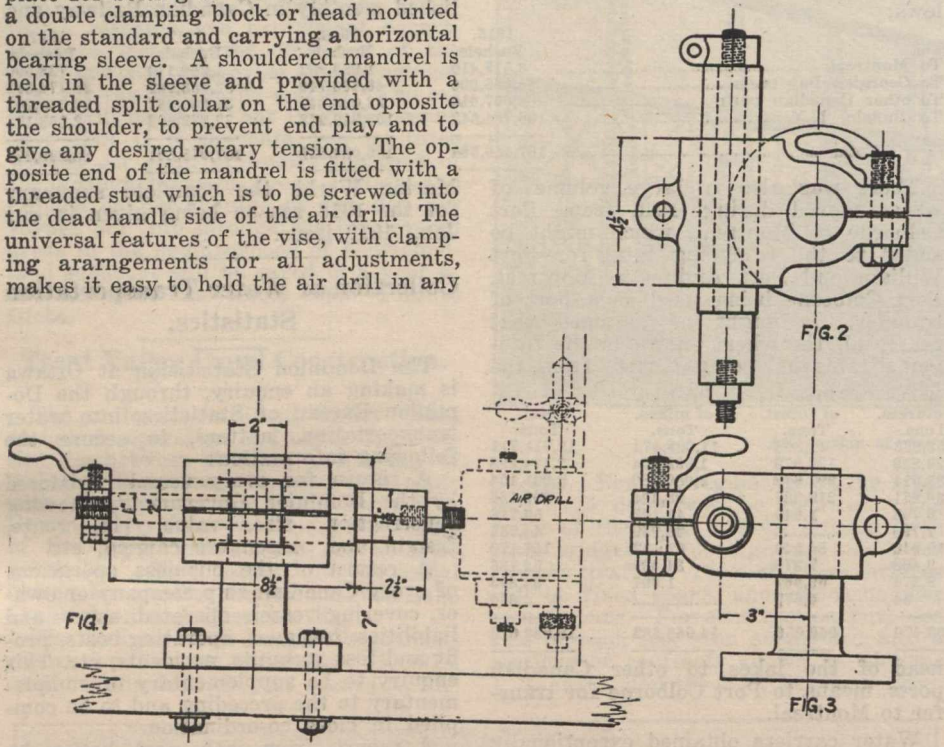
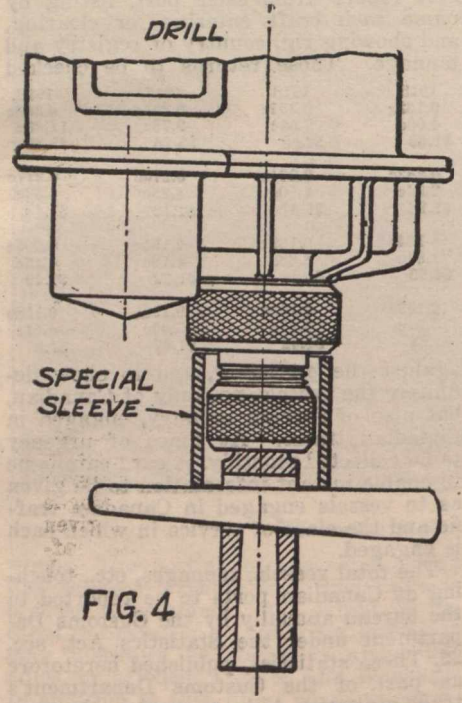
Air Tool Devices for Shipbuilding.

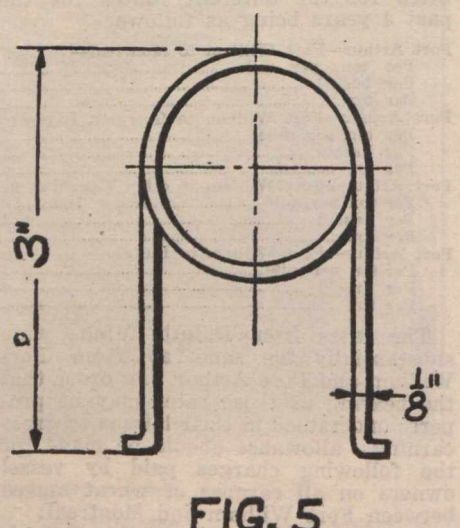
The three convenient air tool devices illustrated herewith were developed by W. A. Mason, foreman air tool repair shop, Wyandotte plant, American Shipbuilding Co., Detroit, Mich.

