(No Model.)

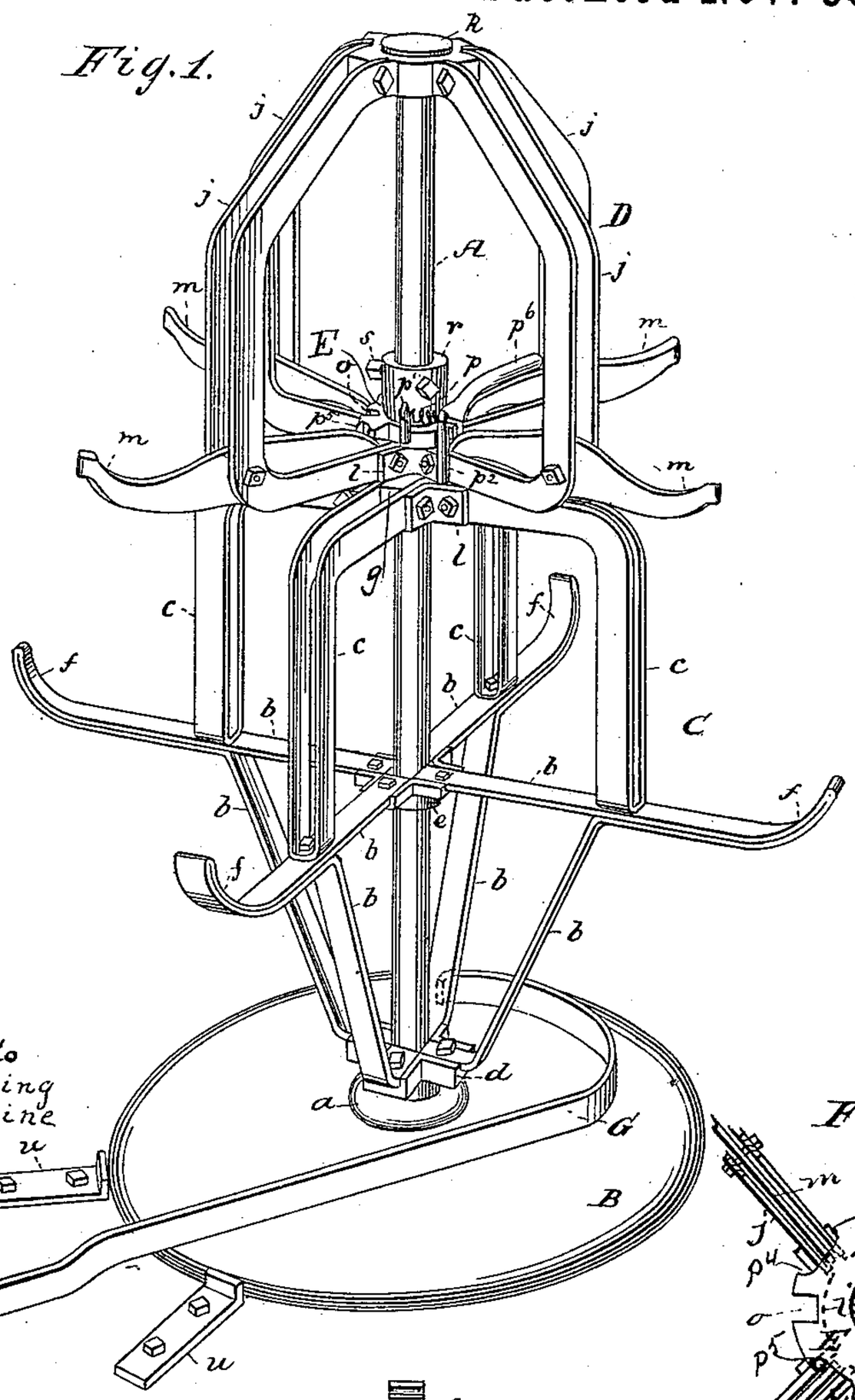
2 Sheets—Sheet 1.

G. W. McKINNY.

REEL.

No. 353,578. Patented Nov. 30, 1886.

Fig. 1.



His connected to devices for stopping a barbing machine

Fig. 5.

