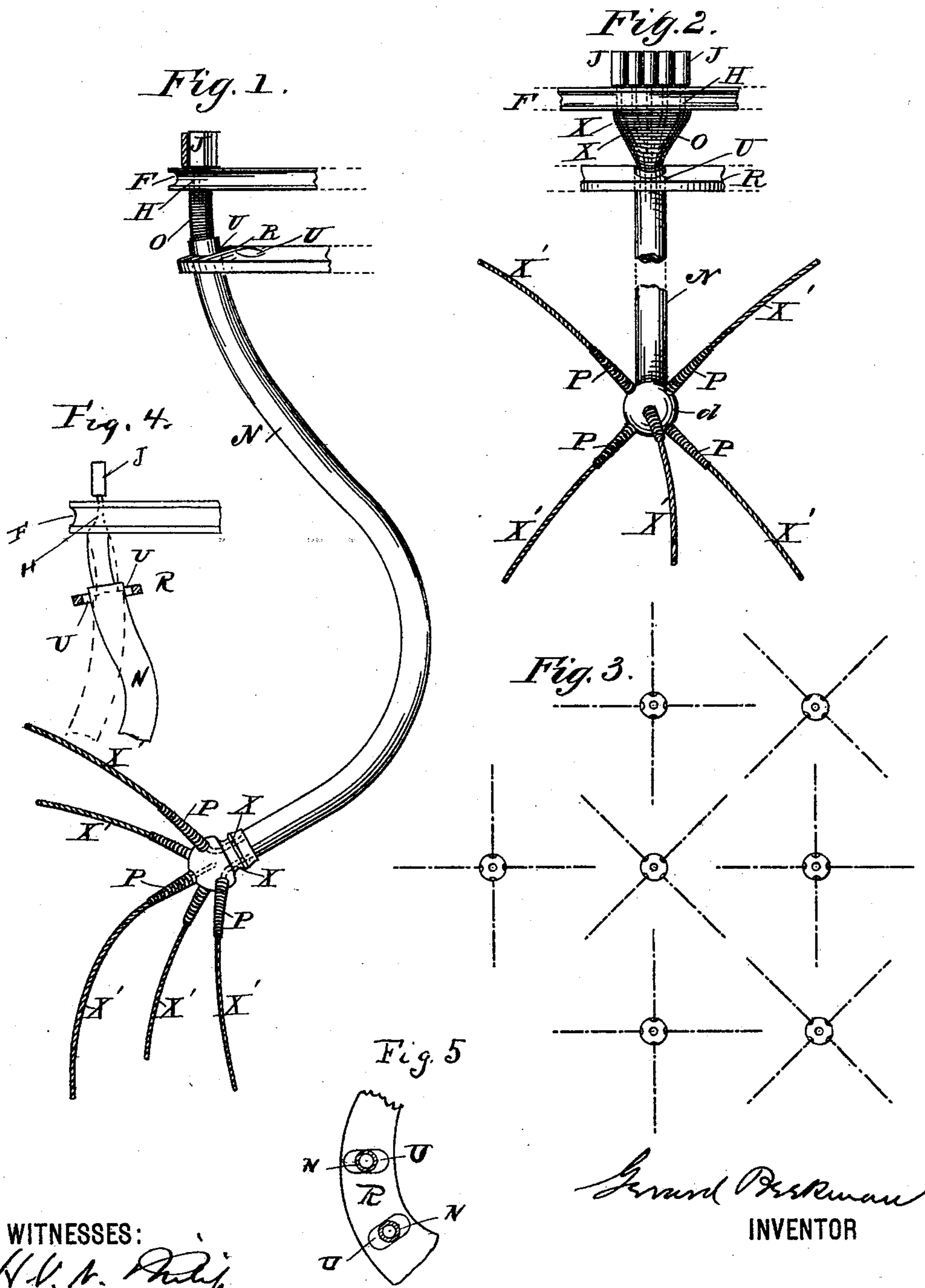


(No Model.)

G. BEEKMAN.  
COTTON HARVESTER.

No. 482,156.

Patented Sept. 6, 1892.



WITNESSES:  
*N. V. N. Smith*  
*Wm B. Whitney*

*Gerard Beekman*  
INVENTOR

BY  
*Pathe, Atterbury, Hyde & Co.*  
ATTORNEYS

# UNITED STATES PATENT OFFICE.

GERARD BEEKMAN, OF NEW YORK, N. Y.

