The span rode very steadily. There was a west wind of five miles per hour and a westward eurrent of four miles. The mooring tackle was cut clear of the end bents when Mr. Davie took charge, and the span was at first drawn out by means of tackle running from a steam hoist situated at each end of the span to the end bents Lo and L18. The larger tugs, "John Pratt," "Virginia," "F. Dupre," "Mathilda," and "Spray," all of the Sincennes-McNaughton Line, of Montreal, were standing by.

The span cut loose from its downstream stone crib anchored at 6.06 and was then absolutely free and normal to the current, which was running westward at four miles per hour.

The tug "Spray" replaced the "Belle of Quebec" at 6.11. The "Virginia" took hold of the middle of the lower chord of the span at 6.12. The "Mathilda" replaced the "M. E. Hackett" at 6.12. The "M. E. Hackett" took hold of the span at the south end, upstream side, at 6.15, the "Belle" simultaneously taking hold at the north end, upstream side. The "F. Dupre" and the "John Pratt" also took hold of the north end, downstream side, as the current was stronger nearer the shore. The span was then normal to the current and directly opposite the erection site at Sillery, and began to float upstream with the current and the aid of the two small tugs which were pulling westward, the five larger tugs on the easterly side of the span pointing downstream and ready to act as a check on the span's progress at any moment.

check on the span's progress at any moment. The "Hackett" and the "Belle" are about 500 h.p., while the other five tugs are about 1,000 h.p.; the towing hawsers used were $4\frac{1}{2}$ ins. The tide was now at full



Fig. 6.—Side View of One of the End Bearings Under XLO Joint. Taken while Span Rested at Sillery Last Friday. The Bottom Shoe of the Bearing is the Part Immediately Above the Rope

flood and the tidal current was running upstream with a velocity of from four to five miles per hour. By means of ranges which had been previously placed at measured distances apart along the shore, the rate of progress of the span was recorded. The ranges were poles carrying conspicuous targets, each range consisting of two such poles, one placed at the shore line and the other at a little distance from the shore in a line perpendicular to the course taken by the span. When the observer on the span saw the distant pole exactly behind the one on the shore, the time at that moment was taken as the time of passing that particular range.



Fig. 7.—Close View of One of the Nickel-Steel Key Bearings

Taken while span rested on the bronze plate bearings at Sillery. The four key-bearings were used only during the lifting of the span, but they then bore its entire weight. The change in these bearings constituted the most important change in design from last year's program. The rocker type of bearing used last year failed, resulting in the loss of the first span. At the left, the rope is looped through the forged steel plate which was later bolted across the end of the bearing to assist in stopping the upper shoe from slipping off the key in case of accident. The right loop of the rope is through one of the bolt holes provided for this purpose.

The first range was passed at 6.23 a.m. The distance from the first range to the second was 1,700 ft., and as the second was passed at 6.29, the speed was about 3.2 miles per hour.

The distance to the third range was 2,560 ft., and it was passed at 6.36, so that the speed between the third and fourth ranges was about 4.1 miles per hour.

From the third to the fourth range was 2,180 ft., and the fourth was passed at $6.45\frac{1}{2}$, so the speed between those two ranges was about 2.6 miles per hour. The span was then about $1\frac{1}{4}$ miles from the bridge site. The effect c^f the 10-mile-per-hour west wind was being felt, checking the speed of the span somewhat.

The distance to the fifth range was 2,050 ft. and it was passed at 6.53. Speed, about 3.1 miles per hour.

Distance to sixth range, 1,750 ft. Time of passing sixth range was missed. Distance to seventh range, 620