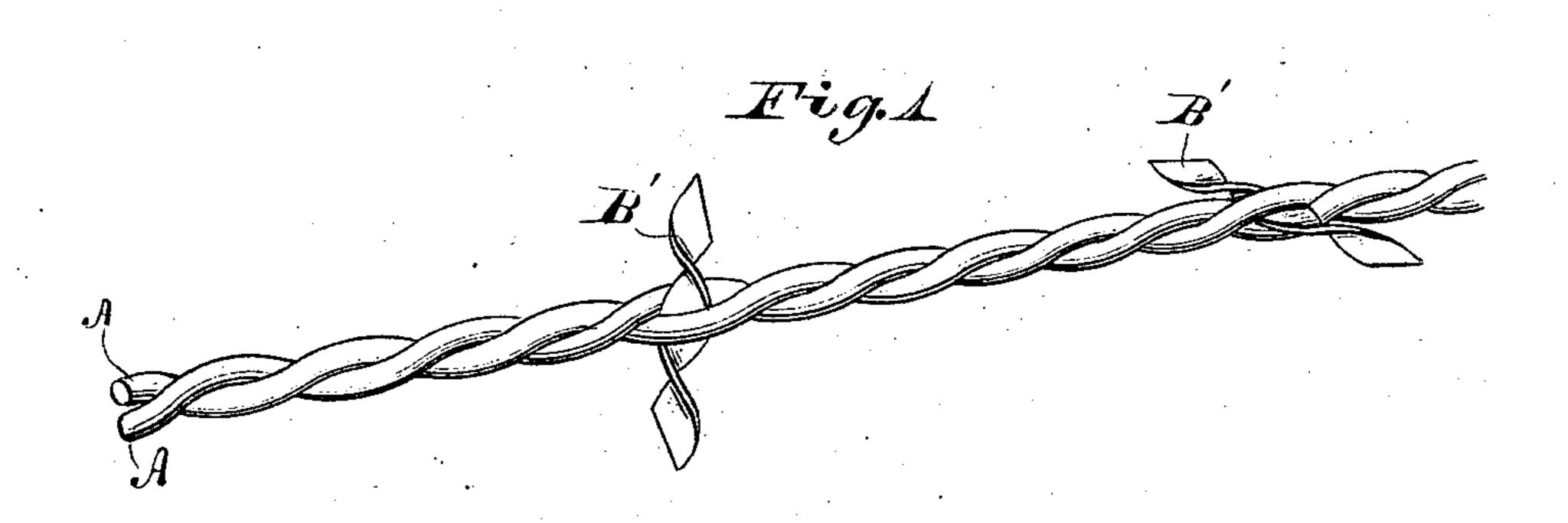
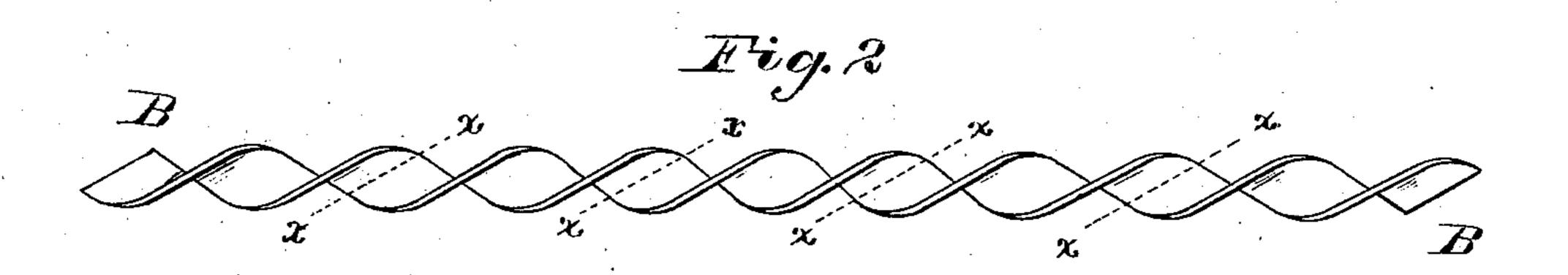
(No Model.)

