

(No Model.)

C. F. SMITH.
CAP FOR WHEEL SKEINS.

No. 531,701.

Patented Jan. 1, 1895.

Fig. 1.

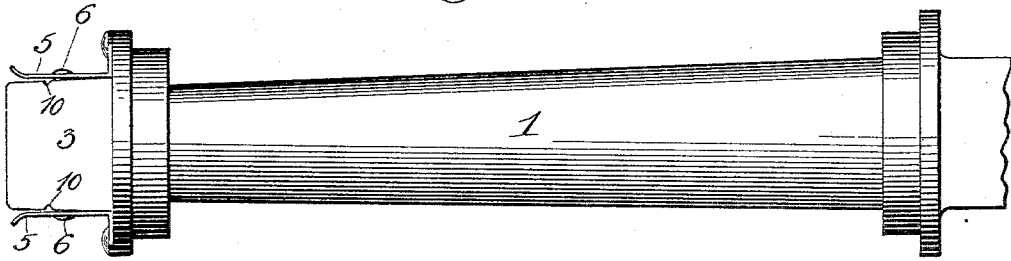


Fig. 2.

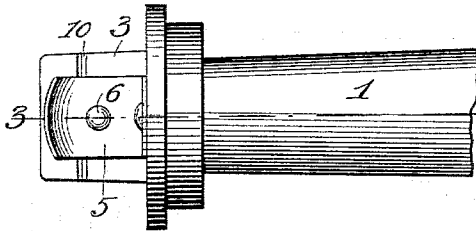


Fig. 3.

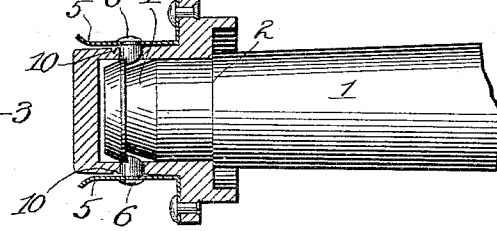


Fig. 4.

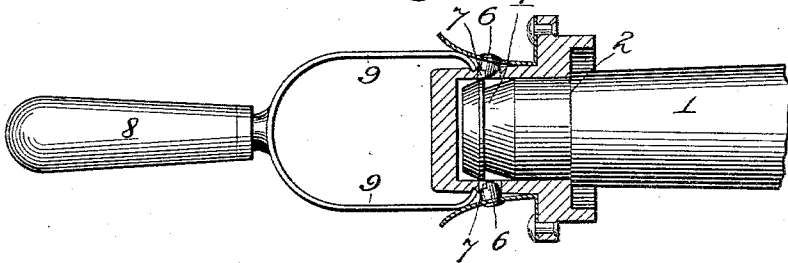
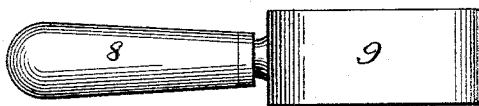


Fig. 5.



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CAP FOR WHEEL-SKEINS.

SPECIFICATION forming part of Letters Patent No. 531,701, dated January 1, 1895.

Application filed August 30, 1894. Serial No. 521,766. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE F. SMITH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Caps for Wheel-Skeins, of which the following is a specification, reference being had to the accompanying drawings, in which—

10 Figure 1 is a view of a skein with the cap mounted upon its outer end. Fig. 2 is a view of a portion of the skein with the cap mounted upon its outer end, showing the side of the cap upon which the springs are secured. Fig. 15 3 is a view of a portion of the skein with the cap mounted thereon, the cap being shown in section upon line 3—3 of Fig. 2. Fig. 4 is a view of a portion of the skein with the cap mounted thereon, showing the springs pried 20 apart so as to free the dogs from the groove in the end of the skein; and Fig. 5 is a detail, being a top view of the tool by means of which the springs are pried apart and the cap removed.