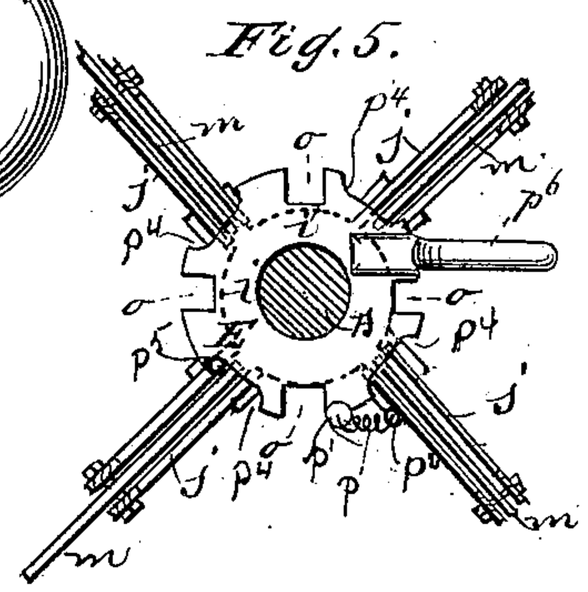
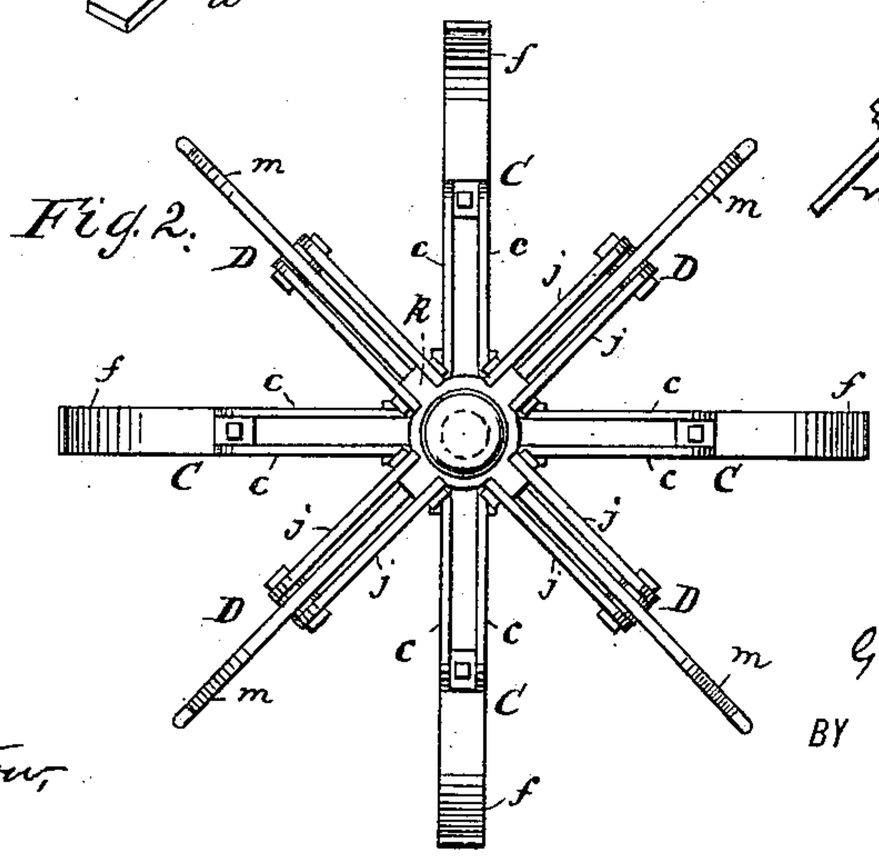


Fig. 2.



WITNESSES:

Edward Wolff.
Herman Gustow,

INVENTOR
George W. McKinny
BY
George Cook
his ATTORNEY

(No Model.)

2 Sheets—Sheet 2.

G. W. McKINNY.

REEL.

No. 353,578. Patented Nov. 30, 1886.

Fig. 3.

