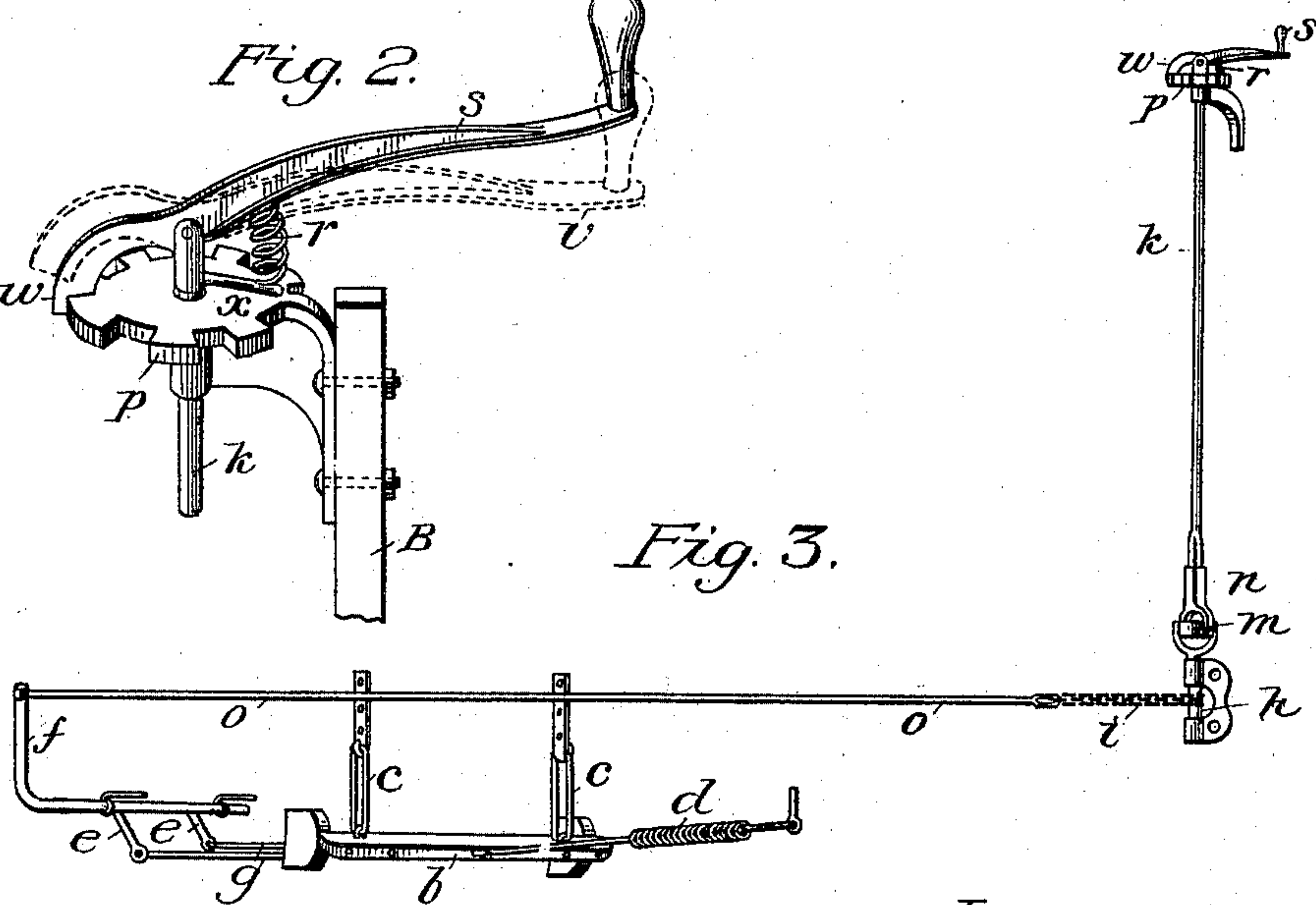
