

No. 634,964.

Patented Oct. 17, 1899.

J. F. STEWARD.
BUNDLE DISCHARGING MECHANISM.

(Application filed May 23, 1899.)

(No Model.)

Fig. 1.

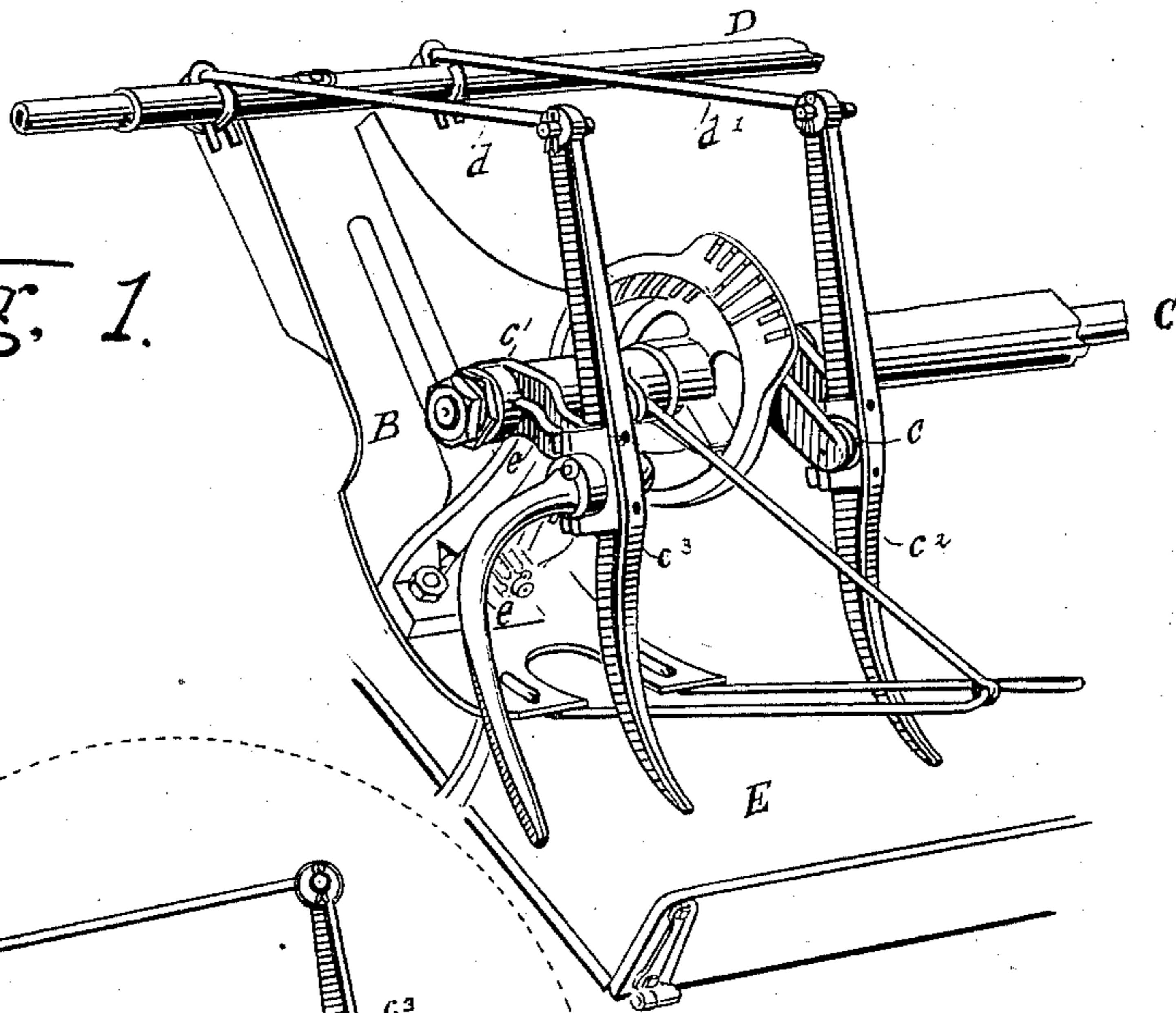


Fig. 2.