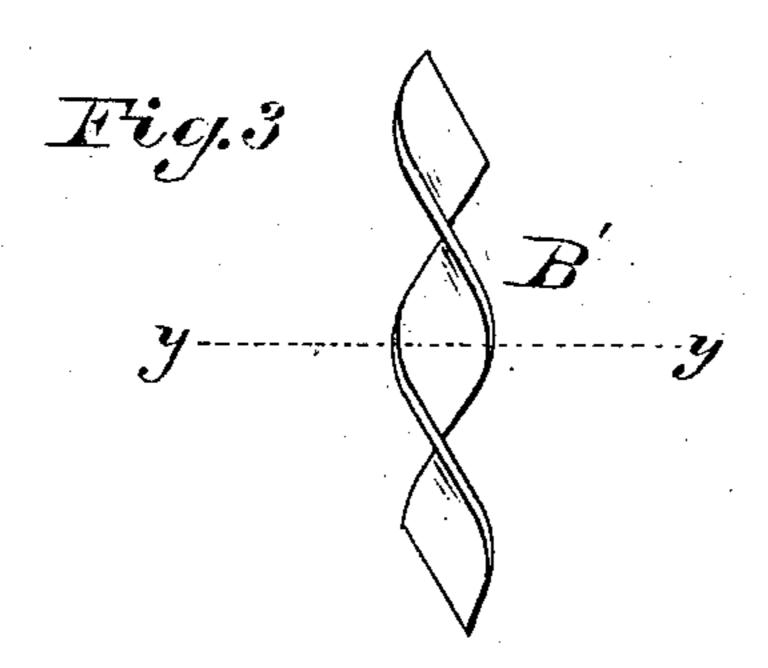
## A. J. UPHAM.

No. 294,827.

Patented Mar. 11, 1884.







John Chopkins

By Geo. Ro. Eutter,

Atturney.

## United States Patent Office.

ANDREW J. UPHAM, OF SYCAMORE, ILLINOIS, ASSIGNOR TO THE WASH-BURN & MOEN MANUFACTURING COMPANY, OF WORCESTER, MASSACHU-SETTS, AND ISAAC L. ELLWOOD, OF DE KALB, ILLINOIS.

## BARBED WIRE.

SPECIFICATION forming part of Letters Patent No. 294,827, dated March 11, 1884.

Application filed December 29, 1882. (No model)

To all whom it may concern:

Be it known that I, Andrew J. Upham, a citizen of the United States, residing at Sycamore, in the county of De Kalb and State of 5 Illinois, have invented a certain new and useful Improvement in Barbed Wire, which is fully set forth in the following specification, reference being made to the accompanying drawings, in which—

Figure 1 represents in perspective and on an enlarged scale a piece of barbed wire which embodies my improvements. Fig. 2 is a side view on an enlarged scale of the blank from which the barbs are made. Fig. 3 is a side 15 view on an enlarged scale of one of the barbs; and Fig. 4 is a section of the same, taken on the line y y of Fig. 3.

My invention relates to barbed wire, the

barbs of which are of sheet metal.

My invention consists in the combination of a spirally-twisted sheet-metal barb, with two main fence-strands cabled together and holding the spiral barb between their twists, as will be hereinafter more fully described.

In the drawings, A A represent the cablestrands composing the fence-wire, which are of the ordinary kind, and are twisted together in the usual manner, and carry at suitable intervals sheet-metal barbs B', of peculiar con-30 struction. These barbs are cut from a spirally-twisted sheet-metal strip, B, shown in Fig. 2, and may be cut so as to contain one or more twists, according as a longer or shorter barb is desired. In the present instance they 35 are shown cut so as to include two twists in addition to the curved pointed ends, which result from obliquely shearing off the barbs from the blank.

The blank B may be made from ordinary 40 strip metal—such as is sometimes used for the fencing proper—the spiral shape being imparted to the barb metal by any well-known means. The barbs may be fed in between the cable-strands either by hand or machine, and 45 there incorporated by releasing them from the

hand, or by shearing them off from the rest of the blank, as the case may be, after the cablestrands have closed tightly around the barb metal at such a tension as to very slightly spring out of shape or indent the edges of the 50 latter.

It will be understood that the cable-strands or main fence-wires are drawn or fed through some proper guiding device, which keeps them separated for a short distance, thereby 55 rendering possible the placing of the barbs in position between the cable-strands preparatory to their being clamped in position as the wires or strands are twisted or cabled together.

It will be seen that when desired the barbs 60 can be manufactured separately and in large quantities, and then fed in by children, thus rendering possible the manufacture of barbed wire at a comparatively slight cost.

The operation of shearing the barbs off from 65 the blank, of course, may take place during their incorporation into the cable, thus making barbed wire at an expense greatly less than is necessarily incurred where the barb metal must be manipulated both before and during 70 the operation of attaching the barbs to the cable.

It will be observed that the adjustment of the spiral-barb metal to its proper final position between the cable-strands is, in a sense, 75 at least, automatic, inasmuch as the indentations in the barbs, by which they are kept from dropping out from between the cable-strands, are made during, instead of before, their incorporation into the fence-cable.

I claim as my invention and desire to se-

cure by Letters Patent—

A spirally-twisted sheet-metal barb, in combination with two main fence-strands cabled together and holding the spiral barb between 85 its twists, substantially as set forth.

ANDREW J. UPHAM.

Witnesses:

JOHN B. WHALEN, CHAS. E. WALKER.