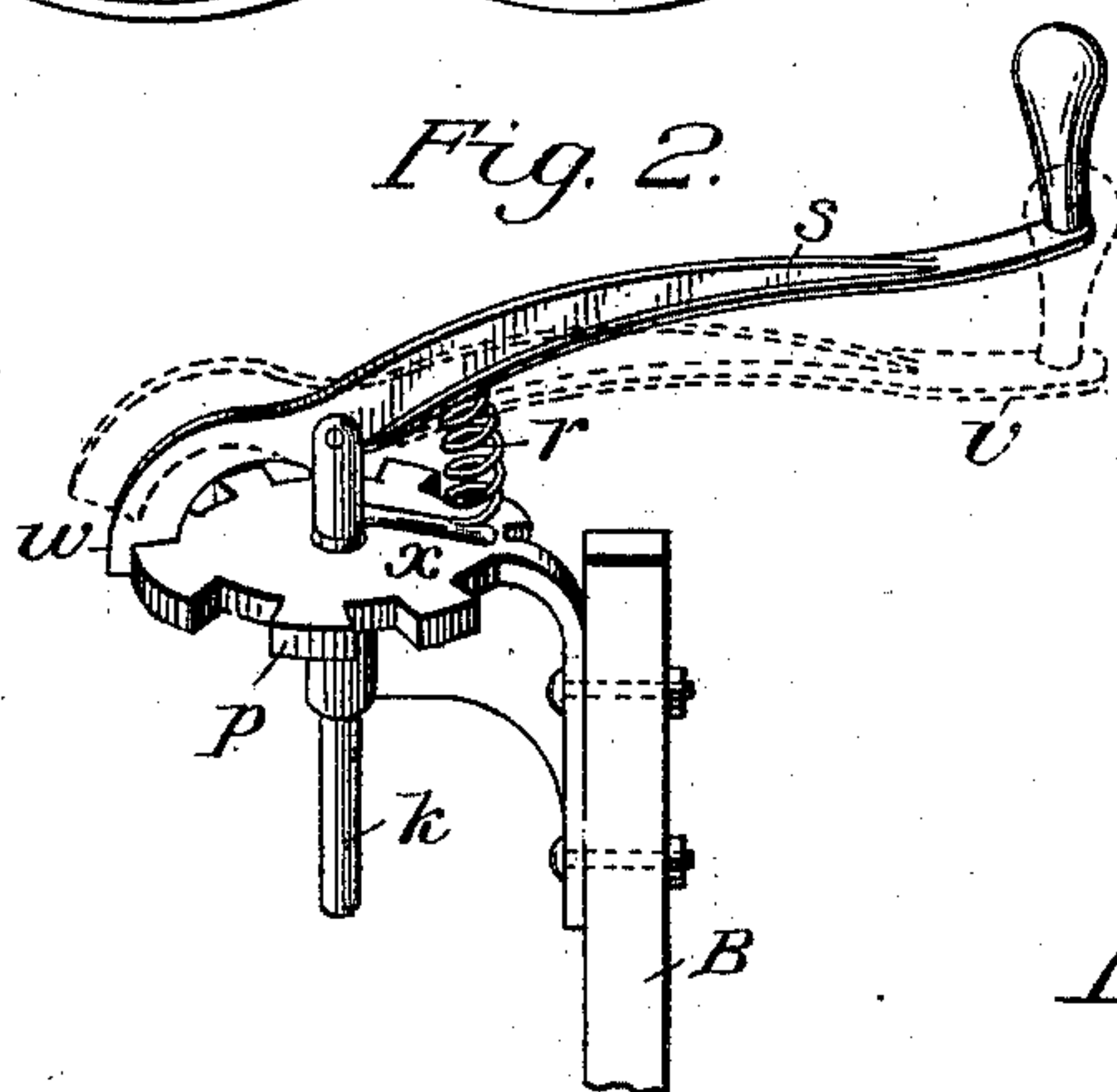
