

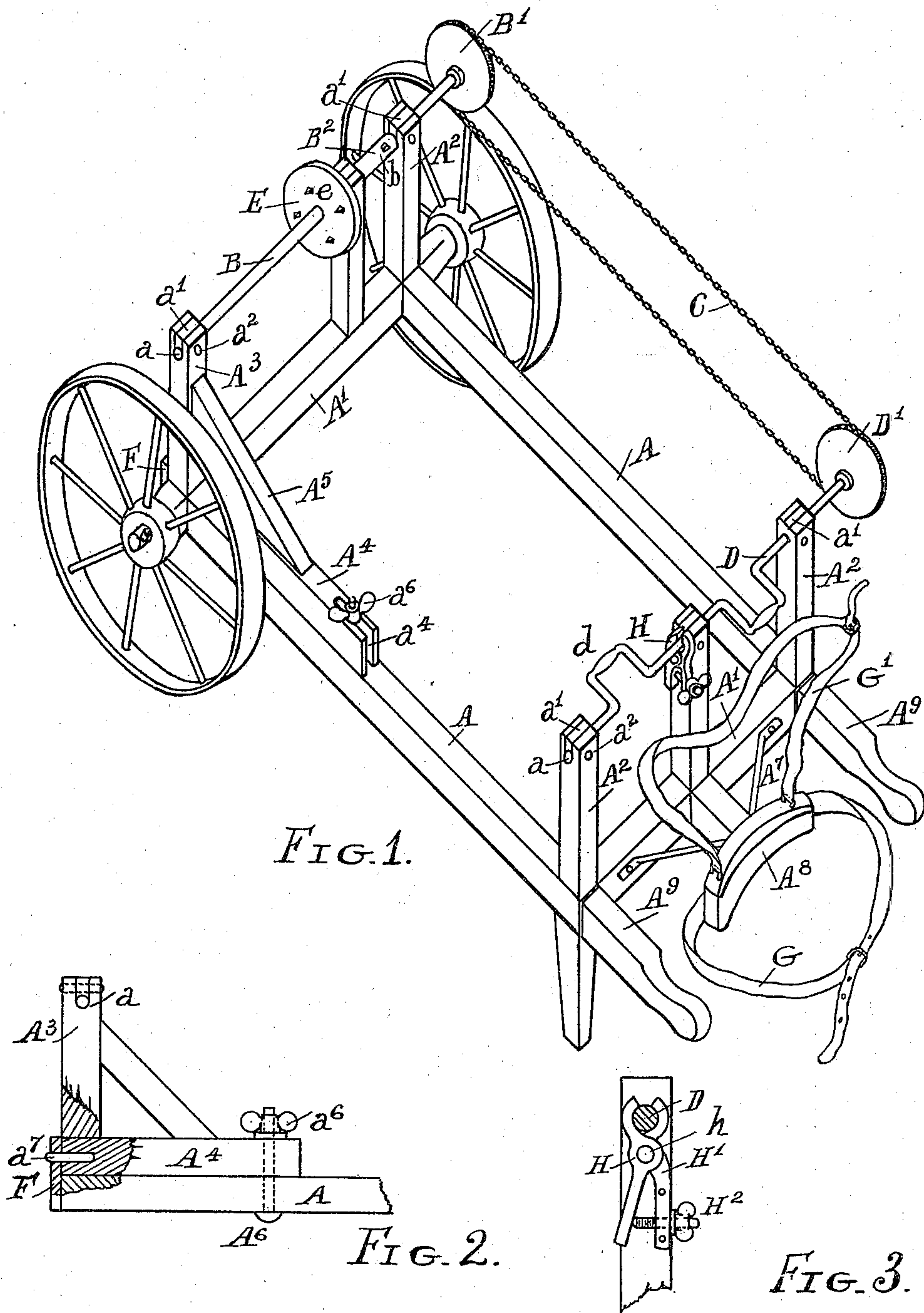
No. 708,596.

Patented Sept. 9, 1902.