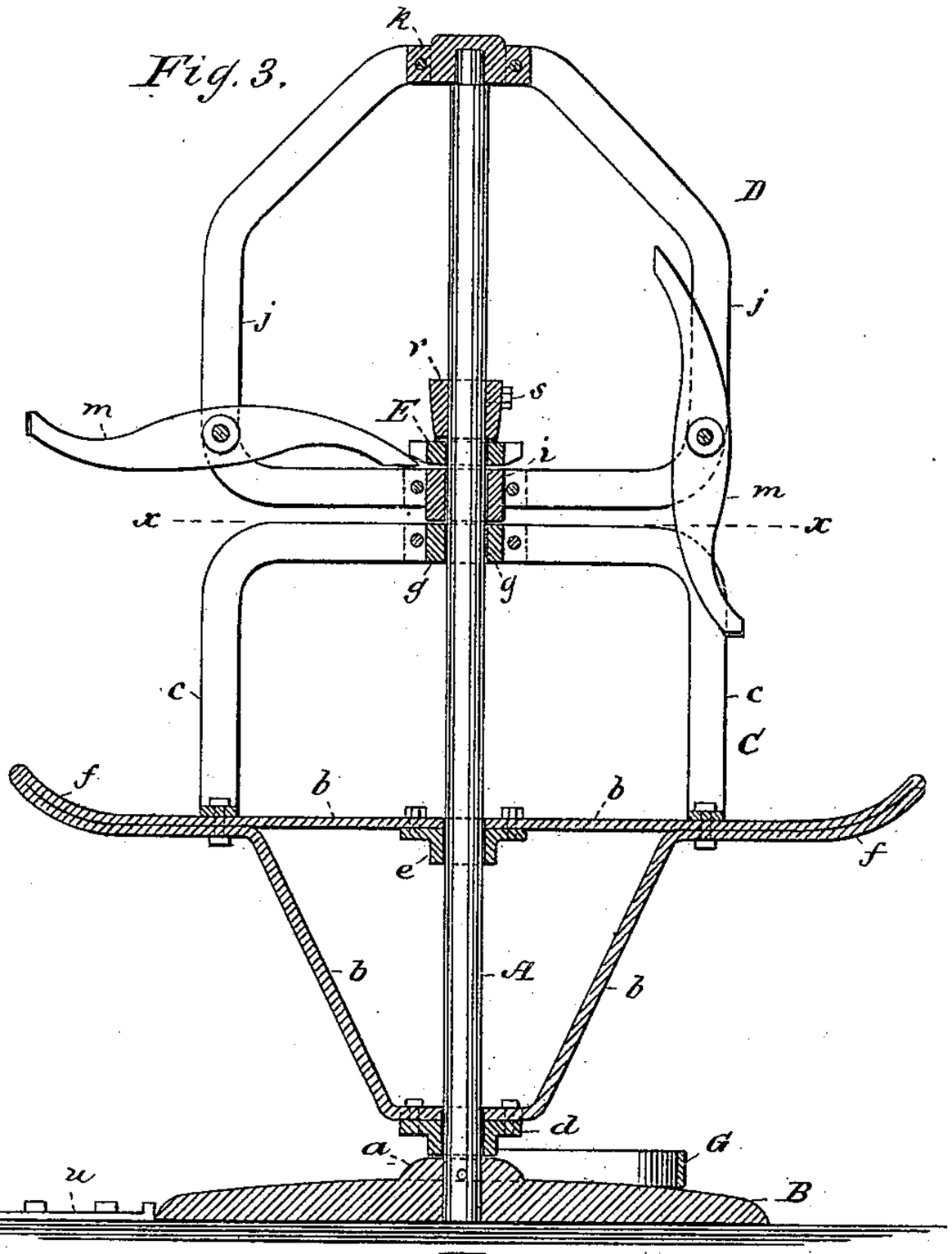
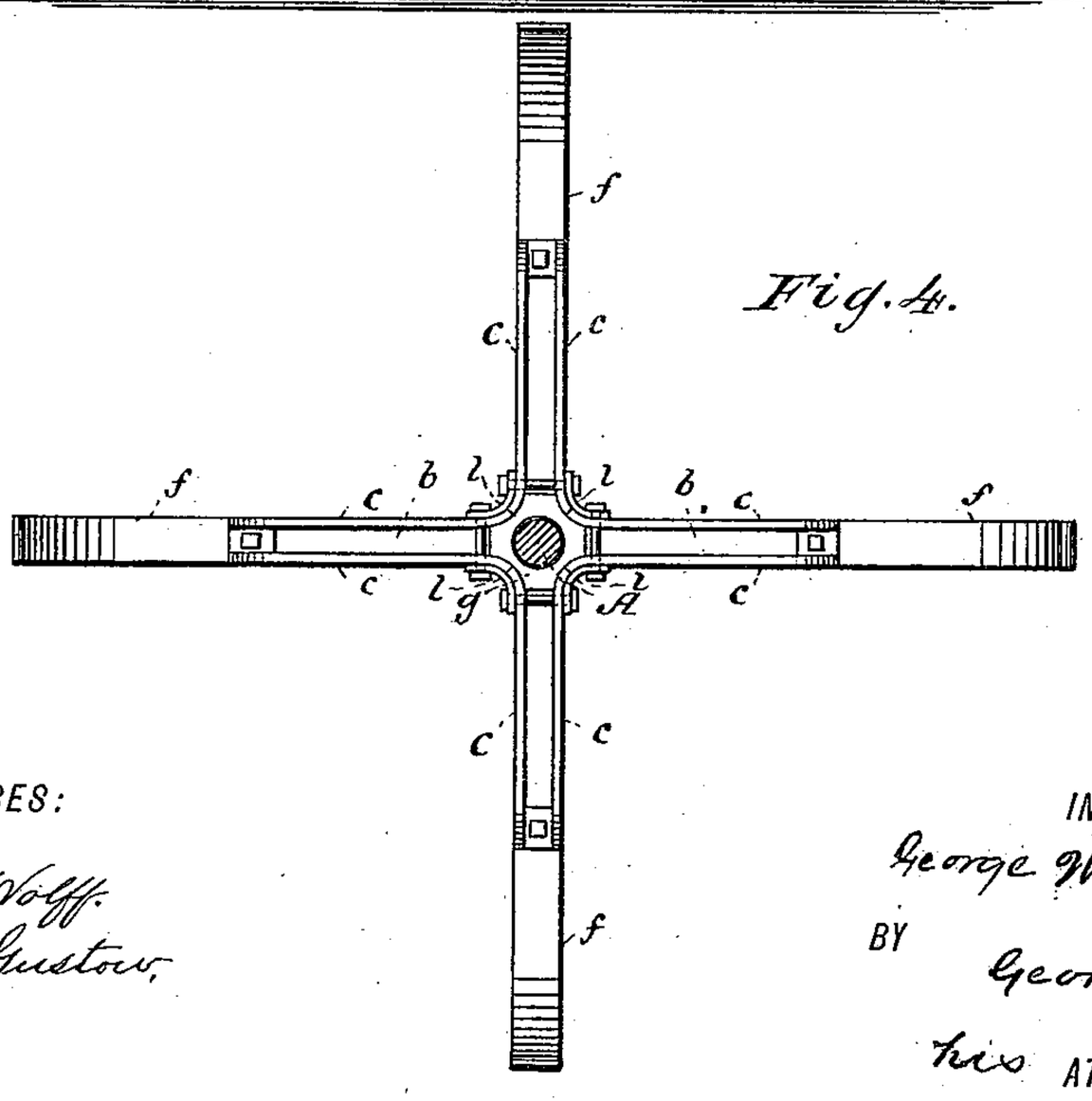