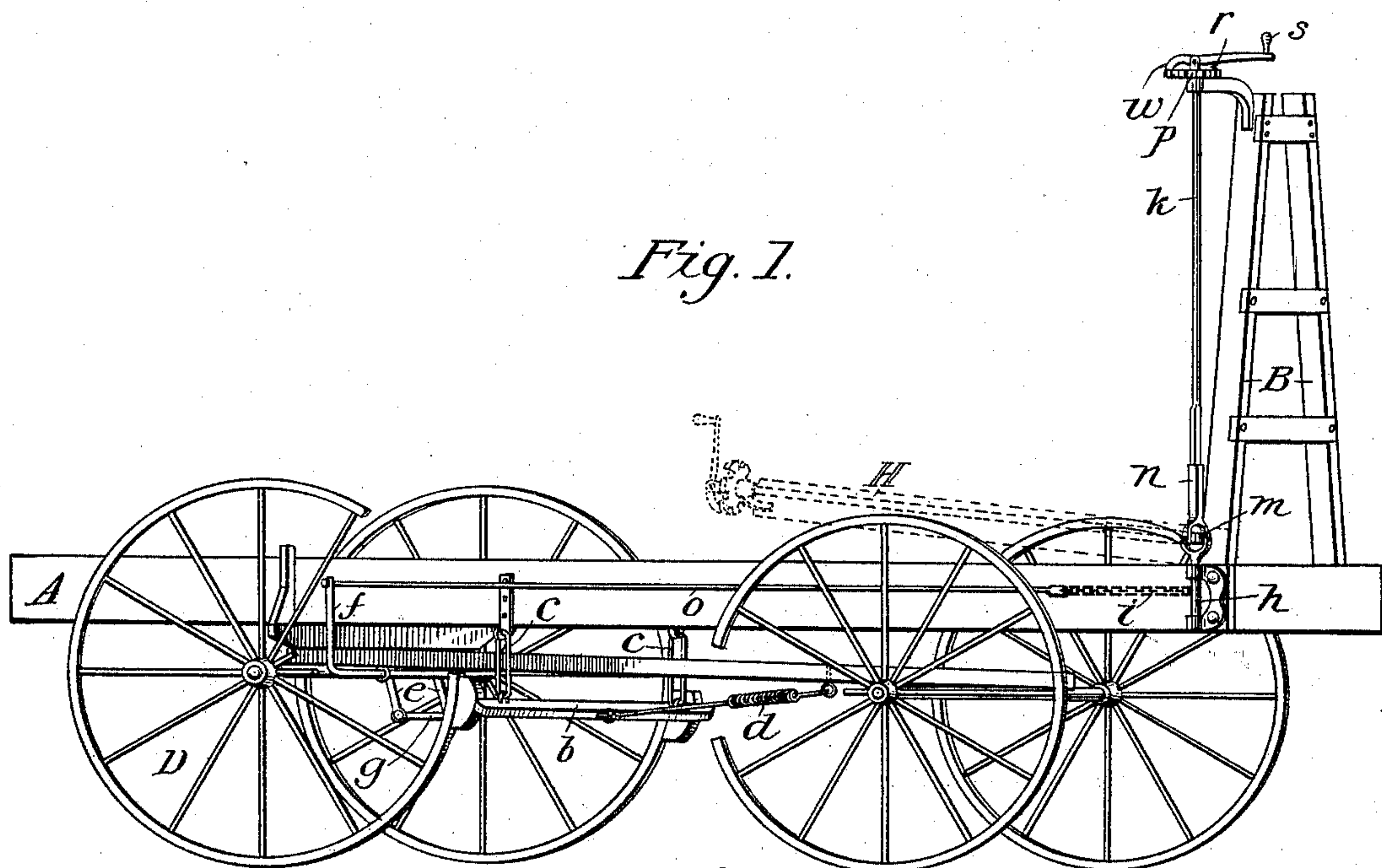