Z. D. SMITH.  
REEL FOR BARBED WIRE.

(Application filed Mar. 14, 1902.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

ZACHARY D. SMITH, OF SPRINGFIELD, ILLINOIS.

## REEL FOR BARBED WIRE.

SPECIFICATION forming part of Letters Patent No. 708,596, dated September 9, 1902.

Application filed March 14, 1902. Serial No. 98,214. (No model.)

*To all whom it may concern:*

Be it known that I, ZACHARY D. SMITH, a citizen of the United States, residing at Springfield, in the county of Sangamon and State of Illinois, have invented certain new and useful Improvements in Reels for Barbed Wire, of which the following is such a full, clear, and exact description as will enable others skilled in the art to which it appertains to make and use my said invention.

My invention relates to barbed-wire reels such as are employed in winding up barbed wire and placing it on spools in suitable condition for storage or transportation or for unwinding wire from the spool as may be required in the construction of barbed-wire fence.

The purposes of my invention are to provide a barbed-wire reel so constructed and arranged that the spool on which the wire is to be wound or from which it is to be unwound may be easily placed upon the machine or removed therefrom, to provide means of novel and improved construction for connecting the spool with the supporting-frame of the apparatus, to provide means for rotating the spool as may be necessary either for winding up or unwinding the wire, to provide means whereby the apparatus may be connected with and supported on the person of the user in such manner as to facilitate the use of the apparatus, and to provide means to prevent too-rapid winding or unwinding of the wire.

With these ends in view my invention consists in the novel features of construction and combinations of parts shown in the annexed drawings, to which reference is hereby made, and hereinafter particularly described, and finally recited in the claim.

Referring to the drawings, Figure 1 is a perspective view of the complete apparatus. Fig. 2 is an enlarged partial side elevation of the left-hand side of the apparatus. Fig. 3 is an enlarged partial vertical section on the line 3 3 of Fig. 1.

Similar letters of reference designate like parts in the several views.

The main frame, which may be of any suitable material, is preferably rectangular in form and consists of side pieces A, joined by

cross-pieces A'. Posts A<sup>2</sup> are secured on top of the frame. Handles A<sup>3</sup>, which may be used in supporting and guiding the apparatus, are connected with the frame. A spool-shaft B turns in suitable bearings on the posts A<sup>2</sup> and A<sup>3</sup> at the rear end of the apparatus. A double crank-shaft D, provided with suitable handles d, turns in suitable bearings on the post A<sup>2</sup> at the front end of the apparatus. A sprocket-wheel D' is secured to the shaft D, and a sprocket-wheel B' is secured to the shaft B. A sprocket-chain C runs on the wheels D' and B'. A collar B<sup>2</sup> surrounds the shaft B between the adjacent rear posts A<sup>2</sup> and is secured on the shaft by a set-screw b or other suitable securing device. The collar prevents longitudinal movement of the shaft in its bearings. The bearings a, in which the shafts B and D turn, are preferably formed by boring holes transversely through the posts A<sup>2</sup> and A<sup>3</sup> in line with each other and then sawing longitudinally through the posts until the saw cuts reach the holes, thus forming blocks a', which are held in place above the shafts by pins a<sup>2</sup>, and the blocks serve to prevent lifting or accidental displacement of shafts. A circular plate E is mounted on the shaft B and is connected therewith by a set-screw or other suitable securing device and has on its face projecting pins e, which engage with the spool placed on the shaft and prevent turning of the spool.

A bracket by which one end of the shaft B is supported consists of a vertical post A<sup>3</sup> and a horizontal member A<sup>4</sup>. A brace A<sup>5</sup> connects the members A<sup>3</sup> and A<sup>4</sup>. A plate F is secured on the rear cross-piece of the main frame, and a pin a<sup>7</sup> on the member A<sup>4</sup> fits in a transverse hole in the plate. In the front end of the member A<sup>4</sup> is a slot a<sup>4</sup>. A bolt A<sup>6</sup> passes through the side piece A and through the slot a<sup>4</sup> in the member A<sup>4</sup>, and a thumb-nut a<sup>6</sup> on the bolt serves to secure the member A<sup>4</sup> on the side piece A. By loosening the nut a<sup>6</sup> the bracket may be slipped forward sufficiently to withdraw the pin a<sup>7</sup> from the hole in the plate, so as to permit the bracket to be removed from the end of the shaft. The spool may then be placed on the shaft and the bracket restored to its original position and secured in place. The spool will



then be in position for use. To remove the spool from the shaft, this procedure will be reversed.