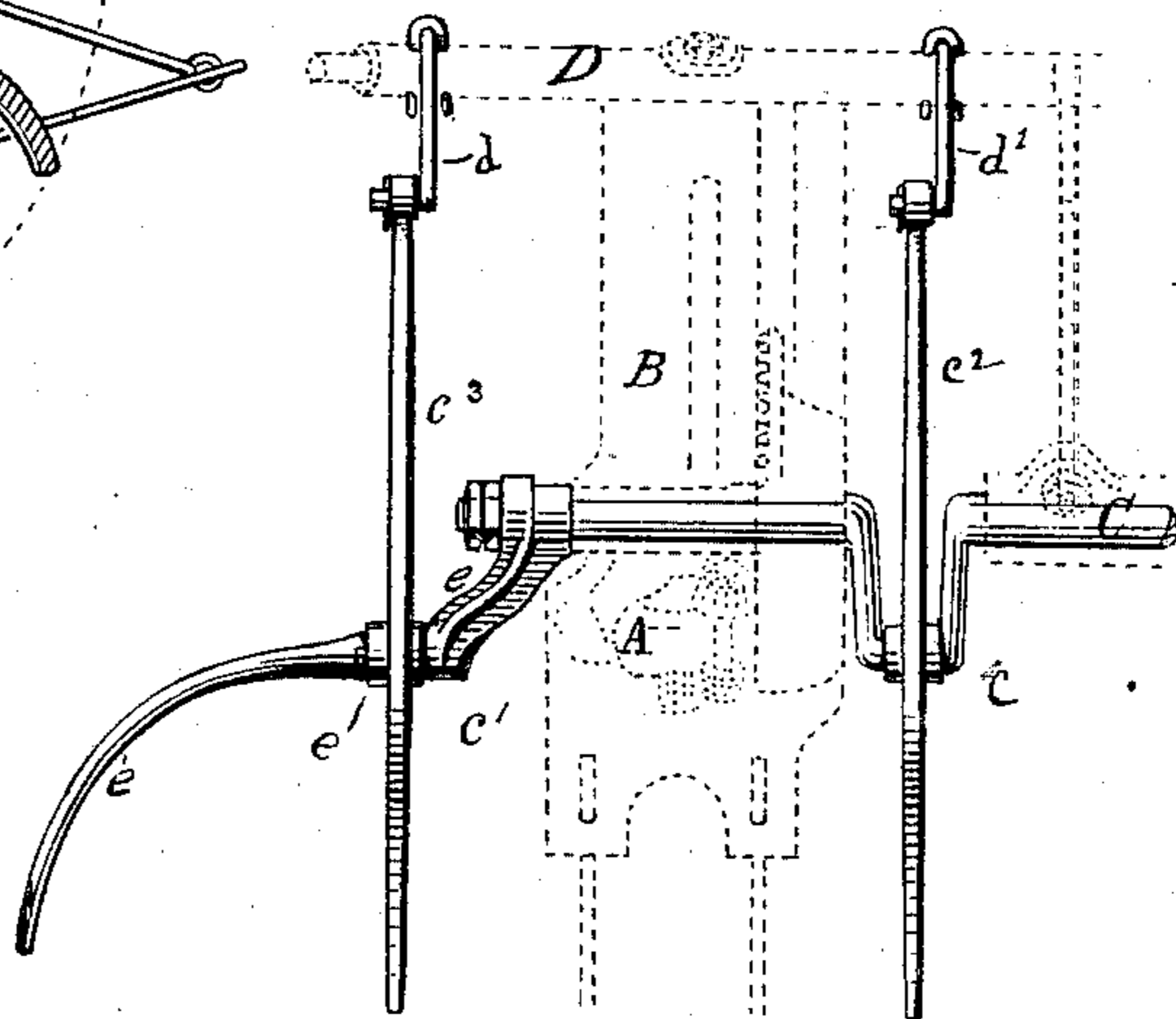
