

12,950 lbs.,

king load is

ment in the
600-lbs., is

the British
Mr. C. M.

t section of
inter. The
and with the

rings some-
720 lbs. it

t angles to
ions above
r extended

ng load is

ase in the
0 lbs., is

weight was
mounted to
the fibres
ing of $\frac{1}{2}$ -in.

9 lbs. per
bs. 3 ozs.,
this beam

her rings
ring apart

5869 lbs

se in the
00-lbs., is

0 lbs. per
s. 3 ozs.,
laboratory

Beam VI was tested May 22nd, 1893, with the annular rings as in Fig. 8. Under a load of 15,480 lbs. it failed by the tearing apart of the fibres on the tension face.

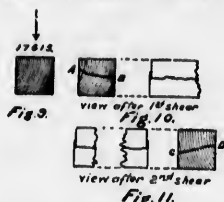
The corresponding maximum skin stress is 7116 lbs.

The co-efficient of elasticity as determined by an increase in the deflection of .3-in. between the loads of 500 lbs. and 8,000-lbs. is 1,489,215 lbs.

Table II shows the several readings.

The weight of the beam on May 11th was 49 lbs. 6 ozs., or 31.05 lbs. per cubic foot, and the weight on May 22nd was 48 lbs. 1 oz., or 30.23 lbs., showing a loss of weight while in the laboratory at the rate of .0745 lb. per cubic foot per day.

Beam VII was tested on May 19th, 1893. In this beam the annular rings ran somewhat obliquely as in Fig. 9. Under a load of 17,615 lbs., the beam sheared longitudinally along the plane AB, Fig. 10, the distance between the ends of the portions above and below the plane of shear being 3-16ths of an inch. The plane of shear extended to a distance of .46 ins. from the end of the beam.



The maximum skin stress corresponding to this breaking weight of 17,615 lbs. is 8712 lbs.

The co-efficient of elasticity, as determined by an increase in the deflection of .255-in. between the loads of 500 lbs. and 8500 lbs., is 2,052,250 lbs.

Table B shows the several readings.

Immediately after the longitudinal shear the jockey weight was run back until it indicated a load of 5090 lbs. when the lever again floated. The weight was then gradually increased until it amounted to 11,840 lbs., when there was a second longitudinal shear along the plane CD at the other end, Fig. 11. The lap at the plane AB was now increased from 3-16ths in. to 3-10ths in., and the distance between the ends of the portions above and below the plane of shear at the other end of the beam was 3-20ths of an inch.

After this second shear the jockey weight was run back to 6840 lbs. when the lever floated. The load was gradually increased until it amounted to 8990 lbs., when the beam was fractured by the tearing apart of the fibres on the tension face.

On May 11th, this beam weighed 60 lbs. 4 ozs., or 40.69 lbs. per cubic foot, and the weight on May 19th was 59 lbs. 2 ozs., or 39.92 lbs. per cubic foot, showing a loss of weight in the laboratory at the rate of .00625 lb. per cubic foot per day.

Beam VIII was tested May 22nd, 1893. In this beam the annular rings were oblique as in Fig. 12. Under a load of 11,700 lbs. it failed at the support by the tearing apart of the fibres on the tension face.

