

E. E. TUCHOLKE.

REEL HINGE.

APPLICATION FILED SEPT. 15, 1911.

1,033,966.

Patented July 30, 1912.

Fig. 1.

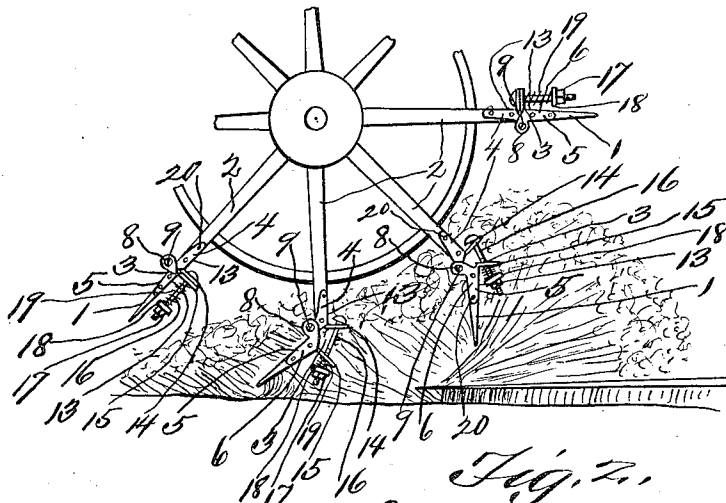


Fig. 2.

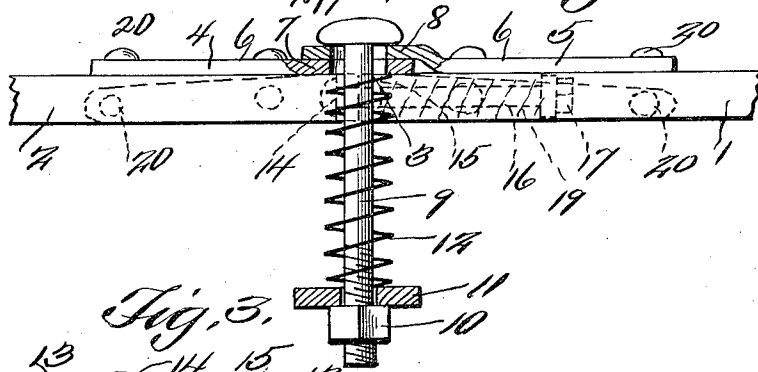
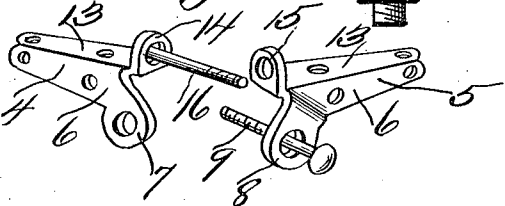


Fig. 3.



Witnesses

Francis P. Boswell.
A. C. Frothingham.

Inventor
Emil E. Tucholke,

By *D. Swift & Co.*
Attorney

UNITED STATES PATENT OFFICE.

EMIL ED TUCHOLKE, OF LABOLT, SOUTH DAKOTA.

REEL-HINGE.

1,033,966.

Specification of Letters Patent.

Patented July 30, 1912.

Application filed September 15, 1911. Serial No. 649,503.

To all whom it may concern:

Be it known that I, EMIL E. TUCHOLKE, a citizen of the United States, residing at Labolt, in the county of Grant and State of South Dakota, have invented a new and useful Reel-Hinge; 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 ap-
10 pertains to make and use the same.

This invention relates to harvester-reels, and particularly to a new and useful hinge for the arms for such reels.

The main object of the invention is to provide a hinge, capable of flexing in one or more directions.

The invention comprises further features and combination of parts, as hereinafter set forth, shown in the drawings and claimed.

20 In the drawings:—Figure 1 is a view in elevation, showing a flexible hinge connection, constructed in accordance with the invention, and applied between two members. Fig. 2 is a similar view, taken at right angles to Fig. 1. Fig. 3 is a view in perspective of various parts of the flexible hinge connection disassembled, showing the
25 springs of the connection omitted.

Referring more especially to the drawings
30 1 and 2 designate two members, which compose the arms of the harvester reel. These two members are connected together by the flexible hinge connection, 3. This hinge connection consists of the two plates 4 and
35 5, which are angular in cross section, as shown. Projecting from the sides 6 of the plates 4 and 5 are two apertured ears 7 and 8, which are disposed in registration. Passing through the ears 7 and 8 is a bolt 9, hav-
40 ing a nut 10 threaded on its end. The diameter of the bolt 9 is less than the diameters of the apertures of the ears 7 and 8. Arranged on the bolt 9 is a washer 11, and encircling the bolt between the ears 7 and
45 8 and the washer a coil spring 12 is arranged.

Extending at right angles to the sides 13 of the plates 4 and 5 are two ears 14 and 15. The planes of these ears are at right angles
50 to those of the ears 7 and 8. Passing through the ears 14 and 15 is a bolt 16, on the end of which a nut 17 is threaded. Adjacent the nut a washer 18 is disposed. Between the washer 18 and one of the ears 14
55 and 15 a coil spring 19 is interposed. The plates 4 and 5 are secured to the members

1 and 2, by means of the bolts 20, as shown. The apertures of the ears 14 and 15 are larger in diameter than the shank of the bolt, which passes through them.

By making the apertures of the ears 7 and 8 and the ears 14 and 15 larger in diameter than the bolts, the plates 4 and 5 may flex in more than one direction. When the members are worked on the pivot bolt 9 the
60 tension of the spring 19 is exercised, and when the members are flexed at right angles to the first flexing both springs are under tension.

By the provision of such a hinge the mem-
70 bers 1 of the arms of the reel are allowed to flex in one or more directions, and as shown in Fig. 1 of the drawings, which flexing is caused by the resistance of the grain in contact with the members 1, thus deflecting or
75 carrying the standing grain upon the platform (not shown) of the harvester. The arms and the member 1 tend to raise the fallen grain into position, for cutting action by the sickle (not shown) of the har-
80 vester (not shown).

From the foregoing it will be noted that there has been devised an efficient, simple and practical flexible hinge.

The invention having been set forth, what
85 is claimed as new and useful is:—

1. In a harvester reel having radial arms, each arm comprising two members, one immovable relative to the reel, while the other constitutes an outer movable tip member
90 having a flexible hinge connection with the outer end of the immovable member, the flexible connection being so constructed, so as to constitute means to permit the tip member to move in three directions, under
95 the resistance of the grain.

2. In a harvester reel having radial arms, each arm comprising two members, one immovable relative to the reel, while the other constitutes an outer movable tip member
100 having a flexible hinge connection with the outer end of the immovable member, the hinge connection comprising a pair of metal angle plates, each plate having apertured ears arranged in planes at right angles to
105 each other, the corresponding ears of each plate being arranged in registration, bolts passing through the registered ears and provided with coiled springs, and means on the bolts for regulating the tension of the
110 springs.

3. In a harvester reel having radial arms,

each arm comprising two members, one immovable relative to the reel, while the other constitutes an outer movable tip member having a flexible hinge connection with the
5 outer end of the immovable member, the hinge connection comprising a pair of metal angle plates, each plate having apertured ears arranged in planes at right angles to each other, the corresponding ears of each
10 plate being arranged in registration, a pair of bolts arranged in planes at right angles

to each other and passing through the registered ears, springs on the bolts, and nuts threaded on the free ends of the bolts for regulating the tension of the springs. 15

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

EMIL ED TUCHOLKE.

Witnesses:

S. M. ENGBRETSON,
ARTHUR ORMAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."