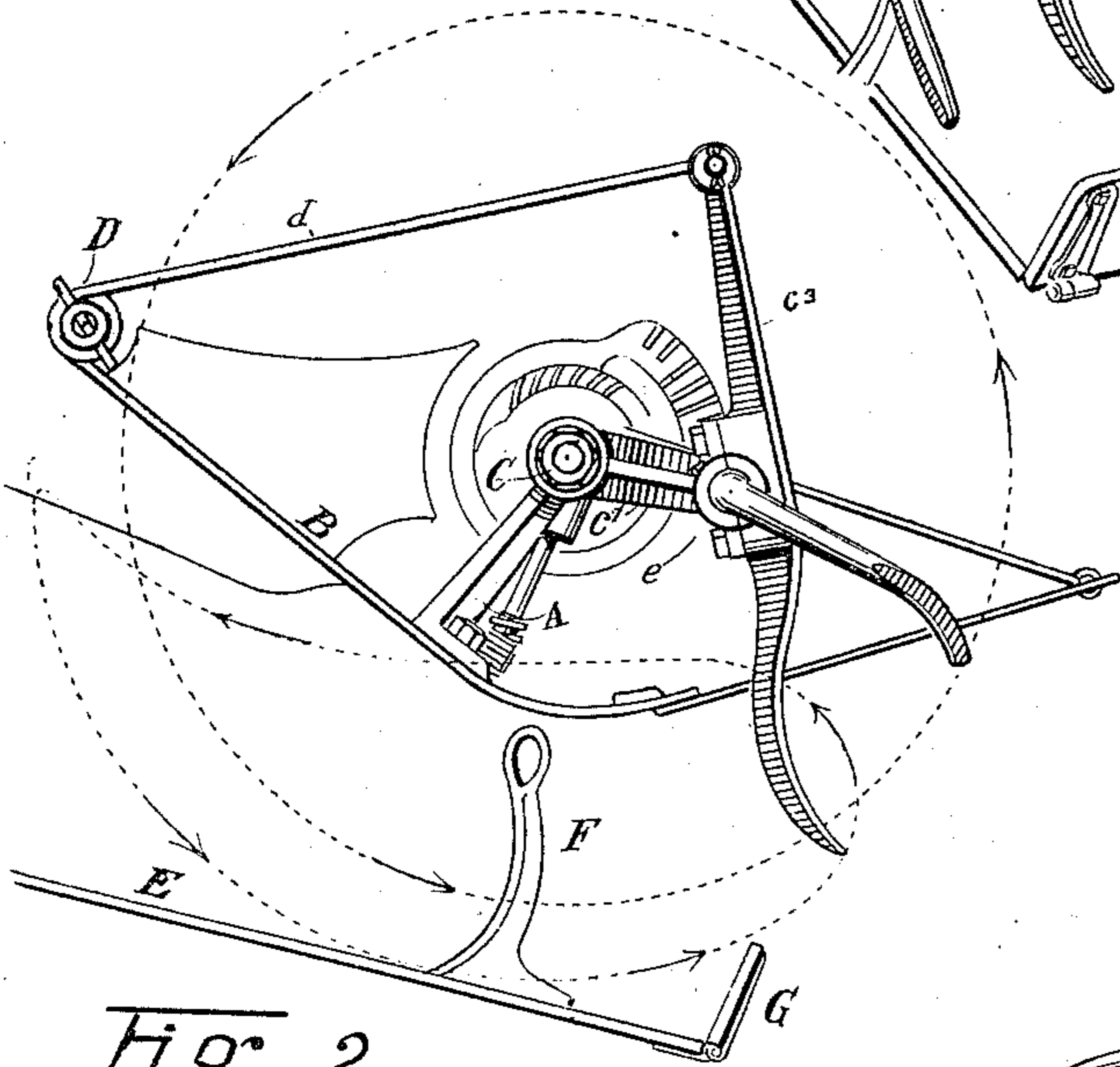