## COTTON-HARVESTER.

**SPECIFICATION** forming part of Letters Patent No. 482,156, dated September 6, 1892.

Original application filed November 15, 1890, Serial No. 371,525. Divided and this application filed April 22, 1891. Serial No. 389,934. (No model.)

*To all whom it may concern:*

Be it known that I, GERARD BEEKMAN, a citizen of the United States, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Cotton-Harvesters, the said invention having been described, also, in an application for United States Letters Patent filed by me November 15, 1890, Serial No. 371,525, this application being a division of the said application, Serial No. 371,525, by reference to which this will fully appear.

The following is a specification of my invention, reference being had therein to the accompanying drawings, in which similar letters refer to similar parts throughout the several views.

My invention relates to that class of cotton-harvesters in which the picking mechanism rotates backward at substantially the same rate of motion as that of the harvester over the ground.

The object of my invention is to group and support several pickers in one elastic arm, such as is described in my said prior application, and I attain this object by the mechanism illustrated in the accompanying drawings.

Figures 1 and 2 represent enlarged side and front views, in perspective, of a form of elastic arm in which several pickers are grouped. Fig. 3 represents a plan view of the arrangement of adjoining arms and pickers of the kind shown in Figs. 1 and 2. Fig. 4 is an enlarged detail view showing the regulating-wheel R in section, and Fig. 5 is a horizontal section of Fig. 4.

Only portions of the mechanism which I prefer to employ for rotating shafts X are shown. It is the same as that described in Letters Patent of the United States granted to me September 23, 1890, No. 436,770.

Spools J are journaled in wheel F and rotated therein by means of a belt pressing against said spools, said belt being stationary or moving in a direction opposite to that of wheel F. To shanks H of spools J are attached flexible shafts X, each giving rotation to a picker X'. The flexible shafts X are preferably composed of a fine coil of wire, substantially as shown in my said Letters Pat-

ent; but they may be composed of any other materials suitable for flexible shafting.

The pickers attached to the ends of the flexible shafts X may be of any form of revolving picking device suitable for seizing the fiber of cotton—such, for instance, as those referred to in my said Letters Patent. They may be of string or of wire or spiral spring, which wire may be rigid or flexible, and may be covered with gutta-percha, rubber, or textile fabrics, or with any other substance which will assist the cotton in wrapping itself around the pickers.

A short distance below the wheel F is the regulating-wheel R, having slots U, through which pass the flexible arms N. Said flexible arms N are made of coils of wire or of curved tubes. The slots U are elongated, as appear in Figs. 4 and 5, to permit the elastic movement of the arms N, due to the yielding action of the coils of wire O at their upper part, whereby they are attached to the wheel F. At the lower extremities of the arms N the pickers X', forming extensions of the shafts X, are supported in their divergent relation by means of the several elastic tubular fingers P. These tubular fingers P are also composed of coiled wire or other suitable material adapted for flexibility.

d, Figs. 1 and 2, is a knob having apertures corresponding in number with the elastic shafts and closed in or supported by the arm. To each of these apertures may be attached a wire coil or other form of elastic tip, through which projects the picker X'. Figs. 1 and 2 show five shafts thus passing through a single arm; but I do not confine myself to any particular number of shafts. The pickers should branch from the knob d in easy lines, so as to allow easy rotations of the shaft X. When a number of these arms of different lengths, each supporting several pickers, depend from the wheel F, I prefer to arrange them in the manner shown in Fig. 3, or in staggered positions, so that the pickers will not interfere with one another and will search every part of the plant.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a machine for harvesting cotton, two or more flexible shafts supported by the same



elastic arm, each shaft being connected at one end to a separate rotating device J and at the other end to a separate picking device X', projecting from said arm, substantially as described.

5 2. In a machine for harvesting cotton, an elastic arm containing two or more flexible shafts X, in combination with the end piece d, having apertures through which project  
10 picking devices, substantially as described.

3. In a machine for harvesting cotton, the flexible arm consisting of a rigid tube N, ter-

minating at its upper end in an elastic portion and at its lower end bearing a plurality of elastic tubular fingers, and flexible shafts 15 terminating in pickers, supported thereby, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 20th day of April, 1891.

GERARD BEEKMAN.

Witnesses:

H. V. N. PHILIP,

WM. B. WHITNEY.