A bar  $A^7$  projects forwardly from the main frame and has at its front end a yoke  $A^8$ , formed to fit on the chest or back of a man. A belt  $G$ , secured to the yoke, may be worn around the body of the user, and straps  $G'$  are adapted to fit around the back of the neck and rest on the shoulders of the user, so as to retain the yoke at a convenient height for use. The belt  $G$  and straps  $G'$  are provided with buckles, by which they may be fitted to the person of the user.

To prevent too-rapid winding or unwinding of the wire, I employ a brake, which I will now describe. Jaws  $H$  and  $H'$  are mounted on one of the front posts  $A^2$ . The jaw  $H'$  is stationary, and the jaw  $H$  turns on a pivot  $h$ , and the shaft  $D$  turns between the jaws. A screw  $H^2$  is mounted in the member  $H$ , and the end of the screw acts against the member  $H'$ . By turning the screw to the right the jaws may be closed, so as to clamp the shaft and retard its motion to the desired extent. In stretching wire ready for placing on the fence the jaws may be drawn together to clamp against the shaft. When the screw is turned to the left, the jaws will release the shaft, and it will be free to turn.

The operation of the apparatus is as follows: When it is desired to take up wire, the spool is placed on the shaft  $B$ , as already described, and the end of the wire is secured to the spool. The user then lifts the front end of the apparatus by the handles and places the yoke  $A^8$  in convenient position on his breast and passes the belt  $G$  around his body and secures it by the buckle. He then passes the strap  $G$  over the shoulders and around the back of the neck and connects them by the buckle. He then takes hold of the crank-handles  $d$ , one in each hand, and turns them by alternately pushing and pulling with his right and left hands, respectively, and thus rotating the spool through

the instrumentality of the shafts  $D$  and  $B$ , the sprocket-wheels on the shafts, and the chain connecting the sprocket-wheels, and then walks along, pushing the machine in front of him, thus winding the wire on the spool as he proceeds. If the spool winds the wire too rapidly, he turns the screw  $H^2$ , thereby applying the brake, so as to retard the motion of the spool. When it is desired to let out wire and stretch it in position for placing on fence, the user instead of pushing the machine will pull it, as I will now describe. When it is desired to pull the machine, the user will place his back against the yoke  $A^8$ , pass the straps  $G'$  under his arms and around the back of his neck, and secure them by means of the buckle. He will then pass the belt  $G$  around his body and buckle it in front. Then taking hold of the handles  $A^4$  he will pull the machine along, as may be required. When it is desired to stretch the wire, he will apply the brake to prevent rotation of the shaft  $D$  and will then pull on the machine until the desired tension of the wire is attained.

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

In an apparatus of the class described, a bracket having a slotted horizontal member provided with a projecting pin, and a vertical member provided with a transverse bearing, in combination with a main frame a plate on said frame adapted to receive said pin, a bolt passing through said frame and through the slot in a horizontal member of said bracket, and a spool-shaft turnable in the bearing on the vertical member of said bracket, as set forth.

In witness whereof I have hereunto subscribed my name, at Springfield, Illinois, this 28th day of January, 1902.

ZACHARY D. SMITH.

Witnesses:

MAY F. RYAN,

ROBERT H. DOOLING.

It is hereby certified that in Letters Patent No. 708,596, granted September 9, 1902, upon the application of Zachary D. Smith, of Springfield, Illinois, for an improvement in "Reels for Barbed Wire," an error appears in the printed specification requiring correction, as follows: In line 89, page 1, the reference letter "*a*'" should read *A*', and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 30th day of September, A. D., 1902.

[SEAL.]

F. I. ALLEN,  
*Commissioner of Patents.*