Fig. 3.

Witnesses.

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BUNDLE-DISCHARGING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 634,964, dated October 17, 1899.

Application filed May 23, 1899. Serial No. 717,891. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. STEWARD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Bundle-Discharging Mechanism; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention is applicable to any self-binding harvester in which there is a shaft, preferably above the grain, to which the bundle-discharging mechanism can be attached. Its object is to discharge the bound bundles as effectually as possible without the discharging mechanism becoming wound up with straw and carrying the bundles over.

The invention relates to the bundle-discharging mechanism of self-binding harvesters for grain, corn, and other crops, and particularly to that class of machines where the knotter-operating mechanism is driven by an intermittingly-operating shaft located above the deck or table on which the grain is bound; and it has for its object to discharge the bundles from the binder without danger of the straws being caught in the discharging mechanism and wound on the shaft and without tendency to carry the bundles up and over the shaft by the action of the discharging-arms.

The invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a perspective view, Fig. 2 an end elevation, and Fig. 3 a side view, of a part of the binder deck and frame of a self-binding harvester, fully illustrating my discharging mechanism and the manner of operating the same.

In the views, A denotes a part of the binder-frame casting; C, the knotter-operating shaft journaled therein; D, a pipe-rail by means of which the breastplate B is connected with the frame of the machine.

E denotes the binder-deck, F the compressor, and G the usual drop-leaf at its outer end.

The knotter-operating mechanism may be of any desired construction, that shown in the

drawings being of a type that is now well known.

The shaft C immediately adjacent the knotter-operating wheel is cranked, as at *c*, and a vibrating discharge fork or arm *c*² is sleeved about midway of its length upon the pin of this crank. The upper end of the arm *c*² is connected by means of a link *d'* with the pipe-rail D or other fixed part of the machine. On the opposite side of the knotter mechanism from the crank *c* the shaft C is provided with a removable crank-arm *c'*, the same being secured on the end of the shaft by means of nuts *i*. This arm *c'* extends radially from the shaft in line with the cranked part *c*, and on a projection at the outer end of the arm is sleeved another discharge fork or arm *c*³, which is similar in construction to the fork *c*² and is likewise link-connected at its upper end with the pipe-rail D by a pivoted link-rod *d*. These two discharge-arms *c*² *c*³ act in unison on the bundle, and as the knotter-operating shaft C revolves they describe the elliptical path indicated by the dotted lines 1 in Fig. 2, and this forms an efficient mechanism for the purpose described. It is often desirable, however, in this class of machines to be able to turn the shaft C by hand for the purpose of threading up the binder or forcing out a bundle by hand. This cannot conveniently be done by means of the arms *c*² *c*³, and I therefore provide the outer end of the crank *c'* with an outwardly-projecting and rearwardly-curving arm *e*, which acts as an auxiliary discharger, but which rotates with the arm *c'* and describes the path indicated by dotted lines 2 in Fig. 2. This arm *e* practically forms a continuation of the arm *c'* and is secured to or itself forms the projection at the outer end of the arm *c'* on which the fork *c*³ is journaled, and the three arms are preferably so positioned and timed with respect to one another that all three shall strike the bundle at about the same time, but so that the rotary arm *e* shall gain on the non-rotary ones as the bundle is moved outwardly. This increased movement of the rotary arm causes the head portion of long bundles to be thrown well out of the binder and effects a clean separation of the head portion of the outgoing bundle from the unbound grain which for the

time being is in the binder. The position of the arm e relative to the non-rotary arms c^2 and c^3 may be adjusted by securing the former at different angles upon the outer end of the
5 arm c' .

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

1. In a self-binder, a crank-shaft, and one or more non-rotatable discharge-arms thereon
10 and carried thereby, the wrist of one of said cranks being extended to form a rotatable discharge-arm.

2. In a self-binder, the combination of the shaft C , having cranks c , c , and the arm c' at

its end, the discharge-arms c^2 , c^3 , journaled 15 midway of their length upon said cranks, links connecting the upper ends of the discharge-arms to a fixed part of the machine, and an outwardly-extending auxiliary dis-
charger e rigidly connected to the arm c' so 20 as to rotate therewith.

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

JOHN F. STEWARD.

Witnesses:

CHAS. N. CHAMBERS,
MARVIN CRAMER.