Repairing Vise for Air Drills.—Figs. 1, 2 and 3 show a special vise or holder for air drills while repairs are being made. It consists mainly of a round vertical standard or shaft, with attached base plate for bolting to the work bench, and a double clamping block or head mounted on the standard and carrying a horizontal bearing sleeve. A shouldered mandrel is held in the sleeve and provided with a threaded split collar on the end opposite the shoulder, to prevent end play and to give any desired rotary tension. The opposite end of the mandrel is fitted with a threaded stud which is to be screwed into the dead handle side of the air drill. The universal features of the vise, with clamping ararngements for all adjustments, makes it easy to hold the air drill in any position desired and to make changes from one position to another with the least possible loss of time.





Air Drill Socket Extractor.—Fig. 4 illustrates a very simple method of removing a taper shank drill socket from certain classes of air drills which are not provided with a more convenient extracting arrangement. A hardened tool steel sleeve constitutes the special device used for this purpose, and is made large enough to slip loosely over the protection nut of the drill spindle so that it can rest on shoulder against the face of the packing nut. The length of the sleeve is such as to partially overlap the drift key slot in the drill socket. A key driven into the slot and bearing against the sleeve will force the socket out of the drill spindle.



Air Drill Valve Extractor.—Fig. 5 shows a device for extracting valves from air drills, it being made of no. 11 B. & S. gauge spring steel wire. When used the bent points or hooks are inserted into the main parts of the valve and a piston or drift plug is inserted from the opposite end until it rests against the heels of the hooks, which act as driving lugs for the removal of the piston by tapping lightly on the plug. This obviates damage to valve and block resulting from the usual practice of using cold chisel against the valve for its removal.

The First Steamboat on the Red River of the North.

The Red River of the North was first opened to navigation in 1858. The discovery of gold in British Columbia in that year made the people of St. Paul, Minn., then only a village of a few thousand, wild with excitement. Suffering as they were from the financial depression of 1857 they strained every nerve to find some way across the great plains to the gold-laden waters of the Fraser River in B.C.

Many routes were discussed at meetings called by the St. Paul Chamber of Commerce, but a way down the Red River to Fort Garry and thence, westward by the Assiniboine seemed the most promising. Even this route offered almost insurmountable difficulties. Fort Abercrombie and Pembina were the only two settlements of note on the Red River south of Fort Garry, the Hudson's Bay Co.'s post on the Assiniboine River. A stage line was in operation as far as St. Cloud, but a road would have to be constructed from there to some point on the Red River from which a steamboat could be operated to Fort Garry.

As no one knew whether the Red River was navigable, Alex. Ramsey and John Irvine were sent to make an investigation. Making their way up the Minnesota River and over the Kittson trail they arrived at Fort Abercrombie, a structure of "log cabins on the bottomland of the river." From there they travelled on horseback down the east side of the river to a claim which Mr. Irvine had staked out opposite the mouth of the Sheyenne. As far up as that point, they decided, the river ought to be navigable for three or four months of the year.

As a result of Mr. Ramsey's report, the St. Paul Chamber of Commerce made a contract with Anson Northrup to build the first steamboat on the Red River for $2,000. The timbers for his craft were hewn at Crow Wing on the Mississippi. The second hand machinery which had been brought from Maine several years before, with the timbers, lumber, cabins and furniture, was loaded upon 34 wagons at Crow Wing. In the bitter winter of 1858 a party of 60 resolute men and 34 teams trudged 150 miles through the snows of an unknown country, unusually hilly and heavily timbered and without the semblance of a road, to Irvine's claim on the Red River.

There the Anson Northrup was built. The impression that it was not exactly a boating palace may be gained from a description given by Mr. Ramsey concerning the appearance of the boat the next year: "The hull was new, but it was made of pine; the machinery was eight years old; the furniture was very limited; the boiler was of the locomotive kind, and the head was cracked clear across and leaked so badly that it was not possible to get up a sufficient head of steam to be called seaworthy or bear inspection."

The Anson Northrup made its maiden trip in the summer of 1859. Many passengers were taken from Fort Abercrombie to Fort Garry, where they were received with great enthusiasm. It was afterward sold to Norman Kittson, and, in his hands, saw many years of service on the Red River..

The foregoing particulars, gathered from the Minnesota Historical Society's records, by W. W. Wemet, were published recently in the Courier-News,