Fig. 4.



WITNESSES:

Edward Wolff.
Herman Gustow.

INVENTOR
George W. McKinny
BY
George Cook
his ATTORNEY

UNITED STATES PATENT OFFICE.

GEORGE W. McKINNY, OF MARSHALLTOWN, IOWA, ASSIGNOR TO RUBEN E. SEARS, OF SAME PLACE.

REEL.

SPECIFICATION forming part of Letters Patent No. 353,578, dated November 30, 1886.

Application filed November 18, 1885. Renewed October 25, 1886. Serial No. 217,134. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. MCKINNY, a citizen of the United States, and a resident of Marshalltown, in the county of Marshall and State of Iowa, have invented certain new and useful Improvements in Reels, of which the following is a specification.

My invention relates to an improvement in reels for holding wire, the object being to provide a device of this character which shall be specially adapted for feeding wire to a barb-wire machine.

A further object of my invention is to provide a reel so constructed as to contain two or more coils of wire, which may be unwound or fed to the machine by devices operating independently of each other.

A further object of my invention is to provide a reel for containing two or more coils of wire, one above the other, thereby requiring the minimum amount of room; and, further, to so construct the reel that the coils may be easily and readily lowered from the upper to the lower portion thereof as desired.

A further object is to provide devices to be so associated with the reel that should the wire from any cause whatever be prevented from uncoiling or unwinding the barb-wire machine, to which the wire is fed, shall be automatically stopped, the reel therefore requiring but little care and allowing the operator to devote his whole attention to the wire-machine.