(No Model.)

G. F. RANDOLPH.
HAY WAGON BRAKE.

No. 584,829.

Patented June 22, 1897.



Witnesses.

Samuel Barr
C. Pearl Barr

Inventor.

George Fitz Randolph.

UNITED STATES PATENT OFFICE.

GEORGE FITZ RANDOLPH, OF McCAUSLAND, IOWA.

HAY-WAGON BRAKE.

SPECIFICATION forming part of Letters Patent No. 584,829, dated June 22, 1897.

Application filed December 31, 1896. Serial No. 617,691. (No model.)

To all whom it may concern:

Be it known that I, GEORGE FITZ RANDOLPH, a citizen of the United States, residing at McCausland, in the county of Scott and State of Iowa, have invented new and useful Improvements in Brake Attachments for Hay-Wagons, of which the following is a full specification.

My invention relates to improvements in brake attachments for wagons fitted with a rack suitable for carrying hay, straw, fodder, grain in the sheaf, furniture, and other high and bulky loads, the object being to provide a safe and practical brake that can be operated by the driver when in his proper position on top of and at the front end of high loads, such as hay, &c. This I attain by devices and combinations that will be more fully described and claimed hereinafter, reference being made to the accompanying drawings, like letters referring to like parts throughout the different views.

Figure 1 is a side view in perspective of the necessary portions of a wagon and the framework of a common hay-rack, showing my improvements in connection with the wagon and rack. Fig. 2 is a detail view of the hand operating mechanism at the top of the ladder or other support at the front end of a hay-wagon rack. Fig. 3 is a view in suspension of all the parts of a brake embodying my improvements.

In Fig. 1, A is the bed-piece or under rail of a common hay-rack; B, the ladder at the front end of same, also of common construction and designed to receive the end of a binding-pole, (not shown;) *b*, brake-beam; *cc*, suspending connections to bed-pieces A; *d*, stay and antirattle-spring, the use of which is to draw and hold the brake-beam firmly back when not in use and to prevent the usual annoying clattering of such parts caused by the movements of the wagon. *ee* and *f* are arms or levers, *gg* connecting-rods, and *oo* drawing-rod, all of well-known construction, to operate the brake-beam. *i* is a chain or other flexible connection with rod *oo*. *h* is a short winding-shaft secured with suitable fastening to the framework A adjacent to the base of the ladder B and adapted to receive the chain *i* and is connected with the actuating-shaft *k*, the said shaft *k* being supplied at *m* with

a universal joint made necessary by the taper or incline of ladder B from the sides toward the middle; also to provide for the custom of laying the ladder B down, as indicated by the dotted lines at H. *n* is a square socket into which a square part of the shaft *k* slides freely, forming a telescopic joint to allow for increased or diminished length necessary to correspond with the length of the ladder B when it is inclined, as indicated by the dotted lines at H; the angle then formed from H *m h*, Fig. 1, requiring a lengthening of the said actuating-shaft *k*; also useful as a convenience in fitting the parts to a support or ladder of different height.

In Fig. 2, P is a notched plate secured to top of ladder B, through which the shaft *k* passes to receive the rocking crank or lever *s*, which is pivoted between jaws in the top of said shaft and serves by its handpiece at the longer end as the actuating or winding crank and as a detent or lock at the opposite end *w* by engaging with the notched plate P. The security of the lock is maintained by the spring *r*, Fig. 2, which rests on an arm *x* of the shaft *k* and turns with the crank and shaft. When it is desired to rotate the crank for the purpose of drawing or releasing the brake, it is first made to assume the position of the dotted lines *v* by a slight downward pressure, when it is free to revolve.

Fig. 3 is a view in suspension of all the mechanism of a hay-wagon brake embodying my improvements more clearly in detail.

I do not confine myself to any particular form of wagon-brake, as my improvements may be used in connection with any form of wagon-brake now in use the shoes of which are drawn in contact with the wheels by means of a rod similar to *oo*, as illustrated.

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

1. The combination with the brake mechanism for a hay wagon or rack of an operating mechanism comprising a short winding-shaft mounted on the frame adjacent to the base of the ladder, to receive a chain or flexible connection between the winding-shaft and brake mechanism, an operating-shaft mounted on the hinged ladder and having a universal joint connecting its lower end with the winding-shaft to permit the operating-shaft

in any part of its turn to be folded with the ladder and means for rotating the operating-shaft, substantially as described.

2. The combination with the brake mechanism of an operating-shaft formed in sliding or telescopic sections and mounted on the wagon-ladder, substantially as described.

3. The combination with the winding-shaft mounted on the wagon-frame adjacent to the base of the ladder and adapted for connection with the brake mechanism, of a brake-operating shaft mounted on the ladder and formed in telescopic sections, the lower section being connected to the winding-shaft by a hinge or universal joint and means for rotating the operating-shaft, substantially as described.

4. The combination with the operating-handle of a brake having a projection at one end in the form of a detent or pawl, and pivoted on the upper end of the brake-operating shaft, said shaft having a lateral arm under said handle and a spring interposed between said arm and handle to hold said detent in engagement with a ratch.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE FITZ RANDOLPH.

Witnesses:

ERNST MÜLLER,
JOHN IRWIN.