25 My invention relates to caps by means of which wheels are held in their place upon skeins, and its object is to provide a cap which shall take the place of the nuts ordinarily used for such purpose, shall be readily removable from the end of the skein, and shall 30 be interchangeable so that it may be used upon the skeins upon either side of the vehicle or upon either end of the axle, and at the same time shall remain securely in position until removed. It is well known that 35 with the older nuts which were used, and which were screwed upon the end of the skein or axle, they had to be made right and left handed so as not to be unscrewed by the forward motion of the buggy, and in such case 40 if the motion of the wheel were reversed by backing the buggy or the vehicle, or in any other way, the nut was liable to be unscrewed and lost, causing the wheel to come off. By 45 means of my improvement I avoid these difficulties.

Another advantage of my improvement is that the cap rotates readily upon the end of the skein, so that in case the washer which is 50 interposed between the inner end of the cap and the hub of the wheel fits too tightly the wheel will not be bent in its rotation thereby,

but the cap may rotate with the wheel upon the skein.

I accomplish the objects of my invention 55 as hereinafter specified and as illustrated in the drawings.

That which I regard as new will be set forth in the claim.

In the drawings,—1 indicates a skein or 60 axle upon which the wheel is mounted and rotates. The outer end of the skein is provided with a shoulder 2, as best shown in Figs. 3 and 4.

3 indicates a cap, which is bored cylindrical 65 so as to freely fit and rotate upon the outer end of the skein 1, bearing against the shoulder 2.

4 (see Figs. 3 and 4) indicates a circumferential groove near the outer end of the skein 70 1. The outer end of the cap 3 is preferably squared, as shown in the drawings.

5 indicates springs which are secured to the cap 3. I prefer to make these springs two 75 in number, but it is obvious that a greater number might be employed. The springs 5 may be bolted upon or secured to the cap in any suitable manner.

6 indicates dogs, which are secured to the springs 5 and pass through suitable openings 80 7 (see Fig. 4) in the cap 3 and are adapted when the springs 5 are in their normal position to engage with the circumferential groove 4 at the end of the skein. The outer end of the skein beyond the groove 4 is preferably 85 beveled, as is shown in Figs. 3 and 4, and the inner ends of the dogs 6 are beveled to correspond, so that the cap may be forced upon the end of the skein. The inner end of the cap 3 is recessed, as is shown in Figs. 3 and 90 4, in order to receive a washer adapted to rest between the cap and the wheel, which being of the usual form is not shown.

When it is desired to place the cap in position upon the skein it is simply pushed upon 95 the skein, the beveled under surfaces of the dogs 6 bearing upon the beveled end of the skein, the dogs are raised and the skein comes into position, the dogs being forced by the springs 5 inward as soon as the skein is in position, whereby they engage with the circumferential groove 4. For the purpose of removing the cap from the skein I prefer to use 100 a tool shown in Figs. 4 and 5. This tool con-

sists of a handle 8 and arms 9. The outer ends of the arms 9 are bent slightly inward, as shown in Fig. 4, and are adapted to engage with a groove 10 upon the cap 3. When it is desired to remove the cap the tool is placed upon the cap, as shown in Fig. 4, and forced inward so that the arms 9 come between the springs 5 and the adjacent surface of the cap. The springs 5 are thus forced outward, raising the dogs 6 from engagement with the groove 4, the tool being forced inward until the outer ends of the arms 9 engage with the groove 10. The cap may then be removed readily from the skein.

15 I have shown and described the tool as being the means by which I prefer to remove the cap from the skein, but I make no claim thereto, as it is obvious that it may be removed in any other suitable manner.

I have shown and described my invention as applied to the wheel skeins of buggies, wagons and similar vehicles, but I do not wish to confine myself thereto, as it is obvious that the skein might be applied to any kind of an axle upon which it is desired to hold in place a wheel rotatably mounted thereon.

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

The combination with the recessed skein; of the cap applied thereto; the spring arms 5 provided each with a dog 6 to engage the skein; and a groove 10 formed in the exterior of the cap, substantially as described.

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Witnesses:

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