A further object of my invention is to provide a reel for feeding wire to a barb-wire machine which shall be simple and economical in construction and at the same time durable and efficient in use; and with these ends in view my invention consists in a vertical shaft or standard, to which are loosely secured two or more reels, one above the other, and constructed and arranged to revolve independently, the reels above the lower reel being each provided with vertically-swinging arms, whereby the coils sustained thereon, may, when desired, be deposited onto the lower reel.

My invention further consists of a vertical shaft or standard having two or more reels loosely secured thereto and located one above the other, vertically-swinging arms secured to one or more of the reels, and suitable devices for holding said arms in a horizontal position.

My invention further consists in a vertical standard rigidly secured to a base, of a reel or reels secured thereto, and a lever resting on said base and connected to the wire-machine to which the wire is fed, whereby when the base is inclined the lever will operate to stop the machine.

My invention further consists in certain novel features of construction and combinations of parts, as will be hereinafter fully described, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective of my improvement. Fig. 2 is a top plan view thereof. Fig. 3 is a vertical sectional view. Fig. 4 is a view taken on the line *x x* of Fig. 3, and Fig. 5 is a detached view of the disk.

Referring to the drawings, A represents a vertical shaft or standard rigidly secured to the base B, adapted to rest on the floor or other suitable foundation, and provided with the raised portion *a*. Around the lower portion of the standard revolves the reel C, preferably made of iron, and consisting of the pieces *b*, which form the arms on which the coil of wire rests, and the angle-irons *c*, which form the arms around which the coil is wound. The pieces *b* are bolted or otherwise secured at their lower ends to the collar *d*, resting on the portion *a*, which forms a bearing therefor, said collar having outwardly-extending flanges formed thereon, to which the ends of said arms are fastened. The arms *b* slant outwardly for a portion of their length and are then bent out horizontally and over and extend inwardly to the collar *e*, similar in construction to the collar *d*, and thereby form the horizontal arms *f* of double thickness, on which the coil of wire rests, the said collars *d* and *e* loosely encircling the shaft and allowing the reel to revolve around the same.

To the horizontal arms *f* are rigidly secured the lower bent portions of the arm *c*, the two ends of each of which are secured to the collar *g*, loosely fitting around the shaft, and provided

with outwardly-extending lugs fitting in between the pieces composing the said arms *c*.

It will now be understood from the foregoing description that the reel C is loosely secured to the shaft and allowed to revolve around the same, the coil resting on the horizontal arms *f*, and fed therefrom to a barb-wire machine. Immediately above this reel C is located a reel, D, consisting of the pieces *j*, forming double arms, as shown in Fig. 3 of the drawings, the lower end of which arms are secured to the collar *i*, similar in construction to the collar *g*, and on which latter the lower end of said collar *i* rests. The arms *j* extend upwardly for a certain portion of their length, and are then bent inwardly and bolted to a sleeve or collar, *k*, similar in its construction to the collars *i* and *g*. To the lower portion of the arms composing the reel D and the upper portion of the arms composing the reel C are secured angle-irons *l*, for the purpose of strengthening the reels at those points.

It will be seen that the two reels D and C are in no way connected, allowing either to be revolved at any rate of speed without in any manner interfering with the operations of the other. To the arms *j*, and between the two pieces composing the same, are pivotally secured the arms *m*, adapted to support a coil of wire thereon, the inner ends of said arms resting under the collar *i*.

Immediately above the collar *i* is loosely secured a disk, E, provided with notches *o* on its periphery, which, when said disk is in a certain position, will register with the arms *m* and allow the same to be swung vertically on their pivots, said disk being kept in position to prevent the arms from swinging by means of the spring *p*, one end of which is connected to a lug, *p'*, formed on the disk, and the other end to a projection, p^2, on one of the irons l^3, secured to the upper reel. This projection p^2 on the iron or irons fits in a recess, p^4, formed on the periphery of the disk, which is therefore compelled to turn with the reel. The projection p^5 on one of the irons fitting in a similar recess compels the disk to turn when the reel is revolved in the opposite direction. The disk is also provided with a handle, p^6, by means of which it may be slightly turned independent of the reel and bringing the notches *o* directly under the arms *m* and allowing the same to be swung vertically, as before stated, the inner end of said arms passing in between the pieces composing the arms *j*, and the outer end passing in between the pieces composing the arms *c*. As soon as the handle is released the plate, by virtue of the spring *p*, assumes its normal position and holds the inner ends of the arms between the same and collar *i*.

