## 6 EXPERIMENTS TO DETERMINE THE INFLUENCE OF COMPRESSION.

by employing the scale corresponding to each ordinate of the forward and back pressure lines, as explained at the last meeting of this Society in a paper on the Comparison of Indicators. Cards for each set of conditions were taken, and it was found that the differences in the equivalent scales corrected for all variation between the cards under the several sets of conditions, and between the largest and smallest cards of a set, were within the limits of practical errors. The average of the scales, or 58.2 lbs. per inch, was, therefore, used in computing the horse-power-The calculation of the equivalent scales for one of the cards is given in Table VIII.

## TABLE III.

## AVERAGE DATA OF TESTS AND WEIGHT OF STEAM LESS ENTRAINED WATER.

NUMBER OF TEST.	Datë,	Conditions,	Duration of test in mins.	Total number of revolutions by counter.	Average pressure of steam at engine in pcunds per square inch above atmos- phere.	Total weight of steam and entrained water in pounds.	Average temperature of exit steam at calorimeter.	Percentage of moisture in steam.	Steam per hour less eu- trained moisture.
1	March 10	Equal cut-off	105	26,186	70.8 70.8	1,8811	258	1.4	1,060.2
	12	Equal M.E.P.	80	20.608	72.1	1.116	227	2.9	831.6
20	" 12		40	10.342	72,1	5761	224	3.0	838.8
3	** 15	Equal cut-off	75	19,377	71.2	1,3221	276	0,1	1,056.7
3a	** 15		45	11,629	71.0	793)	271	0,4	1,053.8
4	" 1ð	Special valve	60	15,205	71.8	870	259	1.0	861.3
5	April 3	** **	100	25,280	71.7	1,4751	244	1.8	869.4
5a	• 3		60	15,148	71.8	5881	242	2.0	870.5
6	** 4		120	30,383	72.2	1,7411	268	0.6	865.5
6a	4	H	60	15,175	71.7	8681	268	0.6	363.0
7 1	. 4	Equal M.E.P.	00	15,186	12.1	0241	248	1.7	810.2

A small variation in the amount of work done will cause a greater discrepancy in the results than the difference between the economy at full and for partial compression; so that unless the greatest care be exercised in performing the experiments, the comparative results may be misleading.