By the above-described means the coils of wire are transferred to the lower reel. The wire is first placed on the arms of the upper reel, and by simply turning the disk the notches therein are brought to register with said arms, whereupon the weight of the coil of wire will immediately force the outer ends of the arms downwardly and the coil will drop onto the arms of the lower reel, C. The momentum given to the outer ends of the arms by the weight of the coil when deposited onto the lower reel will cause the arms to revolve until such outer ends strike the collar *i*, whereupon the opposite ends will be in position to receive a coil of wire, and upon releasing the handle on the disk the latter will turn and prevent the arms from again lowering. The disk is prevented from being raised by means of the sleeve *r*, secured to the shaft by means of the set-screws *s*.

On the base B rests the bent end of one arm, G, of a bell crank lever pivoted at *t*, the other vertical arm, H, of which is connected to the operating mechanism of the wire-machine, preferably with the belt-shifter, which is so arranged that when pushed forward the belt is shifted to a loose pulley. (Not shown.) The base B of the reel fits against a block or blocks, *u*, secured to the floor, and adapted in case of accident to prevent the reel from traveling along the floor. It will now be readily understood that should the wire from any cause fail to unwind from the reel, the pulling thereon by the wire-machine would cause an incline of the reel and a partial falling over thereof, which would cause the base B to rise and at the same time raise the arm C of the bell-crank and advance the arm H, which, as before stated, would operate to shift the belt to the loose pulley, and thereby check the operation of the wire-machine and discontinue the tendency to pull the reel over. This construction allows the operator to devote his whole attention to the wire-machine, the reel requiring no attention other than to supply it with the coils of wire, for in case of any accident to the reel the wire-machine will be instantly and automatically stopped.

As I do not limit myself to any particular manner of connecting the lever to the machine, nor make any claim to any particular construction of connecting devices, I have not deemed it necessary to illustrate a machine nor connecting parts. It is manifestly evident that said lever may be connected in many different ways and to many different parts of the machine with the same result as by connecting it as above described.

My device is exceedingly simple in construction, is of few parts, automatic in its operation, and can be manufactured at a small cost.

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

1. A reel for feeding wire to a barb-wire machine, consisting of two or more independent reels, one above the other, the arms of said upper reel being adapted to deposit its coil of wire onto the arms of the lower reel, substantially as set forth.

2. A reel for feeding wire to a barb-wire machine, consisting of two or more independently-operating reels placed one above the other, vertically-swinging arms secured to the upper reel, and a means for holding said arms in

a horizontal position and for releasing them to permit of their vertical movement, as and for the purpose set forth.

3. A reel for feeding wire to a barb-wire machine, which consists of a central rod around which revolve two or more independent reels, placed one above the other, vertically-swinging arms secured to the upper reel, and a recessed disk revolving with said upper reel for holding the arms in a horizontal position, and capable of partial rotation independent of said upper reel, substantially as set forth.

4. The combination, with a reel for feeding wire to a barb-wire machine, of a lever connected with said reel and with devices for stopping the machine, whereby when the reel is inclined from any cause the operations of the machine through the intervention of the lever will be checked, substantially as and for purpose set forth.

5. A reel for feeding wire to a barb-wire machine, consisting of an upright shaft or standard having a reel or reels revolving around the same, and a lever connected with the base of the standard and with devices for stopping the said machine, whereby when the reel is inclined the operations of the machine will be checked, substantially as set forth.

6. A reel for feeding wire to a barb-wire machine, which consists of a standard having two reels revolving around the same, placed one above the other, of the swinging arms *m*, secured to the upper reel, and the recessed disk E, substantially as set forth.

7. A reel consisting of the standard and two independent reels, C D, revolving around the same and placed one above the other, and the spring-actuated disk E, provided with recesses and adapted to hold the swinging arms of the upper reel in a horizontal position, and to be moved to permit the arms to swing and deposit the coil of wire onto the arms of the lower reel, substantially as set forth.

Signed at Marshalltown, in the county of Marshall and State of Iowa, this 11th day of November, A. D. 1885.

GEORGE W. McKINNY.

Witnesses:

HENRY STONE,

MERRITT GREENE.